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The role of selected administrative units in the recruitment, training and supervision of graduate teaching assistants on the campuses of the University of North Carolina

Vaughan, Peter Roy, Ed.D.

The University of North Carolina at Greensboro, 1992

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300 N. Zeeb Rd.
Ann Arbor, MI 48106

THE ROLE OF SELECTED ADMINISTRATIVE UNITS IN THE

RECRUITMENT, TRAINING AND SUPERVISION OF

GRADUATE TEACHING ASSISTANTS ON THE

CAMPUSES OF THE UNIVERSITY

OF NORTH CAROLINA

by

Peter Roy Vaughan

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Dissertation Advisor _____

Committee Members _____

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_____

_____
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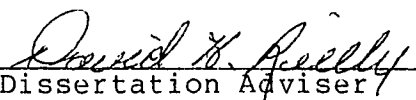of the University of North Carolina. (1992) Directed by
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A survey of deans, department heads and academic vice
chancellors throughout the North Carolina University System
asked for factual information and opinions about the
recruitment, training and supervision of graduate teaching
assistants. Correlations were sought using the Tukey
Honestly Significant Difference test.

It was found that programs for administering graduate
teaching assistants existed in all departments completing
the survey. The details of these programs differed among
academic disciplines ($p < 0.01$). In general respondents
were satisfied with the programs operating in their
departments. They believed that instruction should be given
to assistants in pedagogy, but that recruiting decisions
should be based mainly on academic standards.

At all institutions the primary responsibility for
teaching assistant training and administration rested with
the department. The degree of involvement of the central
administration differed among institutions ($p < 0.05$).
Faculty at institutions with greater involvement of the
central administration in teaching assistant administration
were more in favor of such involvement ($p < 0.05$).

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

Overview

In American universities today the conduct of underclassman laboratory classes, computer labs, and recitation sessions is frequently the responsibility of graduate teaching assistants. The Ninth Biennial Conference on Chemical Education (1987) heard considerable criticism of these teaching assistants, and the way they fulfill their duties. It was alleged that most teaching assistants are not experienced in teaching; some do not have the interest necessary to do a good job; others are provided with too little training or supervision; and many, being of recent foreign origin, have limited skills in the English language and the customary procedures of the American classroom.

That these problems should be a focus at a conference on the teaching of chemistry is not surprising. Any department with a concern for satisfying its clientele and maintaining standards should extend this concern to the work of its graduate assistants, whether they are in a classroom teaching, an office grading papers or the storeroom preparing materials. In departments where classroom

activities involve an aspect of physical danger, employment of teaching assistants carries with it a special obligation to ensure proper recruiting, training and supervision (Landgrebe, 1985).

Concern about poor standards in the recruitment, training and supervision of graduate teaching assistants is not restricted to chemistry departments. Allen (1976), Baldwin (1977), Darling and Earhart (1990), Dunham (1970), Lnenicka (1972), Monaghan (1989), Siebring (1972), Stockdale & Wochok (1977), and Sykes (1988) all express these concerns with reference to departments other than chemistry, and to the university as a whole. These authors suggest that university departments which do a good job of recruiting, training and supervising their graduate teaching assistants are the exception, not the rule!

This dissertation will concern itself with the role of selected administrative units on campuses of the University of North Carolina, including, but not restricted to, individual academic departments in these recruiting, training, and supervisory procedures. It will examine the degree to which the central administration of these institutions requires, regulates, and even directly administers these procedures, and the perceptions of faculty

members concerning the desirability and results of this involvement on campuses where it is found to occur.

Description of The Problem

The University Environment. Universities have traditionally been bastions of specialized study. As far back as the twelfth century the University of Salerno specialized in medicine and that of Bologna in law (Haskins, 1957). Within universities different professors have specialized in teaching different subject matter from as early as the fifth century when the teaching faculty and their duties are recorded for the Capitol School in Constantinople (Bowen, 1972). This specialization reached the American university in 1767 when Harvard assigned its tutors to teach single subjects to the students of all classes, instead of all subjects to the students of a particular class. Since that time the university department with its ranks of full, associate and assistant professor has developed (Rudolf, 1962).

Departments and schools of the modern university can generally be traced to the divisions of human learning, and the specialization inherent in them, however, the graduate school is different. Although the specifics vary from university to university, in general the graduate school

hires no instructors and teaches no courses. It does, however, frequently dictate the standards which the graduate student must meet in the realm of academic study (Walters, 1970).

The university carries out its teaching responsibilities through organizations of specialists termed departments, and it is under the auspices of one of these departments that the graduate assistant teaches. The regulation of his studies, however, is performed through a different organization, the graduate school.

Graduate Teaching Assistants. The symbiotic relationship between the university and the graduate teaching assistant existed as far back as medieval times; the assistant obtaining free board, lodging and tuition, and the university a cheap instructor (Markham, 1967, p.39). Today the practice of hiring graduate students to supervise laboratory sections, recitation sessions and tutorials is the norm at many institutions, some even allowing such students to teach many of the regular undergraduate courses (Dubin & Beisse, 1966-67; Lnenicka, 1972; Smock & Menges, 1985; Sykes, 1988). Indeed Stockdale and Wochok assert that "graduate students teach most of the beginning courses in universities today" (1977, p.85).

In investigating the qualifications and experience that these graduate students bring to their teaching duties, Baldwin (1977, p.83) found that 68.5% had no teaching experience when they began their graduate study, and 72.3% received no preparation for teaching during it! Other major deficiencies reportedly present among graduate teaching assistants include the lack of technical knowledge (Pickering, 1984; Pickering & Kolks, 1976; Siebring, 1972), and poor proficiency in the English language (Brooks, 1977; Heller, 1985: Ninth Biennial Conference on Chemical Education, 1987; Sykes, 1988).

The lack of qualifications of many graduate teaching assistants for the task they are to perform stems, in part, from the tradition that rejects the methods of the teacher's college, preferring graduate students to learn pedagogy by teaching (Earnest, 1953). Another factor is an increase in the availability of research grants, which has allowed many of the more able graduate students to support themselves without teaching (Siebring, 1972), and left those with limited knowledge of subject matter, or little command of the English language, to carry on instruction.

Pedagogical Performance. Siebring (1972, p.98) found a correlation between the learning of the undergraduate

student, and the experience of his graduate teaching assistant. In part this may be due to the fact that such skills as consistent grading have to be learned (Pickering & Goldstein, 1977), but it could also stem from the practice of starting the assistant out working in areas where his/her knowledge is less than perfect (Lnenicka, 1972).

A number of programs exist designed to improve the classroom performance of graduate teaching assistants (Lumsden, Grosslight, Loveland & Williams, 1988; Nowlis, Clark & Rock, 1968; Pickering, 1984). The Ninth Biennial Conference on Chemical Education (1987) heard suggestions that such training should include testing in basic instructional skills, videotaping, frequent feedback from undergraduates, and instruction on the thought patterns of American students.

Siebring (1972) described a two week pre-teaching seminar in which prospective teaching assistants were taught the importance of their role in the work of the department, were instructed in basic instructional skills, and were reintroduced to subjects and materials in the freshman course with which they might have lost familiarity. He identified as most beneficial those sessions where the prospective assistants practiced teaching course materials

to their peers, who played the part of undergraduate learners.

Most university departments offer some form of training to their graduate assistants: in 1967, a survey undertaken by the University of Michigan found only 33% that did not do so (Stockdale and Wochok, 1977). However, that training ranged from complete and highly structured programs to a few brief informal meetings. Many such programs are linked to supervision through class visitations or videotaping, and include weekly discussions and problems sessions (Lewis and McCurdy, 1976; Moll and Allen, 1982; Tipton and Brooks, 1980).

Stockdale and Wochok (1977) reported that the University of Michigan study found that generally such training was undertaken on a departmental basis. Although instances were cited of programs operated jointly by several departments, no universitywide program was identified at that time. Stockdale and Wochok further suggested that basing training at the departmental level should bring with it certain advantages. These were identified as the dedication of one or more faculty members, and the interest of important administrative figures, but they admitted that these advantages rarely materialized, and that most programs suffered from lack of faculty interest and availability of

staff. More recent studies (Andrews & Contributors, 1985; Bruce, 1990; Buerkel-Rothfuss & Gray, 1989; Smock and Menges, 1985; Weimer, Svinicki & Bauer, 1989) identify instances where graduate teaching assistant training is undertaken by the university as a whole through a number of different agencies.

The importance of the knowledge and experience of the teaching assistant to the learning of the undergraduates in his/her classes is generally accepted, and the fact that both of these can be augmented by training programs is widely reported; however such programs are not universally implemented. Where the programs are present, they are generally administered on a department by department basis, and range from the occasional short informal meeting to organized courses.

Summary. The prevalence of teaching assistants in the modern university and their widely cited lack of training and experience leads to a lowering in the levels of learning achieved by many undergraduates. It is reported that this situation can be remedied to a greater or lesser extent by organized training programs including instruction in both subject matter, and pedagogy. Although such training programs are operated by most departments, their content

varies greatly, and often they do not contain all the
elements which have been found to be effective. The reasons
for these deficiencies have been identified by Stockdale and
Wochok (1977) as lack of faculty interest and availability
of staff to undertake the training and supervisory duties.

The tradition of universities is to hand over the
responsibility of instruction to their individual
departments, and the graduate teaching assistants who carry
out much of this function are the creatures of these
departments. Although collaboration of departments in
putting on joint programs for training teaching assistants
has been recognized for some while, universitywide programs
have only recently been reported. It has long been the
tradition, however, for these same graduate students to be
regulated on a universitywide basis in other matters under
the auspices of the graduate school or division.

Importance of Study

Vast numbers of undergraduate students receive much of
their instruction and hands-on experience in lecture halls
and laboratories run in large part by graduate teaching
assistants. Concerns for graduate assistant performance are
found in the literature of many disciplines (Allen 1976,
Baldwin, 1977, Brooks, 1977, Lnenicka, 1972, Monaghan, 1989;

Siebring, 1972, and Stockdale & Wochok, 1977; Sykes, 1988).
The potential adverse effect of incompetent, poorly trained
and uncaring graduate assistants on the recruitment and
retention of undergraduate students makes this subject a
concern for the university as a whole.

While some aspects of the needed training are unique to
individual departments, training in basic pedagogy could be
provided easily and efficiently on a universitywide basis.
Where individual departments do not take the responsibility
for properly preparing their graduate teaching assistants, a
university faced with criticism of its teaching standards
must decide whether to step in and offer such training.

Purpose of Study

This study will examine the campuses of the University
of North Carolina where graduate teaching assistants are
employed, to discover the role of various administrative
units in recruiting, training, and supervising these
assistants. It will try to determine whether a greater role
by central administration, possibly including setting
standards or even actually offering classes, is perceived as
beneficial.

The degree to which the administrations of the campuses of the University of North Carolina have intervened in the activities of their departments in this matter, and the success which they are perceived as having had in doing so, will inform others facing the same decisions.

Research Questions

1. To what extent is there a structured system for the recruitment, training, and supervision of graduate assistants at each of the institutions in the University of North Carolina System?

2. What are the perceptions and opinions of faculty members as to the training which should be given to prospective graduate teaching assistants?

3. What is the involvement of the central administration of the institution, as compared to that of its individual departments, in the recruitment, training, and supervision of graduate teaching assistants at each of the institutions in the University of North Carolina System?

4. What are the perceptions and opinions of faculty members regarding the effect produced by any involvement of the central administration in the recruitment, training, and supervision of graduate teaching assistants?

Definition of Terms

Graduate Teaching Assistant. A person, other than a member of the faculty, who is enrolled in a graduate program and whose tuition and living expenses are provided wholly or in part in exchange for his/her involvement in teaching undergraduates, or grading or preparing materials for undergraduate classes.

Campus. A geographically separate part of a university (Webster's Third New International Dictionary, 1976). Note: The University of North Carolina consists of constituent institutions. While satisfying the definition of campuses, these institutions regard themselves as universities and are so addressed and referred to in the questionnaire. To avoid confusion, the term institution is used in discussion of their administrative structures. The terms campuswide, universitywide, and institutionwide are used in a similar manner.

Assumption

It is assumed that it is desireable to improve each of the three functions of the graduate assistantship, enabling the graduate students to support themselves during their studies, providing the university with cheap effective instructors, and training the next generation of professors.

Limitations

    1. This study is limited to those nine institutions in the North Carolina University System where substantial numbers of graduate teaching assistants are employed.

    2. This study is limited by the small population; at the institutions surveyed only nine individuals occupy each of the particular administrative positions addressed. Where some of these individuals have not responded, or have responded incompletely, statistically desireable groups have not materialized.

    3. This study is limited by the degree to which the perceptions of the respondents coincide with the facts, and the degree to which these perceptions are honestly reported.

CHAPTER II

REVIEW OF THE LITERATURE

This review will start by looking at the history of the graduate teaching assistant, and the environment in which s/he operates, the university. It will look at the demographics of teaching assistants, the duties they are asked to perform, and the qualifications which they bring with them to the job. Highlights will be noted from a few of the many training programs for graduate teaching assistants described in the literature, and the special difficulties of training international teaching assistants will be addressed. The problems of supervising teaching assistants will be discussed, and some of the diverse solutions suggested in the literature will be presented. The final question that will be considered will concern who should administer graduate teaching assistants, and who should be responsible for their training.

Historical Perspective

The University Environment. Higher education in America came of age in 1767. In that year Harvard ended its

time honored practice of assigning a tutor to teach all subjects to the students in a particular class, and instead assigned each tutor to teach a single subject to the students in all classes (Rudolf, 1962). This development was followed by the establishment of college departments and the ranks of instructor, assistant professor, and associate professor. College teaching had become a career.

The concept of specialization of faculty was not new. The Capitol School in Constantinople (literally the school in the auditorium in the capitol) was founded by the Emperor Jovian (ruled 363-4) and much extended by Theodosius II (r. 408-50). It was the first Christian institute for advanced study, and was the product of a series of imperial decrees. These decrees spelled out the number and qualifications of the professors and their faculties, and the rewards which they could receive for exemplary teaching. There were "twenty-eight professors of language, two of law and only one of philosophy, which included mathematics" (Bowen, 1972, p. 296). When higher education returned to Europe in the twelfth century, the studium generale (university) at Salerno specialized in medicine, that at Bologna in law, and that of Paris in theology, though Paris and Bologna offered a full range of subjects (Haskins, 1957; Laurie, 1886).

The schools of medicine, theology, law, arts and science, business, engineering, and education of modern universities are logical outgrowths of this medieval organizational structure of specializations, but a separate graduate school is different.

> Graduate education is organized administratively in several patterns. In the older and more traditional institutions, the graduate school or graduate division represents the arts and sciences; professional graduate work is offered by the individual professional school. Such patterns exist at Harvard, Columbia, Yale, Syracuse, Indiana, and Boston. But the majority of universities have the "umbrella" or universitywide graduate school which administers all graduate study, both the arts and sciences as well as the professional areas. Typical of this type are Illinois, Wisconsin, and the University of California at Los Angeles. There are numerous variations of these two patterns: at New York University, for example, the Ph.D. is granted by the Graduate School of Arts and Sciences, the School of Business Administration, the School of Education, and the School of Engineering and Science - the latter two also offer professional graduate degree programs (Walters, 1970, p. 2-196).

Walters goes on to say that "the dean [of the graduate school] holds an anomalous position in higher education" (p. 2-197). His is not the budget that pays, nor the authority that hires, "whatever influence he has usually stems from his own personality, politics, and propagandist methods" (p.2-197). It is his role, however, to be an educational leader and to set and maintain the standards of graduate

study in the institution despite these limitations on his power.

The Graduate Teaching Assistant. During medieval times, in order to recoup the cost of their education and provide room and board, some graduate students "lectured as necessary regents" (Markham, 1967, p. 39). An added benefit of this system, which provided the college with cheap instructors, and the student with a living, was that "the young student was turned into a young professor" (Daly, 1961, p. 122).

The advent of the professional faculty in the nineteenth century, encompassing main professor, lecturer-assistants, and graduate students, brought an end to the role of the unqualified tutor, and de-emphasized teaching as a component of graduate study (Mandell, 1977). In the second half of the nineteenth, and early years of the twentieth centuries, this new professional faculty sought to revive graduate education, which had languished in the United States, by introducing electives, and conversational lectures rather than recitations (Corbasco, 1960). By the beginning of the twentieth century the Ph.D. became accepted as the "proper" qualification for a professor. Graduate schools answered their obligation to turn out college

teachers, not by adopting the methods of the teachers'
college, but by allowing graduate students to "conduct quiz
sections, or give occasional lectures under the supervision
of experienced staff members" (Earnest, 1953, p. 333).

The organization of American universities into
departments in the nineteenth century was followed by a
resurgence of graduate study. Along with this came the use
of graduate students as teaching assistants. The graduate
teaching assistant system has the advantages of providing
the college with a cheap instructor, and the students with a
stipend. Furthermore, it builds an experienced cadre of
instructors from which the next generation of professors
will emerge.

Graduate Teaching Assistants

Demographics. Today the conduct of underclassman
laboratory sections, computer labs, and recitation sessions
is the responsibility of graduate students on many of
America's campuses. In some instances the instruction of
whole courses has been assigned to such graduate students
(Lnenicka, 1972). Smock and Menges (1985) report that at
one Midwestern university in the fall of 1982, "1,617
graduate teaching assistants taught 2,880 course sections
out of 7,540 total sections, about 38 percent" (p. 22). A

similar percentage is reported by Dubin and Beisse (1966-67) from data on the university of Michigan and the University of California (Berkeley) where, they report, "Every time an undergraduate student registers for a course (or discussion section), the chances are one in three that he will get a teaching assistant for an instructor" (p. 529).

The difficulty of establishing the number of teaching assistants at any particular institution is the subject of a comment by Koran and Cooke (1990):

> At many institutions it is difficult to document precisely how many graduate assistants are actually teaching, since their appointments may range from the research assistant who may teach, to grader who may teach on occasion, to the teaching assistant who definitely teaches. Further each of our institutions may be plagued with inaccurate data on the magnitude of the training task because of vague appointment papers and conscious or unconscious inaccuracies perpetrated by department chairs to avoid the training and supervision responsibilities a large group of teaching assistants would require (p.6).

Responses from 1357 teaching assistants at 8 major universities in the United States were the subject of a study by Diamond and Gray (1987). They reported (p. 14) that 59% were male, and that 83% were U.S. citizens. Of the 17% whose origin lay outside the U.S., 45% were from Asia, 21% from Europe, 11% from Latin America, 10% from North

America, 7% from the Mid-East, 2% from Africa and 4% from other areas of the world. A 1986 survey of physics departments found that 51% of assistants were foreign-born (Survey Evaluates, 1988), suggesting considerable variation among disciplines.

Duties. Diamond and Gray (1987, p.43) reported on the duties to which these teaching assistants were assigned. The most frequent duty was grading (97% of respondents identified grading as an area of responsibility), followed by keeping office hours (94%), preparing tests (72%), leading class discussions (71%), conducting review sections (69%), lecturing (60%), advising and counseling (59%), and supervising laboratories (49%). Thirty-one percent reported full responsibility for the classes they taught, 35% worked with a single faculty member, and 34% were part of a team of faculty and assistants (p. 16). Lumsden, Grosslight, Loveland and Williams (1988) found in a survey of psychology departments that among doctoral programs reporting their students were involved in the teaching process, 74% of programs assigned full teaching responsibility to students, compared to a figure of 19% for master's-only programs (p. 7).

Diamond and Gray (1987) describe a diverse population

of teaching assistants performing a varied array of duties,

but no less varied are the undergraduates for whom these

duties are performed! As Chism, Cano & Pruit (1989) remark:

> Over the past thirty years, colleges and universities
> have become accessible to many types of students who
> previously did not attend in great numbers. Among these
> are ethnic minorities, returning adults, and students
> with disabilities. In addition, the special
> characteristics of other populations, such as women and
> gay and lesbian students, have been recognized more
> widely. (p. 23)

Nyquist, Abbott and Wulff (1989a) assert that teaching this

diversity of students requires "understanding of differing

ethnic and cultural backgrounds and a knowledge of the ways

in which individuals value and approach the learning

experience" (p. 10). They remark that teaching assistants

must be prepared to encounter learning disabilities, and

students with a wide array of learning styles. In teaching

such a diverse population Chism, Cano & Pruitt (1989)

recommend taking a student centered stance:

> This stance goes beyond laying out the feast of
> knowledge and being indifferent about whether all
> partake; it accepts responsibility for welcoming
> students and for creating conditions for their success
> as inherent parts of an instructor's role" (p.27)

Preparation. What skills do the graduate students bring to their performance of their exacting role as assistants? In a survey of graduates of doctoral programs Baldwin (1977, p.83) asked about their teaching experience before entering these programs. Only 31.5% indicated they had such experience; 68.5% had never taught previously! In response to the same survey, 72.3% indicated that their doctoral programs included no preparation for teaching. Diamond and Gray (1987) found that 44% of assistants had held a teaching position previous to their present assignment, including 31% whose previous assignment was in a college situation; only 29% had formal preparation for teaching (p. 17). Brooks, Lewis, Lewis and McCurdy (1976, p. 186) reported that incoming teaching assistants have little or no experience in teaching. The Ninth Biennial Conference on Chemical Education (1987) reported that lack of teaching experience was a common problem found with teaching assistants.

Pickering and Kolks (1976) lament that "nowadays even good graduate students often have little knowledge of wet analytical chemistry" (p. 313). Pickering reports elsewhere (1984, p. 862) that many graduate departments have difficulty attracting enough qualified assistants. The days when assistants went on strike in an attempt to keep their

jobs (Smith, 1986, p. 284) are long gone! Diamond and Gray (1987) found that between three and four percent of assistants were teaching in a course for which they did not feel adequately prepared, and about 20% were teaching outside their disciplines. Of those surveyed, 20% found the time allotted for teaching assignments to be too little, and a similar percentage thought guidance and supervision inadequate.

Another problem with teaching assistants reported at The Ninth Biennial Conference on Chemical Education (1987) was the language and cultural difficulties experienced by teaching assistants from foreign countries. Sykes (1988) asserts that "Many of the teaching assistants are drawn from the ranks of foreign graduate students whether or not they can speak understandable English" (p. 43). Brooks (1977, p.736) also reports undergraduates having difficulty understanding the poor English of foreign teaching assistants.

There is a general agreement in the literature that graduate teaching assistants come to the job unprepared. They are likely to have, through no fault of their own, no experience of teaching. They may also have poor skills in English, and limited knowledge of their subject. The

Association of American Colleges observes "As an initiation rite, the teaching assistantship is almost invariably a disaster" (P.36). Teaching assistants learn "to identify with their scholarly work and treat teaching as a necessary evil" (Wilson & Stearns, 1985, p. 37).

Student Ratings. The reaction of undergraduate students to their graduate student instructors is reported by Nevill, Ware, and Smith (1978) who surveyed 799 students in 36 sections of a mathematics class at the University of Florida. Nineteen of the sections were taught by teaching assistants, and sixteen by faculty members. The two types of instructor had similar responsibilities for their classes. Nevill, Ware and Smith administered a pretest, a posttest, and an instructor rating instrument. The authors found no significant differences in the gain between pretest and posttest for those taught by teaching assistants, and those taught by full-time faculty. They found that students judged teaching assistants and faculty members using a similar conceptual framework. Freshmen students were even unaware as to which instructors were graduate assistants! These results suggested that instructors and assistants might legitimately be compared based on the results of student surveys. In their study, the levels of the ratings given the two types of instructor were similar.

Schuckman (1990) analyzed data from student evaluations of instructors administered in undergraduate psychology courses at Queens College between 1978 and 1986. He compared the ratings received by teaching assistants to those received by full-time faculty members. Data on 41 full-time faculty and 68 teaching assistants were considered. On only one occasion was there a significant difference in the student rating of the two groups, and that semester the teaching assistants were rated higher! Considering only the ratings obtained from introductory psychology classes, the ratings of teaching assistants exceeded those of faculty members in six of the seven administrations.

A partial explanation for the disparity between the problems reported by faculty, and the ratings given to teaching assistants by their students may be provided by Pickering (1983), referring to teaching assistants (TAs) he remarks:

> They are young, energetic, and enthusiastic. They tend
> to root for their students. They do this in an
> unforced way because they do not distinguish themselves
> from their students. . . . Teaching is a new exciting
> experience for them. They haven't yet had time to
> become bored with the material or impatient at
> constantly answering the same questions. . . . The
> T.A. is perceived as a helping person not a threat. (p.
> 56)

Summary. Although it is difficult to ascertain how many assistants are employed in any particular department, or at any particular institution, it has been reported that as many as 38% of the undergraduate courses are taught by assistants at some institutions. Many of these assistants are foreign born.

Teaching assistants are assigned to a wide range of duties, including for some the full responsibility for teaching a course. They have to work with a student body more diverse than at any time in history. Yet these assistants often come to their job with no training or experience in teaching, and limited academic skills; some having the added burden that English is not their native tongue. Despite all these disadvantages, teaching assistants are often rated as highly as regular faculty members on evaluations by undergraduates.

Training for Graduate Teaching Assistants

Rationale. In 1977 Stockdale and Wochok entitled an article "Why Not Train College Teachers to Teach?" This same sentiment was echoed by the Association for American Colleges in 1985 when they lamented, "Only in higher education is it generally assumed that teachers need no

preparation, no supervision, no introduction to teaching" (p.35). Over 50% of teaching assistants intend to teach after graduation (Diamond & Gray, 1987). Providing training for them would prepare many future faculty members for teaching; it would also fulfill "an ethical requirement to provide the highest-quality instruction for their undergraduate students" (Smock & Menges, 1985, p. 22).

Providing quality instruction is not just an end in itself. Siebring (1972, p. 98) determined that there was a correlation between the ratio of students' scores on an end of course test, compared to an initial aptitude test, and the experience of their teaching assistants. Brooks (1977) pointed out that "at some point in every teacher's career s/he will have no experience and be learning how to teach" (p. 736). The Ninth Biennial Conference on Chemical Education (1987) heard that this lack of experience can manifest itself as a lack of consistency in grading. As Pickering and Goldstein (1977) point out, "It takes time to learn to grade well; one is not born knowing how" (p.317).

Far worse than inexperience is the inadequate academic background pointed to by Lnenicka (1972, p. 97). He complains that graduate students are assigned to teach in areas where they are not qualified, with the hope they will

learn the less familiar material through teaching it, and decries administrators who do not bother to evaluate classroom performance. Staton-Spicer and Nyquist (1979) point out a consequence of poor quality instruction:

> T. A.'s often teach service courses required by other departments. If the quality of such instruction is not high, the requirements will not be maintained, resulting in decreased enrollments in those courses. (p. 199)

Since an ever greater number of beginning undergraduate courses are being taught by graduate students (Stockdale & Wochok, 1977, p. 85), the poor preparation of these students is becoming a larger and larger problem. The Ninth Biennial Conference on Chemical Education (1987) heard several suggestions for solutions to the difficulties caused by inexperienced and inadequately prepared teaching assistants. These included testing in basic instructional skills previous to teaching, improving awareness of the thought patterns of American students, training programs, videotaping and frequent feedback from undergraduates. Diamond and Gray (1987) also suggest training in techniques of self evaluation and course evaluation, instructional technology, lecturing techniques, and conducting class discussion.

Relationship with Undergraduates. Andrews (1985c) sees
the teaching assistant's role as calling for a large
repertoire of teaching methods. The assistant may be the
only personal contact the student has with the academic
department; certainly s/he is far closer to the student in
age than are the full-time faculty, and being a student
her/himself, they have much in common. This personal
contact can include coaching, guidance, and feedback as the
assistant encourages, models, and develops thinking skills.
The assistant will most likely be the person to answer the
student's questions, correct his/her misunderstandings, and
ultimately to award a grade, by setting and evaluating tests
and assignments. Pickering (1983) suggests that by
separating teaching from grading as much as possible, the
assistant may be perceived by the undergraduates "as a
helping person, not a threat" (p. 56).

Working with Individual Differences. In their 1989
contribution to Teaching Assistant Training in the 1990s,
Chism, Cano, and Pruitt comment:

       Although changes in student population have taken
       place, very few changes have occurred in the way in
       which universities approach teaching and learning.
       Students from nontraditional groups have simply been
       expected to adjust to the prevailing environment and
       culture of the classroom. The curriculum is heavily
       based on the Western intellectual tradition, and

expectations for students are based on years of
experience with young white males from college-
preparatory programs. Changes, such as the emergence
of black studies and women's studies and a variety of
support services for ethnic minorities, older students,
and students with disabilities, have usually been
introduced as alternative opportunities for students.
(p. 23-24)

These authors see the key to making "appreciation and
respect" for diversity more central to university curriculum
as lying with the faculty of tomorrow. Both in their
present role as teaching assistants, and in their future
role as faculty members, graduate students need to know how
to use such techniques as group cooperation, holistic
thinking, imagery, and expressiveness, in order to offer
greater success to the nontraditional student.

Training Programs. A study of programs for
training teaching assistants at fifty schools was conducted
by the University of Michigan Center for Research on
Learning and Teaching in 1967 (Stockdale and Wochok, 1977,
p. 86). It was found that 33% of the departments surveyed
offered no program for the training and supervision of
teaching assistants; each professor supplying the
instruction he thought necessary to his own graduate
assistant. In the remaining departments, training usually
consisted of short meetings to clarify procedures and

policies, or informal discussions between groups of assistants to exchange information.

Improvement in the provision of training is noted by Pickering (1984) who asserts "the concern about teaching assistants at many institutions has spawned a number of TA training programs" (p. 862). Lumsden, Grosslight, Loveland and Williams (1988) reported that in a survey of 447 graduate psychology programs they had found:

> Teaching seminars are available in 42% of the master's/doctoral programs that assign full course responsibility . . . to doctoral students. This contrasts with 45% of the master's/doctoral programs and 62% of the master's/only programs that assign such responsibility to master's students. (p. 7)

Monaghan (1989) reports "Only half of all academic departments provide training to teaching assistants" (p. 17).

Teaching assistant training programs encompass many features; for example, a training program described by Siebring (1972, p. 99) for assistants in the chemistry program at the University of Wisconsin - Milwaukee, included a two week orientation program, and weekly meetings

throughout the course.   The two week session encompassed

eight objectives:

1) Identify the teaching assistant's role in the
Chemistry Department and impress upon him its
importance.

2) Convey to the teaching assistant his continuing need
for preparation for his teaching duties.

3) Relay to the teaching assistant the nature of the
evaluation process and teach him how to write quizzes
and examinations.

4) Develop in the teaching assistant a concern for
individual differences.

5) Identify the role of memorization in the learning
process. . . .

6) Provide the teaching assistant with a review of
certain materials taught in the freshman course to
renew lost familiarity.

7) Provide the opportunity for the teaching assistant
to perform the experiments to be taught to the
students, so that he knows the degree of accuracy that
can be expected from the students.

8) Familiarize the teaching assistant with the material
with the equipment in the general chemistry laboratory
and the specific principles involved in the
construction and use of the apparatus.

Siebring identified as the most beneficial part of this

program certain sessions during which various assistants

acted as teacher, presenting previously prepared problem

answers to the group, who were encouraged to place

themselves in the role of freshmen and ask questions accordingly.

Brooks, Lewis, Lewis and McCurdy (1976) also identified pre-teaching classes in pedagogy followed by regular contacts with a teaching coach as ingredients in a successful program. Moll and Allen (1982, p. 222), on the other hand, pointed to discussion of examples drawn from student work as the primary ingredient of their weekly meetings with teaching assistants.

A major program for preparing assistants to teach in chemistry departments is Project TEACH (Project TEACH Staff, 1976). The materials produced under the auspices of this project include videotapes, audiotapes, 35mm color slides, handouts and workbooks They originally were designed to support about six hours of instruction on teaching, but more recently a module on laboratory safety has been added which takes an additional five hours (Broman, et al., 1980). The content of the original modules includes performance objectives, reinforcement, questioning skills, ways to tutor, interaction analysis, microteaching, and testing. Writing in 1984, Pickering comments:

>The most famous of these programs is of course David
>Brooks' Project TEACH. This program is directed at
>teaching pedagogy, not content. Judging by its wide
>adoption it fulfills a perceived need at many places.
>The stress on pedagogical training, as opposed to
>subject matter training, is new in chemistry. (p. 862)

Nowlis, Clark and Rock (1968) describe in The Graduate
Student as Teacher, a number of programs for training
teaching assistants in a wide range of departments. They
outline a series of principles which they feel should be
used in examining and improving programs. Graduate students
should move through a progressive sequence from
apprenticeship, with close supervision, to assistantship,
with the freedom to design and conduct a course
independently. This sequence should not include positions
where the only duties are grading, record keeping, or
similar menial tasks, but should bring the student into
contact with "a variety of teaching styles and teaching
resources" (p. 8). Teaching experience should be closely
related to a graduate student's area of competence, not just
a broad introductory course, or a more advanced course in an
area where "he has neither interest nor preparation" (p. 9).
Reappointment should be conditional on competence and
promise as a teacher. Where this is demonstrated, the
student should be guaranteed a long-term period of support,
in exchange for duties which should support her/his

development of competence, without preventing her/him from
attaining her/his graduate degree within the normal time
limits.

Nowlis, Clark and Rock further point out that the
teaching performance of graduate assistants is greatly
effected by the professional respect which they receive.
Poor physical working conditions, over heavy duties, and
lack of collegiality are cited as reasons why morale is low
among assistants. While performing the activities of
teachers they are awarded only the privileges of students.
They continually have to balance the conflicting obligations
of teaching, research and classwork.

Nowlis, Clark and Rock identify poor training and
supervision of graduate teaching assistants as a "general
and serious deficiency in graduate education, with
concomitant failure in undergraduate education" (p. 15).
They characterize a number of levels of training and
supervision, from those where assistants are assigned class
sections then left to their own devices; to those including
a sequence of organized classes in pedagogy, for which
assistants earn academic credit. Some programs are
described as subject oriented, while others treat aspects of
teaching and learning, and yet others focus in on the day-

to-day activities encountered in a particular class.
Nowlis, Clark and Rock cite particular activities, such as
preterm sessions, class visitations, and discussions of
videotaped classes as components of some of these programs.
They advocate experiences which will lead to the graduate
assistant becoming conversant with the practices and
problems of teaching, and learning good habits of grading,
rule keeping and ethical conduct.

In 1978 Grasha reported that "a seminar to train
graduate teaching assistants [included] a broad coverage of
theoretical and applied topics" (p. 21). It examined
personal development, human learning, traditional teaching
practices, teaching and learning styles, classroom models,
classroom interactions, communication and management, and
evaluation. Started as a course for assistants in the
psychology department at the University of Cincinnati in
1971, this course had attracted many participants from other
disciplines at the time of reporting.

Training International Teaching Assistants. According
to Fisher (1985), "The 1980s seem to be the decade of a new
TA challenge: the foreign or non-native speaking TA" (p.
63). Fisher describes this problem as putting a burden on
the admissions process, which was never intended to evaluate

whether a foreign graduate student's English language proficiency was adequate for classroom teaching. He also sees a problems for the institution, which must absorb and provide training for an ever increasing number of foreign graduate students.

In a study for the Mathematical Association of America, Case (reported in Heller, 1986) found that one third of the teaching assistants in mathematics were foreign-born, and that in physics the percentage was 40 per cent! The Task Force for the Teaching of Engineering (1985) found, "About 44 percent of all engineering assistants are foreign nationals, many of whom are reported to have inadequate English skills" (p. 155). More and more institutions are being forced by student complaint, or by legislative action, to test incoming international graduate students, and are finding that they are not passing tests of spoken English, and so cannot be allowed to teach without special training (Heller, 1986). In many instances this has resulted in class sections being cancelled, or international students choosing to pursue their studies at colleges where tests of spoken English are not required. Heller quotes Constantinides and Cousins as reporting instances where foreign graduate students have been identified by English language centers as deficient in language, but have still

been placed in front of classes, when no alternatives could
be found. Heller quotes Comfort of the Physics Department
at Arizona State as defending such actions on the basis that
those who are administering the English language evaluations
are not in the professional discipline of science, and do
not know what is required of assistants. Comfort sees the
language classes required of those failing the tests as a
morale problem for students, and asserts that they do not
produce any gain in language ability.

Specific tests which are used for evaluation of the
adequacy of English language skills of foreign graduate
teaching assistants include the Test of English as a Foreign
Language (TOEFL), and its supplement the Test of Spoken
English (TSE) (Fisher, 1985; Sequira & Costantino, 1989).
Sequira and Costantino also advocate use of the Speaking
Proficiency English Assessment Kit (SPEAK) and/or
standardized interviews, role playings or videotapes.
Fisher states that "No one accepted and established test of
English is a sure indicator of success as a TA in the
classroom" (p. 65). Johncock (1991) reports the use of the
Michigan Test battery (MTELP).

Having identified a language deficiency using some form
of testing procedure, Fisher (1985) and Constantinides

(1989) advocate tracking the foreign graduate students immediately into English for Foreign Students (EFS), or English as a Second Language (ESL) classes. They agree, however, that it is impossible to substantially change foreign teaching assistants' use of English in a short time. Fisher advocates use of class-time for developing a precise and flexible vocabulary for teaching, and working on accent and stress in one-to-one situations, and in the language laboratory. However, the danger seen by Rounds (1987) is that the assistant learns to talk the general-purpose language of the teacher, but not the specific-purpose language of the mathematician, scientist or historian her/his department wishes her/him to use in the classroom.

Perhaps Welsh (1986) is correct when he suggests, somewhat tongue-in-cheek, that "We Should Train our Undergraduates to Deal with International T.A.'s." Fisher (1985) also broaches the possibility of giving time to international students during undergraduate orientations and gatherings. In addition to the language problem, Welsh identifies the other foot of the international TA problem: cultural differences in the classroom. Some international teaching assistants "expect unquestioning submission from their students, . . . act with unyielding authority . . . and . . . stand in a classroom as if standing next to God

Himself." Lack of knowledge of the culture of American classrooms, and psychology of American students is also identified as a problem elsewhere (Constantinides, 1986, 1989; Fisher, 1985; Sarkodie-Mensah, 1991; Sequira & Costantino, 1989).

In her 1989 paper Constantinides describes four types of training programs which are commonly provided for international teaching assistants (ITAs). The first type is the orientation program: held just before the academic term, the orientation program lasts one to five days. It provides "information about the American postsecondary educational system, the institution in which the ITAs will teach, specific requirements of departments, and the teaching assignments that ITAs will undertake" (p. 72). The quantity of information that can be given and received in this type of training is very limited. The second type of program is longer: termed the presession program, it lasts from one to four weeks, and enables the assistants not only to receive information, but to practice its application. Following this type of training, the international assistant may be less likely to violate the expectations of her/his American students, and so make a less disastrous initial impression.

The third type of program described by Constantinides is the concurrent-term program, which lasts throughout the first term that the assistant teaches. This type of program allows more time for training in language, and teaching methods, and offers opportunities for observation of teaching situations. However, it comes too late to prevent an initial bad impression, and at a time when the assistant is overwhelmed with coursework and research. The final type of program is the preterm program; this also occupies a full term, but it is the term before the assistant interacts with undergraduates. In the preterm program the assistant has adequate time to assimilate, and practice the material needed to succeed in an initial teaching assignment, but without the pressure of starting research, coursework and teaching all on the same day.

Constantinides stresses the importance of staffing training sessions for international teaching assistants with faculty who are fully conversant with the behavior expected of teachers in the institution. These faculty members should also be familiar with worldwide educational systems, so they can appreciate the assistants' unfamiliarity with the tasks which they will be expected to perform. With work to be done on language, teaching skills, and discipline-

specific activities, more than one instructor will be needed and a team approach is encouraged.

Student Reaction to Training. Smock and Menges (1985) justify concentrating faculty-development efforts on teaching assistants who "Still have some of the role expectations of students and are reasonably receptive to instruction about teaching" (p. 22). As one aspect of the introduction of a teaching assistant training course, Allen (1976) studied the reaction of teaching assistants to the training they received. The assistants found most useful instruction on lecturing techniques, testing methods and exam question writing, communication in the classroom and learning theory. They found least useful the material on standardized testing methods, innovative methods and evaluation of teaching (p. 25). When Diamond and Gray (1987) asked assistants the areas in which they desired more preparation they listed most frequently evaluation of their teaching and of their course!

Research on Training. Rodriguez (1985) studied the effectiveness of training programs to induce assistants to use effective procedures in the classroom. The graduate assistants were taught to use wait time in questioning students, and to use a sequence where the question was

annunciated before the student respondent was chosen. They
were also taught to award a point for a correct answer, to
praise the student giving it, and to concluding each lesson
with a summary. Observations of classes were carried out
before and after training for a study group and a control
group; the extents to which the taught techniques were
utilized were compared, and significant differences were
found. Rodriguez concluded that the training program was
successful in the short term, but a third observation after
thirty days showed that the use of the techniques decreased,
and a maintenance program was needed.

Abbott, Wulff, and Szego (1989) reviewed the above
study by Rodriguez, as part of a review of thirty research
studies on teaching assistants published during the 1980's.
They separated these studies into those relating to an
aspect of training, those relating to a personal
characteristic of the teaching assistant, and those relating
to ratings of teaching assistants. The studies relating to
an aspect of the training given to teaching assistants
suggested that assistants receiving consultation or
interpretation, along with students' ratings, showed
improvement in their teaching; videotaping followed by self-
or consultant-analysis also produced improvement, as did
workshops and training classes on specific teaching

techniques. In this last area, techniques studied were the grading of essays, the use of the Cognitive Interaction Analysis System, and the interaction between teaching format and student style.

Abbott, Wulff, and Szego divided the studies relating to a personal characteristic of the teaching assistant into two groups. Those which could not be used as a prescription for successful teaching assistant training, such as gender, previous school attended, or age; and others which might provide guidance for the design and timing of more effective training programs. This latter group included empathy, awareness of affective components of classroom behavior, level of experience, and relationship between the assistant's educational background and the training given. Studies of ratings of teaching assistants by students, by supervisors and by the assistants themselves showed positive correlations between students' ratings of teaching assistants and student learning, and among students' ratings, supervisors' ratings and self ratings. Abbott, Wulff, and Szego concluded that insufficient research has been done on teaching assistant training, and that new research will need tighter controls for competing explanations if the resulting data is to be of use to inform practice. Areas where they saw potential for future studies

are the ability to generalize results over disciplines,
interaction of complex student variables with training
approaches, and persistence of behavior modification when
training ends.

Summary. Many authors in discussing higher education
have found fault with the tradition of not providing
training or supervision for teachers. They advocate
training graduate teaching assistants, the majority of whom
plan to teach (Diamond & Gray, 1987). This would provide
higher quality instruction from the assistants now, and when
they become faculty members in the future (Siebring, 1972;
Smock & Menges, 1985). Additional problems which are
identified by those working with graduate teaching assists
are lack of experience (Pickering & Goldstein, 1977), and
poor academic preparation (Lnenicka, 1972; Straton-Spicer &
Nyquist, 1979).

Although a wide range of training programs do exist, it
is reported that no training is available to assistants in
many situations (Lumsden, Grosslight, Loveland & Williams,
1988; Monaghan, 1989; Stockdale and Wochok, 1977). Where
training is provided, ideally it should be a complete
program including all phases of instruction (Siebring,

1972), or even a progression of activities over several years (Nowlis, Clark & Rock, 1968).

Where assistants are non-native speakers of English, special needs for training exist (Heller, 1986). Initial screening tests may be employed to determine language problems (Fisher, 1985; Johncock, 1991; Sequira & Costantino, 1989), which can then be addressed in special English classes (Fisher, 1985; Constantinides, 1989). The proper vocabulary, pronunciation, and behavior for the American class are not, however, easily leaned (Constantinides, 1986, 1989; Fisher, 1985; Sequira & Costantino, 1989; Rounds, 1989; Welsh, 1986).

Abbott, Wulff & Szego (1989) report that research suggests that training can change specific teaching behaviors of graduate teaching assistants. The point out, however, that additional studies need to be done with better controls if useful data is to be obtained.

Supervision of Teaching Assistants.

Wilson and Stearns (1985) indicate the relationship between assistant and supervisor is a "confused and confusing mixture of tacit autonomy and reserved authority" (p. 35). Sprague and Nyquist (1989) see the teaching

assistant supervisor as acting as manager, mentor and model. As manager s/he must plan by selecting materials, scheduling topics, settling goals and allocating tasks. Managing also includes being visible: "TAs being supervised prefer a supervisor whose presence is felt on a daily basis" (p. 40). Teaching assistants like to be kept informed, they don't want to be "caught in the middle" when students ask them questions (Instructional Development Division, 1986); keeping people informed is a major function of management (Sprague and Nyquist, 1989). Managers also give and accept feedback, learning from those "on the front line" how instruction is being received, and where modifications should be made. "Little of what faculty expect of TAs in the classroom is expressed explicitly, directly or formally" (Wilson & Stearns, 1985, p. 36). As Sprague & Nyquist (1989) point out teaching assistants do not necessarily know in advance what is expected of them, especially if they come from another university:

> They need answers to their questions: What are we expected to do in quiz sections? . . . How many office hours are we to hold? When are homework assignments, papers, and exams to be returned? What does it mean to comment on students' papers? What kinds of test items are we to generate? How do undergraduates study for a final? (p. 41)

In addition, assistants need to be informed of institutional policies regarding sexual harassment, academic dishonesty, attendance, and grading.

According to Sprague and Nyquist, management is a task for which academics are "neither philosophically nor practically prepared." There is no tradition of managing or supervising colleagues. As Wilson and Stearns (1985) put it, "Criticism and advice about a colleague's teaching is definitely bad form." It is often easier to find another assistant than to identify and help correct a problem.

Mentoring has more of an academic tradition than managing. Sprague and Nyquist (1989) note that most students choose graduate work at the encouragement of a professor, and "most professors choose academia because of encouragement from professors at the graduate level" (p.43). The third role, that of the professional model, allows teaching assistants to observe how seriously the faculty member takes instruction. Ideally they will be exposed to the cognitive basis behind such processes as selecting a text, choosing a grading program, and preparing a lecture. But Wilson and Stearns (1985) observe that too often the supervising faculty member takes little or no responsibility for communicating to the assistants how to teach.

Wilson and Stearns believe that significant changes can and should be made in the relationship between teaching assistant and supervising professor. In the example they describe, teaching assistants sought input into curriculum planning, and a change from an authoritarian to an open working relationship. Change was accomplished by a series of meetings questioning the premises on which this relationship was based: "by discuss[ing] the undiscussable, [by making] explicit the implicit" (p.38), restructuring was possible. For such a process of change, Wilson and Stearns believe that the initiative must come from the course director or the department, and they discuss several ways in which teaching assistant trainers can prompt this initiative.

Sprague and Nyquist (1989) identify three phases in the professional development of teaching assistants, and claim that supervision must be handled differently during each. The first phase they term "senior learner." The assistant has been chosen because of excellence as a learner, and has not adjusted to the role of instructor; s/he is worried about fitting that role, overwhelmed by teaching, and quick to grasp at one simple educational model. Assistants at this stage need close supervision, direction and support; they can be useful as helpers in large classes, graders, and tutors; they can keep office hours, and may manage carefully

planned quiz sections. They need to develop two-way interaction with their supervisor, and to be involved in discussion as to why certain things are done the way they are.

In the second phase, the "colleague in training," assistants recognize the limitations of their teaching skills, and begin to explore a variety of teaching methods, adapting them to their own teaching needs. The assistant may at this stage "overwhelm the undergraduates by using recently acquired technical language and abstract conceptualizations," unless a supervisor recognizes what is happening and intervenes. In this phase the assistant can do some lecturing, and even teach her/his own section of a class, but is not yet ready to make major decisions about course design. Evaluation by a variety of means, such as videotape, observation, transcription etc., is appropriate.

In the final phase, as "junior colleague," the assistant concerns himself with discovering ways to help students learn. According to Sprague and Nyquist, assistants in this final phase need "opportunities to make professional judgements and try out creative educational approaches." The assistant may no longer appear to need supervision, s/he

may supervise others, in the role of senior teaching assistant, but there is more to learn. Now is the time to adapt to collegial ways of giving and receiving feedback. Rouse (1984) advocates graduate students, on the career path towards college teaching, being included in departmental, collegial and universitywide committees, and in professional activities.

Evaluation of Teaching Assistants. Nowlis, Clark and Rock (1968) admit that most evaluative processes are limited in their application to a particular individual among the many assistants assigned to a course or section. They encourage the use of a variety of such techniques as a basis for promotion, recommendation, and improvement of instruction. Such evaluations of teaching assistants were the subject of a study by Brooks, Kelter and Tipton (1980). They found that by combining the rating by the faculty member who observed a class, with that by the faculty member who supervised the assistant, they obtained a score which correlated well with student evaluative ratings.

Socialization. In addition to their training and supervision, assistants receive much information through an additional process: that of socialization (Staton and Darling, 1989). In this process they acquire the culture of

the organization as they strive to find roles for themselves. Most teaching assistants must socialize to the role of graduate student, and to the role of teacher during the same time period. The role of graduate student is little different from that of undergraduate, which they have held for many years, but that of teacher is new: "It is a thoroughly adult role, very often the first one the graduate student has taken on" (Boehrer & Sarkisian, 1985, p. 9). According to Staton and Darling "TAs begin to think, feel, and act the way teachers do, constructing 'teacher' roles that are distinct and uniquely their own" (1989, p. 17). Boehrer and Sarkiston note: "Distress and exhilaration are more common than indifference" (1985, p. 9).

Every department in every institution has "social practices, collective understandings, and values" which make it unique. Staton and Darling see socialization to the culture of the department as still another learning experience for the new teaching assistant. "New friendships are vital . . . new TAs spend most of their time interacting with peers" (p. 18). Some of the information that the new teaching assistants need concerning "what is expected of them as teachers and graduate students, about the new people and the new setting, and about how their behavior is perceived by others in the department" may be presented

directly and explicitly in an orientation program, but the details have to be learned from communication with their support group of peers. This communication may be passive, such as observing others and listening to others conversations; active, for example asking a more experienced TA; or interactive, asking a professor. Interactive communication with professors was seen by Staton and Darling as reserved for obtaining low risk information about schedule changes, teaching techniques etc. Important information about personal presentation in their new role, and correct interacting with faculty members was obtained though passive or active communication with other teaching assistants.

Staton and Darling identify two further functions of teaching assistant socialization. These are adjusting to a set of rules and policies which are neither fully articulated nor fully obeyed, and generating new strategies for teaching and conducting research. Boehrer and Sarkisian (1985) remark that "TAs are frequently reluctant to ask for help when they need it . . . . [they] make themselves particularly vulnerable if they invite anyone to observe them" (p. 19-20). Staton and Darling (1989) suggest that experienced teaching assistants should be made aware of the role that they play in the socialization of new graduate

students. Their taking a part of the orientation process, being available as informal information sources, and providing opportunities for brainstorming "could become important aspects of TA training programs" (p. 21). The benefits of such a system of peer supervision are described by Symmes (1991).

Summary. Supervision of colleagues is not a normal tradition of academe, and most faculty members are not comfortable managing their assistants (Sprague & Nyquist, 1989; Wilson & Stearns, 1985). Sprague and Nyquist (1989) claim that a better relationship may be achieved if the faculty member recognizes three phases in the growth of the assistant. In the first phase, the "senior learner," the assistant has not adjusted to the role of teacher, needs close supervision, and is most useful as an assistant in a large class section, a grader, or a tutor. In the second phase, the "colleague in training," the assistant is trying new teaching methods, and can be given a section of a class to teach, but is not yet ready to make decisions about course design. In the final phase, the "junior colleague," the assistant is ready to experiment with creative ways to help students learn, and may start to supervise others, and take a part in departmental committees.

Above and beyond the information they receive in training, and from their supervisors, graduate assistants learn a great deal from their peers by a process called socialization (Staton & Darling, 1989). This information often concerns aspects of the culture of the department, expectations of the role of teaching assistant, and others' perceptions of their behavior. They learn more about the new people and the new setting from socialization than can possibly be presented at orientation.

Administration of Teaching Assistants

The administrative divisions of the university have a long history, during which their various territories have been established by evolution and infighting. As a graduate student, the assistant comes under the auspices of the graduate school in most universities, but as a teacher s/he is a creature of the individual department for which s/he works, and consequently subject to the authority of the school in which it is located.

Weimer, Svinicki and Bauer (1989) consider who should be responsible for the training of the graduate assistants and they suggest a number of candidates: the department in which s/he teaches, the college or school in which the department is located, the individual faculty member

responsible for the course, the instructional/faculty development unit of the university, even the graduate school.

The University of Michigan study of teaching assistant training programs at 50 universities, carried out in 1967 (Stockdale and Wochok, 1977) found that most such programs were "based and administered at the department level" (p.86). In no institution was the training of teaching assistants undertaken on a universitywide basis. There was, however, a program at the University of Michigan itself which combined the efforts of five departments in the training of their teaching assistants. Smock and Menges (1985) observed "Comprehensive universitywide programs to help TAs become more effective teachers are an ideal still to be achieved on most campuses" (p. 23). King (1990) reports that such a program "Is still in the planning stage" at North Carolina State University. Diamond and Gray (1987) asked prominent universities about their support programs for teaching assistants; of seven replying, only one had a required institutionwide orientation program. All the remaining institutions, however, offered such institutionwide orientation, together with additional institutionwide training, on an optional basis. Some departments at these institutions required their assistants

to attend these "optional" programs! Language testing and
special classes for foreign teaching assistants were
mentioned by five institutions as institutionwide
undertakings. At one institution two individual colleges
offered their own "formal, required workshops on teaching"
(p. 48).

Smock and Menges (1985) identified advantages and
disadvantages of placing the responsibility for training
programs at various levels. They could not fault leaving
the entire responsibility with the individual faculty
supervisor as far as the financial cost, credibility in the
eyes of assistants, and assistant participation were
concerned. However, they pointed out that the amount of
faculty time needed, the likely course content, the
uncertain continuity of leadership, and the fact that not
all assistants could be involved in such programs were major
disadvantages. The advantages identified for department run
programs included the fact that they were visible evidence
of a department's commitment to good teaching, that they
were discipline oriented, and there was a likelihood that
they would achieve continuity and institutionalization.

Stockdale and Wochok (1977, p. 86) reported from the
University of Michigan study that anticipated benefits of
basing teaching assistant training programs within the

departments, the dedication of one or more faculty members, and the interest of important administrative figures, seldom materialized. In 43% of the cases studied, lack of faculty interest inhibited the program. In particular, faculty members were unwilling to take a role in the processes of training and supervision. Fisher (1985) also identified the interest of an important administrative figure, within either the department or college, as a key to providing improved programs for foreign teaching assistants; but again implied that such interest is seldom present. Nowlis, Clark, and Rock (1968) in conducting a survey and interviews involving department chairs, graduate students and undergraduates at the University of Rochester, were particularly interested in conflicts which arose among the differing perceptions of these groups. They surmised that some department chairs were ignorant of "what [was] going on in the classroom and . . . the amount of preparation and supervision of the graduate student for teaching" (p. 30).

Smock and Menges (1985) identify the advantages and disadvantages associated with placing responsibility for teaching assistant training with various administrative units other than the individual departments. They find the college of education to have the necessary expertise, but not the academic prestige needed. The individual colleges

or schools, are large enough to justify their hiring
specialists and setting up programs, but seldom are able to
sustain funding. Instructional/faculty development centers
are available to all teaching assistants on campus, they can
tailor programs to groups with a common interest, such as
international students or laboratory instructors, and they
can achieve an efficient financial structure. They are also
a "visible demonstration of the university's interest and
commitment to teaching" (p. 28). Disadvantages attributed
to instructional/faculty development centers by Smock and
Menges include their distance from particular disciplines
and day-to-day teaching, the possibility that they may
reflect only one educational philosophy, and the likelihood
that certain departments may use the existence of the center
to justify ignoring the instruction of their own teaching
assistants. They conclude that programs developed by
cooperation between such centers and departments will find
strong support and acceptance.

At the fourteen universities surveyed by Weimer,
Svinicki and Bauer (1989) training was provided in almost
every instance by some combination of an institutionwide
organization (institutional development unit, instructional
center, graduate school etc.) and a specific academic
department. They explored the relationship which existed

between different providers of training programs at these universities. They found that there are no clear-cut trends: in some programs the departments made the decisions about training, seeking assistance as they need it, and in others the institutionwide organization coordinated efforts campuswide, either cajoling or enforcing departmental cooperation.

The process by which the institutional/faculty development center of a university enters into a partnership with departments to ensure proper graduate teaching assistant training is a process of change. Andrews and contributors (1985) identify a number of approaches to change commonly used in this situation. One such approach includes social interaction in the form of networks, and personal contacts, combined with problem solving, where needs are identified and programs designed to meet those needs. An example of such a problem solving program is described by Staton-Spicer and Nyquist (1979):

> Packets of materials have been compiled which include such topics as the lecture method, leading instructional discussions, teaching small groups, and games and simulations. A typical packet contains . . . . Multiple copies of all source materials are centrally located and may be checked out for indefinite periods of time by T.A.'s. (p. 203)

Andrews and contributors (1985) term their second
approach the "research and development approach." It is
characterized by the adaption of existing training resources
(handbooks, videotapes etc.) to the culture of the local
campus, and using them in the context of networking and
problem solving. The third approach follows a political
model, but the authors warn that the institutional/faculty
development center must never get into a struggle with the
departments about ownership of teaching assistant training.
"While many academic departments will not necessarily want
to assume this burden, they also will resist its being taken
over by a central agency that lacks disciplinary
credentials" (p. 80). Andrews and contributors grant that
some political force, the interest of a president or a
powerful dean, may be necessary to get a center launched,
but grass-roots support is built by networking, and by
solving the problems of the departments where program
ownership remains. Once a partnership of mutual support is
established, a political move to introduce institutionwide
training requirements will bring departments clamoring for
help, and the center will become an essential part of
institutional life.

Summary. The responsibility for training graduate
assistants has traditionally fallen upon the academic

department for which they teach, but other scenarios are possible (Diamond & Gray, 1987; King, 1990; Stockdale & Wochok, 1977; Smock & Menges, 1985; Weimer, Svinicki, & Bauer, 1989). At some institutions training programs are the joint responsibility of several departments, or available campuswide on an optional basis, at others institutionwide orientation is required of all teaching assistants, but very few require a full training on an institutionwide scale.

Both department based and institutionwide training programs have advantages and disadvantages. Smock and Menges (1985) see departmental programs as visible evidence of a commitment to good teaching, and feel that they present more efficiently the material and skills that assistants in the department will need. Institutionwide programs are also evidence of a commitment to good teaching, but at a higher level, they are available to a larger number of assistants and can be run more efficiently. They advocate a partnership approach between departments and institutions in developing programs. Such partnerships exist at many universities (Weimer, Svinicki & Bauer, 1989). The process of setting up a partnership is described by Andrews and contributors (1985); it may include networking, problem solving, or politics, but the objective is for ownership to

remain with the department, with instructional and other
help coming on request from an instructional center or
similar institutional agency.

Resources.

The literature on teaching assistants is a very rich
one. Abbott, Wulff and Szego (1989) located 304 ERIC
bibliographical references to teaching assistants published
between 1980 and 1988! Two volumes in the Jossey-Bass New
Directions for Teaching and Learning Series, numbers 22
(Andrews, 1985b) and 39 (Nyquist, Abbott, & Wulff, 1989b),
describe a wide variety of teaching assistant activities and
training, and afford a range of bibliographies. Of
particular interest and use to those involved in teaching
assistant training and supervision are the chapters on
resources (Andrews, 1985a; and Wright, 1989). These
chapters include lists of teaching assistant handbooks which
have been published by various universities, audiovisual
materials for training, discipline-centered materials, books
on teaching, and information on program development,
workshops, conferences and clearinghouses.

A brief listing of "Recommended Guides for the
Beginning Teacher" accompanies an article by McMillen (1986)

in the <u>Chronicle of Higher Education</u>. Extensive
bibliographies of studies including empirical research on
graduate teaching assistants can be found in Abbott, Wulff,
and Szego (1989), Buerkel-Rothfuss & Gray, 1989, and Carroll
(1980). Selected readings are included in Nyquist and
others (1991).

Summary

Experience and adequate preparation are qualifications
which one might assume would accompany anyone who mounted
the podium to teach at a university. It is widely reported,
however, that this is not always the case with teaching
assistants (Allen, 1976; Baldwin, 1977; Brooks, Lewis,
Lewis, & McCurdy, 1976; Lnenicka, 1972; Ninth Biennial
Conference on Chemical Education, 1987; Pickering & Kolks,
1976; Siebring, 1972; Stockdale & Wochok, 1977: Sykes,
1989). The decision not to adopt the methods of the
teachers' college, but to allow graduate students to
"conduct quiz sections and give occasional lectures under
the supervision of experienced staff members" (Earnest,
1953) has not always turned out to be a happy one for the
undergraduates who are its victims!

Increasing numbers of graduate teaching assistants have
been employed as the twentieth century has progressed. The

last twenty-five years has seen them become a major

component of the teaching force on many campuses (Dubin &

Beisse, 1966-67; Lnenicka, 1972; Lumsden, Grosslight,

Loveland, & Williams, 1988; Smock & Menges, 1985). Such

assistants are understandably short on experience and

pedagogical skills, and in practice may also be lacking in

English and subject matter skills as well (Diamond & Gray,

1987; Fisher, 1985; Heller, 1986; Ninth Biennial

Conference on Chemical Education, 1987; Pickering & Kolks,

1976; Sykes, 1988).

Some, but not all, university departments make efforts

to train teaching assistants, operating a range of schools

and classes with varying success (Brooks, Grasha, 1978;

Lewis, Lewis & McCurdy, 1976; Moll & Allen, 1982; Nowlis,

Clark, & Rock, 1968; Pickering, 1984; Seibring, 1972;

Stockdale & Wochok, 1977). This training is likely to

include a combination of orientation, instruction in

teaching techniques, review of subject matter,

familiarization with policies and rules, role-playing,

discussion of student problems, videotaping, and observation

and evaluation by a more experienced mentor. Many

assistants also learn by being given progressively more

demanding assignments, and greater autonomy (Nowlis, Clark &

Rock, 1968; Sprague & Nyquist, 1989). For most faculty

members, the training they may have received as a teaching
assistant is the only training that they have had.

In some disciplines the number of foreign teaching
assistants runs as high as 40%. International teaching
assistants' lack of experience and preparation is often
compounded by their unfamiliarity with the English language,
and ignorance of the behavioral mores of American education
(Constantinides, 1986, 1989; Fisher, 1985; Heller, 1986;
Sequira & Costantino, 1986; Sykes, 1988, Welsh, 1986).
Before these students can be expected to do a competent job
in the classroom, their use of the English language should
be tested and remediation provided, and they should receive
training in the appropriate functions of the American
educator.

The graduate assistant receives information from
training, and from socialization with other teaching
assistants (Staton & Darling, 1989), but by far the most
important source of information, to say nothing of
inspiration, should be her/his supervisor! The effective
supervisor is managing the instruction of a course, training
and mentoring one or more assistants associated with it, and
modelling for them the functions of a college educator
(Sprague & Nyquist, 1989; Wilson & Stearns, 1985). This

supervisor should meet frequently with the assistants both formally and informally, dispensing and receiving information, observing and reacting; s/he must answer their questions, and tell them what is needed. Since criticism and direction of others' teaching are not traditional roles for academics, supervision of assistants seldom comes close to this desireable ideal.

In many institutions training programs for graduate teaching assistants are being developed by campuswide agencies (Diamond & Gray, 1987; Smock & Menges, 1985). These agencies are able to offer training to all assistants on campus, so they can efficiently employ specialists. They can also target instruction to widespread groups with specific common needs. This is particularly true for language programs for international teaching assistants. Campuswide agencies tend to be remote from the specialization found in individual disciplines, and the day-to-day activities of the classroom. Their activities are most successful where partnerships are developed with individual departments.

CHAPTER III

METHODOLOGY

The population examined in this study is a part of the
administration of those institutions within the University
of North Carolina System where graduate students are
employed as teaching assistants. The sample within this
population was selected on the basis of a pilot study at
Western Carolina University. Members of the sample received
a survey seeking both their perceptions of facts, and their
opinions. A statistical analysis was made of the responses
to this survey.

The Population

The population chosen for this study was those members
of the faculties of institutions within the University of
North Carolina University System who oversee the teaching
activities of graduate assistants. This population included
those administering academic programs at the institution,
school, and department levels.

Determination of which institutions within the North
Carolina University System to use for this study was made
using Table 78 (page 160) of the Statistical Abstract of

Higher Education in North Carolina 1989-90. This table
entitled "Financial Aide for Graduate Students in North
Carolina Universities" lists the number of graduate students
receiving assistantships at each institution. Institutions
within the North Carolina University System listed as
awarding more than five assistantships were chosen for the
population. These nine institutions awarded 6,976 out of a
total of 6,982 assistantships listed for 1988-89. The
institutions chosen were Appalachian State University, East
Carolina University, North Carolina Central University,
North Carolina State University, The University of North
Carolina at Chapel Hill, The University of North Carolina at
Charlotte, The University of North Carolina at Greensboro,
The University of North Carolina at Wilmington, and Western
Carolina University.

The Pilot Study

A pilot study was conducted at Western Carolina
University. A list of departments, schools and
administrative divisions was developed which covered a wide
range of teaching disciplines, and areas, found at most
institutions. The persons who headed these departments,
schools, and divisions at Western Carolina University were
identified, and surveys were sent to them. The response to
this mailing, and the results of the pilot study, are given

in Appendix F. Based on the presence, or absence, and nature of the responses obtained in this pilot study, the subjects for the main study at the other institutions were chosen.

The validity and reliability of this instrument were established in this pilot administration at Western Carolina University. The responses of various individuals were compared, and were contrasted with answers given in face-to-face interviews. It was concluded that the instrument would successfully give a picture of the practices regarding the recruitment, training and supervision of graduate students for institutions within the University of North Carolina University System, and the opinions of faculty regarding these practices.

The Sample

At each institution the following members of the administration, or their equivalents, constituted the sample population, and received surveys:

```
The Vice Chancellor for Academic Affairs
The Dean of the School of Arts and Sciences
The Dean of the School of Engineering, Technology,
    or Applied Science
The Dean of the Graduate School
The Dean of the School of Education
The Head of the Department of Chemistry
The Head of the Department of Biology
The Head of the Department of English
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The Head of the Department of Music

Where an office or its equivalent was absent, a survey was
sent to a similar office, such as a head of a fine art
department instead of music, or a dean of nursing or
environmental science instead of engineering, technology or
applied science. In four instances it was recommended that
departments, which had not been selected to receive a
survey, had exemplary programs, and should be contacted;
surveys were sent to them. Some recipients passed surveys
to associates or subordinates for completion; surveys
returned by these designees were accepted.

Sixteen surveys were sent out during the pilot study,
and seventy-six to the other eight institutions during the
main body of the study. Except during the pilot study,
follow-up letters were sent to all those who had not
responded within a month. Unavoidable circumstances lead to
some of those who did not return surveys during the pilot
study not receiving follow-up letters.

Ninety-two surveys and 32 follow-up letters were sent
out; 74 replies were obtained. Of those replying three were
too busy to complete the survey; nine did not complete the
survey because they did not administer programs employing
graduate teaching assistants; three indicated that their

views would be the same as those given by other responders; and one was no longer in the position addressed (the current occupant to whom he had passed the survey has not replied). Three replies consisted of comments or were too incomplete to use, but 54 respondents did complete enough items on the survey that there items could be transcribed into a spreadsheet for statistical analysis.

Demographic information on the 54 respondents who completed the survey is given in Table 1. Demographic information was not collected on non-respondents and respondents who did not complete the survey.

The Instrument

The survey contained three sections. The first sought demographic information concerning the person filling it out. The second section sought responses to establish the current practice in the department, school or institution administered by that individual with respect to the selection, training and supervision of graduate teaching assistants. The final section solicited opinions of that individual concerning improvements which might be made in this practice. Responses were requested on Likert and similar scales. A sample survey is provided in Appendix A,

Table 1.

Demographic Information on Respondents

Age in Years	#	%
30-40	1	2
40-50	21	39
50-60	29	54
Over 60	1	2
Unknown	2	3

Sex	#	%
Male	36	67
Female	14	26
No Response	4	7

Race	#	%
White	41	76
Black	4	7
American Indian	1	2
Other	1	2
No Response	7	13

Non-University Teaching Experience	#	%
Community College	4	7
Elementary School	6	11
Military	1	2
Secondary School	16	30
Business College	1	2

Years in Current Position	#	%
1-2	18	33
3-5	16	30
6-12	13	24
15-23	4	7
No Response	3	6

and the text of the cover letter which accompanied it in Appendix B.

Procedure

A number of practical steps were necessary in carrying out this survey. These included the identification of the recipients by name, the preparation of the package to be mailed, the pilot study, the mailing and the follow-up.

The specific steps were:

1) The branches of the university to be surveyed were selected based on their employment of graduate teaching assistants according to the Statistical Abstract of Higher Education in North Carolina 1989-90 (p.160).

2) A list of sixteen administrative offices was developed, and the holders of these offices at Western Carolina University were identified using a current catalog. These sixteen administrators received copies of the survey in a pilot administration (see Appendix F).

3) The pilot administration of the survey at Western Carolina University was used for validation of the questionnaire, modification of wording and lay-out, and selection of those who would receive surveys at the other institutions.

4) The names and addresses of individual administrators
to be contacted at the remaining eight institutions were
obtained from the catalogs issued by these institutions.
These names and addresses were stored, using a computer
program capable of merging them with the text of letters,
and of producing mailing labels.

5) Each questionnaire was accompanied by a cover letter
from the author, stressing the importance of determining the
current status of this problem, and offering to send results
of the survey to the respondents. The text of this letter
is given in Appendix B. While the intention to publish such
results was stated, it was emphasized that information and
opinions supplied by individuals would be held in absolute
confidence. Recipients were invited to request a copy of
the results of the survey by making a check mark and by
correcting a mailing label on the back of the questionnaire.
A stamped addressed envelope was included for the return of
the completed questionnaire.

6) The questionnaires in their final form, together
with the cover letters, and the stamped addressed return
envelopes, were enclosed unfolded in large envelopes and
mailed first class. They arrived on campus at the end of
February 1992. The return address given was the University

of North Carolina at Greensboro, and the completed surveys
were forwarded to the author from there.

7) At the end of March those individuals who had not
replied to the survey were sent a follow-up letter reminding
them of its importance; a copy of which is given in Appendix
C.

8) Additional surveys were sent to individuals who
reported not receiving the original mailing, or misplacing
it. Surveys were also sent to additional departments at
North Carolina State University and The University of North
Carolina at Chapel Hill where only a few surveys had been
returned. These additional departments were chosen because
their programs for training graduate teaching assistants
were identified by a survey recipient as excellent at one of
the institutions.

9) Seventy-four responses were received to the 92
surveys sent out. Of these responses, 54 contained
completed surveys. The data from these completed surveys
was transferred to the spreadsheet of a computer statistics
program (Hicken & Glass, 1990). The author read and
tabulated the comments made by individual respondents.

10) Requests for information on the involvement of Centers for Teaching and Learning in the training of graduate teaching assistants were sent to all institutions.

Data Analysis

The responses to items on the surveys were considered both individually, and grouped according to their area of focus. The areas of focus used in grouping the questions were:

Area 1. To what degree is there a structured system for training and supervising graduate teaching assistants?

Area 2. How satisfied are the faculty members with the present training programs?

Area 3. What is the opinion of the faculty members concerning the type of training which should be given to prospective graduate teaching assistants?

Area 4. To what degree is the recruitment and training of graduate teaching assistants the responsibility of the individual department?

Area 5. To what degree is the recruitment and training of graduate teaching assistants the responsibility of the institution?

Area 6. What is the opinion of faculty members concerning the desirability of universitywide programs for recruiting and training graduate teaching assistants?

Frequencies of responses to items are given in Appendix
D. The assumption was made that the scales on which these
responses are made produced data which is interval in
nature. Relationships within this data, and correlations to
demographic data were sought using the Computer program
EasyQuant (Hicken & Glass, 1990).

CHAPTER IV

RESULTS

During this study of the administration of graduate
teaching assistants at the institutions that comprise the
North Carolina University System, a total of 92 surveys were
sent out.   Forty-four surveys were sent to departments, 37
to schools and 11 to central administrations.   Of these 92
surveys sent out, 18 (20%) were not returned.   Seven (8%)
were returned unanswered because the recipients were no
longer in the administrative position addressed, too busy to
reply, or indicated that their reply would be the same as
that already sent by another person.   Of the 67 surveys
(73%) eliciting a response (See Table 2), 9 (10%) were from
respondents who merely indicated that no assistants fell
under their jurisdiction, and 4 (4%) submitted limited
comments, or extremely incomplete surveys, leaving 54 (59%)
surveys which were sufficiently complete to be included in
the following analysis.

Of the 28 departments returning a completed survey, two
indicated that although they have employed graduate students
as teaching assistants in the past, they were not doing so

Table 2

Responses Received to Survey

	ASU	NCCU	UNC	ECU	NCSU	UNCC	UNCG	UNCW	WCU
Vice Chancellor			X	0	0	X			0
Assoc. Vice Chancellor									*
Faculty Developer	X								
Dean General College	0			#					
Dean Arts & Science	X			X				X	X
Dean Education	X	0		X			X	X	X
Dean Grad. School	X	X	X	X	X	X	*	X	X
Dean Engineering etc	0		X	X	X	X	0	X	
Dept. Chemistry	X	X		X	X	X	X	X	X
Dept. Music/art	X			X		X	X	0	*
Dept. Biology		X	X	X	X	X	X	X	
Dept. English	X	X			X	X	X	X	
Dept. Economics		X		X				0	
Dept. History			X						

Notes. * = Submitted Comment, or incomplete survey;
X = Survey Filled Out; # = Late response, not used;
0 = Replied "No Graduate Teaching Assistants's".

Key to Institutions
ASU = Appalachian State University (Boone)
NCCU = North Carolina Central University (Durham)
UNC = University of North Carolina (Chapel Hill)
ECU = East Carolina University (Greenville)
NCSU = North Carolina State University (Raleigh)
UNCC = University of North Carolina at Charlotte
UNCG = University of North Carolina at Greensboro
UNCW = University of North Carolina at Wilmington
WCU = Western Carolina University (Cullowhee)

One reply did not identify the institution from which it
came, but was from an associate dean for research.

at present. Four departments identified themselves as
employing less than five assistants, four employed five to
ten, and sixteen departments employed more than ten; two
replied to a pilot form of the survey that did not ask this
question.

Uses of Graduate Teaching Assistants. Survey
respondents were asked to indicate on a checklist those
activities with which the graduate teaching assistants
routinely assisted. Their responses are tabulated in table
3. Schools and central administrations replied in much the
same way as departments, except tHat the schools frequently
indicated using assistants for advisement, a practice not
indicated by departments.

The representative of one department declined to check
individual activities, merely replying "Our assistants have
a full teaching responsibility." Other respondents checked
off individual functions on the list, but added a comment
such as: "Most TA's don't teach," "Most TA's in our
department have full responsibility for a section of a
multi-section course," "Never total teaching
responsibility," "Second year students teach their own
classes," and "Under supervision of a faculty member in
adjacent lab section."

Table 3

Reported Uses of Graduate Teaching Assistants

	Administrative Unit			
	Department	School	Institution	Total
Secretarial Work	16%	24%	0%	16%
Objective Grading	72%	72%	50%	62%
Handing Out Papers	56%	60%	50%	50%
Tutoring Individuals	64%	84%	100%	64%
Recitation/				
Problems Section	36%	78%	100%	48%
Materials Preparation	56%	84%	100%	60%
Subjective Grading	52%	54%	50%	46%
Supervising Laboratory	68%	78%	100%	64%
Student Advisement	0%	42%	50%	16%
Recording Grades				
and Absences	64%	10%	50%	54%

Note Given as percentage of those from the particular administrative unit who responded concerning assistant usage.

The Research Questions

This study of the role of selected administrative units in the recruitment, training, and supervision of graduate teaching assistants, on the campuses of the University of North Carolina, seeks to answer four questions. To answer these four research questions an instrument was used which having sought background and demographic information, asked twenty-one questions of a factual nature, and solicited twenty-one opinions. These facts and opinions constituted a total of forty-two items. The answers to these forty-four items were grouped according to the area of the study which

they addressed. Answers to the research questions were obtained from the total scores for these areas of study by correlation and by seeking statistically significant differences among administrative levels, institutions, and academic departments.

The First Research Question. To what extent is there a structured system for the recruitment, training and supervision of graduate teaching assistants at each of the institutions of the University of North Carolina System? To answer a part of this research question items were placed in a group termed Area 1. The items in Area 1 addressed the degree to which there is a structured system for training and supervising graduate teaching assistants. The question of recruitment was deferred until after the study of the third research question.

The Second Research Question. What are the perceptions and opinions of faculty members as to the type of training which should be given to prospective graduate teaching assistants?. This question was answered by collecting items in Areas 2 and 3. Items grouped in Area 2 were concerned with the satisfaction of the faculty members with the present training programs, and those grouped in Area 3 gave their opinion of the type of training which should be given to prospective graduate teaching assistants.

The Third Research Question. What is the involvement of the central administration of the institution, as compared to that of its individual departments, in the recruitment, training and supervision of graduate teaching assistants at each of the institutions in the University of North Carolina System? Again this question was answered by grouping items in two Areas. Area 4 asked "To what degree is the recruitment and training of graduate teaching assistants the responsibility of the individual department?" and Area 5 asked "To what degree is the recruitment and training of graduate teaching assistants the responsibility of the institution?" In the course of the assembling, analysis, and correlation of these items information on the recruitment and selection of teaching assistants was also abstracted.

The Fourth Research Question. This final research question asked for perceptions and opinions of faculty members regarding the effect produced by any involvement of the central administration in the recruitment, training and supervision of graduate teaching assistants. Items grouped as Area 6 described the opinions of faculty members concerning the desirability of institutionwide programs for recruiting and training graduate teaching assistants.

The correlations and comparisons of these six groups of items, termed Areas, were carried out using a computer program titled "EasyQuant" (Hicken & Glass, 1990). The principle techniques used were correlation, including a scatterplot, and ANOVA, including one-way analysis of variance, Tukey Honestly Significant Difference Test and the Scheffe test. The Tukey method included Kramer's modification for unequal n's (Hicken & Glass, 1990).

In choosing among the ANOVA, Tukey, and Scheffe results to obtain a definitive arbiter of significance, their robustness and the nature of the data had to be considered. Baker, Hardwyck and Petrinovich (1966) showed that the 't' test was applicable to data collected using a Likert scale. Similar considerations allow the ANOVA technique to be used with this type of data, which is between ordinal and interval in nature. However, ANOVA requires equal sized groups or equal variances (Toothaker, 1986, p.452). An attempt to approximate this condition was made by including eight items in each Area, and sending equal numbers of enquiries to the different institutions, schools and departments, but equal numbers of replies were not forthcoming! Equal sized groups could not be randomly selected from the replies since total numbers were too small. With unequal sized groups (n), and unequal variances, the choice was between Tukey and Scheffe. It was

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decided that the Scheffe method was more likely to yield a type II error, due to its highly descriminative nature, than the Tukey method to yield a type I error, since it included Kramer's modification. The Tukey method was therefore chosen to be used in this study, where the numbers of cases in the groups are not radically different.

Research Question 1: Administrative Practices

To what extent is there a structured system for the administration of graduate teaching assistants at the institutions within the North Carolina University System? A general answer to this question was obtained by compiling the answers to several items on the questionnaire. This group of answers will be referred to as Area 1. These items were:

1. Do graduate students who are hired to assist with face-to-face teaching, or to supervise laboratories or recitation sections receive any training in how to perform these duties from any source?

3. Does this training extend beyond informal consultations with the supervising faculty member?

5. Are pedagogical courses recommended to graduate students who plan to be teaching assistants?

6. Is a training class or seminar required during a quarter/semester previous to commencing teaching duties?

7. Is a workshop or similar short period of training required immediately preceding the start of the first course in which the graduate assists?

8. Are regular (perhaps weekly) meetings held with groups of graduate students for training and other purposes during the courses in which they are assisting?

20. Is a course in English communication recommended to the foreign graduate assistants under your administration?

21. Are students observed or videotaped for the purpose of evaluation during actual or simulated teaching sessions?

Responses to all items were scored as follows:

No, Never	Score 0
Yes, about 1/4 the time	Score 1
Yes, about half the time	Score 2
Yes, About 3/4 the time	Score 3
Yes, in all cases	Score 4

The totals for Area 1 are shown in table 4.

The Institutions. The institutions showed no statistically significant difference at the 0.05 level in their average total scores on Area 1 when compared using the Tukey method. No statistically significant difference was found either in the answers to any individual item included in Area 1; a wide range of answers coming from each institution. A less than statistically significant difference was apparent in answer to question 21, concerning videotaping/observing, a practice less prevalent at Appalachian State and East Carolina than at the other institutions.

Table 4.

Area 1 Scores

Administrative Level	Cases	Mean Score	Standard Deviation
Department	28	18.61	7.00
School	21	15.55	5.03
Institution	3	8.00	7.00
Total	52	16.76	6.69

Institution	Cases	Mean Score	Standard Deviation
Appalachian State	6	13.00	8.20
East Carolina	6	16.83	6.18
North Carolina Central	3	17.00	11.14
North Carolina State	4	18.75	5.97
UNC Chapel Hill	6	20.78	5.59
UNC Charlotte	7	16.43	7.89
UNC Greensboro	6	16.00	4.73
UNC Wilmington	6	16.77	6.95
Western Carolina	7	16.89	6.13

Academic Discipline	Cases	Mean Score	Standard Deviation
Biology	7	19.00	3.42
Chemistry	8	16.63	5.58
Education	5	12.52	3.28
English	6	26.73	1.88
Music	4	9.25	5.12
Technology, Engineering & Applied Sciences	3	15.67	2.31

Note. A low score indicates a limited system for administering graduate teaching assistants. A high score indicates a comprehensive system of training and supervision.

Although a wide range of programs for the training and supervision of graduate teaching assistants were found to exist at all institutions, certain components were present in almost all of them. Twenty-six out of 28 respondents at the departmental level indicated that assistants receive some training about 75% the time or better (item 1). Sixteen of these respondents indicated on item 3 that this training goes beyond consultation with an individual faculty member 75% of the time. Only half of these 28 respondents indicated that courses in pedagogy are ever recommended to assistants (item 5).

When the same 28 departmental level respondents were asked about the training given to graduate assistants with a frequency of 75% the time or greater, 8 identified a training class during the quarter or semester before assisting began, 17 indicated that there was a workshop or other period of training required immediately before assisting started, and 18 indicated that regular meetings were held with assistants while they were assisting. Only 7 indicated that none of these types of training sessions were held 75% the time or better. One chemistry department indicated that

> In the department all TA's must enroll in a Semester-Internship course which meets weekly to discuss how to teach the next lab. TA's who have not taught the lab previously do the experiment. Faculty who teach

freshman laboratories usually attend these meetings to participate in the discussions.

Less than half the departmental respondents indicated frequencies of 75% or greater for item 21 referring to videotaping or observing assistants for evaluation. A similar low frequency was reported for courses in English communication for foreign graduate teaching assistants (item 20). At one institution the Test of English as a Foreign Language (TOEFL) was required for admission, and further standards could be invoked by departments, although this was reported as having happened only on one occasion. At another institution a foreign student's score on TOEFL was used to determine whether he/she should take further tests and/or remedial courses. At a third institution

The Center for International Studies has a one day workshop covering intercultural topics in teaching. The TA's English is evaluated at this time. A TA whose English is below the established standard is required to enroll in the English Language Training Institute and achieve the standard before being allowed to teach.

Levels of Administration. Statistically significant differences were also sought among total scores on Area 1, and responses to individual items, for different levels of administration. The mean total scores and their standard deviations are given in Table 4. The difference between the departmental level and the institutional level was

statistically significant by the Tukey method at the 0.05

level. Totals from those administering schools did not

differ with statistical significance from either of the

other groups. The limited data at the institutional level

makes the result very susceptible to extreme opinions of

single individuals, but on some items all three respondents

were in agreement, and disagreed with those at the level of

the school and the department.

Institutionwide administrators gave consistently (but

not significantly) lower responses on items 5, 6, 7, 8, and

21, dealing with pedagogical courses, training classes,

workshops, regular meetings and observation/videotaping.

Those at the school level scored significantly lower at the

0.05 level on items 8 and 21, concerning regular meetings

and observation/videotaping than those at the departmental

level. This statistically significant difference in

perception at different levels of administration may reflect

an increasing lack of awareness by those administrators who

are more remote from specific routine practices, the

introduction of such practices since they left

administration at the department level, or the unconscious

inclusion of departments without graduate teaching

assistants when arriving at their responses. Aware of this

last pitfall, one dean excused himself from answering the

survey by saying "Specific departments . . . have particular

practices and traditions . . . I preside over 18 such departments."

Statistically significant and consistent differences were found in the responses from the different academic disciplines at the various institutions, whether having the status of departments or schools. The data for disciplines with three or more respondents are given in Table 4. The totals for English Departments were higher than those for Education, Chemistry, Music and the Applied Sciences at the 0.01 significance level, and higher than Biology at the 0.05 significance level (Tukey). Biology was also higher than Music at the 0.01 significance level. This strong relationship of Area 1 total to academic discipline derived from differences in the responses to items 5, 6, 7, 8, and 21; those for 5, 6 and 8 being statistically significant at the 0.05 level or better (Tukey).

It was obvious from several comments made by respondents at different institutions that their systems for training and supervision of graduate teaching assistants are changing. One dean replied "university procedures on TA training are in a state of flux . . . . . we are establishing mandatory TA training in August." Other replies include comments such as "not at this moment," "not yet" and "beginning now." In this situation a litmus test

for an adequate program would be useful. It was found that
where the question in the first section of the instrument
concerning the publication of a handbook was answered in the
affirmative, the score on Area 1 was significantly higher
(0.05, Tukey); this question therefore appears to be one
candidate for such a test of adequacy.

The absence of more extensive training from some
programs was explained by time constraints such as "Only two
days for new TA's," "A six semester limit on eligibility."
and "Offering only master's degrees precludes available time
to graduate students before entering classroom." One
respondent stated that their teaching assistants were
already trained teachers. In another instance training
courses were available and highly recommended, but only
about half the assistants took them.

The recruitment and selection of graduate teaching
assistants will be described in a later section covering the
responsibilities of the different levels of administration
at different institutions.

Research Question 2: The Ideal Program

The perceptions and opinions of faculty members as to
the type of training which should be given to prospective
graduate teaching assistants was estimated by their answers

to two groups of items which will be referred to as Area 2 and Area 3. These are taken from the third section of the instrument which asked for opinions.

Area 2 questions, referring to faculty satisfaction with the present program included:

1. Our departmental training programs for graduate teaching assistants are adequate.

3. The English language is frequently a major problem in classes taught by foreign graduate assistants.

4. Teaching assistants too often allow their research to intrude upon their time to such an extent that their teaching suffers.

5. Some individual departments do not fulfill their obligation to train their teaching assistants properly.

6. Some individual departments are not able to fulfill their obligation to train their teaching assistants properly.

17. Our faculty strive with dedication to ensure the proper preparation and supervision of our teaching assistants.

18. The lack of preparation and poor performance of graduate teaching assistants is frequently a cause for consternation among faculty members.

19. The lack of preparation and poor performance of graduate teaching assistants is a major cause of complaint among undergraduate students.

Responses to Items 1 & 17 were scored as follows:

Strongly Agree	Score 4
Agree	Score 3
Undecided	Score 2
Disagree	Score 1
Strongly disagree	Score 0

Responses to Items 3, 4, 5, 6, 18 & 19 were scored as
follows:

Strongly Agree	Score 0
Agree	Score 1
Undecided	Score 2
Disagree	Score 3
Strongly disagree	Score 4

Total scores for Area 2 are presented in Table 5.

No statistically significant differences were found in
the degree of satisfaction of faculty members with the
current practices in the administration of graduate teaching
assistants when compared among institutions, levels of
administration, or academic departments, except that the
English Departments replied more positively to item 1 than
did the Applied Sciences Departments at the 0.05 level of
significance.

Over 60% of respondents agreed that training programs
for graduate teaching assistants were adequate (item 1),
that English was a frequent problem in classes taught by
foreign teaching assistants (item 3), that some individual
departments do not fulfill their obligations for proper

Table 5.

Area 2 Scores

Administrative Level	Cases	Mean Score	Standard Deviation
Department	27	16.86	3.12
School	21	16.86	4.34
Institution	3	12.67	5.86
Total	51	16.61	3.87

Institution	Cases	Mean Score	Standard Deviation
Appalachian State	6	13.67	4.84
East Carolina	6	17.67	4.55
North Carolina Central	2	18.00	5.66
North Carolina State	4	15.00	4.24
UNC Chapel Hill	6	16.52	3.21
UNC Charlotte	7	15.29	4.23
UNC Greensboro	6	17.00	1.67
UNC Wilmington	6	18.50	2.88
Western Carolina	7	17.29	3.55

Academic Discipline	Cases	Mean Score	Standard Deviation
Biology	7	17.7	3.5
Chemistry	8	17.3	3.2
Education	5	15.8	4.3
English	5	15.6	2.7
Music	4	15.0	3.9
Technology, Engineering & Applied Sciences	3	14.7	4.5

Note. A low score indicates little satisfaction with the existing system for administering graduate teaching assistants. A high score indicates great satisfaction with the system.

training (item 5), and that faculty members strived with dedication to ensure proper preparation of teaching assistants (item 17). Similarly, more than 60% disagreed with item 4 which suggested that teaching assistants let their research intrude on their teaching, with item 18 that lack of preparation of teaching assistants was frequently a consternation among faculty members, and item 19 that this lack was a frequent cause for complaint among faculty members. For Item 7, which suggested that some individual departments were unable to fulfill their obligation to train their teaching assistants properly, the results were spread across the spectrum, the average being "undecided", with no statistically significant correlation to institutions or departments.

One English department was justifiably satisfied with their program for training graduate teaching assistants. In the first year the assistant is required to take two courses in teaching English and perform tutoring in the Writing Lab. During the second year the assistant is given complete charge of a section of a freshman class, but is supported by regular training sessions with the Director of Composition, mentoring by a faculty member, and regular observations followed by discussions of class performance.

The internal consistency of this study was monitored by correlating the answer given to item 1 on the adequacy of training programs with answers given other sections of the instrument. Correlation with the item in the factual section requesting information about the frequency with which training extends beyond informal consultations with the supervising faculty member (Factual item 3, discussed under Area 1) was good ($r = 0.394$, $p = 0.004$). However, correlation with the question concerning the publication of a handbook was far poorer ($r = 0.194$, $p = 0.169$). A similar correlation was attempted between item 18 concerning consternation of faculty members about the lack of training of assistants, and whether or not a handbook is provided. There was no statistically significant correlation ($r = 0.001$, $p = 0.996$).

Components of an Ideal System. The items scored together in Area 3 concerned the desirability of including certain factors in the standards met by, and training given to, teaching assistants. Items scored in this area reflected the ideal situation; they were:

> 2. Training assistants in pedagogy is unnecessary provided that they are competent in subject matter.

3. The English language is frequently a major problem in classes taught by foreign graduate assistants.

10. Teaching assistants should be required to take a semester/quarter long training program before being allowed to teach.

11. Teaching assistants should be required to meet specific academic proficiencies before being allowed to teach.

12. Teaching assistants should be required to meet certain pedagogical proficiencies before being allowed to teach.

13. Teaching assistants should be required to meet specific proficiencies in English communication before being allowed to teach.

14. Teaching assistants should be required to meet certain pedagogical proficiencies during the first semester of teaching.

15. Potential performance as a teacher should be of paramount importance in selecting teaching assistants.

Responses to Item 1 were scored as follows:

Strongly Agree	Score 0
Agree	Score 1
Undecided	Score 2
Disagree	Score 3
Strongly disagree	Score 4

Responses to Items 3, 10, 11, 12, 13, 14 & 15 were scored as follows:

Strongly Agree	Score 4
Agree	Score 3
Undecided	Score 2
Disagree	Score 1
Strongly disagree	Score 0

The total scores for Area 3 are given in Table 6.

Table 6.

Area 3 Scores

Administrative Level	Cases	Mean Score	Standard Deviation
Department	28	22.2	4.8
School	21	22.9	2.4
Institution	3	25.3	5.8
Total	52	22.7	4.1

Institution	Cases	Mean Score	Standard Deviation
Appalachian State	6	24.2	5.0
East Carolina	6	22.5	4.0
North Carolina Central	2	24.0	4.4
North Carolina State	4	23.8	2.2
UNC Chapel Hill	6	22.5	5.1
UNC Charlotte	7	24.3	4.0
UNC Greensboro	6	21.3	4.1
UNC Wilmington	6	20.5	5.5
Western Carolina	7	22.2	2.3

Academic Discipline	Cases	Mean Score	Standard Deviation
Biology	7	21.7	3.7
Chemistry	8	19.7	4.8
Education	5	25.4	2.3
English	6	26.7	2.9
Music	4	22.8	6.0
Technology, Engineering & Applied Sciences	3	22.3	3.1

Note. A low score indicates a preference for a limited system for administering graduate teaching assistants. A high score indicates a preference for a more comprehensive system of training and supervision.

The Area 3 scores do not show any statistically significant variation by the Tukey procedure when grouped by institution or administrative level. English departments scored higher than Chemistry departments at the 0.05 level using the Tukey procedure.

None of the individual items in Area 3 showed a statistically significant variation among institutions, or administrative levels. There was a general disagreement with the statement "Training assistants in pedagogy is unnecessary as long as they are competent in subject matter" in item 2, and an agreement with item 3, that foreign graduate assistants introduce a language problem. Although most respondents tended to disagree with the concept of a semester/quarter long training program before starting to assist, the three respondents at the institutionwide level were slightly in favor. There was strong, universal agreement with the requirement of academic proficiencies (item 11 - average score 3.4), but weaker agreement with item 12 concerned with pedagogical proficiencies being demonstrated before being allowed to teach (average score 2.8), except at the University of North Carolina at Greensboro (average score 3.3). There was very slightly more agreement with the concept of requiring proficiency in pedagogy during the first semester of teaching (item 14 - average 2.9). A requirement for proficiency in English

communication was supported more strongly (item 13 - average score 3.4). Few respondents disagreed with the statement in item 15 that "potential performance as a teacher should be of paramount importance in selecting teaching assistants".

There were statistically significant differences among departments on certain of the items included in Area 3. On item 10, referring to a quarter/semester long training program before teaching began, the English and Education departmental totals were higher than the Chemistry Department total at the 0.05 level or better using the Tukey method, and the English score was also significantly higher than the Biology and Applied Sciences totals by the same measure. On item 12 English was again significantly higher than Chemistry in supporting the requirement of pedagogical proficiencies before assisting begins. On the importance to be placed on potential performance as a teacher the Education Departments scored highest, then English, Music and Biology; all were significantly higher than Chemistry.

Several of the factors which were given in comments as reasons for the absence of components from training programs in discussion of the first research question, were also cited as pertinent to any ideal program to which a particular department might aspire. Such comments as "Most TA's don't teach," and "Ours are already certified

teachers," were joined by "[Preparation and supervision of teaching assistants] are not a faculty responsibility." At the other end of the scale, one respondent pointed out that training needed to be concerned with such topics as sexual harassment etc., not just pedagogy.

Correlations of individual items in Area 3 with items from the factual section of the instrument yielded mixed results. Factual item 10 enquired whether graduate students had to meet standards of pedagogy established by the academic department before they were allowed to teach. It yielded a positive correlation ($r = 0.270$, $p = 0.053$) with item 15 in Area 5 which affirms that potential performance as a teacher should be of paramount importance in selecting teaching assistants. However, when the answers to factual item 3 concerning the extent to which training went beyond informal consultations with a supervisor were correlated with the same item 15, a negative correlation was obtained ($r = -0.268$, $p = 0.057$). Again, a negative correlation was obtained between item 12 on the need for assistants to meet pedagogical proficiences and factual item 8 on the holding of regular training meetings, this, however, was at a statistically less significant level ($r = -0.238$, $p = 0.096$).

Scores on Area 3 naturally had a high negative correlation with those on Area 2 (r = - 0.385, p = 0.005 - see Appendix E, figure 2), since those showing the highest aspirations for ideal administrative procedures in Area 3 were least satisfied with existing procedures as shown by their low score in Area 2. No statistically significant correlation was found between Area 3 and Area 1 (r = - 0.031, p = 0.829), but Area 2 did correlate to Area 1 (r = 0.300, p = 0.033 - see Appendix E, figure I).

Research Question 3:   The Involvement of the Institution

The degree to which the institution, as opposed to its academic subdivisions such as departments, is involved in the administration of the graduate teaching assistants is considered by grouping the data into Areas 4 and 5. Area 4 concerns the role of the department, and Area 5 the role of the institution.

The items compiled to form Area 4 are:

2. Is such training the responsibility of the individual academic department employing the assistant?

4. Is training in pedagogy available to graduate teaching assistants on a universitywide basis?

9. Do graduate students have to meet academic standards established by the academic department before they can assist in teaching courses?

10. Do graduate students have to meet standards of pedagogy established by the academic department before they can assist in teaching courses?

11. Do foreign graduate students have to meet standards of English proficiency established by the <u>academic department</u> before they can start work as teaching assistants?.

12. Is the offer of a teaching assistantship or fellowship made by the <u>academic department</u> in which the graduate student will be teaching?

16. Does <u>the university</u> offer teaching assistantships/fellowships to prospective students without submitting their qualifications to <u>a specific academic department</u> for approval and acceptance?

18. Does <u>the Graduate School</u> have a role in the training in pedagogy of graduate teaching assistants?

Responses to Items 2, 9, 10, 11 & 12 were scored as follows:

No, Never	Score 0
Yes, about 1/4 the time	Score 1
Yes, about half the time	Score 2
Yes, About 3/4 the time	Score 3
Yes, in all cases	Score 4

Responses to Items 4, 16 & 18 were scored as follows:

No, Never	Score 4
Yes, about 1/4 the time	Score 3
Yes, about half the time	Score 2
Yes, About 3/4 the time	Score 1
Yes, in all cases	Score 0

The total scores for Area 4 are given in Table 7.

Statistically significant differences are seen among institutions, but not among departments. Although the institutional administrative level average score is significantly below those for the school and the departmental levels, this appears to be due to the disproportionate effect of an outlier on the small sample, and will be ignored. (See Appendix E, figure 5)

Table 7.

Area 4 Scores

Administrative Level	Cases	Mean Score	Standard Deviation
Department	28	26.77	3.14
School	21	26.36	3.34
Institution	3	20.33	3.79
Total	52	26.23	3.52

Institution	Cases	Mean Score	Standard Deviation
Appalachian State	6	21.97	4.38
East Carolina	6	28.62	1.46
North Carolina Central	3	26.33	1.53
North Carolina State	4	25.25	0.96
UNC Chapel Hill	6	23.67	3.01
UNC Charlotte	7	26.43	3.69
UNC Greensboro	6	27.17	4.02
UNC Wilmington	6	28.28	2.76
Western Carolina	7	27.99	2.24

Academic Discipline	Cases	Mean Score	Standard Deviation
Biology	7	24.86	2.97
Chemistry	8	27.71	2.88
Education	5	29.00	1.73
English	6	28.48	1.08
Music	4	24.70	4.61
Technology, Engineering & Applied Sciences	3	25.67	5.51

Note. A low score indicates little involvement of the individual department in the system for administering graduate teaching assistants. A high score indicates a high degree of involvement.

There was a general agreement among respondents that the training of graduate teaching assistants was the concern of the individual department (Item 2). It was similarly agreed that assistants had to meet academic standards established by the department before commencing their duties (Item 9). The academic department was identified by 52 out of 53 respondents as the administrative level where the offer of an assistantship was made to a graduate student on all occasions (Item 12). Only two individual respondents answered positively to the suggestion that the institution might offer assitantships to prospective students without submitting their qualification to the appropriate academic department for approval and acceptance (Item 16). Item 10 concerning whether standards of pedagogy were established by the department, and required of perspective graduate assistants, brought forth a full range of responses. There was, however, no statistically significant relationship between these responses and the different institutions; but a weak relationship to academic department emerged, Biology Departments giving the lowest responses on average, and Education and English the most positive.

Statistically significant differences between responses to individual items in this Area were found for institutions, but not for academic departments or administrative levels. The University of North Carolina at

Chapel Hill and North Carolina State University averaged higher on Item 4 concerning the availability of training in pedagogy for graduate assistants on an institutionwide basis with a greater than 0.05 significance level using the Tukey test. Responses from Appalachian State University indicated at a similar level of significance that the Graduate School there takes a role in the training of graduate assistants in pedagogy (Item 18). A less than statistically significant difference indicated that a similar situation may exist at the University of North Carolina at Charlotte. A comment from a third institution noted "The Graduate School allocates TA's to departments and handles their contracts." Items 9 and 11 also showed less than statistically significant differences among institutions. East Carolina, North Carolina State and The University of North Carolina at Wilmington averaged higher than Appalachian State University and North Carolina Central University on the requirement by the departments of academic standards for assistants (Item 9). Western Carolina University and North Carolina State University provided higher responses on average to item 11 concerning the existence at the department level of standards of English proficiency for foreign assistants, than did Appalachian State University.

Institutional Involvement. The items concerning the involvement of the institution with the administration of

Graduate teaching assistants which are grouped as Area 5 are given below:

4. Is training in pedagogy available to graduate teaching assistants on a <u>universitywide</u> basis?

13. Do graduate teaching assistants have to meet <u>academic standards</u> established by <u>the</u> <u>university</u> before they can assist in teaching courses?

14. Do graduate teaching assistants have to meet <u>standards of pedagogy</u> established by <u>the university</u> before they can assist in teaching courses?

15. Do foreign graduate teaching assistants have to pass a test of English proficiency prescribed by <u>the university</u> before they can assist in teaching courses?

16. Does <u>the university</u> offer teaching assistantships/fellowships to prospective students without submitting their qualifications to <u>a specific academic department</u> for approval and acceptance?

17. Does the <u>Graduate School</u> have a role in the recruitment of graduate teaching assistants, other than its regulation of their admission to and completion of graduate study?

18. Does <u>the Graduate School</u> have a role in the training in pedagogy of graduate teaching assistants?

19. Does <u>the Graduate School</u> have specific standards of pedagogy which have to be met by teaching assistants?

Responses to each item in Area 5 were scored as follows:

No, Never	Score 0
Yes, about 1/4 the time	Score 1
Yes, about half the time	Score 2
Yes, About 3/4 the time	Score 3
Yes, in all cases	Score 4

The total scores for this area are given in Table 8.

Table 8

Area 5 Scores

Administrative Level	Cases	Mean Score	Standard Deviation
Department	28	6.89	3.09
School	21	10.83	4.29
Institution	3	9.67	2.89
Total	53	8.68	4.06

Institution	Cases	Mean Score	Standard Deviation
Appalachian State	6	12.38	3.10
East Carolina	6	11.00	4.60
North Carolina Central	3	8.33	6.51
North Carolina State	4	8.00	4.24
UNC Chapel Hill	6	7.68	3.21
UNC Charlotte	7	9.43	4.28
UNC Greensboro	6	8.67	1.63
UNC Wilmington	6	3.50	2.17
Western Carolina	7	8.26	3.95

Academic Discipline	Cases	Mean Score	Standard Deviation
Biology	7	6.14	2.91
Chemistry	8	6.50	3.12
Education	5	10.00	5.24
English	6	7.47	2.63
Music	4	9.33	3.80
Technology, Engineering & Applied Sciences	4	9.25	4.11

Note. A low score indicates little involvement of the institution in the system for administering graduate teaching assistants. A high score indicates a high degree of involvement.

Where Area 4 was concerned with the department's share
of the responsibility for the administration of graduate
assistants, Area 5 looks at the institution's share. Area 5
contains items 4, 16 and 18, which were also in Area 4, but
in Area 5 the response "Yes, in all cases" scores 4, whereas
in Area 4 it scored 0.

The total scores on Area 5 are related to the
institutions from which they come at the 0.05 level of
significance or better using the Tukey Test. The highest
score, most involvement of institutionwide administration,
is seen at Appalachian State University, the next at East
Carolina, then the University of North Carolina at
Charlotte; significantly lower than these three is the
average total score at the University of North Carolina at
Wilmington.

As noted in Area 4, North Carolina State University and
the University of North Carolina at Chapel Hill scored
significantly higher on Item 4, and Appalachian State
University significantly higher on Item 18. Item 16
received a negative response on all campuses.

There was also a universally negative response to item
19, "Does the graduate school have specific standards of
pedagogy which have to be met by graduate teaching

assistants?" A slightly less uniform, but still distinctly
negative response was given concerning the role of the
graduate school in recruitment (item 17).

There were statistically significant differences among
campuses on items 13 and 14 at the 0.05 level or better
(Tukey). Item 13 asks about the institution's role in
establishing academic standards for teaching assistants;
The University of North Carolina at Greensboro and
Appalachian State University scored significantly higher
than the University of North Carolina at Wilmington on this
item. East Carolina University scored significantly higher
when asked about the institution's requiring standards of
pedagogy (Item 14). Item 15 showed less than statistically
significant differences between the University of North
Carolina at Charlotte where foreign assistants have to take
a test of English proficiency proscribed by the institution
on almost all occasions, and North Carolina Central
University and the University of North Carolina at Chapel
Hill where this is seldom the case. There appeared to be a
confusion among respondents as to whether item 15 referred
to a screening test, such as TOEFL, used for admission, or
an additional special test relating to the graduate
student's professed wish to assist in teaching.

The total scores for Area 5, and the scores on individual items, were not significantly related to academic departments. However, a statistically significant relationship (0.01, Tukey) was displayed between Area 5 total score and the administrative level of the respondent; those at the school level having the higher totals. These had their origin in a statistically significant difference on item 15, concerning foreign assistants, and a less than statistically significant difference on the establishment of standards of pedagogy (Item 14).

Whereas Area 4 described the role of the department in the administration of graduate teaching assistants, Area 5 described the role of the institution. Both of these areas showed a statistically significant relationship to institutions from which the responses were returned. Hopefully, this reflected different practices in administering graduate teaching assistants at these institutions. The institutions scoring high on Area 4 were East Carolina University, Western Carolina University and The University of North Carolina at Wilmington. The University of North Carolina at Wilmington scored lowest on Area 5, where Appalachian State University and East Carolina scored highest. Appalachian State University was the low scorer on Area 4. These behaviors were simply not related.

Recruitment and Selection. The items examined in detail in Areas 4 and 5 provide a description of who is responsible for the recruitment and selection of graduate teaching assistants. Items 12, 16, and 17 enquired about recruitment, and revealed that assistantships were nearly always offered by departments (item 12, 52 out of 53 responses), and almost never by institutions without the approval of the appropriate department (item 16, 51 negative responses out of 53). Thirty-nine responders indicated that the graduate school had no role in recruitment beyond regulation of the admission to and completion of graduate study; however, 14 others indicated various degrees of involvement (item 17).

Three aspects of the selection process were the subject of items in the instrument; academic standards, standards of pedagogy, and standards of English proficiency for foreign students. Items 13 and 9 were concerned with academic standards and whether they were established at the departmental level or at the institutional level. Forty-nine of 51 respondents indicated that academic standards were established at either the departmental, or the institutional level, or both. Only two respondents indicated that such standards were not always present. Similarly, in items 15 and 11, respondents indicated that some standard of English proficiency was required of foreign

graduate students before they could become teaching assistants, though whether this was any greater than that required for admission to classes was not the subject of an item. The subject of standards of pedagogy, and who establishes them was the subject of items 11, 15 and 19. The last of these concerned the involvement of the graduate school; 47 out of 51 respondents said that it had no involvement! As one respondent stated "The Graduate School knows little about teaching or teacher training . . . . . Teaching assistants should be trained and evaluated by the College of Education." The other two questions dealt with the roles of the department and of the institution in establishing such standards; 20 respondents were willing to say that one or the other administration, or a few instances both, had fulfilled this obligation at their institution.

There was no statistically significant correlation of Area 4 with Area 3 ($r = 0.059$, $p = 0.676$), but it did correlate with Area 1 ($r = 0.315$, $p = 0.023$ - see Appendix E, figure 3), and Area 2 ($r = 0.361$, $p = 0.009$ - see Appendix E, figure 4). Area 5 did not correlate significantly with Areas 1 ($r = 0.019$, $p = 0.894$), 2 ($r = -0.040$, $p = 0.778$), 3 ($r = 0.018$, $p = 0.901$) or 4 ($r = -0.093$, $p = 0.510$).

Research Question 4: Reaction to Institutionwide Program

What are the perceptions and opinions of faculty
members concerning the desirability of institutionwide
programs for recruiting and training graduate teaching
assistants? Items relating to this question were totalled
as Area 6, they are as follows:

5. Some individual departments do not fulfill their
obligation to train their teaching assistants properly.

6. Some individual departments are not able to fulfill
their obligation to train their teaching assistants
properly.

7. Universitywide training programs for graduate
teaching assistants in basic pedagogy could/do offer
great saving in resources.

8. Universitywide training programs for graduate
teaching assistants in basic pedagogy could/do produce
substantial improvements in teaching standards.

9. Universitywide training programs for graduate
teaching assistants in basic pedagogy should be
established/expanded at this institution.

16. The awarding of teaching assistantships and
fellowships should be the sole prerogative of the
academic department which is to employ the graduate
student concerned.

20. The Graduate School should be the authority which
specifies and monitors the training and proficiency
required before an assistant is allowed to teach.

21. Specifying and monitoring the training and/or
proficiency of teaching assistants should be the sole
prerogative of the academic department which employs
the graduate students concerned.

Responses to items 16 & 21 were scored as follows:

        Strongly Agree   Score 0
        Agree   Score 1
        Undecided   Score 2
        Disagree   Score 3
        Strongly disagree   Score 4

Responses to items 5, 6, 7, 8, 9, & 20 were scored as follows:

        Strongly Agree   Score 4
        Agree   Score 3
        Undecided   Score 2
        Disagree   Score 1
        Strongly disagree   Score 0

Total scores for Area 6 are given in Table 9.

The mean total scores on Area 6 for institutions, administrative levels and academic departments are given in Table 9. Differences among institutions, and differences among academic departments were not statistically significant, but a statistically significant difference was present among the administrative levels. Department level totals were lower on Area 6 than school level at a significance level of 0.01, and lower than institution level at a significance level of 0.05 (Tukey).

There were no statistically significant differences among institutions on responses to individual items. Academic departments only showed a statistically significant variation on item 21 where administrators in the Applied

Table 9.

<u>Area 6 Scores</u>

Administrative Level	Cases	Mean Score	Standard Deviation
Department	27	12.3	4.9
School	21	16.9	5.3
Institution	3	21.0	6.1
Total	51	14.7	5.7

Institution	Cases	Mean Score	Standard Deviation
Appalachian State	6	17.5	7.0
East Carolina	6	14.8	4.9
North Carolina Central	2	17.5	2.1
North Carolina State	4	17.3	9.4
UNC Chapel Hill	6	14.3	4.6
UNC Charlotte	7	17.6	4.9
UNC Greensboro	6	13.2	4.2
UNC Wilmington	6	11.7	6.9
Western Carolina	7	11.0	4.1

Academic Discipline	Cases	Mean Score	Standard Deviation
Biology	7	14.1	4.8
Chemistry	8	8.9	4.0
Education	5	15.4	5.7
English	5	11.6	6.4
Music	4	14.2	3.6
Technology, Engineering & Applied Sciences	3	17.7	6.0

<u>Note</u>. A low score indicates little favor for institutionwide programs for recruiting and training graduate teaching assistants. A high score indicates a preference for such programs.

Sciences Departments favored departmental control far less than did those in other departments, particularly Chemistry (significance 0.05, Tukey). This may be a result of the fact that the subjects chosen to represent administrators in the Applied Sciences, Engineering and Technology area were deans of the appropriate schools, not heads of departments.

Items 5 through 9 sought to elicit opinions about departmental programs as compared to institutionwide programs. All levels agreed with the statement that some departments do not fulfill their obligation to train their assistants properly (Item 5), but those at the school, and institution levels agreed more strongly. Institution level administrators were also stronger than departmental level administrators in their agreement that some departments were not able to fulfill this obligation (Item 6), but those administering schools disagreed. On item 7, concerning the savings in resources offered by universitywide training programs, there was an agreement, on average, from all groups, but institution level personnel were more strongly in agreement than school level personnel, who in turn were ahead of departmental level personnel. This same pattern was seen in item 8 concerning improvements in teaching standards from institutionwide training programs, and item 9 on the desirability of such programs. One administrator

commented that institutionwide programs should supplement, but not replace departmental programs.

There were statistically significant differences on Items 16, 20 and 21 by the Tukey method at the 0.05 level or better. On average, departments agreed strongly that they should be the sole awarder of teaching assistantships (Item 16), and the school and institutionwide administrators agreed, though with less enthusiasm. On the other hand, every level of administration disagreed with the suggestion in item 20 that the graduate school should be charged with the specification and monitoring of training and proficiencies for prospective graduate teaching assistants. On the final item, number 21, there was total disagreement. Departmental administrators agreed strongly that the monitoring and specifying of training and proficiency should be solely their prerogative. Institution level personnel disagreed with this statement. School level administrators were, on the average, undecided.

Total scores on Area 6 did not correlate significantly with those on Area 1 ($r = -0.219$, $p = 0.122$), but showed direct/positive statistically significant correlations with Areas 5 ($r = 2.632$, $p = 0.011$ - see Appendix E, figure 8) and 3 ($r = 2.450$, $p = 0.018$ - see Appendix E, figure 9), and inverse/negative correlations with Areas 2 ($r = -4.338$, $p = $

0.000 - see Appendix E, figure 6) and 4 (r = -2.993, p =
0.004 - see Appendix E, figure 7).

A close to statistically significant negative
correlation was obtained between item 9, asserting the
desirability of establishing or expanding institutionwide
programs, and the existence of a handbook for graduate
assistants (r = - 0.264, p = 0.061). An even more
statistically significant negative relationship related item
8 on the improvements which flow from institutionwide
programs to factual item 8 on the holding of regular
training meetings (r = - 0.392, p = 0.005). It appears that
those providing the least complete training are most in
favor of institutionwide programs.

Centers for Teaching and Learning

Enquiries were sent to the Centers for Teaching and
Learning at the nine institutions and three replies were
received. Two centers replied that they were not involved
in any way with training graduate teaching assistants,
despite the fact that on the campus served by one of them
the faculty were very complementary about the program
"offered by the center for teaching and learning". The
third center to reply claimed to have been involved with the
training of graduate teaching assistants for the past ten
years, and to offer orientation workshops, but the only

department at that institution to mention institutionwide cooperation indicated the Graduate School and the School of Education as its organizers. A senior administrator on the same campus indicated that institutionwide training in pedagogy was "beginning now!"

Summary

Ninety-two surveys were sent out in this study, and seventy-four replies were received. Fifty-four of these respondents indicated that they did indeed administer programs which employed graduate teaching assistants, and completed the instrument sufficiently for it to be included in the analysis of data. Twenty of the 28 departments replying employed 5 or more assistants. Assistants were most frequently employed doing objective grading, supervising laboratories, tutoring individuals, and recording grades and absences.

The first question addressed in this study concerned the extent to which there is a structured system for the recruitment, training and supervision of graduate teaching assistants at each of the institutions within the North Carolina University System. It was discovered that in most instances the graduate assistants do receive some form of training beyond informal meetings with individual faculty members. This training is given most often in the form of a

workshop immediately before the semester, and/or regular
meetings during the period of teaching. In a few instances
observation/videotaping is used to evaluate and improve
teaching performance. Most institutions evaluate foreign
graduate students using TOEFL, but often no further testing
or remediation is given. In some instances the graduate
school takes a role in the recruitment of assistants, but in
almost every instance individual departments select their
own assistants, and offer them assistantships. This
behavior did not differ significantly from one institution
to another, but statistically significant differences did
occur between the academic disciplines. English departments
scored highest, followed by Biology, then Chemistry and
Applied Science. The low scoring departments were Education
and Music.

The second question addressed was "What are the
perceptions and opinions of faculty members as to the type
of training which should be given to prospective graduate
teaching assistants?" Whatever their present program,
respondents generally considered it adequate, though there
was a positive correlation between satisfaction (Area 2) and
adequacy (Area 1 - see Appendix E, figure 1). Most
respondents favored some instruction in pedagogy, but placed
academic standards well ahead of pedagogical ones. There
was general support for a requirement of proficiency in

English communication for foreign assistants. There was no statistically significant difference discerned among institutions on this research question, but when asked what training should be given, English departments scored significantly higher than did chemistry departments. There was a negative correlation between this score for what training respondents believed should be given (Area 3) and their satisfaction with the present situation (Area 2 - see Appendix E, figure 2).

In the third research question the involvement of the central administration of the institution, as compared to that of its individual departments, in the recruitment, training and supervision of graduate teaching assistants was assessed at each of the institutions. In all academic areas, and at all institutions the primary responsibility for administering graduate teaching assistants lies with the department employing them. There are statistically significant differences among institutions in the degree to which institutionwide programs have involved themselves in setting standards for assistants, both academic and pedagogical. The degree to which departments controlled their own programs (Area 4) correlated positively with the adequacy of those programs (Area 1 - see Appendix E, figure 3), and their satisfaction with those programs (Area 2 - see Appendix E, figure 4).

The final research question was "What are the
perceptions and opinions of faculty members as to the effect
produced by any such involvement of the central
administration in the recruitment, training and supervision
of graduate teaching assistants?" Responses showed a
statistically significant variation depending on the
administrative level of the respondents. Department level
administrators were less enthusiastic concerning
institutionwide programs than were school level
administrators, and they were less enthusiastic than were
institution level administrators. All agreed, however, that
the awarding of assistantships should remain with the
department, and that the graduate school was not the
appropriate agency to monitor and control training. Scores
on the desirability of institutionwide programs (Area 6)
correlated positively with the present degree of
institutional involvement (Area 5 - see Appendix E, figure
8), and what training respondents believed should be given
(Area 3 - see Appendix E, figure 9). Area 6 - the
desirability of institutionwide programs - also correlated
negatively with the satisfaction of respondents with their
present programs (Area 2 - see Appendix E, figure 6), and
the present degree of departmental autonomy in the area of
the administration of graduate teaching assistants (Area 4 -
see Appendix E, figure 7).

CHAPTER V

CONCLUSIONS

The title of this study is the role of selected
administrative units in the recruitment, training, and
supervision of graduate teaching assistants on the campuses
of the University of North Carolina. For many years, a
large percentage of the courses at American universities
have been taught by graduate teaching assistants. These
assistants have varied greatly in their knowledge of subject
matter, their natural ability to teach, and the training
which they have received. Traditionally, the training of
these assistants has been the concern of the department in
which they teach. Recently a concern for the poor teaching
and learning which sometimes result, coupled with an influx
of international teaching assistants, has led many
universities to institute training programs on an
institutionwide basis. The extent to which this change has
reached the North Carolina system, and the reaction of
administrators to it are the topics of this study.

The study was accomplished by surveying administrators
at those institutions within the University of North
Carolina System, where substantial numbers of assistantships

are awarded. At each of the nine such institutions, four
surveys were sent to heads of departments; four more were
sent to deans of schools or colleges; and one was sent to
the vice chancellor for academic affairs.

Of ninety-two surveys sent out, 74 (79.5%) were
returned, 20 of which were not completed. The answers given
on the remaining 54 (58.7%) were transcribed to a spread
sheet as numerical scores, and analyzed by a computer
statistics program (Hicken & Glass, 1991). The responses to
questions were grouped according to the area of the problem
with which they dealt; total scores for these areas were
used in many of the statistical procedures. The two
procedures used were correlation, and the Tukey Honestly
Significant Difference Test, incorporating Kramer's
modification for unequal n's.

The first research question concerned the extent to
which a structured system for the administration of graduate
assistants was in place. All departments completing the
survey reported having some system for supervising and
training teaching assistants, but the details and extent of
these systems varied greatly. They did not show a
statistically significant difference among the institutions,
but did differ with statistical significance among academic
disciplines ($p < 0.01$). Recruitment of teaching assistants

was found to be a departmental prerogative in almost every instance.

The second research question sought the perceptions and opinions of faculty concerning the type of training that should be given to teaching assistants. In general, respondents were satisfied with the program currently operating in their departments; those with more complete programs registering greater satisfaction. Most respondents indicated that instruction in pedagogy should be included in the training given to assistants, but did not consider that standards of pedagogy should be rated as highly as academic standards in the selection and hiring of assistants. It was also widely agreed that foreign assistants should be tested for their English proficiency.

The third research question asked about the role of the department, compared to the role of the institution, in the recruitment, training and supervision of graduate teaching assistants. At all institutions surveyed, and in every department providing data, the primary responsibility for these administrative functions rests with the department. The departmental/institutional balance responsible for setting standards, and providing training for assistants showed a statistically significant difference among institutions ($p < 0.05$). Both the satisfaction that

departments expressed with their programs, and the adequacy of those programs correlated positively with the degree to which departments controlled their own programs.

The fourth research question addressed the opinions of faculty members concerning the involvement of the institution in the recruitment, training and supervision of graduate teaching assistants. Administrators at the institutional level favored institutional involvement in training more than did the deans of school, and far more than did department heads. Those respondents who had high ideals as to what training should be given, and/or were dissatisfied with the training presently given by their departments, were more likely to favor institutional involvement; as were those who reported the existence of such involvement at their institutions.

Discussion

The First Research Question. To what extent is there a structured system for the recruitment, training, and supervision of graduate teaching assistants at the institutions within the North Carolina University System?

No statistically significant difference was found among institutions when they were compared on the group of questions termed Area 1, which were concerned with the

extent of the training and supervision provided for graduate
teaching assistants. However, each institution yielded a
range of scores, showing that not only do programs ranging
from minimal to exemplary exist within the North Carolina
University System, they sometimes coexist at the same
institution. Statistically significant differences were
found among the academic disciplines (p < 0.01), even though
a range of programs was found in each.

Previous studies in this area have described the
variation among different academic disciplines at a single
institution (Nowlis, Clark, & Rock, 1968), among departments
of a particular discipline at different institutions
(Lumsden, Grosslight, & Loveland, 1988), and among
departments with different disciplines at different
institutions (Nowlis, Clark, & Rock, 1968; Stockdale &
Wochok, 1977; Diamond & Gray, 1987). Since Diamond and Gray
collected data from a number of academic departments at each
of eight institutions, their findings bear comparison to the
present study. Although they did not address the area of
training, nor look for similarities or differences among the
institutions, their findings are in general agreement with
those of the present study in that they found that support
and supervision of teaching assistants varied greatly from
department to department on a given campus (p. 60).

The finding of the present study that the extent to which training and supervision are provided varies with academic discipline, and that a similar range of such provision exists at each institution, might be a result of the membership of all these institutions in the North Carolina University System. This system, however, is not homogeneous; graduate programs are found at master's-only institutions, doctorate granting institutions, and research institutions. At master's-only institutions graduate students assist for less time, and are given less responsibility, so it would be reasonable to expect that they would receive different training, but this expectation has not been born out by the present study. A further reason why membership in the North Carolina University System is unlikely to confer uniqueness on these institutions lies in its origin, which is a recent confederation of previously independent institutions. Alternatively it is possible that the relationship between extent of training and supervision, and academic discipline or department might extend beyond North Carolina, and be related to the structure of the disciplines of the departments involved.

Variations in the total scores on those questions grouped as Area 1, which describe the extent to which training and supervision are provided, were also found among

administrative levels. The statistically significant difference between institutionwide personnel and departmental personnel was apparently due to the unwarranted importance assumed by an outlier because the sample of institutionwide personnel consisted of only three respondents. However, even ignoring this outlier, institutionwide personnel reported lower availability of training and supervision than did school or college level personnel, who, in turn, reported lower availability than did departmental personnel. This variation might have been due to lack of knowledge on the part of the more senior administrators, who are more remote from the day-to-day operation of such programs; or to their replies being framed to encompass a variety of practices; but it also might reflect an uncontrolled interaction of variables. Because most of the deans surveyed were from schools other than the school of Arts and Sciences, while most of the department heads were from departments within this school; any differences appearing between deans and department heads might be attributable to the relationship found to exist between extent of training and academic discipline! In any event, the average score on Area 1 by deans of schools of arts and sciences (16.00) is extremely close to that of deans from all types of schools (15.55), so any interaction of variables had only a marginal effect.

The Second Research Question. What are the perceptions and opinions of faculty members as to the type of training which should be given to prospective graduate teaching assistants? Two groupings of questions were used in answering this research question. Area 2 addressed the satisfaction of respondents with their current system for training graduate teaching assistants, and Area 3 asked them what training they thought should be given to prospective graduate teaching assistants.

Generally, respondents were satisfied with their present programs; no statistically significant difference being found among Area 2 total scores for institutions, administrative levels, or academic disciplines. However, these scores correlated positively ($r = 0.300$) with Area 1 scores (extent of program), showing that those with more extensive programs reporting greater satisfaction.

Area 3 scores, relating to the components which respondents would like to see in an ideal program, and the priorities which they put on these components, showed no statistically significant differences among institutions or levels of administration. Among academic disciplines the average total for English department respondents was significantly higher than that for chemistry departments ($p < 0.05$), this difference originating, in part, from greater

importance being placed on pedagogy by respondents in English departments, than by those in chemistry departments. Looking back to Area 1 scores (Table 3) for these two departments, it is noteworthy that English departments had by far the most extensive and adequate programs (score 26.73) with the smallest standard deviation (1.88), while chemistry departments had an average score of 16.63, with the largest standard deviation (5.58). Several English department respondents mention their assistants' involvement with writing labs or centers during training, an activity which may focus attention on the skills of pedagogy. Assistants in chemistry departments, on the other hand, usually start out their duties in laboratories, where the focus is likely to be on preparation and provision of materials, and on monitoring safety (Pickering & Kolks, 1976; Pickering, 1984; Browman et Al., 1980; Tipton & Brooks, 1980). It should also be noted that most respondents from English departments indicated that they were never involved with foreign graduate assistants with language problems; a circumstance allowing more time for concentration on teaching skills.

The Third Research Question. What is the involvement of the central administration of the institution, as compared to that of its individual departments, in the recruitment, training, and supervision of graduate teaching

assistants on each of the constituent institutions of the
University of North Carolina system? Again two groupings of
data were used to answer this question. Area 4 assessed the
degree to which administration of assistants was in the
hands of the department, and Area 5 the degree to which it
was in the hands of the institution.

Total scores for Area 4, the role of the department,
and Area 5, the role of the institution, varied with
statistical significance from institution to institution,
but not from discipline to discipline. In all cases the
score for Area 4 was much higher than that for Area 5,
indicating that primary responsibility for graduate
assistant administration lies with the department at all
institutions. Respondents from Appalachian State University
reported the greatest involvement of the institution, and
the least involvement of the departments. (It should be
noted that one faculty member at Appalachian reported an
imminent reaccreditation visit; perhaps the power of the
institution looms particularly large at such a time!) At
the University of North Carolina at Wilmington the influence
of the institution was reported to be the lowest, and that
of the departments close to the highest. Most schools lay
somewhere between these extremes (Tables 6 and 7), with
their Area 4 total about three times as large as their Area
5 total. East Carolina was unusual in that both its Area 4

and Area 5 scores were much higher than average, showing a high degree of involvement of both department and institution in the administration of the graduate teaching assistants. High scores on Area 4, departmental control, correlated positively with Area 1, extent of program, and Area 2, satisfaction with program.

In 1985, Smock and Menges commented "Comprehensive universitywide programs to help TAs become more effective teachers are an ideal still to be achieved on most campuses" (p. 23). They might well have been describing the situation found at the constituent institutions of the University of North Carolina system today. Centers for teaching and learning, and/or instructional/institutional development, exist at several institutions and provide, or claim to provide, some orientation and/or training. The graduate schools play various roles in recruitment and record keeping. The central administrations enforce academic standards for admission of graduate students, and English language standards for foreign students. However, responses suggest that only at East Carolina does an institutionwide organization exist which is making a significant contribution on a regular basis to the orientation and training of graduate teaching assistants. Even there, the situation falls far short of the cooperation between the

departments and the teaching center recommended by Smock and Menges (1985).

The present study found that institutional involvement in teaching assistant recruitment, selection, and training is greater in the perception of administrators at the school and institutionwide levels than in the perception of administrators at the departmental level. If such differences of perception exist outside the North Carolina University System, they may cast doubt on Diamond and Gray's (1987) finding that the colleges they surveyed offered institutionwide orientation and training, since they obtained their information from institutional level sources.

The positive correlations of departmental control with program extent, and faculty satisfaction support the contention by Andrews and contributors (1985) that the ownership of training programs should remain with the departments, not be assumed by the institution.

The Fourth Research Question. What are the perceptions and opinions of faculty members as to the effect produced by any such involvement of the central administration in the recruitment, training, and supervision of graduate teaching assistants? This question was addressed in part by Area 6, a group of questions canvassing faculty opinions concerning

the desirability of institutionwide programs for the recruitment, and training of graduate teaching assistants.

Statistically significant differences were not found among institutions or academic disciplines, but were found among administrative levels. Institutionwide personnel were more in favor of institutionwide programs than were school personnel, and they were more in favor than were departmental personnel. There was a positive correlation (r = 0.352) between the degree to which respondents favored institutionwide programs (Area 6), and their perception of the degree to which such programs existed at their institutions (Area 5). Those who were less satisfied with their present programs (Area 2) also favored institutionwide programs, as did those with high ideals as to what such programs should entail (Area 3).

Andrews and contributors (1985) identify, as the first step in the establishment of an institutionwide program, the interest of a powerful president or dean. The finding that persons at these more lofty levels of administration in institutions under the umbrella of the North Carolina System are more in favor of such programs may suggest the emergence of such an interest. The response at the institutional level, two vice chancellors and one faculty developer, was far too small to draw definitive conclusions, and very

biased by an outlier. However, among the deans, several displayed very strong support for institutionwide training programs for graduate teaching assistants.

The correlations of the degree to which respondents favored institutionwide programs, to their other responses are the principle findings of this study. As might be expected, those who are less satisfied with their present programs are more in favor of the emergence of institutionwide programs (Appendix E - figure 6). Those with higher ideals for training programs also favor institutionwide programs (Appendix E - figure 9), and they are likely to be the force behind new developments in this field. Those who perceive their departments as having greater control of the present program are less in favor of institutionwide programs (Appendix E - Figure 7), and those who perceive the institution as having a larger share in this control are more in favor (Appendix E - figure 8). The finding that administrators in situations where the institutionwide programs are starting to be implemented, or perceived as being implemented, are more in favor of such programs has several implications. The first is that institutionwide programs promise improvements, tangible or intangible, which address problems presently encountered by these administrators. Secondly, these programs, even at the embryonic level at which they exist on the campuses

surveyed, do deliver such improvements. Thirdly, these programs are likely to continue to expand.

Conclusions

- The recruitment, training and supervision of graduate teaching assistants at institutions within the North Carolina system is primarily the responsibility of the department employing such assistants.

- The extent of training and supervision depends more on the academic discipline of the department, than on the institution where it is located.

- Although most administrators are satisfied with their present programs, those with more complete programs are more satisfied.

- Departments which have more control over their programs have more extensive programs, and are more satisfied with those programs.

- Most respondents believe that training should include instruction in pedagogy, but that academic ability should continue to be the primary concern in hiring.

- There is a general agreement on the need to improve the English language proficiency of foreign graduate teaching assistants.

- The extent to which institutionwide programs for training have been established at these institutions is very limited, and varies from institution to institution.

- Administrators at institutions where institutionwide programs are more prevalent tend to favor such programs more than do administrators at other institutions.

- Those administrators with high ideals for training programs, and those who are less satisfied with present programs, are more likely to favor institutionwide programs.

- Administrators at the school and institution level tend to have lower opinions as to the extent of present departmental programs, to have higher opinions as to the extent of institutionwide programs, and to favor the expansion of such institutionwide programs more highly than do administrators at the department level.

Implications for Practice

The assistantship serves the same three functions as an apprenticeship. It enables the graduate students to support themselves during their studies; it provides the university with cheap instructors; and it trains the next generation of professors. The proper performance of each of these functions is desireable for the proper functioning of the graduate, and of the undergraduate, educational systems.

This avenue of employment, which finances many students' graduate studies, must not be so arduous that it impedes their research efforts and/or class work! There is

not time for the rigorous training given an education major,
but placing graduate students in a teaching role for which
they are totally unprepared can produce worry, failure, and
self-doubt which will sap the energy and time needed for
proper completion of graduate study. Only a few assistants
will flourish in the classroom without minimal training.

The use of graduate students to perform some or all of
the functions of instructors in undergraduate classes can
easily be justified by the need to keep the expense of a
college education within reasonable bounds. It may also be
argued that teaching gives graduate students confidence and
fluency in their subject, and that their presence in the
classroom provides the full-time faculty with opportunities
to perform research, and keep current in their disciplines.
All these justifications apply whether the assistant teaches
well or poorly!

Motivation to improve the quality of teaching of
assistants, to expend faculty time and resources on
training, comes from other considerations. Sometimes an
individual faculty member sees the graduate assistants as an
integral part of the mission of the department, and devotes
great energy to their training and motivation (Smock &
Menges, 1985). Sometimes an administrator, whether worried
about possible criticisms of his/her program, or motivated

by an ethical requirement, demands excellence in the
instructional program, and includes the graduate teaching
assistants (Stockdale & Wochok, 1977; Fisher, 1985; Smock &
Menges, 1985). Sometimes a program which has become
institutionalized, a necessary nuisance passed from one
department member to another, proves embarrassingly
inadequate in the light of a new problem. Recently such
problems have included the influx of international teaching
assistants (Fisher, 1985; Heller, 1986; Constantinides,
1989; Sequira & Costantino, 1989), a more diverse student
body (Chism, Cano & Pruit, 1987), and a national concern
over academic standards which is beyond the scope of the
present work.

Few writers who advocate training for assistants fail
to mention that any such training is not just being given to
a temporary transient population, but to the next generation
of faculty members (Daly, 1961; Rouse, 1984; Diamond & Gray,
1987; Sprague & Nyquist, 1989). However, since tomorrow's
faculty will probably do their teaching in someone else's
department, they are no more likely to justify attention
than are the assistants working down the hall today!
Naturally, faculty members who are opponents of such
training are always ready to assert that they did just fine
without it.

The following recommendations are made in the light of the findings of this study, and the assumption of a genuine desire to improve each of the three functions of the assistantship, enabling the graduate students to support themselves during their studies, providing the university with cheap instructors, and training the next generation of professors.

The first recommendation is the establishment of some organization responsible at the institutionwide level for supplementing the training given to teaching assistants by individual departments. This is justified by the finding that departments in some disciplines are giving very good training, while departments in others have no such tradition. It is further justified by the general agreement among respondents that international students should meet standards of English communication before being allowed to teach, and that all assistants should receive training in pedagogy. The literature describes the complexities involved in testing and improving communication of foreign assistants (Fisher, 1985; Constantinides, 1989), and in teaching pedagogy (Nowlis, Clark & Rock, 1968; Seibring, 1972; Project TEACH Staff, 1976); few departments have the specialized personnel or resources necessary to carry out these tasks.

The second recommendation is that this institutionwide agency (such as a teaching center) should leave ownership of the graduate assistant training program with their departments as suggested by Andrews and contributors (1985). This is justified by the finding that those departments which believe they have the most control over their programs have the most extensive programs, and are most satisfied with them. The teaching center can offer a smorgasbord of services, ranging from orientation and training in pedagogy, to videotaping and record keeping, making them available to any department which wants to use them, without interfering with the unique discipline-specific preparation which only that department can give.

It was found that where institutionwide programs were established and operating, they tended to have won supporters among the administration. The final recommendation is that these supporters be urged to make assistant training mandatory. As pointed out by Andrews and contributors (1985), departments which have come to rely on a teaching center for a few services, will naturally expand that reliance in time of crisis. Where formerly departments would have jealously guarded a perfunctory program, and resisted all pressure to change, accepting an expansion of the services they already receive from the teaching center provides an easier alternative.

Recommendations for Further Research

The limitations of the present work as to numbers of institutions studied, and number of replies received cry out for additional work. Can these findings be generalized beyond the North Carolina University System? Will they stand up if a larger number of subjects are included? Are other aspects of departmental administration discipline dependent?

One consequence of the small sample size used in the present study was that some academic disciplines are represented only by deans, while others responded at the departmental level. Only an additional study which controls administrative level, or academic discipline will provide unequivocal results.

The picture which has emerged from the present study is one of an embryonic system of institutionwide involvement in the recruitment, training and supervision of graduate teaching assistants at the constituent institutions of the North Carolina University System. How this embryo develops, whether it is allowed to emerge, and its first few faltering steps present us with fascinating subjects for further research.

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Appendix A

Questionnaire

This questionnaire is part of a study of the recruitment, training and supervision of graduate teaching assistants on different campuses of the University of North Carolina. The confidentiality of individual responses is guaranteed. Your assistance will be greatly appreciated. Please return this questionnaire in the stamped addressed envelope provided to: Peter Vaughan, c/o Dr. Dave Riley, Dept of Educational Administration, UNC - Greensboro, Greensboro NC 27412-5001.

Please provide the following information concerning yourself:-

Title or Position _____

Years Held ____   Sex: Male __ Female __ (Please check)

              Race: White __   Age: Under 30 __
                       Black __   30 - 40   __
            American Indian __   40 - 50   __
                   Hispanic __   50 - 60   __
                      Other __   Over 60   __

When you were a graduate student did you
serve as a graduate teaching assistant?   Yes __ No __

Were you ever responsible for
supervising and/or training graduate
teaching assistants?   Yes __ No __

Do you currently administer a program
which employ graduate teaching
assistants?   Yes __ No __

Do you have a publication/handbook which
you distribute to new/prospective
teaching assistants?
                                               Yes __ No __

Do you have any teaching experience   Yes __ No __
outside higher education?

If yes,   Level _____
Type_____

Please answer each of the following questions with respect
to the department, school or university you administer:

How many graduate students are employed to assist with
teaching in your program? (Please check)

Less than 5 _____   5 to 10 _____   More than 10 _____

With which of the following activities do graduate
assistants routinely assist? (Please check)

__ Secretarial Work   __ Materials Preparation

__ Objective Grading   __ Subjective Grading

__ Handing Out Papers   __ Supervising Laboratory

__ Tutoring Individuals   __ Student Advisement

__ Recitation/Problems   __ Recording Grades and Absences
   Session

Please answer each of the following questions by circling
the
appropriate number:
                            0 - No, Never
                            1 - Yes, about 1/4 the time
                            2 - Yes, about half the time
                            3 - Yes, About 3/4 the time
                            4 - Yes, in all cases

1. Do graduate students who are hired to
assist with face-to-face teaching, or to
supervise laboratories or recitation sections
receive any training in how to perform these
duties from any source?   0 1 2 3 4

2. Is such training the responsibility of the
individual academic department employing the
assistant?   0 1 2 3 4

3. Does this training extend beyond informal consultations with the supervising faculty member? 0 1 2 3 4

4. Is training in pedagogy available to graduate teaching assistants on a universitywide basis? 0 1 2 3 4

5. Are pedagogical courses recommended to graduate students who plan to be teaching assistants? 0 1 2 3 4

6. Is a training class or seminar required during a quarter/semester previous to commencing teaching duties? 0 1 2 3 4

7. Is a workshop or similar short period of training required immediately preceding the start of the first course in which the graduate assists? 0 1 2 3 4

8. Are regular (perhaps weekly) meetings held with groups of graduate students for training and other purposes during the courses in which they are assisting? 0 1 2 3 4

9. Do graduate students have to meet academic standards established by the academic department before they can assist in teaching courses? 0 1 2 3 4

10. Do graduate students have to meet standards of pedagogy established by the academic department before they can assist in teaching courses? 0 1 2 3 4

11. Do foreign graduate students have to meet standards of English proficiency established by the academic department before they can start work as teaching assistants? 0 1 2 3 4

12. Is the offer of a teaching ward or fellowship made by the academic department in which the graduate student will be teaching? 0 1 2 3 4

13. Do graduate teaching assistants have to meet <u>academic standards</u> established by <u>the university</u> before they can assist in teaching courses?   0   1   2   3   4

14. Do graduate teaching assistants have to meet <u>standards of pedagogy</u> established by <u>the university</u> before they can assist in teaching courses?   0   1   2   3   4

15. Do foreign graduate teaching assistants have to pass a test of English proficiency prescribed by <u>the university</u> before they can assist in teaching courses?   0   1   2   3   4

16. Does <u>the university</u> offer teaching assistantships/fellowships to prospective students without submitting their qualifications to <u>a specific academic department</u> for approval and acceptance?   0   1   2   3   4

17. Does <u>the Graduate School</u> have a role in the recruitment of graduate teaching assistants, other than its regulation of their admission to and completion of graduate study?   0   1   2   3   4

18. Does <u>the Graduate School</u> have a role in the training in pedagogy of graduate teaching assistants?   0   1   2   3   4

19. Does <u>the Graduate School</u> have specific standards of pedagogy which have to be met by teaching assistants?   0   1   2   3   4

20. Is a course in English communication recommended to the foreign graduate assistants under your administration?   0   1   2   3   4

21. Are students observed or videotaped for the purpose of evaluation during actual or simulated teaching sessions?   0   1   2   3   4

Please indicate how much you agree or disagree with each statement by circling the appropriate letter(s):

> SA - Strongly agree
> A - Agree
> U - Undecided
> D - Disagree
> SD - Strongly disagree

1. Our departmental training programs for graduate teaching assistants are adequate.

SA A U D SD

2. Training assistants in pedagogy is unnecessary provided that they are competent in subject matter.

SA A U D SD

3. The English language is frequently a major problem in classes taught by foreign graduate assistants.

SA A U D SD

4. Teaching assistants too often allow their research to intrude upon their time to such an extent that their teaching suffers.

SA A U D SD

5. Some individual departments do not fulfill their obligation to train their teaching assistants properly.

SA A U D SD

6. Some individual departments are not able to fulfill their obligation to train their teaching assistants properly.

SA A U D SD

7. Universitywide training programs for graduate teaching assistants in basic pedagogy could/do offer great saving in resources.

SA A U D SD

8. Universitywide training programs for graduate teaching assistants in basic pedagogy could/do produce substantial improvements in teaching standards.

SA A U D SD

9. Universitywide training programs for graduate teaching assistants in basic pedagogy should be established/expanded at this institution.

SA A U D SD

10. Teaching assistants should be required to take a semester/quarter long training program before being allowed to teach.

SA A U D SD

11. Teaching assistants should be required to
meet specific <u>academic</u> proficiencies before
being allowed to teach.   SA   A   U   D   SD

12. Teaching assistants should be required to
meet certain <u>pedagogical</u> proficiencies before
being allowed to teach.   SA   A   U   D   SD

13. Teaching assistants should be required to
meet specific proficiencies in <u>English
communication</u> before being allowed to teach. SA   A   U   D   SD

14. Teaching assistants should be required to
meet certain pedagogical proficiencies during
the first semester of teaching.   SA   A   U   D   SD

15. Potential performance as a teacher should
be of paramount importance in selecting
teaching assistants.   SA   A   U   D   SD

16. The awarding of teaching assistantships
and fellowships should be the sole prerogative
of the <u>academic department</u> which is to employ
the graduate student concerned.   SA   A   U   D   SD

17. Our faculty strive with dedication to
ensure the proper preparation and supervision
of our teaching assistants.   SA   A   U   D   SD

18. The lack of preparation and poor
performance of graduate teaching assistants is
frequently a cause for consternation among
<u>faculty members</u>.   SA   A   U   D   SD

19. The lack of preparation and poor
performance of graduate teaching assistants is
a major cause of complaint among <u>undergraduate
students</u>.   SA   A   U   D   SD

20. <u>The Graduate School</u> should be the
authority which specifies and monitors the
training and proficiency required before an
assistant is allowed to teach.   SA   A   U   D   SD

21. Specifying and monitoring the training
and/or proficiency of teaching assistants
should be the sole prerogative of the <u>academic
department</u> which employs the graduate students
concerned.   SA   A   U   D   SD

If you feel that you have not been able to express fully
your opinions about the preparation of graduate teaching
assistants, please feel free to do so on the back of this
page, with the assurance that I will receive them with both
interest and respect.

Please describe any unique organizations, such as teaching
centers, schools, colleges, or groupings of departments
which offer training to, require specific qualifications of,
or demand standards of performance from, graduate teaching
assistants at your institution.

Do you wish to be sent a summary
of the results of this survey?   Yes _____   No _____

If so, please correct the address sticker on the back of
this page.

Appendix B

Cover Letter

The Department of Educational Administration
The University of North Carolina at Greensboro
Greensboro, North Carolina, 27412-5001.

February 3, 1992

Professor Dave Riley,
The Department of Educational Administration,
The University of North Carolina at Greensboro,
Greensboro NC 27412-5001.

Dear Dr. Riley,

I became interested in the preparation given graduate teaching assistants five years ago, while teaching at WCU. I am now completing a dissertation on this subject. I will be very glad if you will take a few minutes to help me. My study concerns the recruiting, training and supervising of graduate teaching assistants on the various campuses of the University of North Carolina. I am particularly interested in the role of the institution as compared to the role of individual departments.

Please fill out the attached survey from the standpoint of the department, school or university you administer, and return it in the stamped envelope provided. If you would like to receive a summary of my results, please indicate this on the last page of the survey.

Sincerely,

Peter R. Vaughan

Appendix C

Follow-up Letter

c/o Dr. Dave Riley,
Department of Educational Admin.,
UNC-Greensboro,
Greensboro, NC 27412-5001

April 1st 1992

Professor Dave Riley,
Department of Educational Administration,
The University of North Carolina at Greensboro,
Greensboro, NC 27412-5001

Dear Dr. Riley,

About a month ago I sent you a survey on the administration of graduate teaching assistants. I have not yet received a reply from you. I would appreciate your checking the appropriate message below and returning this letter in the enclosed envelope.

Naturally I respect your right not to return the survey, should this have been your wish. Thank you for your attention in this matter.

Sincerely,

Peter R. Vaughan

_____ I never received your survey

_____ We have no graduate students in our department

_____ Graduate students are not hired to assist in teaching

_____ Your survey did not allow me room to reply fully

_____ I did not wish to release the information asked for

_____ I intended to reply, but work has intervened

_____ I sent you a reply

_____ Please send me a new copy of the survey

Appendix D

Frequency of Responses to Items

The number of times each answer was selected to each
question is indicated below:
Column 1 - No, Never
Column 2 - Yes, about 1/4 the time
Column 3 - Yes, about half the time
Column 4 - Yes, About 3/4 the time
Column 5 - Yes, in all cases

(1) (2) (3) (4) (5)

1. Do graduate students who are hired to
assist with face-to-face teaching, or to
supervise laboratories or recitation sections
receive any training in how to perform these
duties from any source? 1 2 5 12 32

2. Is such training the responsibility of the
individual academic department employing the
assistant? 1 0 1 5 46

3. Does this training extend beyond informal
consultations with the supervising faculty
member? 5 5 10 10 23

4. Is training in pedagogy available to
graduate teaching assistants on a
universitywide basis? 23 4 6 5 14

5. Are pedagogical courses recommended to
graduate students who plan to be teaching
assistants? 25 10 7 4 7

6. Is a training class or seminar required
during a quarter/semester previous to
commencing teaching duties? 27 9 6 1 10

7. Is a workshop or similar short period of
training required immediately preceding the
start of the first course in which the
graduate assists? 11 10 7 6 19

8. Are regular (perhaps weekly) meetings held with groups of graduate students for training and other purposes during the courses in which they are assisting?   8 8 10 11 14

9. Do graduate students have to meet academic standards established by the <u>academic department</u> before they can assist in teaching courses?   3 2 3 1 43

10. Do graduate students have to meet standards of pedagogy established by the <u>academic department</u> before they can assist in teaching courses?   17 6 9 6 15

11. Do foreign graduate students have to meet standards of English proficiency established by the <u>academic department</u> before they can start work as teaching assistants?   3 2 1 5 39

12. Is the offer of a teaching ward or fellowship made by the <u>academic department</u> in which the graduate student will be teaching?   1 0 0 0 52

13. Do graduate teaching assistants have to meet <u>academic standards</u> established by <u>the university</u> before they can assist in teaching courses?   15 1 1 2 34

14. Do graduate teaching assistants have to meet <u>standards of pedagogy</u> established by <u>the university</u> before they can assist in teaching courses?   41 5 3 0 4

15. Do foreign graduate teaching assistants have to pass a test of English proficiency prescribed by <u>the university</u> before they can assist in teaching courses?   6 1 0 0 28

16. Does <u>the university</u> offer teaching assistantships/fellowships to prospective students without submitting their qualifications to <u>a specific academic department</u> for approval and acceptance?   51 0 0 1 1

17. Does <u>the Graduate School</u> have a role in the recruitment of graduate teaching assistants, other than its regulation of their admission to and completion of graduate study?   39 4 4 4 2

18. Does <u>the Graduate School</u> have a role in the training in pedagogy of graduate teaching assistants?　　　　　40　2　5　2　2

19. Does <u>the Graduate School</u> have specific standards of pedagogy which have to be met by teaching assistants?　　　　　47　0　3　0　1

20. Is a course in English communication recommended to the foreign graduate assistants under your administration?　　　15　9　10　4　11

21. Are students observed or videotaped for the purpose of evaluation during actual or simulated teaching sessions?　　　16　12　11　3　8

Please indicate how much you agree or disagree with each statement by circling the appropriate letter(s):

Column 1　- Strongly agree
Column 2　- Agree
Column 3　- Undecided
Column 4　- Disagree
Column 5　- Strongly disagree

	(1)	(2)	(3)	(4)	(5)
1. Our departmental training programs for graduate teaching assistants are adequate.	6	25	6	13	2
2. Training assistants in pedagogy is unnecessary provided that they are competent in subject matter.	1	5	4	29	14
3. The English language is frequently a major problem in classes taught by foreign graduate assistants.	12	21	3	10	2
4. Teaching assistants too often allow their research to intrude upon their time to such an extent that their teaching suffers.	4	3	8	31	6
5. Some individual departments <u>do not</u> fulfill their obligation to train their teaching assistants properly.	10	21	16	3	0
6. Some individual departments <u>are not able</u> to fulfill their obligation to train their teaching assistants properly.	3	13	18	12	4
7. <u>Universitywide</u> training programs for graduate teaching assistants in basic pedagogy could/do offer great saving in resources.	7	19	13	10	4

8. <u>Universitywide</u> training programs for graduate teaching assistants in basic pedagogy could/do produce substantial improvements in teaching standards.

5 23 13 9 2

9. <u>Universitywide</u> training programs for graduate teaching assistants in basic pedagogy should be established/expanded at this institution.

7 21 13 4 6

10. Teaching assistants should be required to take a semester/quarter long training program before being allowed to teach.

6 10 4 26 7

11. Teaching assistants should be required to meet specific <u>academic</u> proficiencies before being allowed to teach.

25 25 1 1 0

12. Teaching assistants should be required to meet certain <u>pedagogical</u> proficiencies before being allowed to teach.

9 29 9 6 0

13. Teaching assistants should be required to meet specific proficiencies in <u>English communication</u> before being allowed to teach.

28 19 3 2 0

14. Teaching assistants should be required to meet certain pedagogical proficiencies during the first semester of teaching.

8 33 8 3 0

15. Potential performance as a teacher should be of paramount importance in selecting teaching assistants.

13 23 8 7 1

16. The awarding of teaching assistantships and fellowships should be the sole prerogative of the <u>academic department</u> which is to employ the graduate student concerned.

26 20 3 2 2

17. Our faculty strive with dedication to ensure the proper preparation and supervision of our teaching assistants.

17 26 4 4 1

18. The lack of preparation and poor performance of graduate teaching assistants is frequently a cause for consternation among <u>faculty members</u>.

2 11 7 28 5

19. The lack of preparation and poor performance of graduate teaching assistants is a major cause of complaint among <u>undergraduate students</u>.

6 5 4 35 3

20. <u>The Graduate School</u> should be the
authority which specifies and monitors the
training and proficiency required before an
assistant is allowed to teach.   2   2   8 22 19

21. Specifying and monitoring the training
and/or proficiency of teaching assistants
should be the sole prerogative of the <u>academic</u>
<u>department</u> which employs the graduate students
concerned.   18 19   3   9   3

Appendix E

<u>Statistical Analyses</u>

Figure 1   Scatterplot & Correlation Statistics for AREA 2
            with AREA 1

Figure 2   Scatterplot & Correlation Statistics for AREA 3
            with AREA 2

Figure 3   Scatterplot & Correlation Statistics for AREA 4
            with AREA 1

Figure 4   Scatterplot & Correlation Statistics for AREA 4
            with AREA 2

Figure 5   Scatterplot & Correlation Statistics for AREA 4
            with ADMINISTRATIVE LEVEL

Figure 6   Scatterplot & Correlation Statistics for AREA 6
            with AREA 2

Figure 7   Scatterplot & Correlation Statistics for AREA 6
            with AREA 4

Figure 8   Scatterplot & Correlation Statistics for AREA 6
            with AREA 5

Figure 9   Scatterplot & Correlation Statistics for AREA 6
            with AREA 3

Figure 1

Scatterplot & Correlation Statistics for AREA 2 with AREA 1
~~~~~~

```
          +------------------------------------------+
   23.00+              1                           1|
       |          1              1 1                |
       |                  1          1      1       |
       |                   1 1         1       1    |
   18.75+          1          1 12 1            |
       |                      1 1   2           | HORIZONTAL =    AREA 1
A      |          1      2    1        1       1 | VERTICAL    =   AREA 2
R      |                  1      1         1   1| # Cases     =       51
E  14.50+      1    1  11112 12                |
A      |                                       | CORRELATION=       0.300
       |              1                        | tstat r     =      2.199
2      |                        1          1 | 2-tail prob=      0.033
   10.25+      1            2                  |
       |                            1          |
       |                                       |
       |                                       |
    6.00+1                                     |
          ++---------+---------+---------+---------++
          0.00      7.00     14.00     21.00    28.00
                         AREA 1
```

Figure 2

Scatterplot & Correlation Statistics for AREA 3 with AREA 2
~~~~~~

```
           +-----------------------------------------+
    32.00+1                                          |
        |          1                 1               |
        |                     1                      |
        |                                            |
    26.85+                     1  1                   |
        |        1     1       2     1 1   1     1   | HORIZONTAL =    AREA 2
A       |                          1    1        1 1| VERTICAL    =    AREA 3
R       |         1  1               1  3 1 1    |   | # Cases     =        51
E   21.70+            1      1 1   1 2          1 1|
A       |                   3 2  1 1             |   | CORRELATION=    -0.385
        |         1                        1     |   | tstat r     =    -2.924
3       |                                    1   |   | 2-tail prob=     0.005
    16.55+                          1 1     1     |
        |                               1 1       |
        |                                         |
        |                                         |
    11.40+                                    1   |
        ++---------+---------+---------+---------++
          6.00      10.25     14.50     18.75     23.00
                             AREA 2
```

Figure 3

Scatterplot & Correlation Statistics for AREA 4 with AREA 1

```
            +----------------------------------------+
    32.00+                    1            1         |
        |                        1                   |
        |              11    1       1  1         1  |
        |               1     1            11        |
    28.00+        1        1 1 111 11          1 11|
A       |     1        1                1       1  | HORIZONTAL =    AREA 1
R       |           1   1      1 1         1       | VERTICAL   =    AREA 4
E       |               1      1     1       1     | # Cases    =        52
A   24.00+              1      1     1 1 1 1  1    |
        |                1                          | CORRELATION=     0.315
4       |                  1    1                   | tstat r    =     2.344
        |                                           | 2-tail prob=     0.023
    20.00+           1        1                     |
        |                         1                 |
        |                 1                         |
        |                                           |
    16.00+1                                         |
        ++---------+---------+---------+---------++
        0.00      7.25     14.50     21.75     29.00
                           AREA 1
```

Figure 4

Scatterplot & Correlation Statistics for AREA 4 with AREA 2
~~~~~~

```
            +----------------------------------------+
   32.00+                         1 1                |
       |                               1             |
       |                      1  1 1    3            |
       |         1              1    1      1        |
   28.00+                   1 2  2 1     1       2 1|
A      |           1  1                         2    | HORIZONTAL  =    AREA 2
R      |                   1 3        1              | VERTICAL    =    AREA 4
E      |        1                        1      1 1| # Cases     =       51
A  24.00+             1           1 1      3 1       |
       |                          1                  | CORRELATION=      0.361
4      |                   1 1                       | tstat r    =      2.707
       |                                             | 2-tail prob=      0.009
   20.00+          1                  1              |
       |             1                               |
       |                   1                         |
       |                                             |
   16.00+1                                           |
       ++---------+---------+---------+---------++
        6.00     10.25     14.50     18.75     23.00
                        AREA 2
```

Figure 5

Scatterplot & Correlation Statistics for AREA 4 with ADMINISTRATIVE LEVEL

```
            +--------------------------------------------+
    32.00+2                                              |
         |                           1                   |
         |4                          2                   |
         |2                          2                   |
    28.00+5                          6                   |
A        |3                          1                   | HORIZONTAL = ADMINLEVEL
R        |4                          1                   | VERTICAL    =    AREA 4
E        |                           4                   | # Cases     =        52
A   24.00+6                          1                   |
         |                                              1| CORRELATION=    -0.300
4        |                           1                  1| tstat r     =    -2.220
         |                                               | 2-tail prob=     0.031
    20.00+1                          1                   |
         |1                                              |
         |                           1                   |
         |                                               |
    16.00+                                              1|
         ++------------------+-------------------++
           Department        School        Institution
                          ADMINLEVEL
```

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Figure 6

Scatterplot & Correlation Statistics for AREA 6 with AREA 2
~~~~~~

```
              +------------------------------------------+
      31.0+          1                                   |
          |                                              |
          |1                                             |
          |                                              |
      23.8+          2           1                       |
A         |                                              |  HORIZONTAL =     AREA 2
R         |                              1               |  VERTICAL    =    AREA 6
E         |          1  1         2               2   1  |  # Cases     =        51
A     16.5+                    2 3  1 3      1          2|
          |                      2     2 1   1 1 1       |  CORRELATION=     -0.527
6         |                         1        2 1         |  tstat r     =    -4.338
          |                       1              1       |  2-tail prob=      0.000
       9.3+               1              2  1            |
          |             1                1  1        1   |
          |                           1 1                |
          |                                  1           |
       2.0+                                       1   |  |
          ++---------+---------+---------+---------++
          6.00      10.25     14.50     18.75     23.00
                           AREA 2
```

Figure 7

Scatterplot & Correlation Statistics for AREA 6 with AREA 4
~~~~~~
```
            +----------------------------------------+
   31.0+                            1                |
       |                                             |
      |1                                             |
       |                                             |
   23.8+      1     1                      1         |
A      |                                             |    HORIZONTAL =    AREA 4
R      |                                     1       |    VERTICAL   =    AREA 6
E      |        1        1     1  1     2       1    |    # Cases    =        51
A  16.5+                    1 1   2 3     3  1 1      |
       |          1          1     2 1  2            1|    CORRELATION=     -0.393
6      |                     1          1    1  1     |    tstat r     =    -2.993
       |              1                    1         |  2-tail prob=       0.004
   9.3+                      2                1    1|
       |                              1  1  1 1      |
       |                                 2           |
       |                  1                          |
   2.0+                                 1           |
      ++---------+---------+---------+---------++
      16.00      20.00     24.00     28.00     32.00
                       AREA 4
```

Figure 8

Scatterplot & Correlation Statistics for AREA 6 with AREA 5
~~~~~~
```
          +-------------------------------------+
    31.0+                                1      |
        |                                       |
        |                      1                |
        |                                       |
    23.8+                                2    1  |
A       |                                       | HORIZONTAL =    AREA 5
R       |                            1          | VERTICAL    =   AREA 6
E       |         1   2 1               1    1    1| # Cases     =        51
A   16.5+      1 1    1      3 1    1 2  1      1  |
        |1      1            3      1 1       1    | CORRELATION=     0.352
6       |            2       1              1      | tstat r     =    2.632
        |                       1       1          | 2-tail prob=    0.011
     9.3+         1         2        1            |
        |            1      1 1      1             |
        |                 2                       |
        |         1                               |
     2.0+         1                               |
        ++---------+---------+---------+---------++
        0.00      4.25      8.50     12.75     17.00
                        AREA 5
```

Figure 9

Scatterplot & Correlation Statistics for AREA 6 with AREA 3
~~~~~~
```
             +---------------------------------------+
     31.0+                                  1        |
         |                                           |
         |                                          1|
         |                                           |
     23.8+                 1    1    1               |
A        |                                           |    HORIZONTAL  =     AREA 3
R        |                                   1       |    VERTICAL    =     AREA 6
E        |               1 1 2 2                   1 |    # Cases     =         51
A    16.5+                2 4 12 1 1 1              |
         |          1 1 1   1        21         1    |    CORRELATION=       0.330
6        |       1          1    2                   |    tstat r     =      2.450
         |                    1      1               |    2-tail prob=      0.018
      9.3+       1    1         1 1                  |
         |                        2   11             |
         |                      1                 1  |
         |            1                              |
      2.0+1                                          |
         ++---------+---------+---------+---------++
          11.40     16.55     21.70     26.85     32.00
                          AREA 3
```

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Appendix F

<u>Pilot Study</u>

A pilot study was performed at WCU to establish
reliability of, and baseline data for, the survey.
Initially eleven copies were sent to WCU. A sample copy is
provided in Appendix A, and a sample of the letter which
accompanied it in Appendix B.

The responses were as follows:

    Dean, School of Technology: Filled out completely

    Associate Vice Chancellor for Academic Affairs:

    Omitted several pages, added many comments

    Vice Chancellor for Academic Affairs: Returned

        instrument, not filled out, with comment

    Dean of School of Education and Psychology: Filled out

        completely

    Head, Dept of Psychology: No response

    Head, Dept of Chemistry and Physics: Filled out

        completely

    Head, Dept of Biology: Filled out completely

    Dean, School of Arts and Sciences: Filled out with

        one page omitted

    Head, Dept of History: No response

Vice Chancellor for Student Development: No

response

Dean of the Graduate School: Filled out completely

Only two department heads responded out of four
surveyed. Since the data from these responses suggested
that all training and supervision of graduate teaching
assistants at WCU takes place at the departmental level,
four more department heads were targeted. These new surveys
were modified to include a check-off sheet inquiring as to
which duties graduate assistants performed. This check-off
became part of the final version of the survey (Appendix A).
The following results were obtained:

Head, Department of Music: Partially filled out

response

Head, Accounting and Management: returned blank

response

Head, Department of Nursing: Returned Blank

response

Head, Department of Art: No response

Those returning blank questionnaires stated that there
were no teaching assistants in their departments, although
graduate students performed objective and subjective
grading, supervised laboratories, tutored individuals,
prepared materials, handed out papers, and recorded grades

and absences. The WCU <u>Handbook for Graduate Assistants</u> distinguishes between "teaching assistantships" and "academic service assistantships", but neither those faculty members interviewed, nor the present head of another academic department was aware of the meaning, or existence, of the "academic service assistantship".

A follow-up letter was sent to the head of the Department of Art (see Appendix C). From several possible reasons for not responding the one selected was "Graduate students are not hired to assist in teaching".

Follow-up interviews were held with the dean of a school and the head of a department, the head of another department submitted written responses to questions in lieu of an interview. The Dean of the School of Arts and Sciences received, filled out, and returned the page of the instrument which he had omitted.

It was suggested in one interview that the main use of graduate students as teaching assistants was in the Biology, Chemistry and English Departments. A survey was sent to the head of the English Department. This survey as modified in that question #1 was changed to read "Do graduate students who are hired to help with face-to-face teaching ..." instead of " ... to perform face-to-face teaching ... ", so

as to forestall a "Graduate students do not teach" response.
An answer was received to this survey, too late for
inclusion in the pilot study, but was included in the main
study.

Of sixteen surveys mailed only six recipients responded
to all questions early enough for inclusion in this pilot
study. Three of these were interviewed. The responses of
each of these six to the surveys are given below (Tables 10
and 11) together with the results of the interviews, they
are identified as   "A" and "B" (Department Heads) and "C",
"D", "E" and "F" (Deans of Schools). Responses are grouped
according to the areas of focus to which they apply.

Table 10

Responses to Factual Questions Grouped by Area

	Respondents					
Item	A	B	C	D	E	F
Area 1						
1	4	4	4	3	3	3
3	4	4	2	3	3	1
5	1	0	1	0	1	1
6	0	4	0	1	1	0
7	4	4	0	3	3	1
8	1	4	2	3	3	1
20	1	0	2	1	1	0
21	3	3	0	0	2	0
Total	18	23	11	14	17	7
Area 4						
2	4	4	4	4	4	4
4	0	4	0	0	0	3
9	0	4	4	4	4	4
10	4	0	2	0	3	3
11	4	4	4	4	4	4
12	4	4	4	4	4	4
16	0	0	0	0	0	0
18	0	0	0	0	0	0
Total	16	20	18	16	19	22
Area 5						
4	0	4	0	0	0	3
13	4	4	4	0	4	4
14	0	0	0	0	0	1
15	0	0	4	4	3	3
16	0	0	0	0	0	0
17	3	3	3	1	1	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
Total	7	11	11	5	8	11

Table 11

Responses to Opinion Questions Grouped by Area

| Item | | | Respondents | | | |
	A	B	C	D	E	F
			Area 2			
1	D	A	A	D	A	A
3	SA	D	D	A	A	SD
4	D	D	D	D	SD	SD
5	U	U	A	A	A	A
6	U	U	A	D	D	D
17	SA	A	U	A	A	A
18	D	D	U	A	SD	SD
19	D	D	U	A	SD	SD
Total	16	20	17	16	19	22
			Area 3			
2	SD	A	D	D	D	D
3	SA	D	D	A	A	SD
10	SD	SD	D	U	D	D
11	SA	SA	SA	A	A	SA
12	A	A	A	U	A	SA
13	A	A	SA	A	SA	SA
14	A	A	A	U	A	SA
15	D	A	A	A	A	SA
Total	22	18	22	21	23	24
			Area 6			
5	U	U	A	A	A	A
6	U	U	A	D	D	D
7	D	A	U	U	U	SD
8	D	A	A	U	U	D
9	SD	A	U	U	U	SD
16	SA	SA	A	A	A	A
20	SD	D	U	D	SD	SD
21	SA	SA	A	A	A	A
Total	6	14	17	13	12	7

Result of interviews

    Area 1. To what degree is there a structured system for training and supervising graduate teaching assistants?

A: There is a system of training, but no training is given in pedagogy. The training starts with a one to two hour introductory and administrative session with the Director of Graduate Studies, after that the individual faculty member for whom the assistant is to work is responsible.

D: There is no system at the school level. Some departments have training programs, notably biology and chemistry. In other departments there is no regular use of teaching assistants, hence no training. In these other departments the assistants are used for report grading and are trained by the instructor. Some are sent to the writing center in the library for training. Often graduate assistants are used for research or advisement; it is up to the individual faculty member

B: (Written Response) We started one fall 1990

Area 2. How satisfied are the faculty members with the
present training programs?

A: I did not change it, so I suppose I was satisfied with it
[No longer department head at time of interview]. Ideally,
I am not satisfied, but who will bell the cat? It is not a
high enough priority. This year I am teaching a lab.
without a graduate assistant; it takes eight hours a week.
I wrote cookbook experiments when working with graduate
assistants; now, without a graduate assistant, I can do
more, be more open. I gave authority to the assistant, did
not spent much time in the lab, set them up as a real
instructor; I do not know how well it succeeded. I think
the students got the message that the lab was not as
important.

D: The present programs are not sufficient for preparing
someone to teach. In my area, history, you could not get
anywhere near learning to teach in a year. An assistant
could get enough training to be of use in discussion groups.

B: (Written Response) Yes

Area 3. What is the opinion of the faculty members concerning the type of training which should be given to prospective graduate teaching assistants?

A: There are few complaints about the results of what we do now, so changing it is not a high priority.

D: There should a training program for the lab assistants. The labs. should be coordinated with the course and the undergraduates should get individual attention. There should be a coordinator.

B: (Written Response) Attendance at first lab session required. Provided a packet of materials from teaching center. Discussion of techniques with faculty.

Area 4. To what degree is the recruitment and training of graduate teaching assistants the responsibility of the individual department?

A: Training is done on a departmental level. No departmentwide meetings are held for all teaching assistants. Individual instructors meet with students assisting in their courses to discuss the lesson of the week. Assistants must use ingenuity to get material across.

D: I leave graduate matters to the departments and to the
graduate school

B: (Written Response)   Recruitment 90%   Training 100%

Area 5.   To what degree is the recruitment and training
of graduate teaching assistants the responsibility of the
institution?

A: The university does nothing toward training.   No
assistantships are offered by the university; students are
sent to the departments by the graduate school, the
departments decide whether to offer an assistantship.   The
assistantships offered are not lucrative, they recently were
increased from $4500 to $5500 per year, but even now they
cannot attract students at the university level. This sum is
the lowest in the state in chemistry.   The department has
only one foreign student at present, a chinese, a "walk-in".

D: All assistantships are departmentally based.   I am
pushing to put the money for graduate assistant stipends
with the dean of the graduate school, and to let him finance
them.   The relationship between the dean of arts and
sciences and the graduate school is not an easy one.

Assistantships involve financial assistance and must be for some instructional purpose.

B: (Written Response)   10%

   Area 6. What is the opinion of faculty members concerning the desirability of universitywide programs for recruiting and training graduate teaching assistants?

A: The graduate school has to make contact with prospective graduate assistants, but the departments must recruit their graduate students. Training for different departments would be so different that it would not be an efficient use of time to do it on a universitywide basis. It probably would be possible to combine some of the training for chemistry assistants, and biology assistants.

D: I could be in favor of some kind of universitywide training, but someone else ought to do it. The money would have to be given to the graduate dean, who could then control the students and set up training. Many graduate students are not seriously involved with assistantships. English, Chemistry, Biology and some students in art are serious in this respect.

B: (Written Response)   Yes

Significant Written Comments

E: "Our school only uses graduate teaching assistants to teach laboratory sections under close supervision of the professor in charge of the course."

F: "WCU.'s School of Education employs very few graduate teaching assistants."

C: "Graduate students do not teach except as lab assistants usually. Therefore many of the issues that you raise aren't relevant to masters only institutions".

Department Head [Survey not completed]: "I do not and will not permit grad. students to teach in this dept." [They do tutor, supervise labs.. and do subjective grading]

Department Head [Survey not completed]: "These questions are subjective. In many cases the answers are unknown, yet there is not a place to mark this response."

Institutionwide Administrator [Survey not complete]: "Our graduate students do not teach courses. Those who supervise laboratories receive information, training

and advice from the appropriate faculty member and department head."

Institutionwide Administrator [Survey not completed]: "We have no graduate students who teach full classes. We do have lab Assistants. Our Graduate assistants do <u>NOT</u> teach. More often our lab assistants are directed daily in how to set up the labs.. Our graduate assistants do not teach. They may grade papers under supervision, show films, set up labs. etc. On rare occasions, they may present a lecture under supervision. Again they don't teach. All [foreign graduate assistants] must pass an English proficiency test or course. These questions do not seem applicable since our graduate assistants do not teach. Western Carolina University has a policy that prohibits graduate students from teaching. They may assist by grading papers, taking attendance, setting up labs., and monitoring labs. for safety purposes, but all is done under the supervision of a faculty member. No graduate assistant gives grades or has full responsibility for delivering instruction. It seems to me that this questionnaire would be better suited for doctoral granting institutions that train TA.'s for teaching as a part of their doctoral work. Many departments have their own

graduate handbooks which include sections on graduate assistantships."

Conclusions

The comments and interviews show that many departments at WCU hire graduate students to perform many of the functions of teachers, including laboratory supervision, subjective grading, and tutoring. They do not regard these assis tants as teachers, nor give them any training that they are willing to report.

In the departments of biology, chemistry, and english assistants play a far more important role, and they get some training. That given in chemistry is of long standing, but limited and variable in scope; that in biology a recent addition, but with a better defined content. Faculty members are somewhat uneasy about the limited nature of the training given, but no one wishes to increase their role, especially since there have been few, if any, complaints about the present system. Use of institutionwide facilities is embryonic, and hardly recognized as such by those involved: the biology department employs materials from the teaching center, and the english department utilizes the writing center in the library.

For the areas of focus the following correlation between interviews and computed scores was found:

Area 1: Few departments have structured systems for training and supervision of graduate teaching assistants. These are of recent origin, or are very limited in structure or content.

Average score: 15

Area 2: Although there is an underlying feeling that present training programs are short of ideal, faculty members are satisfied in the sense that they do not plan to change the status quo.

Average Score: 18

Area 3: Prescriptions for the type of training which should be given generally included an orientation, regular meetings with faculty members to familiarize assistants with course content, and a coordination at the departmental level.

Average score: 22

Area 4: All training of graduate teaching assistants is arranged by, and virtually all is performed by the individual departments. The departments offer the assistantships and do their own recruiting.

Average Score: 19

Area 5: The institution has no part in training, and
only a very limited role in recruiting graduate assistants.

Average score: 9

Area 6: There was a limited approval of the concept of
institutionwide programs, but doubts as to the workability.

Average score 12

Comparing the three individuals who were interviewed,
on areas where definitive answers were given, the following
emerges. On Area II, A and D showed reservations, but B was
satisfied with his newly installed system. His score was 20,
they both scored 16. However, the same scores were obtained
on area III where D and B gave similar responses in the
interview. The difference comes from a disagreement in an
item (#4) concerning a fact about the institution, which
would be the same for all departments. This disagreement
leads to a similar spurious difference in scores on area IV.
Such differences in the perceptions of individuals about the
factual situation would be removed when all the answers for
an entire institution were averaged. A showed far less
enthusiasm for area V than the other two and his score of 7
is less than theirs, which were 13 and 14. The last area

showed a general agreement both in the interviews and in the score computed for the items.

I conclude that the computed scores, averaged over a number of responses, will give a picture of the status of, and faculty opinion concerning the recruitment, training, and supervision of graduate teaching assistants at a particular institution. Such pictures will be able to be compared to show variations and correlations for the institutions, within the umbrella of the University of North Carolina system.