# AN ABSTRACT OF THE THESIS OF

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The graduate student population has been traditionally overlooked within higher education. However, within recent decades, much research has been devoted to addressing the multiple facets of the graduate student experience, including that of the graduate teaching assistant (GTA) position. This thesis seeks to explore in depth the experiences of GTAs in the classroom. A summary and critique of the literature that exists surrounding GTAs is provided, including literature related to national graduate student demographics, the history of GTA/GRA positions, salient issues surrounding the GTA position, and models of GTA development. The goal of this thesis is to share results from a quantitative study that analyzes how graduate students self-identify into a three-stage model of GTA development proposed by Nyquist and Sprague (1998). Within this particular study, an online survey questionnaire was developed to support a quantitative research design. An independent chi-square analysis was conducted on the data derived from this questionnaire. The results from this study will be discussed, and further implications of this research for both researchers and practitioners will be explored.

# Graduate Teaching Assistant (GTA) Development in the College Classroom

by Jennifer L. Meitl

# A THESIS

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APPROVED:
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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.
Jennifer L. Meitl, Author

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#### **Preface**

# Graduate Teaching Assistant (GTA) Development in the College Classroom

After my graduation from the University of Kansas in May of 2006, I embarked upon my graduate school journey at Oregon State University. As an out-of state student new to Oregon I struggled with several questions: "Where do I do my grocery shopping? How can I find a decent hairdresser? Where can I get my dry cleaning done?" To many, these issues seem trivial and unimportant. However, paired with bigger issues—establishing a support network, adjusting to a new academic rigor, and learning my role as a graduate teaching assistant—my transition to graduate school became a complicated multi-faceted event. In reflecting upon the last two years of my life, perhaps the most intriguing piece of my transition has been my experience in serving as a Graduate Teaching Assistant (GTA). Personally, I find that serving as a classroom teacher in a collegiate setting has been both exhausting and exhilarating, and have since become intrigued and enamored by the literature surrounding development within GTAs.

"Finding one's way through this maze of grand possibilities, only loosely related, and some even in fairly serious tension with one another, was, however exciting (and it was enormously exciting), a perilous business.

With so many ways to turn, so few tracks laid down, and so little experience of one's own to go by, even small decisions, to take this seminar, attack that subject, work with this professor, seemed enormously consequential—a

reverseless commitment to something immense, portentous, splendid, and unclear" (Geertz, 1995, p. 101)

# Chapter 1

# Introduction

In looking at the nearly 400-year history of higher education in America, the graduate student population has been traditionally overlooked. (Chism, 1998; Wert, 1998). Historically, the focus of many researchers has centered upon the undergraduate population; studies surrounding student development theory, transitional issues, and persistence toward degree have been primarily aimed at undergraduate students (Bair, Haworth & Sanfort, 2004). However, within the recent decades, beginning primarily in the 1980's, multiple researchers have begun to explore the complexities that exist within the graduate student population as well. Researchers have begun to dissect the many different pieces that exist within the graduate student experience, from the mentoring that graduate students receive from their major professor to the professional development needs that exist within their complex journeys (Bair, Haworth & Sanfort, 2004; Gold, 2005; Park, 1994; Peyton, 2001; Poock, 2001). Further work surrounding graduate student attrition and time to degree completion has looked to explore the issues that may affect graduate student persistence (Golde, 2005).

Perhaps one of the most salient factors identified within the literature that affects the graduate student experience is the assistantship (Anderson & Swazey, 1998; Fischer & Zigmund, 1998; Nyquist, Abbott, & Wulff, 1989). Within these assistantships, graduate students are expected to perform multiple tasks; conducting study review sessions, grading exams, assessing tests, and leading discussions are

just a few of the tasks for which graduate teaching assistants (GTAs) and graduate research assistants (GRAs) are responsible (Nyquist, Abbott, & Wulff). Assistantship duties vary greatly from position to position, but usually center around some combination of research and teaching. Graduate research assistants (GRAs) focus primarily on research often with little to no teaching responsibilities; graduate teaching assistants (GTAs), are primarily assigned tasks that directly support undergraduate learning in the classroom as instructors, classroom assistants, discussion leaders, and graders. The training and support that graduate students receive in their roles as GTAs/GRAs varies greatly from institution to institution, and even from department to department within any given institution. Scope of the Study

This thesis investigated the experiences of graduate students relative to their duties of instruction, assessing the level of instructional development at which graduate students self-identify. Data was collected and assessed across a three-stage model of instructional development proposed by Nyquist and Sprague (1998). The survey data was solicited from 758 graduate students at a public land grant institution located in the Pacific Northwest. Each of these graduate students held an assistantship (from .2 FTE-.49 FTE) at the given institution, as either a graduate research assistant or a graduate teaching assistant.

Theoretical Framework/Research Perspective

This study approached knowledge from a viewpoint of post-positivism.

Truths within individuals are seen to be socially constructed, yet a common truth is

seen to exist in the world. This research sought to define the certain truths that are apparent within graduate students' self-perceptions as instructors in the college classroom.

Statement of the Problem/Need for the Study

Graduate students are a diverse population with multiple backgrounds and needs. There are also many facets to the graduate student experience, and, because of this, it is necessary to dissect the greater experience into smaller pieces. As mentioned previously, one of these pieces is the graduate assistantship. The assistantship serves as an integral part of the graduate student experience, but graduate student roles and duties within their assistantships vary greatly from institution to institution and department to department (Anderson & Swazey, 1998). Nyquist, Abbott and Sprague (1991) call for a greater examination of the issues and conceptualizations that have been formulated surrounding graduate student training and development. Better understanding the complex issues that graduate students face as instructors in the classroom is an important task for researchers and practitioners in higher education, as the call for better teaching and learning within America's universities continues to be emphasized. King (2003) specifically calls researchers and practitioners to strive for "a complex understanding of student learning," noting the importance of this understanding in the United States higher education system (p. 234).

Further calls for improved instruction address the multiple issues that lie within the graduate student experience. Andrews (1985) calls for campus-wide

professional development programs that foster dialogue and provide support systems for graduate students struggling with difficult transitional issues. Even more specifically, Nyquist and Sprague (1991) note that "the success of our work with TAs rests on the ability to identify individual needs and to match training programs to those needs" (p. 295). In order to further qualify these needs, Nyquist and Sprague propose a three-stage model, identifying the stages through which they believe that teaching assistants progress as instructors in the college classroom.

These three stages—senior learner, colleague in training, and junior colleague—served as an important foundation within this research study.

Therefore, in order to fully address the issues that surround graduate teaching assistant (GTA) instructional development, institutions must begin with a thorough exploration of this development within the college classroom.

Researchers have begun to explore many of the salient areas of the GTA experience, but few have look to do quantitative research to analyze GTA self-perceptions in a college classroom. The Nyquist and Sprague (1998) model gives great qualitative insights to GTA development, and serves as an important base for exploration. However, it is necessary for research to build off of this work, seeking to analyze the instructional experiences of GTAs in a different way.

# *Purpose of the Study*

This study looked to explore quantitatively the self-perceptions of graduate students as instructors within the college classroom. Specifically, this study looked to determine how GTAs self-identify across a three-stage model of teaching

assistant development as graduate student classroom instructors (Nyquist & Sprague, 1998). Further, this study sought to tentatively develop a survey tool that could be used in the future as a foundation in developing a survey to assess incoming cohorts of graduate students.

Rationale for Methodology/Research Design

As mentioned previously, little quantitative research has been done to explore the development of graduate students in the college classroom, specifically within the context of the Nyquist and Sprague (1998) model of GTA development. In using a quantitative research design, the researcher sought to gain a description of a certain population of graduate students as it relates to the aforementioned model of teaching development.

Hypothesis/Research Question

The null hypothesis (H<sub>o</sub>) was that graduate students would be evenly distributed across the three stages of the Nyquist and Sprague (1998) model. The alternate hypothesis (H<sub>1</sub>) is that graduate students would not be distributed evenly across the proposed stages. Nyquist and Sprague do not propose that there is any reason to think that graduate students would not fall evenly across the stages of this model.

The research question that drove this study is as follows: how do GTAs self-identify across the three stages of senior learner, colleague in training, and junior colleague? And further, do variables such as gender, area of study, degree

type, and teaching experience have any relationship with the stage into which GTAs self-identify?

Definition of Terms

For purposes of this study, a graduate teaching assistant (GTA) will be defined as any graduate student employed by an institution of higher education to teach undergraduate students in the classroom in some capacity. This includes those graduate students who may as well hold graduate research assistant positions, but maintain a role as an instructor in a classroom. Language within higher education has adopted several acronyms to refer to this position, but within this research, the acronym of GTA will be used for consistency.

# Overview of Thesis

The remainder of this thesis will explore in depth the experiences of GTAs in the classroom. Chapter two contains a summary and critique of the literature that exists surrounding graduate students, and, more specifically, graduate teaching assistants. This summary will include literature related to national graduate student demographics, the history of GTA/GRA positions, salient issues surrounding the GTA position, and models of GTA development. Chapter three provides an overview for the specific design and procedures used to carry out the research, as well as the data analyses procedures employed. Results of the independent chisquare analysis will be reported in chapter four, with chapter five presenting an evaluation of the research question, a discussion of the limitations of this study, as well as the implications of these results for both researchers and practitioners.

# Chapter 2

#### The Literature Review

This literature review seeks to provide national graduate student demographics, the history of GTA/GRA positions, salient issues surrounding the GTA position, and models of GTA development. Key facets of this thesis are addressed within the exploration and analysis of two key studies (Chism, 1998; Nyquist & Sprague, 1998). Chism will seek to provide a thorough history of graduate students as well as several key paradigms to keep in mind when thinking of GTA development, and Nyquist and Sprague propose a three-stage model through which GTAs develop in the college classroom.

# An Overview of Graduate Students

The graduate student population is composed of diverse students with varying needs. The demographics of graduate students paint a picture of complexity; gender, enrollment status, field of study, and other correlating factors within individual institutions paint a picture of a diverse and unique community (Redd, 2006). Further, the graduate student experience is defined by external factors as well; the fit of the department with the students' working style as well as the productivity of the advisor/advisee relationship can prove to be very important factors in the overall graduate student experience (Golde, 2005).

The Council of Graduate Schools (CGS) releases a yearly report that contains important information on graduate student enrollment and degrees conferred to graduate students at institutions across the United States. The CGS

teams with the Graduate Records Examination Board (GRE) yearly to distribute this "Survey of Graduate Enrollment." The respondents of this survey represent a large percentage of the total U.S. graduate enrollment when compared to the statistics from the U.S. Department of Education, and are therefore likely to be representative of overall national figures. Currently, there are over a million and a half graduate students enrolled in doctoral and master's programs around the country (Redd, 2006). Of these students, 41% are men, and 59% are women. A bit under half (46%) of the entire graduate student population is enrolled in their graduate programs part-time, with the remaining 54% enrolled full-time at the university. On a national level, the largest populations of graduate students were enrolled in education programs (24%) and business programs (17%). However, these two fields also had the highest proportions of part-time students (63% and 45%, respectively). Graduate enrollment also differs markedly by gender within differing fields; for example, 74% of graduate students in education are female, and in a traditionally male-dominated field such as engineering, 78% of the graduate students were men (Redd, 2006). Overall, the demographic information surrounding the graduate student population is quite complex, and it is difficult to find many parallels within this population, as they can vary greatly from institution to institution and department to department. Specific demographics for the institutional home of participants will be discussed in chapter three.

These demographics present to researchers an interesting and dynamic perspective to explore. But to look at the graduate student experience ever closer,

one will find that there are many other factors that are salient within their experiences. Anderson and Swazey (1998) note the overall complexity of graduate school; they note that the paths upon which graduate students embark differ academically, emotionally, and socially. Multiple factors, both internal and external, influence the graduate student experience; because of these factors, each graduate student's journey will look differently.

The factors that affect graduate students can certainly be internal, including individual learning preferences and prior perceptions about teaching (Nyquist & Sprague, 1998). These preferences and perceptions could highly influence the preparedness and overall mindset of many graduate students.

However, Golde (2005) also notes the effects that external factors can play. Several external factors have been deemed important within the literature surrounding the graduate student experience. These factors can include "poor fit of expectations between student and department" (p. 683), which can manifest itself in multiple ways, including miscommunication regarding expectations and academic requirements (Golde). Another factor mentioned often within the literature is the importance of the faculty advisor and graduate student relationship (Bair, Haworth & Sandfort, 2004; Golde, 2005). Bair, Haworth and Sandfort note specifically that "faculty members are the key advocates for doctoral students" (p. 710). If this relationship is less than functional, then many times graduate students are left to fend for themselves. This can create difficult situations for graduate students, as

mentoring has been proven to be an integral piece of the graduate student experience (Bair, Haworth & Sandfort).

While the individual journeys of graduate students is difficult to describe because of the multiple influences that exist within graduate programs, one thing is certain. Many students who begin post-undergraduate work never finish their intended degrees. Golde (2005) reports that over 40% of graduate students who begin a doctoral program fail to complete it. She notes specifically that "understanding patterns of and reasons for attrition is a critical step…" in working to support all graduate students at every institution (p. 670).

This research (Bair, Haworth and Sandfort, 2004; Golde, 2005; Nyquist and Sprague, 1998), combined with the complex demographics of graduate students today, means that researchers must really dig deep in exploring the multiple pieces of the graduate student experience in order to ascertain the most salient factors that might affect graduate students. While many of these factors might be internal, many are external as well, and present themselves in dynamic and ever-changing ways, making the graduate student experience a complex phenomenon, ready for much study.

The History of GTA Development/Context within Higher Education

As noted previously, the graduate student population is a one that has been largely overlooked within the history of student affairs (Fischer & Zigmund, 1998; Park, 2004; Poock, 2001). Recently, however, institutions across the nation have begun to recognize the importance of this population, leading to an increase in

literature addressing the history of the graduate student population, specifically within their duties as graduate teaching assistants (GTAs).

The role of graduate students and the programs that support their development have continued to evolve throughout the entirety of the twentieth century. Nancy Van Note Chism (1998) notes that there are four phases of history relative to the institutions' gradual recognition of the graduate students, specifically in relation to their teaching duties: (a) "Nothing to Say," (b) "Private Conversations," (c) "Can We Talk?," and (d) "Extending the Conversation." These four phases were developed to draw broad themes and issues within the conversation of professional development in the history of GTAs, and are primarily concerned with preparing GTAs for the academic rigors of teaching.

The first phase that Chism (1998) describes is entitled "Nothing to Say," and encompasses the first 50 years of the twentieth century. Within this period, the concept of preparing individuals to teach was very much affected by the teaching-learning dynamic of that time, consisting of a "teaching is telling" (p. 2) mindset, which left the preparation of teachers in general on the back burner (Chism). Content knowledge of the professor was highly valued, and the classroom was not seen as an exchange of ideas; it was seen as a hierarchical interaction between someone with knowledge, namely the professor, and someone without knowledge, the student. Graduate teaching assistants existed in smaller numbers that could be easily managed by faculty.

The second phase, "Private Conversations," began in the 1960's, when the undergraduate population at many universities began to become much more numerous and diverse (Chism, 1998). At the end of World War II, changing social dynamics and increased access to education through the GI bill led to a need for many more classes; classes that needed instructors (Rudolph, 1990). Universities immediately began to look for a solution, and found the answer in graduate teaching assistants. Large populations of GTAs were found most specifically in departments with classes that were in great demand such as communication, math, and English (Rudolph). It was these departments that began to tentatively recognize the need for training and support services to foster GTA development. In short, conversations surrounding GTA development during this phase took place within the departmental realm, primarily within those departments that were forced to employ a large number of GTAs (Chism).

In 1986, phase three, "Can We Talk?," began to address the professional development of GTAs in a more direct fashion (Chism, 1998). This year marks the first national convention that focused explicitly on TA issues. This conference was held at The Ohio State University, and Chism notes that during this time period

large institutions came together to publicly talk about a situation that they had previously treated cautiously: the fact that TAs were carrying a large part of the undergraduate load and that efforts to prepare these graduate students were in their infancy. (p. 4)

These conversations spoke to practical aspects of the GTA experience including the selection of GTAs, GTA responsibilities, and financial obligations. Within this phase, several new programming efforts became immensely popular on campuses during this time. One such program, Preparing Future Faculty, focused on providing centralized support to GTAs on campuses across the nation. These efforts and the existence of such programs led to an increased awareness about the GTA position and the developmental needs of GTAs (Gaff & Pruitt-Logan, 1998).

Finally, in the early 1990's, professional development within the GTA position moved beyond merely talking about the issue into the stage called "Extending the Conversation" (Chism, 1998). Within this decade, the legislature and government became key players as issues of budgets, international GTAs and internal education policies became hot topics within the public sphere. Toward the end of this period, institutions began to recognize that training GTAs might be more than just providing the tools to help prepare graduate students to teach. These conversations began to shed light upon not only the issues and concerns surrounding GTA training, but also upon the always developing complex skill sets that are needed to be a successful professional in both academia and beyond.

During this time, researchers began to gather much more information regarding the GTA experience.

This history indicates that the development of graduate teaching assistants (GTAs) in the college classroom has been continually evolving since the beginning of American higher education. The complexities that exist within the GTA position

are only complicated by the institutional structures of higher education.

Professional development support services and programs across the nation vary greatly in their structures, and best practices have been difficult to define

(Anderson & Swazey, 1998; Gaff & Pruitt-Logan, 1998; Mintz, 1998; Poock, 2001). This lack in understanding, combined with an unclear picture of GTA development makes the creation of GTA support services very difficult to carry out, and calls for more research to explore this newly developing field of research. 

Salient Issues within GTA/GRA Training

The development of Graduate Teaching Assistants (GTAs) was invisible to administrators less than a century ago, but has now become relevant to many researchers and practitioners. Chism (1998) continues her exploration of GTA development by defining six paradigms that serve as the foundation for considering GTA development today.

The first paradigm recognizes that "professional development efforts center on teaching in the broader sense of the term" (Chism, 1998, p. 7). In this sense, the GTA role becomes a role from which graduate students are able to gain many teaching skills that will be applicable to their future careers. From this perspective, teaching refers to both formal settings and informal interactions within which information is being conveyed. For example, within an office setting, an engineer may be in charge of training a new engineer on the ins-and-outs of the computer system in the office. Using Chism's paradigm, teacher development is defined in a broader context that is not confined to a classroom setting.

Related to this paradigm, Chism (1998) notes that professional development within the GTA position must also "encompass other aspects of future careers besides teaching" (p. 7). While "a substantial 40 percent [of 1500 graduate students] noted that their desire to teach at the college or university level was a very important part of their reason for going to graduate school" (Anderson & Swazey, 1998, p. 4), the complex skill sets and development needed to be prepared for teaching within the professoriate can also easily be applied within other careers. This dynamic provides the foundation through which GTAs develop professionally, whether the careers lie within academia or beyond. Fischer & Zigmund (1998) also note the importance of this paradigm, stating that graduate students, particularly GTAs, are pursuing diverse sets of careers after successful completion of their programs. The skills that that GTAs develop within their classrooms can be liberally applied to most any professional setting, whether in academia or beyond.

The third and fourth dimensions that Chism notes as important within her work are that professional development efforts must be for all graduate students, and must extend beyond mere training efforts. All graduate students could be better served with intentional training surrounding instructional development. Further, professional development efforts must encompass a variety of things; teaching graduate students necessary skills within the classroom is important, but it is perhaps more important to help graduate students understand the importance of reflective practice, regardless of discipline. Helping graduate student to create a larger framework for practice is beneficial for each one of them.

Finally, Chism (1998) notes the importance of ongoing training throughout the graduate student experience, with an emphasis on teamwork. As GTAs develop, they need to have an abundance of collegial dialogue with their supervisors, major professors, and course supervisors. Further, GTAs must gain increasing responsibilities to continue growing, and with these increasing responsibilities should come support from multiple facets of the university including faculty developers, department heads, and peers.

In defining these paradigms, Chism (1998) notes the importance of and need for structured professional development opportunities such as Preparing Future Faculty programs in order to provide support for graduate teaching assistants (GTAs). However, her work only defines the broad issues of professional development within the graduate student population; little of her work addresses the specific issues that should be addressed within instructional development when providing intentional services to these GTAs.

It is important to note that Chism (1998) is not alone in her exploration of best practices for GTA development; much discussion continues to abound surrounding programs to train and support GTAs throughout and beyond their teaching experience (Fischer & Zigmund, 1998; Gaff & Pruitt-Logan, 1998; LaPidus, 1998; Park, 2004). However, much of this work focuses on the establishment and maintenance of support systems, and neglects to address specifically the instructional development and self-perceptions of GTAs within a college classroom.

One can see that the complexity of the graduate student population makes graduate students a difficult population to study. However, there have been multiple studies to detect the most salient aspects of the graduate student experience. In their study of over 1500 graduate students, Anderson and Swazey (1998) found that the graduate student experience often entails an assistantship piece of some sort. Two-thirds of the graduate students who participated in this study held a position within an assistantship, "and nearly as many had been teaching assistants" (p. 6). This piece of the graduate student experience is one that plays a major role in the development of graduate students.

Fiscally, graduate students themselves benefit greatly from the financial resources offered by many universities in exchange for their services (Andrews, 1985). In most cases, graduate students are given monthly stipends and tuition waivers. It is within their experiences as GTAs/GRAs that graduate students can gain relevant teaching experiences to help them acquire the skills necessary for becoming a professor in academia.

However, graduate students are not the only ones who benefit from assistantships. Today, graduate students who hold assistantships play an integral role in higher education, as they are responsible for a substantial percentage of undergraduate instruction (Nyquist & Wulff, 1987). Wert (1998) notes that universities who employ graduate students in the classroom also benefit greatly from the services that GTAs provide, particularly in the area of designing and

teaching undergraduate courses. It is estimated that "GTAs provide instruction for 40% of the undergraduate courses in research and comprehensive universities, and they have teaching responsibilities in approximately 60% of the introductory courses taken by first- and second-year undergraduates." (p. xvii). In this realm, it is easy to see how this partnership between the university and graduate students allows university expansion at minimal cost (Park, 2004), and serves vital needs for both entities.

# *Importance of GTAs*

This research shows that GTAs hold important dual roles within higher education, roles that can significantly affect campus climate, particulalry undergraduate student persistence. The literature surrounding first-year student retention is steeped with studies that emphasize the importance of student-faculty interactions, developmental advising, and student-centered learning (Astin, 1993; Kinzie & Kuh, 2007; Pascarella & Terenzini, 2005; Vowell, 2007). At most institutions, GTAs receive little to no training for their roles as classroom instructors and academic mentors, leaving them to navigate the classroom and their mentoring relationships with students alone (Park, C. 2002; Weimer, Svinicki, & Bauer, 1989). The importance of the GTA role on student retention and persistence is barely recognized at an institutional level, and GTAs are left to fend for themselves in serving in these complex roles to benefit the undergraduate population.

The graduate teaching assistant's role on campus as a guide and mentor to undergraduate students is an important reason to know more about the Graduate Teaching Assistant (GTA) experience; however, perhaps a more imperative reason to understand this phenomenon lies within a bigger picture. Anderson and Swazey (1998) note that graduate students "are prepared to become leaders, professionals, researchers, and scholars who will be responsible for the advancement of our knowledge and well-being" (p. 1). In essence, institutions of higher education serve as the training ground for the leaders of the next generation, and graduate students on each campus will be responsible in leading the continued training of future professionals, whether employed in academia or in a non-academic setting.

Because of this, enhanced knowledge of the developmental pieces of the GTA experience is of utmost importance.

# GTA Development

The graduate teaching experience (GTA) experience in the classroom is important to understand, and multiple factors can influence the development of GTAs in a college classroom. Two researchers, Nyquist and Sprague (1998), have done substantial research to explore the instructional development of graduate teaching assistants. The following pages provide background regarding the multiple influences that may affect GTA development and articulate a specific model of GTA development developed by Nyquist and Sprague.

# Background

Before examining Nyquist and Sprague (1998) specifically, it is important to point out the importance of institutional messages surrounding teaching and learning on instructor development. Institutions often struggle to clearly articulate consistent messages to graduate teaching assistants (GTAs) regarding their work as teachers in the classroom (Poock, 2001). Academia has become a world where research assistantships are coveted and faculty spend little time with their GTAs discussing teaching; however, messages from the top speak of teaching as "critical to the instructional programs of the university" (Nyquist & Sprague p. 65). Gaff and Pruitt-Logan (1998) as well as Poock (2001) note the inconsistency of supervision and training within the Graduate Teaching Assistant position. Anderson and Swazey (1998) articulate actual GTA voices; 72 percent of the 1500 graduate students surveyed within their study "agreed that research assistants were carefully supervised by faculty, but only 40 percent made the same assessment about teaching assistants" (p. 6). These institutionally sent messages and inconsistencies within training and supervision could perhaps have a great influence on individual GTA development, and without an accurate picture of this development, supporting graduate students in their development is extremely difficult.

# Model of GTA Development

After studying graduate teaching assistants (GTAs) in their natural settings for over 20 years, Nyquist & Sprague (1998) propose a tentative model of GTA

development to add insight to the complexity of the GTA experience (see Appendix A). Within their studies, the researchers themselves state that it is difficult to come up with only one conclusion surrounding the development of GTAs. However, throughout the years, many salient issues began to manifest themselves within GTA development, and in the late 1980's Nyquist and Sprague began to informally chart them. The researchers themselves claim that the model is imperfect, but they also claim that the model works as a way for professionals and graduate students alike to organize their thoughts and perceptions regarding GTA development in the classroom and beyond, despite the fact that there is little to no prior research regarding GTA development in particular.

After formulating a frame of reference from which to view the development of GTAs, Nyquist and Sprague (1998) note the importance of the context of an individual's experience with education. Three major factors were identified: (a) private theories that a GTA may hold about teaching, (b) messages that GTAs receive about teaching, and (c) viewpoints of other graduate students. These messages can greatly influence the rate at which GTAs progress throughout the model, as the messages themselves are related to very individual characteristics including the preferred learning style of the GTA, the perceptions that GTAs formulate from outside sources about their experiences, and the places from which GTAs seek advice.

Nyquist and Sprague (1998) propose a model of graduate teaching assistant development consisting of three stages: (a) senior learner, (b) colleague-in-training,

and (c) junior colleague. Within these three stages, Nyquist and Sprague (1998) explore four dimensions: (a) concerns, (b) discourse level, (c) approach to authority, and (d) approach to students (see Appendix A). The first dimension, "TA Concerns," looks to define the specific issues/concerns that GTA's have in regards to the classroom. The second dimension explored is that of "TA Discourse." Within this dimension, the way in which TAs speak about their discipline is analyzed. The third dimension, "Relationships with Students," seeks to describe dynamic student-teacher relationships are constantly changing as GTAs develop in the college classroom. Finally, the fourth dimension that Nyquist and Sprague propose surrounds the GTA's "Relationship with Authority." Within this dimension, GTAs are described in terms of their interactions with supervising faculty and support staff.

#### Senior learner

According to the Nyquist and Sprague (1998) model, senior learners are in the very preliminary stages of development, and are able to relate strongly with students, while still providing a level of expertise in the subject matter. GTA concerns are fixated on many external factors such as what they are wearing, how to interact with the students, and how to merely survive in the classroom environment. Within their discourse (the second dimension), GTAs functioning as senior learners "combine rather rudimentary technical vocabulary with extremely informal and colloquial speech" (pp. 69-70). When speaking in terms of relationships with students, an interesting dynamic is noted. Within this stage,

GTAs have intense emotional ties with their students, as they very much want to befriend the students in their classrooms. And finally, when looking at relationships of authority, GTAs who are functioning as senior learners have most generally just entered the profession and tend to be dependent on supervising faculty; they look for much guidance and support, as well as practical advice that can aid them in the classroom.

### Colleague in training

Nyquist and Sprague (1998) propose that then, as these initial stages have been addressed, graduate students move on to the next level, "Colleague in Training." This stage overall is marked by an increased awareness of the need to master teaching skills in order to provide successful assistance as a teacher. GTAs' concerns, the first dimension, shift toward acquiring/mastering the skills needed to be a successful teacher. They no longer worry about survival in the classroom, as they have experiences from which to draw. In looking at the second dimension, the discourse that GTAs in this stage use to communicate with their students becomes very technical. As GTAs move along in their specific programs, they gain more knowledge about the discipline, and GTAs are found using only very complex vocabulary, seemingly unable to relate the concepts in their discipline to "real-life" applications that are relevant to the students. As far as student relationships are concerned, GTAs may begin to become less personable with the student body. GTAs many times feel as though they are being used by their students, and move to the opposite extreme that was found within the first stage; the focus within the

classroom becomes gaining respect from the students in their classrooms rather than friendship. This stage of colleague-in-training is defined by an almost overadherence to the rules, and an inability to meet each individual student where they are at. Further complicating this stage is a tenser relationship with authority. The tension within this fourth dimension often manifests itself as the GTA seeks to become an autonomous functioning member of academia. This can result in arguments regarding the philosophical differences of teaching, as well as arguments challenging the standardized components of many large lecture classes.

### Junior colleague

Finally, within the third stage, junior colleagues move to a place in which they are able to identify with students as well as function as successful classroom teachers (Nyquist and Sprague, 1998). At this stage, GTAs only lack formal credentials and experience that will help them to make well-informed teaching decisions in the future. Junior colleagues, according to Nyquist and Sprague, have gained "a reasonable comfort level in the instructional role and some degree of proficiency in teaching" (p. 68). Teacher concerns begin to become centered on student learning and outcomes; it is only within this stage that Nyquist and Sprague speak of a more student and learner-centered philosophy existing within the GTA population. Also, as GTAs progress to the third stage of the model, they begin to incorporate the technical vocabulary with the language of the greater community, combining the two extremes that existed within the first and second stage of the model. Further, within their relationships with students, GTAs are able to create

balance in their approaches, accepting dichotomies of wanting to be liked and wanting to be respected as necessary to be a successful teacher in the college classroom. Similiarly, regarding relationship with authority, GTAs are finally able to establish a collegial connection with supervising faculty and staff. This connection is reciprocal, as the faculty has most generally at this point granted the GTA a certain amount of autonomy, and the resistance that was present within the second stage of this dimension disintegrates.

*The stages of the model* 

Nyquist and Sprague note that Graduate Teaching Assistants enter into this process at different levels, and progress throughout these levels at different rates. Within all dimensions, Nyquist and Sprague (1998) note the same pattern: the thoughts and actions of a senior learner starkly contrast the thoughts and actions of a colleague-in-training. However, as time progresses, Nyquist and Sprague propose that a colleague-in-training is able to move to the next stage of development, junior colleague, by intricately combining both extremes (i.e. extreme care for their students and extreme care for their role as GTA) into their teaching pedagogy.

The Nyquist and Sprague (1998) model will serve as an important component within this study; it serves as the basis for the creation of a survey and research design. While there are multiple factors that may influence teaching development apart from this model, as demonstrated previously by Chism (1998), this research will look to specifically address how GTAs might self-identify into the three stages of senior learner, colleague-in-training, and junior colleague. An

appropriate methodology was constructed in order to further explore the GTA experience in the classroom, and analyze into what stage GTAs self-identify.

# Chapter 3

#### Methodology

In order to gain insight into the self-perceptions of graduate teaching assistants (GTAs) in a college classroom, the researcher began by defining a setting and population. Next a research design and hypothesis were created, which included a web-based survey (see Appendix B) developed through a local survey design tool. This survey tool primarily sought to determine into which level of Nyquist and Sprague's (1998) model GTAs self-identified, as well as collect the demographic information of the respondents so as to gain further information about the sample. Then, research procedures were created in order to accurately collect the data, and multiple analyses—specifically the independent chi square analysis and additional post hoc tests as needed—were performed using the Statistical Package for the Social Sciences.

Overview of Study/Research Question

Within this study, the researcher looked to quantitatively explore the distribution of graduate teaching assistants (GTAs) across the three stages of the Nyquist and Sprague (1998) model of GTA development. Specifically, this thesis looked to answer the following question: how do GTAs self-identify across the three stages of senior learner, colleague in training, and junior colleague? And further, do variables such as gender, area of study, degree type, and teaching experience have any relationship with the stage into which GTAs self-identify?

A subsidiary aim of this research was to develop a measure that institutions could use to aid in the study and support of the GTA population. A measure such as this could be utilized yearly by universities as a way of understanding the needs of each individual cohort of GTAs. By better understanding the instructional needs of their own GTAs, campuses could perhaps use this standardized survey tool to move forward in creating intentional support services that address the specific needs of their own individual GTA population.

## Hypothesis

The hypotheses that drove this study, specifically the chi-square analysis, are as follows. The null hypothesis  $(H_o)$  was that graduate students would be evenly distributed in all three stages. The alternate hypothesis  $(H_1)$  is that graduate students would not be distributed evenly across the categories.

Setting

The research was conducted at a mid-sized (around 18,000 undergraduates), land-grant institution located in the U.S. Pacific Northwest. At the time of the study, there were 3,109 graduate students at this institution. Of these 3,109 students, there was an almost even split between males and females (49.8% female; 50.2% male). Over a quarter of these graduate students (35.7%) were seeking their terminal degrees; the remainder of the students were seeking Master's degrees. Of particular importance to this study is that 1,052 graduate students (33.8%) are only seeking their advanced degrees part time, leaving only 2,057 graduate students eligible for assistantships on campus. Graduate students must have been full time in

order to hold an assistantship on campus, and only 36.8% of these full time graduate students, a total of 758 graduate students, held assistantships at this institution during the time of the study.

## Population/Sampling

In order to identify the population of graduate students with assistantships on the selected campus, the Office of Graduate Studies was contacted, as well as the Office of Human Resources. Collaboration with these two offices provided access to the directory information (including the email addresses) of all current graduate students who were employed at the university in an assistantship position.

Because of the electronic nature of the survey, the population being studied (i.e. all 758 graduate students with assistantships) became the sample. These 758 graduate students held both Graduate Teaching Assistant (GTA) positions as well as Graduate Research Assistant (GRA) positions. In many cases, GRAs work primarily on research in a laboratory setting, but many of these GRAs may have had teaching experiences prior to obtaining their assistantship position. Also, many GRAs have teaching responsibilities simultaneously in conjunction with their research duties. Therefore, all graduate students with assistantships on campus were included in the sample, but are referred to as GTAs within the remainder of this research for consistency and clarity.

#### Research Design

This study used a survey design in order to gather data from GTAs regarding their self-identities across the Nyquist and Sprague model. Specifically,

an electronic questionnaire was developed in order to collect the data. Email addresses serve as directory information and are accessible to the public, giving the researcher convenient access to the sample population. Further, internet surveys provide a quick and convenient way to gather data, and was therefore selected as the primary way to gather data (Creswell, 2005).

## Instrument Development

The web-based survey was constructed using the institution's online survey tool (see Appendix B). Within the first section of the survey, 12 questions were posed in order to collect basic demographic information, including gender, area of study, degree type and teaching experience, all of which were relevant variables in the post hoc analysis to determine why GTAs self-identified into certain stages. Then, the researcher formulated 24 additional questions to accurately reflect the stages and dimensions of the Nyquist and Sprague (1998) model of GTA development. Within these 24 questions, eight questions were generated for each stage (senior learner, colleague-in-training, and junior colleague). These questions were then organized by the four dimensions that Nyquist and Sprague discuss within their model (teacher concerns, the discourse used to relay discipline specific information, and the GTA's approach to both students and authority). Each of these questions were closed-ended with graduate students choosing yes/no responses. This format assisted the researcher in analyzing the data using the chi-square analysis. The ultimate aim of the survey's format was to determine with which level each GTA self-identifies.

## Content Validity

As part of the survey development the researcher looked to establish content validity. Creswell (2005) defines content validity as "the extent to which the questions on the instrument and the scores from these questions are representative of all the possible questions that a researcher could as about the content or skills" (p. 164). In order to establish content validity, the instrument was distributed to an expert panel composed of six prominent faculty and staff that have direct or indirect experience in working with the graduate student population and/or teacher development. This panel looked to see if the questions were valid in relation to the model that was provided to them (Creswell). The survey was also distributed to the thesis committee to provide feedback. After this process, changes were made to some of the questions' wording in order to minimize value judgments and standardize the survey design.

Following IRB approval, the survey was piloted with two graduate students from a peer institution; they proposed several relevant changes to the "teaching experiences" section of the survey (see Appendix B). Specifically, the categories that were provided in the "role within the classroom" did not fully encompass the multiple roles that the GTAs felt they carried. The items "Grader", "Discussion leader", "Guest presenter", and "Trainer" were all added in accordance with their feedback.

The survey was sent out in electronic form to the 758 graduate students with assistantships at the institution. Consent was gained from each participant, and a specific protocol was followed to encourage participation in the study.

## Participant Consent

Participant information, including demographics and responses to all questions, was held confidential, and was viewed only by the researcher. Further, within the text of each Email, participants were notified that they would receive no compensation for their participation in this study. Informed consent was also gained within the text of the Email body. In choosing to click on the link contained within the Email, participants chose to freely participate in the survey. Participants were free to discontinue the survey at any time and submit their responses up to that point or not submit their survey at all.

In order to give participants the opportunity to inquire further about the survey, the opening message of the survey (see Appendix B) included the direct contact information of the researcher, the Primary Investigator, and the Institutional Review Board Human Protections Administrator.

#### Protocol

The researcher developed a protocol based on an original mailing protocol developed by Salant and Dillman (1994). This protocol was used to collect responses from the 758 graduate students at the research site. Since the survey was in electronic form, the researcher modified the survey mailing protocol to fit with

the use of electronic technology. Following is the description of the modified Salant & Dillman protocol that was used to solicit responses from all graduate students with assistantships at this particular institution.

A preliminary invitation (see Appendix C) introducing the study (with no link to the survey) was sent out to 758 graduate students on November 14, 2007. These were the graduate students that the Office of Human Resources had delineated as holding an FTE position on campus as a Graduate Teaching Assistant (GTA) or a Graduate Research Assistant (GRA). After the initial invitation was sent, multiple responses were received. Thirty-four respondents replied to the email to articulate that they do not have any teaching responsibilities within their GTA/GRA positions. Twenty-eight students replied to the email with a blank response, self-opting out of the research study as indicated in the invitatory email.

On November 16, an invitation with the link included (see Appendix D) to take the 15-minute online survey was sent out to the remaining 696 graduate students on the list. The GTA/GRAs whom had no responsibilities teaching in the classroom were deleted from participating in this second email, as well as those whom had clarified themselves as "not" being a teacher in the classroom. From this response as well, the researcher received nine more GTA/GRA responses saying that they did not have teaching responsibilities, so they were deleted from the recruitment email list, resulting in 687 individuals who received the survey. The first round elicited 222 responses, as of November 20.

A reminder email (see Appendix E) was sent to all participants on November 20 to the 687 graduate students with teaching responsibilities who received the survey on November 16. Again, the numbers of graduate students deemed as participants continued to be modified as multiple graduate students opted out of the study because they have never had/do not plan on having any teaching responsibilities. Nine graduate students replied to this email telling the researcher that they had no teaching responsibilities in the classroom. This reminder email elicited an additional 147 responses, leaving the total number of responses collected at this point to be 323, and the total number of eligible individuals with teaching responsibilities at 678.

A final reminder (see Appendix F) was sent out on December 4, 2007, to the remaining 678 graduate students to prompt them to complete the survey before it was closed on December 5, 2007 at 5:00pm. The survey closed on December 5, 2007 at 5:00pm with a total of 374 responses.

## Data Analysis

Data was coded and analyzed using the chi-square test of independence to determine the distribution of GTAs across the three levels of development as proposed by Nyquist and Sprague (1998).

#### Coding/Chi-square

First, the researcher coded each demographic question in order to gain descriptive information as well as to prepare this particular data for potential post hoc tests. The "yes/no" questions related specifically to the Nyquist and Sprague

model (i.e. questions 13-36 in Appendix B) were coded as follows: yes=1, no=0, and -9=no response. After coding the data into an Excel spreadsheet, the data was transferred to the Statistical Package fore the Social Sciences (SPSS) software.

Data was prepared to run the chi-square analysis, as a chi-square analysis would be able to best determine the single level at which each GTA was functioning. While other methods of data collection/analysis were considered (i.e. use of a Liekert scale model, different analysis, etc.), the stage model proposed by Nyquist and Sprague (1998) could best be analyzed using a simple chi-square, as this test determined the single level into which GTAs self-identified.

## Chapter 4

#### **Results**

This survey gained important information regarding the respondents, including important information surrounding gender, area of study, degree type and amount of teaching experience. Further, the survey looked to collect information surrounding the breadth of teaching responsibilities that exist within individual assistantships. Finally the survey looked to gain the self-perceptions of graduate teaching assistants (GTAs) within the college classroom through the lens of the Nyquist and Sprague (1998) model of GTA development. Specifically, this survey sought to identify how GTAs self-identify across the three stages of senior learner, colleague in training, and junior colleague, as well as explore the relationships that might exist between the self-identified level and variables such as gender, area of study, degree type, and amount of teaching experience, and their effects on GTA self identity.

# Descriptive Demographics

A total of 374 graduate students responded to the survey, meaning that almost half of the sample responded (49.5%). An almost even split in gender was observed (45.7% male and 51.2% female). The most predominant college represented in the respondents was the College of Science (33%), with large groups of respondents also coming from the College of Health and Human Sciences (15.4%), the College of Engineering (14.6%), and the College of Liberal Arts (12.8%) (see Figure 1).

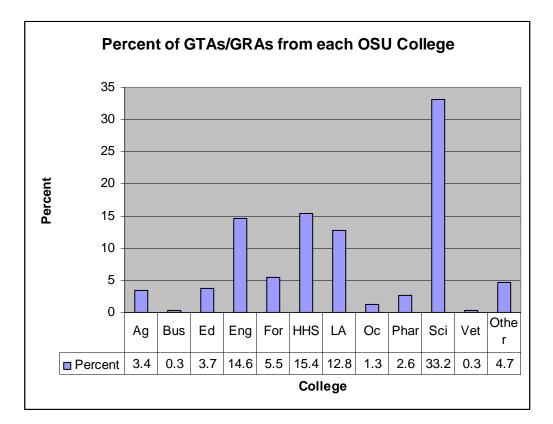


Figure I: Percent of GTAs/GRAs from each OSU College

Over half (58%) of the respondents were seeking to complete their PhD requirements. Almost a quarter (23%) were looking to complete their Master of Science requirements, with the remaining respondents (19%) were looking to fulfill the requirements for other graduate degrees offered by Oregon State University (most primarily the MA and MAIS degrees).

A majority of the responding GTAs were within the first two years of their programs (see Figure II).

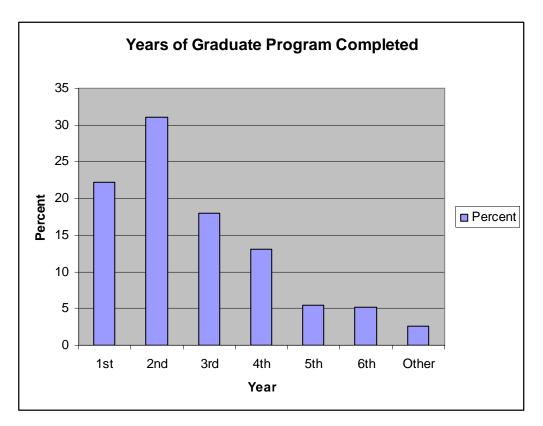


Figure II: Years of Graduate Program Completed

Over half of the respondents were in their first two years of graduate school (22.2% in their first year, 31.1% in their second year). Around one-fifth of the respondents (18%) were in their third year, and 13.1% percent were in their fourth year of graduate school. The remainder of the respondents (12.2%) identified themselves as in their fifth or sixth year of their graduate program.

Almost all of the 374 respondents (98%) reported having a graduate assistantship at Oregon State. Out of those respondents, 65% held a Graduate Teaching Assistant position, and 26.9% reported having a Graduate Research Assistant position with several teaching responsibilities. A majority (72.8%) of

these instructors reported that they taught courses at the undergraduate level; while 5.2% taught at only the graduate level; the remaining percentage (11.7%) of respondents were responsible for teaching courses at both the graduate and the undergraduate level.

Out of this sample, 72.3% of the respondents reported having *multiple roles* in the classroom, with at least one of those roles including acting as an autonomous instructor in the classroom, whether as a lead instructor, recitation instructor, discussion leader, or lab instructor.

## Research Hypothesis

The results were calculated at a .05 probability level, giving a confidence level of 95%. Thus, if the results showed a less than .05 probability, then the results are likely to be produced within other samples; the results in this case would not be random. At this .05 confidence level, the chi-square test was performed, revealing an uneven distribution across the three stages.

Table I
Chi Square Results of GTAs (expected/observed) Across Three Levels of GTA
Development

	Expected N	Observed N
Senior Learner	119.7	69
Colleague in training	119.7	97
Junior colleague	119.7	193

Each level was expected to have an even number of students within each category, around 119 students. After conducting the chi-square analysis, the observed totals did not match this hypothesis; 69 students self-identified as senior learners; 97

identified themselves as a colleague in training, and a majority of the respondents (193 GTAs) identified themselves as junior colleagues. When looking at percentages, over half (53.8%) of the respondents self-identified themselves as junior colleagues, the most advanced of Nyquist and Sprague's (1998) stages. Nearly one-third (27%) of the respondents identified themselves as colleagues-intraining, and the remaining respondents (19.2%) identified themselves as functioning as senior learners, the lowest stage identified in the model.

Table II

Chi Square Results

	Chi-square	df	Asymp. Sig.
FinalType	70.685	2	.000

The independent chi-square test result with a p < .000 means that is less than 1 in a 1000 chance that the results were random rather than reflecting an actual relationship between the variables. In this case, with a .05 probability level, the results are likely to be produced again; the results are not just a random occurrence.

The results of this test did not support the null hypothesis  $(H_o)$  that graduate students would be evenly distributed in all three stages. Consequently, the alternate hypothesis  $(H_1)$  was accepted; graduate students were not distributed evenly across the categories.

#### Post Hoc Analysis

Additional post-hoc tests were completed in order to determine possible reasons that the null hypothesis was rejected. Gender, area of study, degree type,

and amount of teaching experience were all analyzed in connection with the results, and none of these factors were found to be significant in terms of relevance to the Nyquist and Sprague (1998) model.

# Chapter 5

#### **Discussion of Results**

The overall aim of this study was to gain a clearer picture of GTA instructional development in a college classroom. A three-stage model of GTA development, created by Nyquist and Sprague (1998), was used to develop a survey to collect data from all GTAs. This data was then analyzed using an independent chi-square analysis to determine the distribution of graduate teaching assistants (GTAs) across the three stages of the Nyquist and Sprague model. Specifically, the study looked to answer the following question: how do GTAs self-identify across the three stages of senior learner, colleague in training, and junior colleague? And further, do variables such as gender, area of study, degree type, and teaching experience have any relationship with the stage into which GTAs self-identify?

Therefore, the null hypothesis  $(H_o)$  of this study was that graduate students would be evenly distributed across all three stages. The alternate hypothesis  $(H_1)$  was that graduate students would not be distributed evenly across the categories. The results of the chi-square analysis supported the rejection of the null hypothesis, as the test (ran at a .05 P level) showed a significant result.

This chapter will seek to paint a clear picture of the research question at hand as well as address the limitations that existed within the study. With the rejection of the null hypothesis, there are many things that can be discussed. This chapter will also explore potential reasons that GTAs answered the questions in the way that they did, as well as discuss the Nyquist and Sprague (1998) model itself.

Further information will be presented in the form of implications for both researchers and practitioners.

## Evaluation of Research Questions

In looking at the graduate student population sampled, it is clear that the graduate teaching assistants at this particular institution do not fall evenly across Nyquist and Sprague's (1998) three stages of GTA development. The greatest number of GTAs (53.8%) identified themselves as junior colleagues, the highest level on the Nyquist and Sprague model. Only 27% of the respondents identified themselves as colleagues-in-training; the remaining respondents (19.2%) identified themselves as functioning as senior learners in the classroom. Further, in looking at the post hoc analyses, the variables explored, gender, area of study, degree type, and amount of teaching experience did not appear to affect the stage into which GTAs self identify.

#### Limitations

Multiple limitations existed within this particular study. Creating questions without value judgments and establishing a research design that would accurately measure the experiences of GTAs within the classroom proved to be a difficult challenge. Further, this research was influenced by many outside factors; the varying definitions of "teaching" and the perceptions surrounding teaching within individual GTAs might have also affected the results of this survey.

## Value Judgments

The first limitation of this study was found within the development of the instrument. The model itself provided much guidance in creating the questions for the survey. However, difficulties arose when trying to formulate questions that existed without inherent value judgments. Objectivity and consistent language within each question was difficult to achieve, as teaching is inherently a value-based activity. Therefore, the creation of value-free questions proved to be a difficult task. In looking closer at this limitation, one can see that the model itself has impending value judgments; one individual on the expert panel as well supported this point of view, identifying certain concerns about the model itself.

## Research Design

Another obvious limitation within this study was the survey design, and the fact that it forced graduate students to answer "yes" or "no" to each question. Many of the questions asked graduate students to be very general in speaking of their experiences, and gave them little room to qualify what exactly they meant if they did choose to say "yes" or "no" to a particular question. Within the data collection phase, multiple students actually opted out of the study because they were being forced to choose "yes" or "no."

The research design was a deterrent to a few students, and many administrators as well responded with questions and concerns regarding the design of the survey. One of the members of the expert panel responded with concerns regarding the "forced answer" questions that existed within the survey; this

individual felt that perhaps the GTA experience could not be forced into a particular category, and that the experience of being an instructor in the classroom has a much more fluid and dynamic nature that could not be demonstrated through the chosen method of analysis. However, the chi-square analysis seemed the most appropriate technique because it enabled graduate students to be coded into just one category. In assigning GTAs to a certain category, it is unreasonable to think that a graduate student might be 43% senior learner, 7% colleague in training, and 50% junior colleague. This limitation is certainly noted, however, as it certainly could have had an affect on the respondents/results of the study.

## Definitions of Teaching

Yet another limitation of this study lied out of the control of the researcher. As mentioned previously, various definitions and perceptions surrounding "teaching" exist in the world of higher education, and the language used to convey certain thoughts, ideas and pedagogies are often inconsistent. For example, when the survey was first distributed, eleven graduate students replied to the preliminary email with clarifying questions, trying to determine if the study was indeed for them. The questions were as follows: "I teach/train writing assistants? Does that count?" Other times, the graduate students presented qualifying questions like: "I give presentations every other week in class? Does that count?" These varied responsibilities and departmental differences could have highly influenced the answers provided by the respondents. Here one must remember Nyquist and Sprague's (1998) supporting work surrounding of the importance of educational

background; it is within this context that perhaps this research was not equipped to describe in full detail the meanings embedded within the experiences of graduate teaching assistants.

## Generalizability Limitations

The respondent pool was half of the population of OSU GTAs. Gender and academic area did not seem to influence response rates. As such, the results can be fairly seen as representative of GTAs at this particular institution. The generalizability of the results to GTAs across the state or nation is unknown.

Influences on GTA Self Identity

Over half of the GTAs within the sample identified themselves senior learners, the highest level of functioning within the Nyquist and Spargue (1998) model. This is an interesting dynamic to explore. This section proposes four reasons that this might be the case: (a) GTAs could be well prepared for their duties in the classroom and functioning at the highest level; (b) GTAs are responding as to where they aspire to be functioning professionally; (c) prior notions of teaching form the self-identities of GTAs; and (d) GTA perceptions are formed by the students with whom they spend a majority of their time.

# Preparedness

The first and most obvious answer regarding the reasons that GTAs selfidentified into the greatest level of functioning is that GTAs are actually well prepared and functioning at a high level. There are multiple resources at this institution for teaching support and professional development; workshops and training opportunities for GTAs exist both centrally and departmentally. Also, multiple mentors and professors at this particular institution seek to guide and direct GTAs in their teaching duties; these faculty efforts could have great influence in helping to prepare GTAs at this particular institution.

While this obvious answer could be the case, it is important to note several factors. At this particular institution, there were no centralized programs that targeted the GTA population explicitly, and many researchers support the fact that that the graduate student population can benefit greatly from centralized services intentionally directed toward the unique issues that exist within the context of the GTA experience (Anderson, 1998). This lack of intentional support could suggest that perhaps GTAs at this institution are not truly functioning at this higher level.

The post hoc analysis also gives more support for the fact that GTAs at this particular institution might not be well-prepared: if GTAs were being supported differently within their departments, then the post hoc analysis ran departmentally (i.e. area of study) might have shown significant results. Certain departments might have scored higher because of the emphasis on teaching, but this was not the case. The distribution of the GTAs and their self-identified levels was similar throughout all departments.

#### Aspirations/Desires

A second reason that graduate teaching assistants (GTAs) within this sample responded in this way could be internal. GTAs could possibly have many different motivations for self-identifying predominately into the highest level.

Graduate students have many professional aspirations, and a majority of these students seek to enter the professoriate when they graduate (Anderson & Swazey, 1998). These aspirations could certainly affect the way in which GTAs answered these questions; perhaps GTA's perceptions of themselves as instructors are primarily defined by the things that they aspire to be doing in the classroom. With these professional goals in mind, it is clear that GTAs might be aware of "good" teaching practices, and have therefore adapted their answers to the questions as to where they wish to be functioning, and not at the level at which they actually are functioning.

Most graduate students desire to be both good students and good professionals. The graduate student experience, as illustrated previously, is complex and is made up of many facets. These facets are many times overpowering within the graduate student experience, and GTAs could have been seeking affirmations from multiple sources, even if it is from within their own person. With this in mind, it is evident that GTAs might need to create these affirmations so that they can identify as good professionals, not just as good students.

#### **Prior Notions of Teaching**

Graduate teaching assistants (GTAs) could also be defining themselves as a teacher through their inward notions of teaching. These notions could be a driving force that lies behind the graduate student endeavor; at some point some teacher, instructor, or professor might have inspired them to attend graduate school.

Therefore, GTAs might have been answering these questions about teaching

compared to the way in which they have been taught by this very favorite teacher, instructor or professor. These perceptions surrounding self-identity and teaching can be easily connected with the preliminary work of Nyquist and Sprague (1998); graduate teaching assistants perhaps rely heavily on predisposed notions of teaching, and these notions do define the way in which a graduate student defines their role in a college classroom. This then, could have obviously affected the level into which GTAs self-identify.

#### Feedback

Graduate teaching assistants (GTAs) within this sample could have also formed their self identities as junior colleagues from the feedback that they receive throughout the process of teaching. The most frequent interactions that GTAs during a single week are most frequently with their students during lectures, recitations, and labs. If this is the case, then perhaps GTAs form their self-identities from the feedback they receive from the students, rather than the feedback that they might be receiving from the faculty, whom they might interact with on a more infrequent basis.

Not only do graduate students interact with their students more frequently each week, but the sheer volume of feedback that comes from 20 students in a classroom is much greater than the volume of feedback that they might receive from one or two supervising faculty. Further, students give feedback in multiple ways, verbally, nonverbally, and electronically. If one looks at these factors, it is easy to see how GTAs perceptions of their own teaching might be affected by

sources other than faculty. In other words, GTAs may think that they are doing a better job than they are actually doing, because their perceptions might be highly influenced by others' (i.e. students') positive perceptions of them.

# Critique of Model

The many complex issues that arose throughout the research process perhaps call into question the Nyquist and Sprague (1998) model itself. The previous discussion surrounding the multiple influencing factors on identity suggests that perhaps the model is inadequate in fully articulating GTA development in a college classroom, especially since this model was developed by faculty.

Perhaps, then, instructional development in the college classroom is more complicated than the model that Nyquist and Sprague (1998) propose. Institutional perceptions regarding teaching and learning affect the GTA's self identity in the classroom, and it cannot be forgotten that prior experiences with teaching and learning could also play an integral role in the ways in which GTAs develop in the college classroom (Nyquist and Sprague, 1998). This four dimensional, three stage model may be inadequate in describing the GTA experience, and one can see from the previous discussion that there are multiple factors within the life of a GTA that might predicate the ways that the GTA engages in a classroom setting. One must only look to Chism's (1998) work to remember the multiple components that should be kept in mind when supporting GTAs in their professional development.

These factors of which Chism speaks, combined with the results of this study give researchers and practitioners much to ponder.

### *Implications*

In looking at this study, there are multiple implications that this research holds for higher education as a whole. Researchers and practitioners alike can benefit from this study surrounding GTA instructional development in the college classroom.

#### For Researchers

First of all, the online survey questionnaire itself gives future researchers a foundation from which to begin further exploration of the Nyquist and Sprague (1998) model of GTA development. Future studies could be done to test the reliability of the instrument, and the instrument could serve as a to aid researchers in the creation of a new and better instrument to measure GTA development in the college classroom.

Also, researchers could also look to explore GTA development in the college classroom within the context of a qualitative research design. This study, in combination with the Nyquist and Sprague (1998) model as well as Chism's (1998) work could be further explored in a qualitative fashion to flesh out some of the factors and perceptions that might affect teacher development in the college classroom.

Taking this research further could also mean the creation of a new and different model of GTA development that better describes the complexities that

arise within GTA development when including prior perceptions regarding teaching and learning as well as departmental messages that are communicated to the GTAs throughout their appointments. Perhaps the new model is not a stage-based model? Maybe the model is more circular and fluid, as many of the caveats of this study might propose?

Finally, another interesting area of study would be to explore the faculty perceptions of GTAs and their development as instructors in the college classroom. Future studies might look to compare faculty perceptions of GTA development to the GTA's own perceptions of his/her development, and explore why these perceptions are the same or different.

#### For Practitioners

First and foremost, this study shows that practitioners within higher education must be sensitive to GTA development and the complex needs that GTAs present as they develop as teachers in the classroom. Student affairs practitioners in all offices must be cognizant of the multiple factors that affect the graduate student experience both within the classroom environment and beyond, and work in successful partnerships to best support graduate students. Further, supervising faculty and advisors must remain aware of the dynamic pieces of the GTA experience in order to provide relevant instructional support and guidance to this population.

Secondly, institutions must recognize the importance of supporting graduate teaching assistants (GTAs) throughout their development as a teacher in the

classroom. GTA training programs should look to intentionally address the multiple facets of the GTA experience, surrounding all of the dimensions that Nyquist and Sprague (1998) propose, as well as those proposed by Chism's (1998) view of GTAs today. These services could vary from campus to campus, but could serve as integral pieces in aiding graduate students in their overall professional development.

# Chapter 6

#### **Conclusion**

The overall aim of this study was to gain a clearer picture of GTA instructional development in a college classroom. A three-stage model of GTA development created by Nyquist and Sprague (1998) was used to develop a survey to collect data from all GTAs. This data was then analyzed using an independent chi-square analysis to determine the distribution of graduate teaching assistants (GTAs) across the three stages of the Nyquist and Sprague model. Specifically, the study looked to answer the following question: how do GTAs self-identify across the three stages of senior learner, colleague in training, and junior colleague? And further, do variables such as gender, area of study, degree type, and amount of teaching experience have any relationship with the stage into which GTAs self-identify?

The null hypothesis ( $H_0$ ) of this study was that graduate students would be evenly distributed across all three stages. The alternate hypothesis ( $H_1$ ) was that graduate students would not be distributed evenly across the categories. A survey research design was created in order to measure this phenomenon; an online questionnaire of 37 questions was sent out to 758 graduate students at a mid-sized, land grant institution in the Pacific Northwest. An 49.5% response rate was observed, and the data was then coded and analyzed using SPSS. The results of the chi-square analysis supported the rejection of the null hypothesis, as the test (ran at a .05 P level) showed a significant result. Further, over 53% of GTAs within this

study self-identified into the highest level of this model. Nearly one-third (27%) of the respondents identified themselves as colleagues-in-training, and the remaining respondents (19.2%) identified themselves as functioning as senior learners, the lowest stage identified in the model.

These results raise many more questions. Perhaps GTAs are well-prepared for their instructional duties on this particular college campus? Perhaps GTAs answered the questions regarding their practices in the classroom as to where they aspired to be? Or perhaps GTAs answered the questions based on their previous notions of "good" teaching? And finally, and perhaps most importantly, perhaps the model itself is unable to capture fully the GTA experience? While this study had several limitations, these significant results still have multiple implications for both researchers and practitioners. It is clear through this study that the GTA experience still holds much mystery. Overall, researchers, faculty, and student affairs practitioners should remain constantly aware of the many complexities that exist within the graduate student population, so as to further understanding of the graduate student experience as well as provide this population with the appropriate amounts of challenge and support.

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# Indicators of TA Development

Senior Learner	Colleague-In-Training	Junior Colleague
Concerns		
Self/survival	Skills	Outcomes
How will students like	How do I lecture,	Are students getting it?
me?	discuss?	
Discourse Level		
Presocialized	Socialized	Postsocialized
Give simplistic	Talk like insiders, use	Make complex ideas clear
explanations	technical language	without use of jargon
Approach to Authority		
Dependent	Independent or	Interdependent/collegial
	Counterdependent	
Rely on supervisor	Stand on own ideas—	Begin to relate to faculty
	defiant at times	as partners in meeting
		instructional challenges
Approach to Students		
Engaged/vulnerable;	Detached; student as	Engaged/professional;
student as friend, victim,	experimental subject	student as client
or enemy		
"Love" students, want to	Disengage or distance	Understand
be friends, expect	themselves from	student/instructor
admiration, or are hurt,	students—becoming	relationships & the
angry in response,	analytical about	collaborative effort
and personalize	learning relationships	required for student
interactions		learning to occur

Adapted from: Nyquist, J.D. & Sprague, J. (1998) Thinking developmentally about TAs. In Marincovich, M., Prostko, J. & Stout, F. (Eds.), *The professional development of graduate teaching assistants* (pp. 61-88). Bolton, MA: Anker Publishing Company.

# Appendix B

Online survey can be accessed at: <a href="https://surveys.bus.oregonstate.edu/BsgSurvey2\_0/main.aspx?SurveyID=2163">https://surveys.bus.oregonstate.edu/BsgSurvey2\_0/main.aspx?SurveyID=2163</a>

SC Survey	12/6/07 6:00 PM
	Survey Home   OSU Home
My Survey: Graduate Teaching Assistant Development in th [2163]	Oregon State University
New Survey   Delete Survey   Duplicate Survey  Administration   Edit Questions   Edit Scales   Manage Data   Manage Images   Man.	•••
Indicates required questions	
Demographics	
▶ 1. Gender:	
○ Male	
○ Female	
Other	
Please specify other here:	
▶ 2. With which college are you seeking your advanced degree? Agricultural Sciences	
⊕ Business	
○ Education	
○ Engineering	
○ Forestry	
○ Health & Human Sci.	
O Liberal Arts	
Oceanic & Atmos. Sci.	
○ Pharmacy	
○ Science	
○ Vet. Med.	
Other	
Please specify other here:	
A	
▶ 3. What type of degree are you seeking?	
⊕MS	
⊕PhD	
⊕EdD	
⊝EdM	
⊝MA	
○MAg	
○ MAIS	

BSG Survey	12/6/07 6:00 PM
⊙MAT	
OMBA	
○MEng	
OMF	
OMFA	
○ MOcE	
OMPH	
OMPP	
OMSE	
Other	
Please specify other here:	
Trouble opening extrem there.	
▶ 4. In what year of the program are you?	
First	
Second	
○ Third	
○ Fourth	
○Fifth	
Sixth	
Other	
Please specify other here:	
5. Do you currently hold a graduate assistantship?	
○Yes	
○No	
6. If so, what type?	
Graduate Teaching Assistant	
Graduate Research Assistant	
Graduate Fellow Assistant	
Other	
Please specify other here:	
· ·	

# **Teaching Experience**

The following questions seek to gain information regarding your teaching experiences within your graduate school experience. If you are not currently teaching, but teaching has been a part of your assistantship duties, we still very much value your experiences as an instructor in the classroom.

7. What level of courses have you taught/are you currently teaching? (Choose all that apply.)  Undergraduate Graduate Other
Please specify other here:
8. Which course(s)?
9. What roles have you maintained (in the past or currently) as a university level instructor? (Choose all roles that apply.)  Lead instructor  Recitation instructor  Discussion leader  Lab section leader  Guest presenter  Trainer  Administrative assistant  Grader  Other  Please specify other here:
10. Over how many terms (including this term) have you been teaching at a university level?  (format: any numeric value)
11. If you have previously taught at a semester school, how many semesters did you teach at that institution?  (format: any numeric value)

### **Teacher Concerns**

The following questions relate to classroom concerns that many instructors struggle with on a day-to-day basis. While you may have dealt with all of these concerns throughout your teaching career, please answer yes or no to each concern as it affects your present (or most recent) classroom teaching situation.

12. I feel well prepared for my role as a classroom teacher.  Yes  No
13. I fear that the students think of me as a bad teacher.  OYes  No
14. I am affected by students' perceptions of me.  ○ Yes  ○ No
15. I feel that it is important to have a fixed lesson plan for each class session. ○Yes ○No
16. I think it is important to have a variety of classroom activities.  ○Yes ○No
<ul><li>17. I am primarily concerned with whether or not students understand the course material.</li><li>Yes</li><li>No</li></ul>
18. I am concerned about student engagement in the classroom.  O Yes  O No

## **Teacher Discourse**

The following questions seek to determine how you communicate the concepts of your field to students in the classroom setting. Again, use your current or most recent classroom situation and respond with yes/no to the following questions.

<ul><li>19. I think it is most beneficial to relate to students in terms that they can understand easily.</li><li>Yes</li><li>No</li></ul>
20. I try to use real life examples to attempt to convey the information in my subject area.  ○ Yes ○ No
21. I think it is important that students learn the important vocabulary in my field.  ○ Yes ○ No
<ul><li>22. I like to introduce students to the philosophical foundations of the subject matter.</li><li>Yes</li><li>No</li></ul>
23. I break down large concepts into more easily understood components.  ○ Yes  ○ No
24. I incorporate metaphors and stories into my lectures and presentations.  ○ Yes  ○ No
Approach to Authority
The following questions seek to determine the interactions that you as a GTA have with lead instructors and/or supervisors. Again, using your current or most recent teaching appointment, respond with yes/no to the following statements.
25. I rely heavily on the experience of seasoned faculty members to guide my work as a GTA.  ○ Yes ○ No
26. The support of my supervisor has been key to success in my classroom teaching.  ○ Yes ○ No

27. I sometimes struggle with the way my supervisor wants me to present information.  Yes No
28. I feel that my supervisor is a good instructor, but could grow as a teacher.  ○ Yes ○ No
29. I use my supervisor as a resource for knowledge.  ○ Yes ○ No
<ul> <li>30. I look toward faculty in my department for advice regarding my classroom interactions.</li> <li>Yes</li> <li>No</li> </ul>
Approach to Students
This last set of questions seeks to determine how you interact with students on an individual level as well as within the classroom. Please answer yes/no as you feel is appropriate for your current or most recent teaching experience.
31. I feel that interaction with my students is the most important part of my job.  ○ Yes ○ No
32. I value student contact, and am willing to be as flexible as needed to enhance student learning.  Yes No
33. I strive to be respected as a teacher by my students.  ○ Yes ○ No

35. I relate to my students on an individual level, working to facilitate their learning.  ○ Yes  ○ No
36. I use my relationships with students as an important resource in advancing their learning.  ○ Yes  ○ No
Final Thoughts
37. Do you have any other feedback that you would like to add regarding your development as a GTA/GRA as an instructor in the classroom?
Submit
Developed by the Business Solutions Group at OSU College of Business © Oregon State University 2002

For technical questions, please contact the Business Solutions Group.

Appendix C

To:

From: Jennifer Meitl

Subject: Your Teaching Experiences at OSU

# Dear <INSERT NAME HERE>:

Within the next few days, you will receive a request to complete a brief survey regarding your experiences as an instructor in the classroom. I will be emailing you the link to a 15-minute internet-based survey in order to gain an increased understanding of your classroom experiences as an instructor here at Oregon State.

This survey is being conducted to gain an overall understanding of the graduate student experience as an instructor in the classroom. The results of this survey will be used to complete the requirements for my Master's thesis.

I would greatly appreciate your taking the time to complete and return the survey when you receive it.

Thank you so much in advance for your help.

All best,

Jennifer Meitl

\*\* If you would prefer to not take part in this survey, then please respond with a blank Email, and you will be removed from the potential list of participants.

Appendix D

To:

From: Jennifer Meitl

Subject: Invitation to Participate in Survey

Dear <INSERT NAME HERE>:

As a graduate student at Oregon State, you have rich and unique experiences that tell a unique story. Many of you serve in important roles as Graduate Research Assistants and Graduate Teaching Assistants. Because of this, you are invited to participate in a survey investigating instructor development at Oregon State University.

## <INSERT LINK HERE>

In participating in this survey, you will be sharing vital classroom thoughts and experiences that could help shape the future training and support of graduate students. You serve an important role on this campus, and I would love to hear about your experiences in the classroom.

I am a graduate student here at Oregon State University in the College Student Services and Administration (CSSA) program in the School of Education, and am working to complete the research requirements for my thesis degree. I am interested in studying the teaching development of Graduate Teaching Assistants and Graduate Research Assistants. Ultimately, this survey is being conducted to gain a better understanding of graduate instructor development, and to test the reliability and validity of the survey instrument itself.

Please know that participation in this study is voluntary: completion and submission of the survey constitutes consent by the participant. The survey itself will take 15-20 minutes to complete. Please note that responses will be recorded confidentially through OSU's Business Solutions Group; in no way will you be linked to your responses after submission.

While reflecting on your experiences in the classroom may cause discomfort, know that your responses to this survey will form an important foundation for further inquiries into classroom development and support. Please feel free to discontinue the survey at any time by closing your web browser. I certainly hope that you will take a few minutes of your time to add your experiences.

If you have any questions concerning this survey, please feel free to contact myself

(<u>Jennifer.meitl@oregonstate.edu</u>), the Primary Investigator Jessica White (<u>Jessica.white@oregonstate.edu</u>), or the OSU Institutional Review Board (541-737-4933) for more information regarding this study.

Thank you for your time!

Jennifer Meitl

Appendix E

To:

From: Jennifer Meitl

Subject: Second Call: Survey Link

Dear <INSERT NAME HERE>:

Last week, an invitation to participate in an online survey was sent to you. If you have already completed the survey, please accept my sincere thanks. However, if you have not yet completed the survey, please do so soon. Your experiences in the classroom are vital in understanding GTA development, and I very much look forward to hearing from you!

Here is the survey link: <INSERT LINK HERE>

Again, participation in this study is voluntary: completion and submission of the survey constitutes consent by the participant. The survey itself will take 15 minutes to complete. Please note that responses will be recorded confidentially through OSU's Business Solutions Group; in no way will you be linked to your responses after submission.

If you have any questions concerning this survey, please feel free to contact myself (<u>Jennifer.meitl@oregonstate.edu</u>), the Primary Investigator Jessica White (<u>Jessica.white@oregonstate.edu</u>), or the OSU Institutional Review Board (541-737-4933) for more information regarding this study.

Thank you for your time, Jennifer Meitl

Appendix F

To:

From: Jennifer Meitl

Subject: Final Call: Your Graduate Teaching Experience

Dear < INSERT NAME HERE>.

About three weeks ago, you received a request to participate in a survey regarding instructor development in the classroom. I do realize that the life of a graduate student is hectic, but I am asking you to please take a few minutes of your time to complete this online survey to add to the information regarding graduate student development in the classroom; I would very much value your feedback.

This study is being conducted in order to gain knowledge about the GTA/GRA population at Oregon State, and to test the reliability and validity of the instrument used. I am writing you this final time because this study's usefulness depends on your responses. I do hope that you will take the time to fill out the survey.

# <INSERT LINK LARGELY HERE>

I look forward to hearing about your experiences in the classroom. If you have any questions concerning this survey, please feel free to contact me (<a href="mailto:Jennifer.meitl@oregonstate.edu">Jennifer.meitl@oregonstate.edu</a>), the Primary Investigator Jessica White (<a href="Jessica.white@oregonstate.edu">Jessica.white@oregonstate.edu</a>), or the OSU Institutional Review Board (541-737-4933) for more information regarding this study.

\*\*Participation in this study is voluntary: completion and submission of the survey constitutes consent by the participant. The survey itself will take 15 minutes to complete. Please note that responses will be recorded confidentially through OSU's Business Solutions Group; in no way will you be linked to your responses after submission.

Sincerely, Jennifer Meitl