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

4

Thinking Developmentally About TAs

Jody D. Nyquist and Jo Sprague

Anyone who works with a large group of TAs over any period of time—and we have worked with hundreds over many years—soon realizes that no single model of TA training comes close to fitting all situations. Disciplines differ, as do individuals and their teaching assignments. Underneath the differences, however, are some similarities, which we began to tentatively chart in the late 1980s. It appeared that as TAs moved through their programs, there seemed to be some underlying stages or phases they went through in their development.

We were drawn to stage approaches to human behavior because they offset some of the problems of the various styles approaches that were so much in vogue at the time. Completing inventories such as the Myers-Briggs or classifying oneself into the quadrants of any number of quite heuristic grids runs the risk of freezing individuals prematurely and/or permanently. We were bothered by the tendency of TAs to sidestep reflection on the impact of their teaching with the all-purpose comment, "Well, that's just my teaching style."

The developmental perspective we adopted at the time (Sprague & Nyquist, 1989, 1991; Nyquist & Sprague, 1992) is not the only, or even the best, way to think about TA training. Imperfect as our initial model has turned out to be, though, the approach has offered a way of thinking that has directly influenced the design and presentation of many TA programs in the last decade. When we see TAs as professionals in a constant

state of development, we must think of them, ourselves, and our programs as mutable and contingent. The full complexity of the process by which people move from being students toward being professors mitigates against programs designed around teaching tips or a series of quick workshops. Thus, the developmental way of thinking turned out to fit well with a number of other movements that were taking place in the scholarly literature and in the broader arenas of academia. It allowed us to organize our and others' observations and experiences with TAs, and offered insights as to why working with graduate students as they aspire to become effective teachers is so challenging and complex, yet at the same time, meaningful and rewarding as well as intellectually stimulating. Thus, we have continued to pursue the developmental approach in our quest to better understand how graduate students become effective teachers and how to assist them in that process.

Context for the Study of the Teaching Development of Graduate TAs

Obviously, even when we think developmentally about graduate teaching assistants, we must do so within a context. TAs are surrounded by influences, pressures, tensions, and expectations of those to whom they report, their own aspirations, motivations, and individual issues. So, as we attempt to identify where TAs are developmentally and how best to assist them, we need to contextualize our thinking within at least three frames of reference: what is already known about the development of graduate teaching assistants, the broader trends affecting higher education, and factors related to the individual TA.

The Context of the Scholarly Literature on TA Development

Although there was no prior research on TAs' development, our work did not begin from scratch. We were able to draw reasonable inferences about how TAs develop as teachers by looking at several related bodies of literature. Learning to be a professor is similar to other forms of professional development. Schön's important work (1987) gave insight into the rich apprenticeships of practice that lead to professional competence as architects, doctors, and designers. Other scholars were studying the phases in the professional development of teachers, counselors, and junior faculty members (Connolly & Bruner, 1974; Hunt, 1971; Kagan, 1988; Perry, 1970; Sprinthall & Theis-Sprinthall, 1983). All of this work provided parallels to observations about how TAs seem to evolve in their skills and judgment.

The Context of the Academy

Outside the scholarly literature, educational policymakers were engaging in a national conversation about preparing the professoriate of the future. There has been no lack of critics of the traditional assumption that knowledge of subject matter is a necessary and sufficient condition for knowing how to be a university faculty member. Yet, despite a few reform attempts such as the doctor of arts degree in the 1970s, the supremacy of the doctoral-granting universities as gatekeepers of quality and credentialers of faculty members has not been seriously challenged. However, leaders in graduate education began to recognize that their students were being hired into faculty positions in institutions very different from their own. In addition to wanting assistant professors who were superbly qualified to launch a research program, these institutions were looking for colleagues who could teach a wide range of courses, develop curriculum, advise students, serve on faculty committees, and work collaboratively as colleagues. An important national movement, Preparing Future Faculty (PFF),[1] provided incentives for research universities to form partnerships with other types of institutions and to design learning experiences for graduate students that would prepare them to choose the academic context in which they could make their best contribution.

At the same time, there has been renewed attention paid to the quality of undergraduate teaching at research universities. In response to pressures from parents and taxpayers, institutions have moved away from viewing the TA appointment as primarily a low-cost way to provide instruction while funding graduate students' education. In the short term, this has led to much greater investment in the design of quality TA training experiences. In the longer term, it has meant that rewards and resources, even in the most prestigious research departments, have become linked to some extent to stewardship of undergraduate instruction. Graduate students began to observe that no matter how brilliant a researcher a faculty member is, a certain level of teaching effectiveness is expected.

These factors inside and outside the academy were all driving a move away from treating work with TAs as a matter of only providing training for introductory courses. Such training, though still important, is now

being seen as embedded in broader visions of graduate education and the powerful ways that early teaching experiences set the stage for later professional development as faculty members.

The Context of an Individual's Experience

The development of the instructional competence of graduate teaching assistants is individual and influenced by many factors. In our current work on a national research project on TA development, we have begun to realize how factors outside of the developmental models we had examined, as well as our own framework, affect TA development.[2] Three of these factors may be difficult to influence, but should be considered when trying to understand the process of assisting graduate students to develop into college/university teachers: TAs' prior understandings of effective teaching, messages TAs receive about teaching and how they process them, and the influence of other graduate students on a TA's development.

Private theories/personal visions about teaching. Graduate students enter graduate school with their own private theories about what makes an effective teacher. They have sat in classrooms for at least 16 years, been taught rigorously and continuously by parents, relatives, and friends, and can describe—in interviews—what attributes they want in their teachers. This is all based, of course, on what worked for them as learners, on what teachers and professors did that helped them personally. TAs refer to their fourth grade teacher, their eighth grade science instructor, and their Girl Scout counselor. These personal visions (Brookfield, 1990; Wulff, 1993; Nyquist, 1993) are deeply rooted. TAs can tell us what those instructors did that assisted them to learn. They want to do the same. Unfortunately, however, their models may work only for students like themselves. In addition, we find there is a tendency for graduate students to hold tightly to those ideas, distorting information about teaching to fit their personal visions of effective teachers. Learning theory, studies in higher education teaching and learning, or even the wisdom of practice can be deflected or modified if they do not fit the graduate student's private theory or personal vision of effective teaching.

Messages TAs receive about teaching. Although institutions and most departments believe that they send strong, clear messages about the importance of teaching, graduate students in our current study report that those messages are very mixed:

> *Everyone tells you that a research assistantship is to be prized over a teaching assistantship.*
>
> *My advisor worked diligently to assist me to win a Fulbright but never discussed with me or supported me in my teaching, even though I was a teaching assistant for him for three years.*
>
> *If this department cared about teaching, it would give you your assignment earlier than the Friday before the Monday that you start to teach.*
>
> *I don't feel in the slightest bit that my advisors could give less of a crap about what kind of a TA I am. First of all, the professors don't care how good a TA I am. All they care is that the work gets done.*
>
> *The president and the provost and the department chair all tell us how teaching assistants are critical to the instructional programs of the university, how the undergraduate programs depend heavily on our effective performance, how this opportunity, if performed effectively, will affect the rest of our professional lives. It sounds good, and the messages seem believable and accurate. Soon, however, you begin to receive messages that are in contradiction: Your advisor says not to spend too much time on teaching, not to let it get in the way of your course and lab work.*

Not only do the messages about teaching appear to be contradictory, but TAs process them in different ways. Determining how to assign meaning to those messages often brings graduate students to sharing their perceptions with their peers and attempting to assess their own responses relative to others.

Peers/other graduate students. As TAs in Darling's study (1986) reported, they ask their peers for advice when the issues are of significance. Staton and Darling (1989) described this phenomenon in the following way:

> When TAs needed information that was highly salient, risky, and unobtainable through observation, they typically consulted a reliable third party (for example, they

> asked an experienced TA how a particular professor would be likely to respond to a challenge). Only when the information concerned something of low risk (for example, how to approach a particular topic in class, or whether there would be changes in the schedule) were new TAs likely to consult professors directly (p. 19).

Darling (1986) found that experienced TAs become the primary informants for new TAs and provide critical sources of information regarding teaching assignments in departments, including expectations, policies, accepted procedures, and innovative ideas. This reliance on peers as the ultimate authority on teaching can create difficulties, as we will see when we look more closely at our developmental framework.

One Conceptualization of the Development of Graduate Teaching Assistants

As mentioned previously, to help us better understand what was going on with our graduate teaching assistants developmentally, we posited a framework that seems to be a useful way of thinking through how graduate students develop into teachers. In our model, we propose three stages that TAs seem to move through and label these with the general role descriptors of senior learner, colleague-in-training, and junior colleague. As the titles suggest, senior learners still identify strongly with students, but they function as experts who are capable of providing assistance; colleagues-in-training have begun to shift their identification to the role of teacher and recognize the need to master the skills of that role; and junior colleagues have reached a level of confident functioning in many parts of the role and may lack only the formal credentials, the length of experience, and the seasoned judgments that are required of those who are considered full members of the profession of higher education faculty.

Research findings from our current national study underscore the very different levels at which graduate students enter these roles as TAs. In the same cohort of doctoral students, for example, might be some who are complete novices as teachers, some who have taught secondary school, some with community college teaching experience, and some from excellent TA training programs in M.A.-granting institutions. Not only do TAs enter at different levels, but, obviously, they grow at different rates in many different dimensions.

Table 4.1
Indicators of TA Development

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

Adapted from: Sprague, J., & Nyquist, J. D. (1991). A developmental perspective on the TA role. In J. D. Nyquist, R. D. Abbott, D. H. Wulff, & J. Sprague (Eds.), *Preparing the professoriate of tomorrow to teach: Selected readings in TA training* (pp. 295-312). Dubuque, IA: Kendall /Hunt.

So how can supervisors determine where TAs are in their development in order to meet their individual needs? In trying to analyze developmental levels, we have naturally turned to the academic discipline in which we have our roots, communication. We believe that the way TAs talk is a revealing indicator of their levels of development. The underlying assumption is that speech is a reflection of attitudes, beliefs, and values. We know that the phenomenon is much more complex and interesting

than that, however. Communication theorists no longer indulge in chicken-and-egg arguments about whether speech reflects thought or vice versa. The relationships among language, culture, identity, consciousness, and action are infinitely recursive. The way TAs talk tells us about their beliefs, but it also tells us a great deal about the communities in which they are embedded. In our research about the messages TAs receive, we are beginning to see the applications of Bakhtin's (1981) statement that we do not just speak our language, but our language speaks us. From the perspective of Vygotsky (1986), this means that "individual development" is inherently and profoundly social. Growth is not a matter of unfolding according to some preprogrammed plan; it occurs with other people in conversation and joint action. We borrow each other's words and phrases. In time they become our own, and with them ideas and beliefs from the social world become internalized, and then become part of our action and identity. Knowing this, then, we began to listen to how TAs talk about themselves in their instructional roles. As Table 4.1 shows, we believe that changes in TA development can be charted along four dimensions revealed in their talk about their concerns, their discipline, their relationships to students, and their relationship to authority.

TA Concerns

A substantial body of literature is available, some of which has directly involved teaching assistants (Book & Eisenberg, 1979; Fuller, 1969; Staton-Spicer & Bassett, 1979), reporting the ways that teachers describe their professional concerns. At the earliest stage, concerns center on self and survival. TAs worry about what to wear, how their students will address them, whether they will look and sound enough like an instructor to gain respect, and whether they will please their students and employers. After initial experiences, TAs' concerns tend to center on issues related to mastering the skills of teaching such as lecturing, leading discussion, grading, and constructing exams. Only at a somewhat advanced point, when there is a reasonable comfort level in the instructional role and some degree of proficiency in teaching, do TAs' concerns turn to the impact of instruction. It is then that they worry most about whether their students are learning, and if not, how best to assist them. What follows are typical comments taken from transcripts of interviews with the TAs in our current study that illustrate these stages.

- Senior Learner

  "I hope that there aren't enough gaps in my knowledge to make them doubt me as a competent teacher." (male/math)

  "I think I was nervous. Just being effective and if my students like me and stuff like that." (female/zoology)

  "Whether I gave a good impression to my students—of, number one, me, and number two, the subject that I study. That's always something you want to do." (male/math)

- Colleague-in-Training

  "I've come to like it [lecturing] a lot. Still for me, I don't know how the students feel about these things, but still for me, it's kind of exciting to really sit and plan and think about things and how I would present them. It's kind of strange that I'm new at this a little bit, and so I don't know the effectiveness of my presentation. They generally aren't going to tell you very much or give you much feedback." (male/math)

  "Part of it is a scheduling thing, I think, that figuring out how much, of not giving them too big of a task to do in their group so that the task fits the amount of time that they have, and then making sure that there's time to pull everybody back together and see that they feel that they've gained some main points out of that." (female/history)

- Junior Colleague

  "I think I cared less at the end [about whether students liked me]. I cared more about if they are getting it, and not do they like me." (female/zoology)

  "As the quarter progressed what I started to notice was that the one man in the class did all the talking. So then I started to think this is a gender thing. How am I going to negotiate this? I think it's really important that I facilitate my students' confidence in their right to speak. Especially the women. But I'm also very protective of quiet students. Their comfort zone. So I had a really difficult time with that." (female/English)

TA Discourse

A second dimension along which development can be traced is the way TAs talk about their disciplines. Typically, entry-level TAs combine

rather rudimentary technical vocabulary with extremely informal and colloquial speech. A colleague reports walking by a classroom where a novice instructor of introductory broadcasting was saying something like this: "So the FCC is all, 'You guys have to comply with this rating thing.' And the networks are all, 'No waaaay!'"

The colleague reports that the students seemed enthralled. This kind of discourse is classified as presocialized (Williams, 1986), because it reveals that its user has not yet been socialized into the academic discourse community. She was not using specialized terms with precision nor modeling the rhetorical conventions that scholars in her field use to build arguments.

As TAs move further along in their own graduate studies, they become more deeply immersed in their discipline and thoroughly steeped in specialized ways of talking about knowledge. In this socialized discourse stage, they are much more fluent, precise, and confident. Unfortunately, this development is a double-edged sword. With this greater mastery comes a tendency to display the new vocabulary, practice on their students, hold forth on unimportant distinctions, and indulge in scholarly digressions. The teaching effectiveness of TAs may temporarily seem to regress during this time as they lose sight of what will be meaningful to beginning students.

At the third developmental level, instructional talk becomes postsocialized. That is, the speaker connects the language of the new community with the language of the broader community. A teacher can be precise without being pedantic, simple without being simplistic. Often explanations are shorter and crisper than at the previous two stages, leaving more time for providing connections through aptly chosen stories, metaphors, and examples. TA comments from our interviews which reflect the levels of their discourse include:

- Senior Learner

  "There are some things in the business algebra course, like the section on linear algebra. There are good things, there are interesting questions in that field. Not so much anymore. There are interesting aspects of that field. It ties into a lot of meaty subjects in mathematics. So, you know that particular part of the class. There is a lot of neat stuff that you can do with that." (female/math)

  "That's one thing that I think is cool about math. Generally, people break it into algebra, which doesn't require calculus in effect and an analysis which is basically things that start from calculus and go from there. Generalize it in some way to higher dimensions or strange surfaces or whatever. There are some other subfields that are harder to classify. Different people lump them in different ways, topology." (male/math)

- Colleague-in-Training

  "It's definitely that I am thinking a lot more through the intellectual job that I am doing as opposed to sort of the skills-oriented job." (female/zoology)

  "I guess (the course) is just to keep a broad-based knowledge of chemistry and so that you are familiar with all the concepts and the terms. It's a lot of hand waving. A lot of like okay, so this happens but it really doesn't ever happen. They will tell you things that happen that really don't happen. Just because it's too complicated to explain what really does happen. A lot of steps get skipped in between and they will give you a lot of rules that get broken. Like they will say this is a rule in chemistry and then when you get into a class higher up, they will say, okay, this rule you learned in general chemistry isn't always true. Actually, it's not that true usually. It's kind of like that. It's a lot of like magic. A lot of formulas come out of the air and stuff like that. It's just a general overview and here are a bunch of formulas and here are how things, how heat and energy relate in all these things. So that if you need to know, if you are working in biology, you need to know these things, you need to know where to find them." (male/chemistry)

- Junior Colleague

  "The whole idea of the feeding of this organism is actually really complicated... So what I did was I just told them that the room was, like we were inside the organism. And I kind of took them on this tour as if we'd just been eaten by the organism and everything in the room kind of took on significance as like the anatomy of the organism. And by us trying to escape, I kind of brought them into this feeling that they were eaten. And I said, if we went this way, how would we be caught? And I showed them like how effective a feeder is because that's kind of one of the main things about this organism. And they really were into it." (male/zoology)

Relationships with Students

A third developmental dimension is how TAs relate to their students. At first, the relationship is personal and intense. Students are friends or enemies, victims or bullies. TAs want very much to be liked, and often they are. The students of beginning TAs reciprocate their warmth with compliments, gifts, and, occasionally, inconvenient crushes. Many times, TAs extend themselves for their students in various ways, assuming that their generous efforts will be appreciated. When, as often happens, that is not the case, the TA feels hurt and personally betrayed. Other TAs feel threatened or intimidated by particular students or whole classes and suffer emotions ranging from rejection to outrage over conflicts that arise.

After a few experiences of these agonies and ecstasies, TAs generally move to a phase in which they become considerably more detached and analytical about students. (Some of them become downright cynical.) They are more interested in being respected by the majority of students than in being liked by every single one. In general, the emphasis moves away from the individual student to the group. For example, a TA who previously might have granted an exception to a rule would invoke the need to be consistent out of fairness to the class as a group. Instructional decisions are driven less by an intuitive identification with students and more by an intellectual rationale, perhaps grounded in learning theory or based on some teaching model. There can be great intellectual excitement at this stage, as TAs realize they can take control of curriculum and pedagogy. Given the time and support, they create elegant lectures and design elaborate learning activities, but sometimes they remind us more of generals strategically moving troops on the battlefield than of the passionate student advocates they were just a term before.

At the most advanced stage of development, TAs re-engage their students in a more complex relationship, one that takes on special features in the educational context. Though once again they relate to their students more as unique individuals, TAs no longer feel so personally vulnerable in those relationships. TAs approaching professional maturity are less likely to center on the conflict between wanting to be liked as a friend versus needing to be respected as a teacher. They let go of this false dichotomy, which in fact puts a focus on the needs of the instructor, and think about each student's educational needs. The interpersonal relationship becomes one important resource to draw on in working

toward the underlying goal of supporting learning. At this level, the perception of students may best be captured by the word "client." This word calls up the connotation of a relationship involving a skilled professional who is guided by a code of ethics and unselfishly provides a valuable service. Almost paradoxically, at the same time that TAs increase their sense of professional obligation to students, they become less likely to take full responsibility for the outcomes of each interpersonal encounter, realizing that students, too, have obligations for the way a pedagogical relationship evolves. In our interviews, when we listen to TAs talk about their relationships with students, we can hear these rather dramatic shifts:

- Senior Learner

  "The most enjoyable interaction with students is more individual type interaction. I mean time-wise it would be hard to do something but I would have loved to have even more time when it was just office hours with the students. I really enjoyed that and I would do as much of it as I could fit in and it would be hard to fit that much more than whatever, eight hours a week or something like that. I would be happy to do more like that. That was the most rewarding interaction between students." (male/zoology)

  "They tell me I am the only teacher that really cares about them. One of them brought me a little card to thank me for all my help on the assignment. There is one guy in the morning section that is just laying for me every day. He thinks he is so smart and whenever he can, he gets his two buddies going along with him. I just want to kick him out. He is always testing me, and I hate it. They hate the theoretical part, but I just say, come on you guys, let's get through this together, and then we can do something more fun." (female/communication)

- Colleague-in-Training

  "You know, I am not their mother and they don't need me to be their mother. They need to learn to take care of themselves." (female/psychology)

  "I would say 'use this kind of tube,' and they would take a different tube. And it was just really hard to deal with that, you know. Having people not listen to you when you're teaching them. And I had a lot of trouble with that. You know, what do you do? I ended up being really mean, and

hard on the students. I think I became a lot less chummy over the course of the quarter. " (female/zoology)

- Junior Colleague

"I feel like as the quarters have gone on I think I feel maybe less emotionally invested in my students. I don't think that that's necessarily a bad thing. I mean I am still available, and I am definitely being much more careful about being there for my office hours and encouraging people to come in and doing that kind of thing but in terms of an emotional thing. I think that part of it is that when I first got here I really was clinging to my teaching as the thing that was sort of the only thing that was still the same from my old program here. I went from a real small department to a real big department. I knew that I could teach and this was sort of the thing that I was really getting a lot of my identity from. I feel like that's less true. That may be a really healthy thing but it may also not be, I'm not sure. The real rewarding thing was really being more individual and having students that really had problems understanding a concept come to me and hashing it over with them until they understood it. That's like the best feeling, that I really managed to pass along some information or some idea that they didn't get before." (female/English)

"Um, I think it's a real balance because I have definitely moved away from trying to relate to them, to be their friend. I am in a position of authority over them, and I think it's a mistake to pretend that we're just peers engaging in some process together. At the same time, I really want them to feel comfortable with me. I see myself as trying to facilitate their success in college, and I want them to know that that's really important to me." (female/English)

"It's a lot of work and [my students] are really rising to the challenge. I feel like that's what I am there to do. I don't, I kind of have a clashing view with some of the other TAs and some of the people running the [writing] program in that I feel like I'm there to push them as far as they can go. That means not necessarily having every assignment be like a closed assignment where I lay out 'here is exactly what I want, fill in these blanks . . .' I feel like that is not what I am about. I do feel like one of the most important things I can do is give [my students] the freedom to achieve as much as they can." (female/English)

Relationship with Authority

Relationship with authority is the final dimension on which we have charted changes in TAs. At the point of entering TA assignments, TAs are usually very dependent on the faculty supervisor or other experienced instructors with whom they work. They want to know the "right way" to perform as a TA and require a great deal of support and feedback. When TA orientation programs become too philosophical, TAs make no secret of their need for prescriptive and practical advice on what to do in class or lab. A good supervisor is one who provides structure and guidelines and serves as a model of what to do.

Once some experience is gained, often in as little as one term, the TA's relationship with authority begins to change. Especially if there has been positive feedback from students, the TA is eager to become more autonomous. She or he may chafe at standardized course requirements or express philosophical differences with a supervisor. This stage is described as counterdependent because sometimes the motivation goes beyond establishing independence and reflects a need to break with authority.

The third stage of relating to authority is characterized by a more collegial connection between TAs and supervisors. Though the relationship may fall short of full egalitarianism, the TA is likely to be trusted with considerable autonomy and to play a collaborative role in important decisions. Neither hero worship nor resistance is present. Having taught a few terms and inevitably changed some of their own early ideas and practices, TAs gain a respect for the insights a supervisor may have based on years of experience. They can tolerate differences in philosophy and approach without needing to determine if the supervisor's way is right or wrong. There is a growing recognition that underneath the differences are shared goals and necessary, long-term connections to each other as members of the same profession. The changes in attitudes toward their supervisors and faculty members are reflected in these statements:

- Senior Learner

"I would go to my supervisor and find out what she had to say about it. But a lot of times it's little things that can easily be cleared up by just saying 'What do you think of this situation? Does this sound like the right thing to do or is that out of line?'" (female/English)

"That time I had a cheating problem I went in to talk to him and he shuttles me into the chair and that was nice that he held my hand to go in and talk with the department chair and figure out how to handle it." (female/math)

"She didn't give me enough help, and I was just not ready to teach the course." (female/English)

"She's just great. She is the definition of supportive. She is just terrific. Even in the beginning when she came into my class for the very first time. In fact, it was the worst class I'd ever conducted because I changed my agenda to suit her visit. We were going to do some journal entries and a couple of things that the students would do on their own but I thought that she would want to see me teach, and so I went on and did something that I wasn't prepared to do and she saw it, and I'm sure the students saw it and I felt it. But through it all, she was so supportive." (female/English)

- Colleague-in-Training

"It's like he [the professor] tries to make it too simple. I guess my feeling—I'm not sure if I can give a good example just off the cuff—but my feeling is I want to give them [the students] the first chance to make some pretty, not extremely, but some relatively complicated links between things without having to explain them." (male/math)

"Another criticism, in terms of his teaching style . . . His teaching style, for my tastes, talks down to the students too much. You know, treats them as being less intelligent than they really are." (male/math)

"You can talk about it theoretically all you want. This is the biggest problem that I felt with the professor and the way that he taught. He didn't want to give examples because always you are going to give an example that doesn't quite fit. So he talked about it in terms of 'x' and 'y.' So, literally he used the phrase 'x' and 'y'. It was just going over their heads." (female/psychology)

- Junior Colleague

"I heard her once telling her class that . . . if you fall on your tailbone and break the tailbone, there is no way to correct it other than medication. I went down to the library, pulled out a chiropractic book, because I knew exactly the technique that they did, copied it for her, brought it back, and slipped it to her . . . and she would go home and read it and just be absolutely entertained, where she would learn something new." (male/biology)

Refinements of the Framework of TA Development

Now that it has been about a decade since we first offered this model of TA development, we have had opportunities to test it through research and to receive feedback from TAs and those who work with them on how well the model fits their experience. On the whole, we are gratified to learn that it is congruent with the experiences of teaching assistants in many disciplines and on many campuses. At the same time, any generic model runs the risk of oversimplifying and overgeneralizing. What follows are some ways that our thinking has been elaborated and amended as we have worked with the basic model.

Each Stage Has an Essential Role to Play in Development

A key assumption of developmental models—and of our framework—that sometimes gets lost is that movement through a series of steps or phases is a cumulative process. Even if it were possible, it would not be desirable to skip steps in a developmental process because each phase plays an essential role. The behaviors and attitudes of the novice phase are not to be shed, but transformed as growth continues.

Just as a well-adjusted adult retains a healthy component of the joyful and curious child, so do the very best seasoned professors we know somehow retain many of the traits of the senior learner. In our years of work with brand new TAs, we are still amazed at the idealism, openness, and zeal with which they enter our profession. Often their students give them astoundingly high ratings and describe them as the best teachers at the institution. It is easy to discount this as peer identification or "mere popularity," but there is a very important message in the student response to many new teachers: They are doing something right, something that must not be extinguished as they are trained and professionalized.

In the colleague-in-training stage, the TAs add a more analytical component to their teaching identity. This requires a level of detachment. They disengage from their students enough to think about group issues rather than a series of dyadic relationships. They step back from their subject matter to examine its structure and make decisions about

curriculum. They see that their graduate faculty do not exhaust the pedagogical or curricular approaches they might adopt. There is an intellectual excitement about teaching issues at this stage that we hope will be internalized and not abandoned when a person becomes more comfortable and adept. It is certainly troubling to hear a TA say, "Now I know how to teach this course," or "I have figured out how to handle this student issue," because there is a sound of finality that may seal off the career-long journey we hope they will pursue.

The third stage of TA development, junior colleague, is intended to represent a synthesis of the important components of the two previous stages. The passion, engagement, and experience of risk-taking of the fledgling TA are brought back and now integrated with the intellectual frameworks, analytical distance, and sense of control that have evolved. Earlier experiences are reconceived and reintegrated. There is a danger that TAs and those who work with them will not see the importance of this final stage of development, so essential to the future professoriate. For the TA, especially if the early experiences of teaching were disenchanting, it is tempting to discard all the assumptions and impulses of the senior learner and hold firmly to the rational and technical insights of the colleague-in-training phase.

TAs' Development Is Neither Linear nor Smooth

Moving through the stages of TA development is not a tidy, step-by-step process. Although there are some dramatic turning points and breakthroughs, like most of life's developmental processes, the professional growth of TAs is frequently clear only in retrospect when some sort of pattern becomes visible out of a ragged "two-step forward, one-step back" process. Supervisors can signpost this growth that may not be evident to TAs themselves: "I know you are discouraged, but remember how only a couple of months ago you were struggling with . . ."

We have stressed from our earliest explorations of this topic that the path of TA development is best envisioned as a spiral. A vertical line or simple steps suggest that growth all moves in one direction, covering new ground at each phase, which does not capture TA development. Similarly, the popular image of the pendulum is not a completely acceptable alternative. It suggests that teachers cover the same ground over and over again, looking for the perfect spot to land. Most of the time they are wrong, for example, being too lenient, then overreacting by being too strict, and passing over the perfect middle ground along the way. The spiral image is a combination of a pendulum and an ascendant line. TAs are not usually wrong; they are usually right. They may revisit ideas and approaches they have used before, but they return to slightly modified perspectives because of where they have gone in the meantime. Instructors are always faced with issues of classroom management, explaining material that may be fairly new to them, meeting the needs of diverse students, designing courses and pedagogy that will actively engage students, and a myriad of other challenges. Each time we face those issues, as we spiral up, we face them on the basis of new experience and knowledge—at least we do if we are systematic and reflective about our teaching.

The growth and development are never finished. Completion of the formal TA experience does not mark a sharp transition from colleague-in-training to a fully prepared faculty member. The research on new faculty experience makes it clear that, for many, the quest for a teaching identity persists well into the early years of faculty life. Assistant professors, even those with graduate degrees from institutions with strong TA programs, continue through spirals of engagement and disengagement from students or collaboration and separation from their senior colleagues. In their new positions, their concerns change back to self concerns, and they struggle to find the right discourse level for various levels of instruction.

The Role of Affect Cannot Be Minimized in Understanding TA Development

The teaching/learning encounter is first and foremost an intense human activity. Anyone who moves into the role of teacher will make some profound personal changes. No model of stages completely captures the existential highs and lows that TAs live through. Each transformation is accompanied by some very painful realizations. In the move from senior learner to colleague-in-training, for example, TAs usually have to let go of a passionately held view of the teacher/student relationship. Dozens of TAs have reported feeling personally hurt when they first discovered that one of their students had cheated on an assignment. The experience of betrayal by a student or disillusionment with an admired mentor is not unlike the feelings a person has when spurned by a partner in a truly committed relationship. Sometimes the pain is so great that the individual never risks closeness again. So teachers, unless caringly supported

through their early disappointments, may withdraw from ever making themselves vulnerable to students again; thus sealing off much that is precious in teaching.

A similar cynicism can ensue when a new TA spends hours working out a course design that backfires. That person may choose to heed the ubiquitous messages to "work smart" and never again make a major intellectual investment in teaching. Though appearing on the surface to be a competent teacher, he or she may treat instruction as a job, saving passion and risk-taking for research. The developmental model is not meant to present the journey from new TA to active professional as predictable and therefore safe. Each transition involves wrenching changes that require the support of a caring professional community.

Meaningful TA Development Entails Development of Reflectiveness

An important expansion of our thinking about TA development is the role of reflectiveness. For the majority of TAs there is not only a change in what they say about their concerns, their disciplines, their students, and their supervisors; there also are changes in how they talk and, presumably, how they think about their teaching assignments. In general, they become more reflective and more articulate. The comments they make about teaching and learning become richer and more differentiated and better capture the complexity of these activities and their observations.

These changes in reflectiveness raise some questions for us. At a theoretical level, perhaps our model should include a dimension that shows low reflectiveness for senior learners and moves toward high reflectiveness at the junior colleague level. Certainly one cannot reflect until there are some experiences to reflect upon. A teacher cannot think comparatively about groups of students before teaching a few different classes, or see the pros and cons of different teaching approaches until a few have been tried. But beyond these rather obvious changes, our observations suggest that growth in reflection is far from automatic. In fact, new TAs spend a great deal of time reflecting on their teaching experiences. They relive their classes, retell their stories in great detail, and speculate at length about what might have been different. At the same time, many more advanced TAs actually reflect less as they master the basic skills of teaching and their work becomes routinized. Why do some TAs become more reflective while others resist introspection and remain relatively

TABLE 4.2
Responses Indicating Minimal Reflection
Math, Male TA

	STRENGTHS	AREAS FOR IMPROVEMENT
1ST INTERVIEW (first year—halfway through)	*At this point in your teaching, what would you say are some of your primary skills and abilities in teaching math, as the course you are teaching?* I don't know. *No idea at all?* No. *I mean have you heard, could you say anything, have you gotten feedback from the students? Like when someone says, "oh that explanation you gave us was really helpful" or something like that?* No, not really.	*What about things that you feel like you might want to develop, have you identified anything yet that you think you might want to work on or might want to be a hallmark of the way that you teach?* I don't know. Not . . . I mean, no. I haven't analyzed to that degree. *What do you think a student would say if I asked a student? What does this guy do the best in this classroom?* That, I honestly couldn't say.
2ND INTERVIEW (first year—at end)	My strengths. Well, I guess like if asked, I can usually get across what I am trying to say. I can explain something if people have questions about it, so that is a good thing.	Well, I think that I occasionally get bogged down in notation and things like that. Just using symbols for things. Occasionally sometimes . . . It's if you haven't seen a subject before and somebody is writing down a string of Greek letters then it looks imposing.
3RD INTERVIEW (second year—halfway through)	*We've talked about your strengths before. Let's do this both as a graduate student and as a TA. What do you think are your strengths?* (Pause) *Is it more in the content, is it more of the way you relate to me as a student, is it the way you can work with supervisors?* I don't know. (Pause) I think I've been pretty relaxed about things. That can be good. *You mean from the stress standpoint? You don't get too much stress about "I've got to do this . . . "?* Well, I don't know. Sometimes. But, you know. Just do it.	*In your TAing are there areas that you'd like to be better at, or you think "I gotta work on that more before next quarter"?* Sometimes, yeah. I don't know, sometimes . . . It's more like a specific example thing. Like, you know, like I have two sections, one right after the other, and I'll do the same thing in each section. Like I'll cover the same material. But sometimes I'll go to the second section . . . I'll say it differently because I'll say it the first time and for some reason it just seems better to say, at the time at least, see it's better to say it the other way. *So you learned something from that? Doing it twice?* Yeah. But I don't know if there's a general principle I can extract from that.

inarticulate about their teaching experience? Table 4.2 details the responses by the same individual over a period of 14 months in three different interviews.

This TA seems to actively resist reflection, even when the interviewers first invite, and then even prod, him to think about his teaching. He is consistently unwilling to stretch for words to describe his experience. Moreover, he appears to be holding on to a prior model of education that is deeply ingrained and somewhat magical: "I just do it."

It is possible that this TA has "developed" on some of the dimensions of our model, but any development will hit a ceiling of "mere competence" if it is not accompanied with increasingly sophisticated reflection on teaching. At the level of personal career fulfillment, the unreflective university instructor will not be intellectually challenged by the unending puzzles that present themselves in our classrooms. From the perspective of our universities' requirements for a well-prepared future professoriate, there is an urgent need for colleagues who are willing to tackle the complex intersection of ethical, practical, and philosophical issues facing higher education. Reflection is essential.

TAs' voices are composites of significant people who have influenced them, replete with contradictions and tensions. The TA who could not talk in any detail about his own strengths and weaknesses, even in the third interview, was probably not a member of a group that participated in guided reflection. He probably did not have a supervisor who supported his reflective development by engaging him in discussions of the richness of his early teaching experiences.

Returning to the communication perspective introduced earlier, we believe that a careful attention to nuance of language is useful for purposes beyond identifying the TAs' development level. Knowing the many messages that TAs are already receiving from some of their professors and peers, TA supervisors can decide to add other voices to the mix by actively modeling the forms of discourse that characterize reflective practitioners. Though we do not want graduate students to imitate us, we admit to being flattered when junior colleagues with whom we have worked closely pick up some of our trademark phrases such as Jo's "it's a balancing act between x and y" or Jody's "help me think about this." How can a person regularly use such phrases in talking about teaching without starting to think and act as if it were a complex and collaborative activity?

Besides choosing vocabularies that neither trivialize nor privatize teaching, supervisors can use discourse to structure even more active interventions that aid TA development. The kind of speech communities created in TA meetings and individual conferences can be carefully calibrated to elicit TAs' inner struggles to assist them in their thinking through difficult issues. In Vygotskian terms, a teacher or mentor "scaffolds" learning by offering verbal props and prods to help crystallize new insights. Assistance to a learner only works if it falls within a realistic zone; the learner needs to be challenged yet cannot be pushed too far beyond the current developmental level. Effective scaffolding is a delicate blend of recognizing and affirming where the learner is and inviting him or her to flex just a little. If a group of brand new TAs is expressing self concerns and demanding advice on classroom management, the supervisor will not refuse to give them tips and suggestions. But instead of offering definitive prescriptions, perhaps that supervisor can gently nudge them toward reflecting a bit on alternatives. If a TA is engaged in what sounds like student bashing, the supervisor should resist the temptation to reject the feelings of anger or disappointment that gave rise to the expression. After expressing empathy, it can be helpful to ask a question like "What could your students possibly be thinking that would make so many of them interpret the assignment that way?" At moments of developmental transitions, conversations with peers and supervisors have special salience. In these moments a new kind of discourse can be established and internalized, perhaps to become the basis for future action and thinking about teaching.

Concluding Thoughts

Obviously, given the perspectives we have just outlined, TA supervision is not a routine management job. If we are really thinking developmentally about the teaching preparation of the future generation of college/university faculty or the teaching preparation needed in other professional careers, we who supervise TAs must think systematically and developmentally about what we are doing and how we are doing it. TAs are continuously developing, and we must adapt our strategies, our expectations, and our relationships with them to meet the needs of growing professionals. What does all this mean for a TA supervisor faced with a group of graduate students with varied experiences as

teachers who must in a short space of time become qualified, competent interpreters of a discipline to undergraduates? And what does this all mean for TA supervisors who are responsible for assisting graduate students to grow into thoughtful professionals who will be equipped to teach in higher education or in positions in business, industry, and government? The challenge itself is daunting.

We have suggested elsewhere (Nyquist & Wulff, 1996) how the supervisor's role might change across a number of dimensions: relationships with TAs, teaching assignments, teacher training activities, and evaluation processes which are appropriate at various developmental stages. As graduate students change and develop, they will need supervisors who can model the values, behaviors, and characteristics of a professional in their field. TAs will benefit from supervisors who adapt as the TAs change, providing close supervision in the beginning but progressing to a role as consultant and colleague. For this to happen, the supervisor must incrementally and appropriately transfer responsibility for instructional decisions to the TA. In the ideal situation, the assignments for TAs should show a similar progression from specified duties or an assisting role to assuming responsibility for class sessions or even a whole course. TA preparation activities would also need to move from directed supervision to reflective practicums where approaches, results, and new ideas would be shared among colleagues. And, finally, assessment practices of TA performance should move from direct, daily/weekly assessment to providing collegial feedback helping the TA to develop a personal teaching style.

TA supervisors need not face alone the challenges we have identified. They can form partnerships with TAs, even going so far as explaining to TAs how one approaches supervisory challenges. Some supervisors we know share the framework described above with their TAs and find that TAs can relate to the stages and can even place themselves on the four dimensions of their concerns, their discourse, and their relationships with students and with authority. The supervisors report that such an experience is supportive for TAs and allows them to better understand their own needs and ways of getting them met.

Other supervisors use the framework to guide their own assessment and planning for TAs and to introduce the insights of the developmental process incrementally. When they deal with concerns, they assure novices that intense concerns about themselves are natural—that soon they will

be able to move to concerns about the impact of instruction on student learning. When TAs report their first anxieties about students, the supervisor takes time to talk about the natural progression from a personalized relationship to a collaborator/client relationship with students through detachment and objectivity. And many supervisors report that it is helpful to understand the middle stage that TAs go through, where they can almost seem to be regressing on some dimensions. Can this TA who acts as if you cannot do anything that is acceptable be the same person who used to cling to your every word? Parents live through the terrible twos and the horrors of adolescence more comfortably when they see the defiant acts of those periods as essential steps of growth. So, too, when supervisors are able to reframe TA "resistance" as temporary, they will let go more easily, encourage TAs to explore other models of teaching and to find several mentors. They do not abandon leadership but find ways to foster growth with a lighter touch.

But thinking developmentally goes beyond the preliminary model we posed for our colleagues who work with TAs. Surely our three-stage diagram is only a starting point, modified by the many contextual factors and individual differences we have mentioned, and under continued revision as we conduct our current study. What is most important about this way of thinking, we argue, is the opportunity it provides for us to listen carefully to TAs, to seek to capture some part of the dynamic and complex nature of their experience, and to consider more creative and comprehensive ways of working with them.

ENDNOTES

[1] For information on the original project, contact the Council of Graduate Schools in Washington, DC, or see Gaff and Lambert (1996). See also Chapter 16 of this volume.

[2] Due to the generous support of the Pew Charitable Trusts and the Spencer Foundation, we have now completed three years of a four-year, multisite study entitled "The Development of Graduate Students as Prospective Teaching Scholars: A Longitudinal Research Project." Other coprincipal investigators are Ann Austin, Michigan State University, and Donald Wulff, University of Washington. The team includes research assistants: Bettina Woodford, University of Washington; Patti Fraser, Michigan State University; Claire Calcagno, San Jose State University;

and Laura Manning, University of Washington. Unless otherwise indicated, quotations in this chapter are from this study.

References

Bakhtin, M. M. (1981). *The dialogic imagination: Four essays* (C. Emerson & M. Holquist, Trans.). Austin, TX: University of Texas.

Book, C., & Eisenberg, E. M. (1979, November). *Communication concerns of graduate and undergraduate teaching assistants.* Paper presented at the convention of the Speech Communication Association, San Antonio, TX.

Brookfield, S. D. (1990). *The skillful teacher: On technique, trust, and responsiveness in the classroom.* San Francisco, CA: Jossey-Bass.

Connolly, K. J., & Bruner, J. S. (1974). *The growth of competence.* New York, NY: Academic Press.

Darling, A. L. (1986). *On becoming a graduate student: An examination of communication in the socialization process.* Paper presented at the annual meeting of the Speech Communication Association, Chicago, IL.

Fuller, F. F. (1969). Concerns of teachers: A developmental perspective. *American Educational Research Journal, 2,* 207-226.

Gaff, J. G., & Lambert, L. M. (1996). Socializing future faculty to the values of undergraduate education. *Change, 28* (4), 38-45.

Hunt, D. (1971). *Matching models in education.* Toronto, ONT: Ontario Institute for Studies in Education.

Kagan, D. M. (1988). Research on the supervision of counselors and teachers-in-training: Linking two bodies of literature. *Review of Educational Research, 58,* 1-24.

Nyquist, J. D. (1993). The development of faculty as teachers. In M. Weimer (Ed.), *Faculty as teachers: Taking stock of what we know.* University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment (NCTLA).

Nyquist, J. D., Abbott, R. A., Wulff, D. H., & Sprague, J. (Eds.). (1991). *Preparing the professoriate of tomorrow to teach: Selected readings in TA training.* Dubuque, IA: Kendall/Hunt.

Nyquist, J. D., & Sprague, J. (1992). Developmental stages of TAs. In J. D. Nyquist & D. H. Wulff (Eds.), *Preparing teaching assistants for instructional roles: Supervising TAs in communication.* Washington, DC: Speech Communication Association.

Nyquist, J. D., & Wulff, D. H. (1996). *Working effectively with graduate assistants.* Thousand Oaks, CA: Sage.

Perry, W. G. (1970). *Form of intellectual and ethical development in the college years.* New York, NY: Holt, Rinehart, and Winston.

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions.* San Francisco, CA: Jossey-Bass.

Sprague, J., & Nyquist, J. D. (1989). TA supervision. In J. D. Nyquist, R. D. Abbott, & D. H. Wulff (Eds.), *Teaching assistant training in the 1990s.* New Directions for Teaching and Learning, No. 39. San Francisco, CA: Jossey-Bass.

Sprague, J., & Nyquist, J. D. (1991). A developmental perspective on the TA role. In J. D. Nyquist, R. D. Abbott, D. H. Wulff, & J. Sprague (Eds.), *Preparing the professoriate of tomorrow to teach: Selected readings in TA training.* Dubuque, IA: Kendall/Hunt.

Sprinthall, N. A., & Theis-Sprinthall, L. (1983). The need for theoretical frameworks in educating teachers: A cognitive developmental perspective. In K. R. Howey & W. E. Gardner (Eds.), *The education of teachers: A look ahead.* New York, NY: Longman.

Staton, A. Q., & Darling, A. L. (1989). Socialization of teaching assistants. In J. D. Nyquist, R. D. Abbott, & D. H. Wulff (Eds.), *Teaching assistant training in the 1990s.* New Directions for Teaching and Learning, No. 39. San Francisco, CA: Jossey-Bass.

Staton-Spicer, A. Q., & Bassett, R. E. (1979). Communication concerns of preservice and inservice elementary school teachers. *Human Communication Research, 5,* 138-146.