Action Research and the Professional Development of Graduate Teaching Assistants

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The dominant approach to second language (L2) teacher education emphasizes reflection as a tool for helping teachers develop context-specific, personal theories of L2 teaching. Educators can facilitate reflection by involving teachers in action research. This small-scale study investigated whether carrying out action research as part of a graduate seminar affected the professional development of graduate teaching assistants (TAs) who were teaching in foreign and second language departments. Insights into the TAs' professional development were gained through a qualitative analysis of their professional journals, reflective essays, action research reports, and oral and written feedback. The findings indicated that the TAs gained a broader understanding of research, developed an appreciation for peer collaboration, and adopted new L2 teaching practices. Suggestions for L2 teacher educators with an interest in incorporating action research into their graduate degree programs are offered.

IT HAS BEEN CLAIMED THAT THEORY AND research about second language (L2) teacher education has lagged approximately a decade behind the field of general teacher education (Freeman & Johnson, 1998) and that research specifically about L2 teacher education appears to be largely absent from the general education literature (Schultz, 2000; Vélez-Rendón, 2002). Furthermore, much of the L2 teacher education literature to date has described or prescribed "good" classroom practices (Tedick & Walker, 1994) rather than investigating the process of L2 teacher education. Considerably less attention has been paid to how teachers generate knowledge about teaching, how they develop teaching skills, how they link theory and practice, and how their previous experiences inform their belief systems (Cochran-Smith & Lytle, 1993; Freeman & Richards, 1996). These gaps in the literature are curious given that contemporary approaches to L2 teacher education emphasize the importance of reflection in teachers' professional development (Richards, 1998; Richards & Lockhart, 1994; Wallace, 1991). A reflective approach requires that teachers have opportunities to observe, evaluate, and reflect systematically on their classroom practices in order to promote understanding and self-awareness and to make changes when necessary. Teacher educators can create these opportunities for reflection by involving teachers in research. Research can help teachers recognize the importance of learning how to seek answers to their questions (Tedick & Walker, 1995), develop personal theories about L2 learning (Crookes, 1997), and redefine relationships among learners, teachers, and researchers in ways that enhance the effectiveness of their instructional practices (Nunan, 1992).

Despite the benefits that teachers may gain by carrying out research, they may not see it as one of their primary responsibilities. Teachers (both preservice and in-service) may associate research with positivistic assumptions and values, such as validating hypotheses, testing theories, controlling variables, and generalizing findings (Jungck, 2001).

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They may not be comfortable with some of the practices associated with positivistic paradigms, such as withholding instructional materials and activities from some students in order to create a control group (Bell, 1997). Consequently, teachers may regard research as an activity conducted by experts who have specialized training and work in laboratory settings, rather than as a natural extension of L2 teaching that all teachers can carry out in their classrooms. In addition, they may consider the topics typically explored in research studies as distant from their everyday teaching concerns (Crookes, 1993) or divorced from their learners' needs (Bell, 1997). Even when teachers locate studies that are potentially relevant to their classroom situations, they may be "turned off" by the opaquely technical language that is pervasive in research articles (Markee, 1997).

Teacher educators can help teachers bridge the gap between research and their teaching by introducing them to action research. As summarized by Rainey (2000), action research was inspired by Dewey's (1929) ideas about progressive education, but the term originated in the 1940s with Lewin (1946), who considered it an alternative to positivistic research. The initial conception of action research emphasized its potential to empower and emancipate participants through cycles of reform based on reflection and action. However, more recent approaches to action research have emphasized its contribution to an individual teacher's professional self-development rather than its potential to initiate large-scale reform (Burns, 1999; Rainey, 2000). Although definitions of action research vary, there are some typical features associated with it, which were summarized by Burns (1999) as follows:

1. Action research is contextual, small-scale and localized—it identifies and investigates problems within a specific situation.
2. It is evaluative and reflective as it aims to bring about change and improvement in practice.
3. It is participatory as it provides for collaborative investigation by teams of colleagues, practitioners and researchers.
4. Changes in practice are based on the collection of information or data which provides the impetus for change. (p. 30)

Unlike teacher research, which may investigate theoretical issues and topics considered important by scholars in the field, action research typically focuses on questions that emerge from a teacher's immediate classroom situation (Crookes, 1993). And unlike participatory action research, which emphasizes learner participation in identifying the topic to be researched, action research is often teacher defined and directed (Auerbach, 1994). (For a summary of the characteristics associated with different kinds of practitioner research see Zeichner & Noffke, 2001).

Action research has been regarded favorably because it can help teachers develop in-depth perspectives about the process of teaching and learning (Lacorte & Krastel, 2002). However, it has been criticized for prioritizing the search for more effective instructional techniques and the implementation of change over the need to understand the quality of life in L2 classrooms (Allwright, 2003). In addition, there has been considerable debate about the validity of action research because it is generally small-scale and context-specific. Because it generally does not test hypotheses, manipulate variables, or generalize findings, there has been some speculation about whether action research is "real research" (as illustrated through anecdotal accounts in Jungck, 2001; Nunan, 1997; and Rainey, 2000). Whereas some L2 teacher educators have suggested that teacher research should be evaluated against the same standards that are applied to any other kind of research (Nunan, 1997), others have argued that sustainability is more important than academic demands for scientific rigor (Allwright, 1997). Validity criteria associated with qualitative research, such as Erickson's (1986) guidelines for interpretive research, Anderson, Herr, and Nihlen's (1994) and Jacobson's (1998) validity criteria for practitioner research, and the *TESOL Quarterly* (2003) guidelines for case study research, provide a relevant framework for evaluating action research.

Even if L2 teacher educators recognize the benefits teachers may gain by doing action research, they may be uncertain about how to incorporate it into their educational programs. Unfortunately, there is very little empirical research that L2 teacher educators can consult when developing courses and training programs that target action research. Several studies have examined the effect of doing action research on the professional development of L2 student teachers during a required post-coursework teaching year, or in-service L2 teachers working in local schools and colleges (Burton, 1997; Cormany, Maynor, & Kalnin, 2005; Moreira, Vieira, & Marques, 1999; Roberts, 1993; Smith, 2005). However, the results of these studies may not be applicable for L2 teacher educators who work with graduate students teaching at the university level.[1] Most L2 and foreign language departments do not require a year-long teaching experience following the completion of coursework.

In addition, they are unlikely to have established networks of training and support for graduate students who wish to undertake action research. Thus, a viable solution for L2 teacher educators in L2 and foreign language departments may be to include action research as part of the graduate degree curriculum. Two recent studies, described below, examined the effectiveness of integrating an action research component into the graduate degree programs in L2 and foreign language departments (Crookes & Chandler, 2001; Thorne & Qiang, 1996).

Crookes and Chandler (2001) described the introduction of an action research component into an existing L2 teaching methods course for graduate students enrolled in a master's program in European Languages and Literature ($N = 13$) at the University of Hawai'i. Most of the graduate students were teaching assistants (TAs) assigned to first-year Spanish or German classes, but 2 students without teaching appointments did practice teaching in a Spanish class taught by one of the researchers. Reading materials and lectures about action research were added to the course syllabus, and the students carried out collaborative research projects that investigated topics relevant to their L2 teaching assignments. The graduate students collected data through student journals, peer observations, questionnaires, and interviews, and submitted oral and written reports about their findings. The researchers elicited the graduate students' perceptions about the course and their action research projects through journals and final evaluations. The graduate students reported that the action research project overall was beneficial and that using student journals helped them communicate with their students more effectively. The researchers pointed out that the more successful graduate students had previous experience with journaling and field research techniques, whereas the less successful students had difficulty adjusting to the cyclical and reflective nature of action research. The researchers conducted follow-up interviews with 6 TAs who held teaching positions in the subsequent semester in order to determine if they were using any of the action research techniques or concepts they had learned. They reported that the TAs did not carry out formal action research projects or participate in peer collaboration activities, such as peer observations, in the subsequent semester. However, the TAs expressed interest in carrying out future action research projects if their departments could formally allocate time and resources for their projects. The authors concluded that further curricular innovation may be necessary to identify effective ways of implementing action research so that graduate students sustain their interest and involvement in research.

Thorne and Qiang (1996) described the integration of an action research component into a master's program in English for English as a foreign language (EFL) teachers at Beijing Normal University. The action research project ran parallel to the methods course and teaching practice components of the curriculum, which were offered throughout the second year of the program. During the first semester, the teachers were introduced to action research, data collection, and analysis techniques through compulsory workshops, seminars, discussions, and hands-on data analysis activities. The first semester concluded with a planning stage during which the teachers, working in pairs, planned an action research project by identifying a problem, designing and piloting data collection instruments, formulating possible solutions to the problem, and deciding how to collect data that could assess the effectiveness of the solutions. The teachers were not required to carry out the projects in the following semester, but most of them voluntarily implemented their research plans. The authors reported that the teachers who implemented their projects demonstrated greater willingness to try new activities and techniques, improved research skills, heightened sensitivity to classroom dynamics, and more varied use of classroom materials than did teachers who did not carry out their projects. Although the action research component had a positive impact on the professional development of the participating graduate students, it still had not received official recognition from the university and remained a non-credit bearing component of the master's program.

As the findings of these studies suggest, L2 teacher educators may experience administrative challenges when attempting to incorporate action research into graduate degree programs. In addition, they may face ethical challenges involving the decision to mandate action research projects (Barr Ebest, 2001). If L2 teacher educators require action research as part of TA teaching assignments, the TAs may react negatively to being asked to assume additional duties besides teaching (Rainey, 2000). However, if L2 teacher educators simply introduce principles and techniques of action research into their graduate courses without involving TAs in the process of doing action research, the TAs may perceive it as removed from their lives (Wallace, 1991). Barr Ebest (2001) has suggested that L2 teacher educators consider Newman and Brown's (1996, as cited in Barr Ebest, 2001) paradigm for analyzing ethics when deciding how to include an action

research component in their graduate courses. In this paradigm, the important issues that L2 teacher educators might consider include consequences (greatest good for the greatest number), duty (expectations and obligations), rights (issues of respect, privacy, and confidentiality), social justice (advancement of those "least advantaged"), and ethics of care (relationships with those studied).

In light of the challenges that confront L2 teacher educators who hope to integrate action research into their courses, continued efforts to identify educational practices that have a positive impact on learning outcomes are needed, as advocated in the framework of the scholarship of teaching and learning (Kreber, 2001). Several researchers have pointed out the need for L2 teacher educators to carry out research projects that help them determine the effectiveness of their educational practices (Bartels, 2002; Hammadou, 1993). The current study addresses this need. The following research question was formulated: How does participation in an action research seminar affect the professional development of graduate TAs?

METHOD

Context of the Study

I became interested in action research during my second year in the Division of English as an International Language (DEIL) at the University of Illinois, Urbana–Champaign, where I taught introductory and seminar-level courses in second language acquisition (SLA) theory. In my first year at DEIL, I realized that many of the graduate students in my classes were more interested in L2 pedagogy than in SLA theory. I also realized that many of them were not interested in the type of research I did, which was theoretically motivated, hypothesis-testing quantitative research. Instead, they were more interested in practically oriented, classroom-based research whose findings could be applied immediately to their specific L2 teaching contexts. I decided to focus on action research because it could provide them with a tool for investigating their L2 teaching practices through cycles of action and reflection. I also wanted to introduce them to a type of classroom-based research that they might not have encountered in their other graduate courses or readings, which typically targeted experimental research. I hoped to raise their awareness about the different research traditions that they could adopt when exploring their teaching practices.

I considered incorporating an action research component into my SLA courses, but quickly realized that they were not an appropriate forum for an action research requirement. Those courses had an existing research assignment related to course content that required students to test or apply an aspect of SLA theory, which was not compatible with the action research emphasis on classroom practice. Furthermore, most of the students in those classes did not have L2 teaching positions. Consequently, I decided to offer an elective seminar course specifically about action research. I hoped that making the course an elective would ensure that the students had chosen to become involved in action research and were not compelled to participate. Because it was my first time teaching an action research course, I decided to investigate the effectiveness of the seminar so that I could make improvements before offering it again. In addition, I believed that it was important for me also to do an action research project because I was new to action research.

I designed the action research seminar to meet for two 80-minute classes per week over a 15-week semester. The course materials were *Collaborative Action Research for L2 Teachers* (Burns, 1999) and a reading packet that included articles and chapters about different steps in the research process as well as published action research studies such as those by Kebir (1994), Nunan (1996), Perkins (2001), and Szostek (1994). Initially, I followed a lecture/discussion format to introduce principles of action research and describe approaches to data collection, but shifted to a discussion-only format when the TAs had begun their research projects. The TAs nominated topics for discussion, which concerned narrowing research topics, deciding how to collect and analyze data, and presenting research findings. They regularly brought their teaching materials, research materials, and data samples to class for peer and teacher feedback. They collaborated with their peers throughout the research process by collectively arriving at topics to investigate, deciding what data to collect, and reflecting on their teaching practices. The course assessment was based on a professional journal, a reflective essay, an action research project, and class participation. The assignments are described in more detail in the *Data Types* section.

Participants

The participants were 7 graduate TAs (5 women and 2 men)[2] enrolled in the action research seminar described in the previous section. As summarized in Table 1, the TAs were studying in a variety of graduate degree programs including a master's

TABLE 1
Participants' Biographical Information

TA	Degree	L1	TA Position	Previous Teaching Experience
Gary	MA, TESOL	English	EAP Writing	EFL (Japan & Korea) for 4 years, EAP writing (United States) for 2 years
Gordon	Ph.D., EALC	Chinese	Advanced Chinese	L2 Chinese (China, Thailand, & United States) for 9 years.
Grace	Ph.D., Educational Psychology	Korean	EAP Writing	ESL survival skills volunteer (United States) for $\frac{1}{2}$ year, ESL tutor (United States) for 1 year
Isabelle	MA, EALC	Chinese	Intermediate Chinese	EFL (China) for 3 years, L2 Chinese (United States) for $1\frac{1}{2}$ years
Leslie	MA, TESOL	English	EAP Pronunciation	ESL pronunciation (United States) for 1/2 year, EAP writing (United States) for 1/2 year.
Melissa	MA, TESOL	English	IEP Social Coordinator	Junior high (United States) for 7 years, EAP writing (United States) for 2 years
Michelle	MA, TESOL	Japanese	Beginning Japanese	ESL teaching practicum (United States) for $\frac{1}{2}$ year

Note. All names have been changed. EALC = East Asian languages and cultures; EAP = English for academic purposes; EFL = English as a foreign language; ESL = English as a second language; IEP = Intensive English Program; TESOL = Teachers of English to Speakers of Other Languages.

program for Teachers of English to Speakers of Other Languages (TESOL), master's and doctoral programs in East Asian Languages and Cultures (EALC), and a doctoral program in Educational Psychology. They came from various first language (L1) backgrounds, including English, Chinese, Japanese, and Korean. Most of them were teaching L2 classes in their home departments, including English for academic purposes (EAP) writing, Chinese, EAP pronunciation, and Japanese, but 1 TA had an administrative position as the social coordinator in an intensive English program (IEP). All of the TAs had some L2 teaching experience either abroad or in the United States, or both.

As shown in Table 2, the majority of the TAs (6/7) reported that they had enrolled in the seminar in order to learn more about research and to become involved in a research project, but 2 TAs stated that they hoped the seminar would help them with their teaching. In their action research projects, the TAs investigated topics that were motivated by their experiences in their L2 classes. They primarily explored the effectiveness of their teaching practices, such as approaches to grammar instruction (Isabelle and Michelle),[3] methods for encouraging class participation (Gordon), and techniques for transitioning between class activities (Grace). However, 3 TAs investigated broader issues related to course assessment (Gary), syllabus design (Leslie), and program evaluation (Melissa).

Data Types

The present study elicited multiple data types in order to gain a rich understanding of the participants' professional development and of the impact of the seminar on that development. Each data type is described in detail in the following section.

Professional Journal. The TAs recorded their thoughts about their L2 classroom experiences, their action research projects, or the action research seminar, or a combination thereof, making a minimum of two entries per week. I did not predetermine the number of required journal entries, but allowed the TAs to establish the minimum requirement through negotiation and consensus. We also agreed that I would not read their journals until after the course grades had been submitted, in order to allay any of their concerns that negative comments about the seminar might affect their grades. Instead, we decided that I would give them full credit for the professional journal assignment as long as they submitted the required number of journal entries.[4] Each TA made from 27 to 35 entries in the professional journal, and the average entry length was 150 words with a range of 31 to 360 words.

Reflective Essay. The TAs wrote a short summary of their professional development at the end of the semester. They were encouraged to review

TABLE 2
Participants' Interests in Action Research

TA	Motivation for Taking Seminar	Action Research Project
Gary	Improve his negative impressions of research, incorporate elements of action research in his master's thesis, network with other students about research	Promoting self-assessment of progress in L2 writing
Gordon	Learn about action research to help with his teaching	Motivating students to speak up
Grace	Learn about action research by doing a project by herself	Development of a novice, nonnative ESL teacher's use of transitions
Isabelle	Organize her research ideas and do research	Grammar instruction in an intermediate Chinese L2 classroom
Leslie	Learn more about her teaching, learn a research style that can inform her teaching	Action research as a tool for curricular innovation
Melissa	Expand her idea about what research is, learn to do qualitative research	The impact of constraints on action research projects
Michelle	Obtain knowledge about how to do action research	The use of L1 and L2 for grammar instruction in a Japanese as a foreign language class

Note. All names have been changed. ESL = English as a second language.

their professional journal entries, and to reflect on how they had developed over the semester. Their reflective essays ranged from two to four pages in length, with an average length of 650 words.

Action Research Projects. As described previously, the TAs explored context-specific topics related to their L2 pedagogical practices, such as promoting class participation, teaching grammar, encouraging self-assessment, and implementing curricular innovation. The TAs had numerous opportunities for in-class peer and teacher feedback at all stages of the research process, which culminated with an oral presentation and a written report. Their oral presentations were announced on a departmental electronic mailing list, and their friends and colleagues were invited to attend. They submitted the written reports approximately 5 days after the oral presentations. They were encouraged, but not required, to submit their projects to an international conference on language teacher education that was held the following semester.

Course Feedback. The TAs' perceptions about the action research seminar were solicited formally through an oral focus group and a written course evaluation form. A recent graduate of the university who was familiar with the degree program led the oral focus group. The TAs selected her from a list of potential focus group leaders that I had suggested. She was provided with a list of topics and noted the TAs' comments without including any identifying information, which resulted in four pages of notes. The written evaluation consisted of the TAs' responses to open-ended questions on the anonymous course evaluation form used at the university. They completed the written evaluation at the end of the semester. I was not present during the focus group discussion nor when the TAs completed the course evaluation.

Field Notes. The secondary data source was my field notes, which included thoughts that I recorded while preparing lessons, during class, and immediately after class, as well as my reactions to informal conversations with the TAs during office hours. I noted feedback about the seminar that the TAs provided during office hour visits or through email messages and recorded the TAs' responses to in-class discussions about the required readings.

Data Analysis

As described in the previous section, the data for this study consisted of the TAs' professional journals, reflective essays, action research reports, and feedback, as well as my field notes. As is typical in qualitative research (Creswell, 1998, 2003; Denzin & Lincoln, 2000; Rossman & Rallis, 1998), an inductive approach was adopted so that themes emerged from the data. To begin, I read the entire corpus and identified general

themes that illustrated the participants' impressions about their action research projects and the action research seminar. Six initial themes emerged from the data: feelings about research, knowledge of research, ability to do research, perceptions about collaboration, extending research activities, and comments about the seminar.

After identifying the initial themes, I read each data source again to extract segments from the texts that illustrated each theme, pooling information across participants and data sources. As more information was added, the initial themes were refined by grouping related themes. For example, the themes *feelings about research*, *knowledge of research*, and *ability to do research* were combined into a single theme that was renamed *perceptions about research* because all of the segments expressed the participants' perceptions about research and their research activities. The initial themes were also refined by creating new themes as they became apparent. For example, the initial theme *comments about the seminar* was replaced with two new themes, *aspects of the seminar that were helpful* and *aspects of the seminar that needed improvement*, because the segments indicated that the participants had both positive feedback and suggestions for improvement. Finally, the initial themes were also refined through renaming. For example, the initial theme *extending research activities* was renamed *application to L2 teaching practice* because the segments indicated that the participants were applying their research activities to their L2 teaching practices.

After the data analysis was carried out, I presented some preliminary findings at a L2 teacher education conference. Three months later, I read the entire corpus again in order to verify the identification of themes and supporting segments. No additional revisions of the themes were necessary, but 10 segments that were missed in the initial coding were added. This cyclical approach to data analysis and verification resulted in the identification of five themes: perceptions about research, perceptions about collaboration, application to L2 teaching practice, aspects of the seminar that were helpful, and aspects of the seminar that needed improvement. The first three themes are described in the following section, and the final two themes are presented in the Discussion section as suggestions for L2 teacher educators.

FINDINGS

Analysis of the data revealed three themes that concerned changes in the TAs' perceptions about research, their perceptions about collaboration, and their L2 teaching practices. The findings related to each theme are presented in the following sections.

Perceptions about Research

In terms of their perceptions about research, the TAs began the course with a fairly narrow conception of research but gained a broader perspective by the end of the semester. Several TAs regarded research as a complicated process that required considerable technical skills. For example, Isabelle wrote in a journal entry that "to me, research means something very scientific and complicated. One will need some training before he/she can start doing some research."[5] However, by the end of the semester, the TAs had realized that there were many different approaches to research and that not all of those approaches involved controlling variables or testing hypotheses. Their broadened view of research was also evident in their comments about the usefulness of research. For example, Gary admitted in his first journal entry that he often questioned whether research had any impact on people's lives. Gordon also had doubts about the usefulness of research, as he explained in his third journal entry "research is good for professional development but I think research might be a little bit exaggerated because for language teachers teaching well is more important than research." However, later in the semester, they both pointed out how the findings of some research studies could be useful.

Although the TAs' perceptions became more positive as they learned about action research, they had some remaining questions about its validity. Gary wrote in his journal that "it seems action research is still struggling to be considered a valid form of research." Even though he acknowledged the usefulness of action research, he felt that it "was not really generalizable." Similarly, Isabelle wrote in a journal entry that action research was accessible for language teachers, but the findings of their studies might not be "correct" because they were based on a small group of students. After reading a published action research study that was written in a narrative style, Gordon questioned whether it was appropriate to write a research paper without using "academic/technical terms" or referring to theory, because it did not seem "very scientific."

I was occasionally frustrated by the TAs' lingering doubts about the validity of action research. For example, during a session in which the TAs were narrowing their topics and formulating research questions, one TA repeatedly pointed out

that her peers were not controlling variables, which meant that their findings would not be valid. In my notes after that class, I wrote the following: "I keep telling the class that action research isn't tightly controlled experimental research so many things that do matter for experimental research don't matter for action research, but they just don't seem to get it." A few weeks later, the TAs were critiquing published action research studies and one TA stated that a study was poorly done because the author had not included any statistics. As I wrote in my notes, this comment provided

> a good opportunity for me to make the point that they're brainwashed . . . . I told them it was sad that they had bought into the idea that only experimental/stats research was "real" research . . . . I also reiterated that one goal of the seminar was for them to get the idea that other kinds of research are also valid.

Although the TAs initially associated research with positivistic, hypothesis-testing, quantitative studies, which confirms the results of previous studies that examined teachers' beliefs about research (Jungck, 2001; Rankin, 1999), their overall perceptions of research eventually broadened to recognize the usefulness of small-scale, context-specific studies. Nevertheless, they had some lingering reservations about action research, and their concerns reflected the values and standards associated with the more dominant positivistic paradigm in educational research. I occasionally felt discouraged by their reluctance to recognize action research as real research, and wondered why they had difficulty accepting it as a legitimate scholarly activity. Perhaps the absence of action research studies on the reading lists for their graduate courses (including my own SLA courses), as well as the relative lack of action research studies in the top-tier journals exerted a more powerful influence on their attitudes toward action research than I had anticipated.

Perceptions about Collaboration

The second finding that emerged from the data was that the TAs gained an appreciation for peer collaboration by the end of the seminar. Several TAs expressed reservations about the collaborative focus of the seminar in their early journal entries because they believed that collaboration meant that they would be required to work in pairs or groups. For example, Leslie wrote the following in her journal entry:

> I HATE doing things in groups. So this whole collaborative thing sort of gives me a headache . . . . okay so maybe it's not that I hate collaborating, it's more that I hate the idea of collaborating for this class—because there's no one with a similar class that I want to work with. I don't know. I just want to do it by myself.

Gordon expressed very similar concerns in his professional journal, as illustrated by the following excerpt:

> After reading the textbook, I'm not sure how powerful or useful the collaborative action research would be because different classes have different situations. I don't know if your peers can give you really useful insightful suggestions or advice about your own problem. I'm used to working alone.

Despite their initially negative views about collaboration, the TAs regularly wrote in their journal entries about their positive experiences carrying out in-class peer activities. In addition, they wrote in their reflective essays that their views about peer collaboration had become much more positive. For example, Leslie admitted that in the past she had not been "overly impressed with how group work usually works out" but that in the action research seminar she could "actually see how the group work was beneficial." Similarly, Gordon stated that his negative ideas about collaborating with TA peers at the beginning of the semester were "totally wrong." He discovered that peer advice gave him "different perspectives and insight into the issues. . . and more options to choose."

The TAs also appreciated their collaborative activities with colleagues who were not enrolled in the action research seminar. At the beginning of the semester, several TAs commented on the lack of interaction they had with their colleagues. For example, Michelle was considering including nonparticipant observation in her action research project, but did not know whom to ask to observe her class. She explained in her journal that the other TAs "are complaining that they are busy and this makes me hesitate to ask." Gary wrote in his journal that he had mentioned his project to the TAs who were teaching the same course, and that they had scheduled a meeting to discuss the topic further. He admitted that this meeting was the "only collaborative project I've done with the other TAs since I've been here" and wondered if he was "the only one who hasn't collaborated, or is it pervasive in our department?"

Although they initially expressed doubts about the value of peer advice, all of the TAs carried out collaborative activities with their peers in the action research seminar, and the majority of them also collaborated with TAs and lecturers who were not participating in the seminar. Their perceptions about collaboration were unanimously

positive by the end of the semester. Isabelle wrote in her reflective essay that when she looked back over the semester, she realized "we were collaborating with each other all the time!" Grace pointed out in her essay that many of the practices she implemented in her class came from collaborative work with her peers and students, and that collaboration was "a true asset to improving one's teaching practice." Michelle acknowledged the important role that peer collaboration had played in her action research study. She explained that she had "learnt a lot from my classmates . . . this motivated me to devote myself to doing better research."

I was pleased by the TAs' positive response to the collaborative focus of the seminar because I had been critical of my efforts to provide them with peer activities during class time. I had reflected on my difficulty moving from conceptual discussions about the importance of collaboration in action research to the actual implementation of collaborative activities. For example, I wrote the following in my field notes at the beginning of the semester:

> Despite my best intentions, we've gotten into the lecture/teacher-fronted discussion format. There were a bunch of activities in the Hobson (2001) reading that could be used when getting an action research project group together—and all we did was read about them and my brilliant comment was along the lines of "yeah so those are some activities you can do if you're in a group like that" as if we aren't a group like that. We should be doing these activities, not just reading about them and storing the ideas away for future use.

After sharing that excerpt with the TAs, I was able to devote more class time to collaborative activities that gave them opportunities to discuss their teaching and research activities. Although the TAs did not carry out action research projects in teams (as often advocated in the action research literature), they sought out peer support, advice, and feedback throughout the research process and learned to value these collaborative activities. This type of collaboration may be more appropriate in contexts, like this action research seminar, where the teacher-researchers are from different departments and are teaching different languages or subjects, or both.

Applications to L2 Teaching Practice

The third theme that emerged in the data was that the TAs applied the knowledge they obtained by doing action research to improve their L2 teaching practices. The TAs implemented new L2 teaching practices in response to the insights they gained through self-reflection, classroom observations, and peer and student feedback. For example, Grace realized through self-reflection that she had interpreted her role as teacher to be a knowledge giver who should know more about the topic than the students and who should not make mistakes. As a result, she was very conscious of her language use, which led her to speak less fluently than she did in social situations and contributed to the difficulty she was having when transitioning between activities in her EAP writing course. After this realization, she experimented with a new classroom demeanor, which she described in her professional journal as follows: "When I entered the classroom, I acted somewhat differently—kind of loose and easy going. . .. I guess I tried to act like when I was with my friends—easy going and comfortable." Later she wrote in her action research paper that her "effort to be comfortable with my students by acting less like a superior teacher and more like a friendly colleague certainly helped me feel less nervous, which resulted in better transitions." Grace's students also commented on her improved transitions in their writing journals.

In addition to self-reflection, systematic observations of L2 classes taught by themselves, their peers, and their supervisors also helped the TAs improve their L2 teaching practices. For example, Michelle investigated her use of the students' L1 (English) and the target language (Japanese) in her intermediate Japanese class, especially when teaching grammar. After observing her language use in several classes, Michelle realized that she was randomly mixing the two languages, often starting an explanation in English and then switching to Japanese. She then observed her peers' and supervisor's classes and noticed that they used the two languages more systematically and always alerted the students before code-switching to English. Based on her observations, Michelle tried speaking Japanese to introduce new grammar topics first, then checking to see if her students needed additional explanation in English for complex structures. By the end of the semester, Michelle felt that she had gained greater understanding and control over her use of English and Japanese and had learned how to use both languages more effectively.

Finally, student and peer feedback also led the TAs to adopt new techniques in their L2 teaching. The TAs elicited multiple perspectives in their action research projects, for example through student feedback and through peer or supervisor observations, or both. For example, Isabelle explored her use of the students' L1 and the target language (Chinese) and her explanation

of grammar rules (inductively or deductively) in her intermediate Chinese class. By eliciting her students' feedback, Isabelle discovered that they felt that she was speaking too much English and wanted her to speak more Chinese. In response to their feedback, she decided to speak Chinese when presenting grammar points, but quickly realized that she needed to spend more time preparing her grammar lessons. Whereas she had native speaker intuitions about Chinese grammar, she had difficulty converting those intuitions into clear explanations that her students could understand. She had to plan her lessons more thoroughly to make sure that her explanations were comprehensible to intermediate students, and that her example sentences clearly illustrated the grammar points. By the end of the semester, both Isabelle and her students believed that her innovations had resulted in more effective grammar instruction.

The TAs benefited from doing action research because they gained greater understanding of their L2 classes and used that new understanding to improve their L2 teaching practices. Thus, these TAs used action research as a tool for their individual professional self-development, as commonly reported in the action research literature (Burns, 1999; Rainey, 2000). However, some TAs recognized the potential for their action research projects to initiate larger-scale reform. For example, Leslie requested a meeting with the faculty supervisor of her EAP pronunciation course in order to share the findings of her study and discuss possible revisions to the course syllabus. The faculty supervisor welcomed her thoughts and implemented several of the changes she had proposed in the following semester. Similarly, in their collaborative activities, Gary and his peers created a survey about student progress, which his faculty supervisor allowed the TAs to distribute to all the students in the EAP writing course. The findings helped the TAs identify bench marks that their students could use to monitor their progress. I was encouraged that the TAs' research projects facilitated course-wide discussion and innovation, but my enthusiasm was tempered by the recognition that their ability to stimulate larger-scale reform remains contingent upon the receptivity of their faculty supervisors.

DISCUSSION

The findings indicated that carrying out action research projects as part of a graduate seminar had an immediate, positive impact on the TAs' professional development by broadening their perceptions about research, helping them recognize the value of peer collaboration, and encouraging them to implement new pedagogical practices. However, the data could not provide insight into the persistence of these findings because the study was limited to one semester. Curious about whether the action research seminar had any lingering effects on the TAs, I contacted them by email 13 months later and asked them the following questions:

1. In addition to turning in your paper for class, did you do anything else with the project, such as present it at a conference or write it up for a journal?
2. Since the action research seminar, what other research projects have you done? If you haven't done any other research, why not? If you have, what motivated you to do more?
3. Do you think the action research seminar has had any lasting effect on your professional development (i.e., that extends beyond what you did in that semester)?

In response to the first question, 5 TAs reported that they continued working on their action research projects after the seminar had ended. Leslie expanded her action research project into a master's thesis by carrying out another cycle of data collection to implement and evaluate the changes she had proposed in her action research study. She then presented the findings at the language teacher education conference we had discussed in class. Four TAs presented their studies at that same conference as a colloquium, and had their co-authored paper accepted for publication in the conference proceedings. Gary reported that his action research project had been accepted for presentation at the conference, but he was unable to attend due to schedule conflicts. Finally, Melissa reported that she had not done any additional work related to her action research project, which had turned into an essay about the constraints teachers can face when attempting to carry out action research. Thus, the majority of the TAs continued working on their action research projects even though the seminar had ended.

When asked about their participation in other research projects (Question 2), only 2 TAs reported no involvement in any research activities since the seminar had ended. Isabelle graduated the semester following the action research seminar and then had consecutive one-semester teaching positions at three different universities. She felt that she had not been at one university long enough to carry out any new research

projects, but planned to do research to improve her teaching when she found a more stable teaching position. Michelle also graduated the semester following the action research seminar and then enrolled in a doctoral program in applied linguistics at another university. She had not taught since the semester she was enrolled in the action research seminar, and her first semester of doctoral coursework did not involve empirical research. Three TAs reported that they had participated in research projects for their master's theses in the semester following the action research seminar. Whereas Leslie's thesis was a continuation of her action research project, Gary and Melissa's theses involved survey and experimental research. Two doctoral students, Grace and Gordon, had participated in theory-based research projects to fulfill class and degree requirements, but had not carried out projects to investigate their teaching practices. Several TAs explained that they did not have time to start any new action research projects and had little external motivation for doing action research because it was not required in their graduate courses or as part of their teaching positions. Their comments provide further support for Crookes and Chandler's (2001) conclusion that further curricular innovation may be necessary in order to sustain TAs' interest and participation in action research.

Finally, all 7 TAs reported that they believed the action research seminar had a lasting effect on their professional development. Three TAs reported that they were still using techniques they had implemented during action research projects to help them understand and improve their current L2 classes. Isabelle explained that the seminar showed her different ways to solve problems that she faced in her L2 classes, such as seeking peer advice and eliciting student feedback. Gordon felt that he had developed greater awareness of problems in his class and how to improve himself as a teacher. Leslie believed the seminar helped her learn ways to get student input that she then could use to improve the classroom. Gary and Melissa reported that they benefited from the experience of doing action research and were planning on implementing action research projects in the near future. Grace and Michelle believed that presenting their project at a conference and writing a manuscript for the conference proceedings had a lasting impact on their professional development. They both believed that the conference presentation and publication experiences were more influential than the seminar itself, but pointed out that these activities were a result of their participation in the seminar.

In summary, the TAs believed that the action research seminar had a lasting effect on their professional development even though they had not carried out new action research projects since the end of the seminar. Although their responses to the follow-up questions were encouraging, the TAs may have given particularly positive feedback because they were responding to me directly rather than anonymously. Future studies can address the long-term impact of doing action research on teachers' professional development more systematically through longitudinal research that includes avenues for participants to provide anonymous feedback over longer periods of time.

IMPLICATIONS FOR L2 TEACHER EDUCATORS

The TAs' experiences while carrying out action research projects as part of an elective seminar revealed interesting changes in their perceptions about research and collaboration, as well as changes in their L2 teaching practices. Their reflections contained valuable insights that L2 teacher educators might consider when implementing action research courses or integrating action research into existing courses.

Aspects of the Seminar Regarded as Helpful

The TAs reported that they benefited from doing research, not simply reading about action research or planning a research project. As Isabelle commented in her first journal entry, she believed the seminar "might be even better than a research design course, since we will actually DO some research." As pointed out previously, simply talking about action research may lead TAs to perceive it as a discipline that is removed from their lives (Wallace, 1991). Certainly, TAs benefit from the knowledge about research that they receive through class lectures and readings. However, experiential knowledge is also crucial for the acquisition of research skills, which require time and practice to develop. Michelle explained in her reflective essay that "the knowledge from the book or lecture can give some ideas but the knowledge from experience is more insightful and more personalized." Experiential knowledge can reinforce and strengthen the knowledge that teachers obtain through lectures and readings.

Another aspect of the seminar that the TAs found beneficial was the emphasis on the public

dissemination of their research findings. Sharing research findings with members of the community is an important characteristic of action research (Burns, 1999; Crookes & Chandler, 2001). During the first week of class, I talked about various conferences that would be appropriate forums for the TAs' action research projects and distributed a call for proposals. After class, I wondered whether my enthusiasm for the TAs to present their projects at a conference might have been overwhelming given that they were novice researchers. I wrote in my field notes that I hoped "I didn't come across too strong on suggesting that they submit their projects to the conference, but I want them to realize that they are producers of research and are as qualified to present as anyone else." Contrary to my concerns, several TAs reported that they were motivated by the opportunity to present their projects at a conference. For example, Grace wrote in her journal that she hoped her action research project could be something "which can in turn be presented at a conference and if possible, published in a journal." In sum, the TAs appreciated how the seminar helped them become involved in activities that allowed them to make their research findings public.

The TAs reported that the class discussions about published action research studies were very useful. As discussed previously, many of the TAs associated the term *research* with quantitative, hypothesis-testing studies, and had not had as much exposure to alternative paradigms. Consequently, they were not sure how to approach the task of writing their action research papers and needed models of different formats for writing up action research projects. The following excerpt from Leslie's journal reflects the TAs' overall impressions about reading and evaluating published action research studies:

> I really like analyzing the four action research articles, looking at them critically. It's something we haven't done a lot in our classes, but I think it's really great. For one, it was good to know what to do and what not to do. And it was good to see how people do some things differently, but the different ways are okay. But I think one of the best things about it was seeing that even studies that aren't perfect can get published! It gives us all hope!

They also made favorable comments about evaluating published action research studies during the focus group discussion. They suggested that the seminar reading list include more published action research studies and that class discussion about those studies be introduced at the beginning of the semester. However, it may be difficult to assign many action research studies simply because they are not published as frequently as other types of research. When preparing the seminar reading list, I easily located articles about the principles, theory, or value of action research, but I had more difficulty finding published action research studies. As I wrote in my field notes, "if action research is such a great thing, why isn't it getting published?"

Aspects of the Seminar Regarded as Needing Further Innovation

The TAs' reflections also identified some of the challenges that L2 teacher educators may face when implementing action research projects in their graduate courses. One challenge is the need to balance the practical and theoretical elements of action research. Although the TAs appreciated the practical orientation of the course and regularly requested in-class opportunities to discuss their projects in pairs and small groups, they also believed that the seminar should include more theoretical readings and lectures. They mentioned that the textbook and the articles about action research were not particularly difficult, and therefore did not require much elaboration in class. In future semesters, I may spend fewer class periods on general information about action research so that the TAs can begin their projects sooner, which will create more opportunities for peer collaboration. However, as soon as the TAs begin data collection, I might assign more theoretical readings, which can be used to stimulate discussion about their concerns with the validity, generalizability, and evaluation of action research.

Several TAs commented on the difficulty they experienced in trying to implement multiple cycles of action and reflection within a 1-semester period. Many of them were not ready to begin data collection until the second month of the semester. As a result, they did not have enough time to reflect on the effectiveness of their methods, make changes, and assess the impact of those changes. In addition, several TAs had scheduled research activities up until the last week of the semester in order to obtain their students' final impressions. Consequently, they had little time to analyze and reflect on the data before having to present their findings at a public colloquium and submit their written papers. Unfortunately, I have not found an easy way to solve this problem. I could give the TAs incomplete grades so that they have more time to reflect and prepare their written reports, which is an option that 3 TAs elected. I could allow the TAs to continue collecting and analyzing data in the following semester as an independent study. But

this option may not be possible because their L2 classes would have ended, and they may not teach the same course again in the following semester. I could ask the TAs to complete introductory readings and assignments before the semester begins, which would allow them to begin their projects immediately. But they may have difficulty incorporating additional readings and assignments into their teaching and studying schedule.

Finally, several TAs voiced frustration with administrative constraints, such as completing institutional forms for research involving human subjects. Zeni (2001) has observed that institutional review boards at most universities ask questions designed for traditional scientific experiments in which researchers describe precisely what data they will collect and what techniques they will use before beginning the project. However, due to the cyclical nature of action research, teachers may have difficulty predicting all of the methods and materials that they might use in their studies and including every possibility on research board forms. For example, Melissa experienced so many administrative constraints, including time constraints imposed by the need to obtain permission for every change or addition to her data collection procedures, that she finally abandoned her original topic and instead wrote an essay about the impact of constraints on action research projects.

CONCLUDING REMARKS

The results of this small-scale study indicated that TAs who carried out action research projects as part of an elective seminar gained a broader understanding of research, developed an appreciation for peer collaboration, and implemented new L2 teaching practices. Participating in action research gave the TAs a framework for systematically observing, evaluating, and reflecting on their L2 teaching practices, which are key attributes of the reflective approach to teacher education. The TAs' reflections about their experiences in doing action research provided L2 teacher educators with insight into the process by which teachers become reflective practitioners and into the potential role of action research in that process.

As mentioned in the introduction, L2 teacher educators may face ethical challenges when deciding how to integrate action research into their graduate degree programs. Several researchers have pointed out the inherent conflict between the democratic nature of action research and institutional requirements that teachers participate in action research projects (Moreira et al., 1999; Rainey, 2000). Making action research compulsory, either as an independent course or as a component of an existing course, creates an institutional framework for providing TAs with the knowledge, training, and support that can help them develop research skills. However, requiring action research may lead TAs to perceive it as just another course requirement that increases the amount of work they have to do for their L2 teaching assignments. Rather than require action research, L2 teacher educators simply could draw graduate students' attention to action research, for example by assigning or discussing the professional development chapter in a L2 teaching methods textbook (i.e., Brown, 2001; Celce-Murcia, 2001; Harmer, 2001). However, this approach may not provide the amount and type of support that graduate students need to do action research. Although the decision to participate in action research may be best left to the discretion of individual teachers, institutions should provide opportunities for them to learn about and become involved in action research. These opportunities can be provided through several different models including extracurricular action research workshops, optional action research project assignments in required courses, independent studies, and elective courses.

Although this study has made a modest contribution to understanding the relationship between graduate courses and learning outcomes, additional studies are necessary to create a robust empirical base that L2 teacher educators can draw upon when developing courses and field experiences. Longitudinal studies are needed to explore the long-term impact of doing action research on teachers' professional development, in terms of their perceptions about research, their involvement in research activities, and their L2 pedagogical practices. Although the action research seminar examined in this study showed promise as a tool for promoting systematic inquiry, areas for further improvement were identified and on-going research projects are investigating whether additional curricular innovation can address these weaknesses. It is to be hoped that continued efforts by L2 teacher educators to "practice what they preach" (Vélez-Rendón, 2002) through self-reflection and research into the effectiveness of their graduate courses will lead to a greater understanding about how teachers become reflective practitioners and about the role of L2 teacher educators in that process.

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NOTES

[1] For a detailed discussion about the conceptualization of TA education see Byrnes, 2005.

[2] There were 8 graduate TAs enrolled in the seminar, but 1 TA was excluded from this study because neither her professional journal nor reflective essay included any reflection about her action research project or the action research seminar. Instead, all of her journal entries were summaries of her lessons, materials, and activities, and her reflective essay synthesized those summaries.

[3] All names have been changed.

[4] I scanned the TAs' journals to determine how many entries they had written but did not read the content of those entries for several months.

[5] The excerpts from the TAs' professional journals and reflective essays were edited for minor ungrammatical language use.

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