

School District and University Co-Teaching:
Toward Instructional Synergy
in an Induction/M.Ed. Program

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All courses should be taught like this. We need the college professor to help us think broadly about our subject areas. I didn't realize until I took this course how important it would be to me to also have the district instructor there, too, connecting everything to the classroom where I teach every day.

Introduction

What happens when a district teacher assumes the role of university student? What happens when two instructors from two different institutions are at the helm of a single graduate-level university course? The duality of these situations is recognized in the notion of what we termed *instructional synergy*, drawing upon synergy as both “the interaction of two or more agents or forces so that their combined effect was greater than the sum of their individual effects” and as “cooperative interaction among groups, especially among the acquired subsidiaries or merged parts of a corporation, that creates an enhanced combined effect” (retrieved from www.dictionary.com, October 12, 2006). This article, which describes one model of a district/university partnership offering an induction program to new teachers while striving for instructional synergy, will consider how the two *identities* of the teacher as a student, the two *instructors*, as

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well as the two *institutions*, could bring to bear the combined efforts of a school district and university in order to ease a new teacher's transition into the classroom and help provide these teachers with a solid platform from which to launch successful careers as educators.

Induction Programs

High quality education depends upon high quality teachers, with some researchers arguing that teacher quality is the most significant factor affecting student achievement (Darling-Hammond, 1997). As with any profession, teaching relies on the successful installment of new members, and education is strained in this area. Much attention is given to pre-service education and in-service teacher education to the neglect of beginning teachers, even though these induction years are a vital phase of teacher development. Neither pre-service nor in-service programs are specifically geared for beginning teachers who are still negotiating many of the critical basic elements of teaching. Luft (2007) refers to this as "the gap," and believes the retention of good teachers will rely on researchers and practitioners directly addressing the induction phase of teacher development. In the first five years of teaching, close to 50% of teachers leave the profession (Ingersoll & Smith, 2003) and several studies have suggested that those who were successful students themselves are the most likely to leave (Vegas et al., 2001; Henke & Zahn, 2001). First-year teachers deliver narratives of exhaustion, countless administrative meetings, problematic encounters with parents, too little planning time, intense learning of new curriculum content, lack of support, and classroom management issues (Bigelow, 2004).

The call for induction programs to help with these beginning teacher concerns has been heard and by 2003, most states offered some form of mentoring or induction support intended to help school systems with teacher retention. The objectives for these induction programs are, in general: helping new teachers acculturate, facilitating communication about teaching concerns and questions, and strengthening new teachers' knowledge base. As of 2003, eight of 10 beginning teachers in the United States had participated in a formal induction program (Ingersoll & Smith, 2003). The majority of these induction programs are conducted at the district level and designed to meet the generic needs of all teachers regardless of their previous pre-service training, grade level, or subject assignment (Roehrig & Luft, 2006). Still, new teachers continue to leave the profession at an alarming rate.

Many school systems are beleaguered to the point of addressing teacher shortfalls by lowering their standards for teacher quality or

implementing a variety of external incentives to increase the teacher workforce (National Commission on Teaching and America's Future, 1996; Darling-Hammond & Sykes, 2003). These are approaches Ingersoll and Smith (2003) liken to continuously pouring water into a bucket full of holes. According to The National Education Association (NEA) Foundation for the Improvement of Education (2002), the basic orientation model for induction now used in many districts nationwide is insufficient. The NEA concludes, "If induction programs are to help meet school staffing needs and raise the quality of teaching, they must provide comprehensive school-based support consistent with the instructional practice and school transformation models. This is best managed by partnerships between school districts and unions, with participation by active universities and state education agencies" (pg. 7).

On paper, anchoring a university-district partnership, through which students earn master's degrees and complete the state-mandated induction program, with a roster of courses co-taught by district personnel and university professionals may appear to be a near faultless means of ushering new teachers into the profession. While the district offers a robust induction program of its own, nestled in the context of the new teachers' professional lives, the university can add value by offering current research on pedagogical issues, a faculty well versed in educational topics, and state-of-the-art facilities. Universities can also provide continuity of the relationship a pre-service teacher had with an institution of higher learning as he/she negotiates the realities of employment as a teacher, as well as providing another perspective to the problems, solutions, and realities of contemporary education faced by today's teachers.

Fisler and Firestone (2006) contend school improvements result when these multiple perspectives merge in cooperative efforts. Each of this article's co-authors is an instructor in the program described herein, and through our experiences we noted that while many goals were met through the co-teaching arrangement, it was not unproblematic. So we asked ourselves several questions: Can co-teaching teams of district experts and university professors achieve instructional synergy? How do students and instructors experience such a co-teaching arrangement? What are the benefits and drawbacks of offering a partnership program in which all courses are co-taught by university and district personnel?

ID Induction Program

The cooperative effort discussed here is a master's degree program offered in conjunction with a school district's beginning teacher program, articulating induction activities with university courses.¹ For this In-

duction Degree (ID), a small private university partnered with a large urban school district located in the southwest U.S., to offer beginning teachers 9 units of university credit for completion of the two-year induction program with the district. The district induction program provided each novice teacher with a carefully selected support provider, a series of professional development seminars, and formative feedback on their pedagogy. In addition, during the same time period, these beginning teachers enrolled in 21 units of university coursework. At the completion of the two-year induction program and corresponding university coursework, the novice teacher earned a Master's degree (M.Ed.) in curriculum and teaching.

In order to provide an equal voice for each partner in this induction development and to bridge the often-daunting gap between a novice teacher's university pre-service preparation and their professional lives, ID program designers determined that all university courses would be co-taught by university and district personnel. It was believed that this co-teaching arrangement would be a potent way to meet a variety of new teachers' needs and ultimately promote their professional well-being and longevity in teaching.

In order to determine the impact of this co-teaching arrangement on the induction experiences of beginning teachers, a qualitative study was designed to examine the new teachers' perceptions and self-reported experiences in university classes where one co-teacher represented their employer and the other co-teacher represented an institution of higher learning. In this article, we draw from surveys, interviews, journal entries, end-of-semester course evaluations, as well as our and other instructors' experiences to present a case study of an early cohort in this program. The article has two main purposes. First, to examine this co-teaching arrangement as it was experienced by the candidates. Second, driven by the belief that professional development is as important for college professors as it is for teachers in K-12 schools, the authors seized this opportunity to examine their own contributions, and will report on experiences as instructors in the ID program. Ultimately, we want to know if there is evidence that this co-teaching model is, indeed, moving toward instructional synergy.

The Collaborative Teaching Model

Friend and Cook (1995) shortened the term "cooperative teaching" to co-teaching,² which they defined as "two or more professionals delivering substantive instruction to a diverse or blended group of students in a single physical space" (p.2). Most of the literature on co-teaching focuses

on K-12 classrooms, much of it on ways in which co-teaching can support special populations of children. For example, the literature reports strong positive effects of co-teaching between special education and general education professionals in K-12 inclusive classrooms (Pugach & Wesson, 1995; Murawski & Dicker, 2004). Those who have examined co-teaching at the university level have primarily focused on interdepartmental teaching collaborations, which also have been shown to support students' learning through such benefits as exposure to similar problems and issues framed through different theoretical perspectives, diverse problem-solving approaches, and by making explicit the interrelationships between disciplines (Bakken, Clark, & Thompson, 1998; Quinlan, 1998).

The ID program co-teaching model was designed with several goals in mind. First, the link between candidates' academic preparation and professional lives was intentionally addressed, with representative instructors from each stakeholder. Second, university class activities were designed to align logistically and philosophically with the district's required induction program. Finally, the course instructors intended for their co-teaching to represent the symbiosis of the university and the school district; in other words, that candidates would see that the knowledge and contributions of both universities and districts are necessary and valuable in addressing educational issues.

The first challenge was to translate these goals into procedures for co-designing and co-implementing classroom pedagogy, including assessment strategies for the co-taught courses. The primary criterion for pairing instructors was subject matter competence and, necessarily, each educator had to be willing to try something new. Each team of two worked together to design syllabi, select course readings and texts, prepare and deliver instructional activities, and create and administer assessments. Each team determined that all course grades would be mutually agreed upon. In the co-teaching arrangement, each instructor received full compensation for teaching the course from his or her home institution.

The instructors reviewed three co-teaching models identified by Kluth and Straut (2003). In the *duet* model, instructors take turns leading whole-class discussions and facilitating lectures and activities. The *parallel* model involves both instructors participating at the same time, splitting the class into equal sections and providing each group with the same lesson or activity. This structure "lowers the student-teacher ratio and can be used when teachers want to introduce smaller groups to two different activities, concepts, or ideas . . . and then switch groups and repeat the lesson" (p. 231). In the *one teach/one assist* model, "one instructor acts as lead teacher whereas the other floats throughout the classroom providing individual assistance and facilitating small-group

activities” (p. 233). The instructors discovered during their planning that some learning activities lent themselves best to one model, while others worked well with another model; as a result, the courses in the ID program can most closely be described as hybrids of these 3 co-teaching models.

Participants: Candidates and Instructors

Candidates

Candidates enrolled in the ID program were first- and second-year teachers working in the city’s lowest performing schools. The data for this paper were collected from the first cohort of the ID program consisting of a total of 46 candidates of whom seven were males and 39 were females. Thirty-two of the candidates were credentialed for multiple subject and 14 were credentialed for single subject. Most candidates in this cohort were in their early twenties, but their ages ranged from 23 years old to early forties. While the majority was Caucasian, there were also candidates who were African-American, Hispanic, and Asian. Nearly all candidates reported that, prior to their participation in the ID program, they had had no experience with co-taught courses.

Instructors

Each of the co-authors was paired with a district employee with expertise in the area under study. Joe, a high-school principal, and Sandy, an assistant professor in Curriculum and Teaching, taught the Curriculum Design and Evaluation (CD&E) course. Annette, a former high-school English teacher and current administrator in the district’s induction program, and Kendra, also a former high-school English teacher and currently an assistant professor in Literacy, taught Advanced Content-Area Literacy (ACAL). None of the co-instructors knew his or her partner prior to being paired.

Methodology and Data Sources

Methodology

The authors used constant comparative analysis (Glaser & Strauss, 1967) to ground their case study of the experiences of the students and instructors in the first year of the ID program. The authors collaborated with their co-instructors before and after each class meeting to discuss, plan, and debrief; these discussions, plans, and reviews of each class meeting were captured in notes. The co-authors also kept running notes throughout each course devoted in part to their impressions of co-teaching.

All four instructors discussed co-teaching in depth, both specific ways in which each pair was running its course and general ideas about the notion of co-teaching and how each instructor experienced it.

As data were collected, each researcher read the data individually and then met to discuss emerging themes. Because of the size of the dataset, the authors chose to forgo using a qualitative software program and instead analyzed the data together, highlighting sections of notes that supported themes that arose from the data and eliminating themes that were not well supported by the data. We continuously referred to our notes, survey and evaluation responses, and conferred with our co-instructors for examples, which confirmed or disconfirmed our categorizations (Erickson 1986). Successive rounds of analyses of data revealed clusters of informative comments around the more robust themes. Illustrative quotes were highlighted for inclusion in the findings. Analyses were revised and verified through triangulating the multiple sources of data, attending to negative or discrepant case analysis as well as to confirming evidence. Finally, our district co-instructors were consulted throughout the courses, and afterward as much as possible. As will be addressed below in the discussion on challenges facing similar partnerships, the district co-instructors were aware that we were recording our experiences and were at first interested in participating in preparing this analysis, but the realities of their full-time jobs at the district ultimately did not allow either of them the time to participate in analysis or writing.

Data

This case was prepared with data drawn from four primary sources: a survey of candidates' evaluation of various aspects of the co-teaching arrangement, standard end-of-course evaluations required by the university, candidates' reflective journals, and authors' field notes and journals of their co-teaching experiences. In addition, less formally gathered data provided context and helped the authors flesh out their case, such as conversations and email correspondence with candidates and with other instructors in the program, discussions with candidates' field supervisors, and notes from meetings of the crafters of the program.

Both the research surveys and end-of-course evaluations were administered at the termination of each course, maintained anonymity of respondents, and addressed the work of both instructors. However, end-of-course evaluations targeted overall satisfaction with courses and did not distinguish between co-teachers while research surveys focused on candidates' perceptions of the role of each teacher in the co-teaching

process. Both instruments are valid measures for different constructs in this research. End-of-course evaluations are a blunt instrument measuring course factors, valid and reliable across diverse university courses. The surveys, targeting specific research questions, measure student perception of the co-teaching process.

Survey

In order to obtain data addressing how students experience a co-teaching arrangement, the co-authors collaborated to design a survey (see Appendix A), drawing upon literature on co-teaching, and aligning prompts with the stated research questions. The surveys were anonymous and intended to prompt candidates' reflections on what they experienced as positive and negative aspects of having two instructors, as well as to gather candidates' impressions of each instructor individually in several categories. The survey was also intended to capture candidates' thoughts on co-teaching in general, asking, for example, if the courses should be taught in a traditional format instead of co-taught. While the validity of self-report data is always suspect due to the possibility of response bias, which occurs if participants respond to items in a more socially appealing manner, these surveys were anonymous, voluntary, and un-associated with class procedure to reduce this tendency. The responses were collected to obtain immediate response to the co-teaching experience by being administered to candidates at the conclusion of each of their classes during the first year of the program. A total of 46 surveys were collected from the courses in which each author co-taught.

End-of-Course Evaluations

As per university policy, each student is required to respond to a standardized course evaluation at the conclusion of each semester (see Appendix B). The candidates' responses were anonymous and immediate and thus offered an honest and open on-the-spot reflection of the candidates' experiences in each co-taught class. As the evaluations were intended to capture information pertinent to the university, they were not originally intended to be part of the dataset. However, as they reviewed the responses, the authors noted that many candidates did address aspects of the courses that reflected on the co-teaching arrangement and thus provided valuable data. Because the end-of-course evaluations are standardized, comparison can be made to the same course taught to non-ID candidates and also to general courses in the school of education.

Candidate Journaling

Throughout each course, candidates completed and submitted a personal course journal. The journal entries were, in general, responses to open-ended questions in which candidates were asked to react to specific topics or activities covered in a class meeting, to reflect on readings, or to prepare questions raised by a class discussion; on occasion, the journal entries were open forums for candidates to explore whatever was on their minds. Candidates were never asked to discuss one instructor or the other in their journal entries.

Field Notes

The authors took field notes on the co-teaching experience. While the university partners take full responsibility for the conclusions presented here, their district colleagues' thoughts, impressions, and voices are captured to the best of our ability, largely through these notes. The notes were further informed by discussions during the planning process and before and after each class. These conversations covered a wide range of topics related to the courses: individual candidates, assignments, readings, our goals for the courses and the ID program. Often, these conversations allowed the opportunity to test opinions and impressions. Through our work together, the instructors built collegial relationships, which supported us in our efforts to create a balanced representation of not only our perspectives but, as closely as possible, those of our co-instructors.

Results

The disparity between course evaluations and survey results reminds us that the purposes of these two instruments differ and that introduces noise into the analysis. The end-of-course evaluations do not distinguish between co-teachers. For example the course evaluation asks students to measure "4. The instructor's effectiveness in teaching the subject matter." The respondents had no choice but to blend instructors and score an overall effectiveness. Therefore more weight was given to survey results in drawing inferences from the data because the survey instrument allowed us to more precisely dissect, "Did the knowledge and skills of the co-teachers seem to vary?" However, either one instrument or the other would not have sufficiently addressed our research questions. The end-of-course evaluations allowed us to compare students' perception of co-taught courses against the general population of courses on several measures. At the same time the survey data allowed us to look more specifically at the co-teaching aspect of the ID program courses.

Triangulation of these data to determine the interrelationships between the candidates' survey and evaluation responses, the candidates' journal entries, and the author's field notes revealed a logic that extended across both classes and all four instructors. As the authors reviewed the data, it became clear that, in this dataset, there weren't significant differences in candidates' comments about particular courses or co-teaching pairs, a finding we felt was important, in part because it supported our discussion of the general arrangement of co-teaching. Below, we will offer sample experiences of each co-teaching team, followed by results from a combination of all data grouped by theme.

ID Program Sample Experiences

In this section, we will briefly describe two courses presented by each team, in order to illustrate how co-teaching played out in the ID program.

Sample Experience: Joe and Sandy

Joe was a high-school principal; Sandy was an assistant professor and had previously taught CD&E courses to university students. Prior to the initial class meeting, the instructors met to introduce themselves, discuss course goals, text selection, syllabus design, outcome assessment, and the timeline for content delivery. The team decided to simply revise Sandy's existing CD&E syllabus and continue with the same text.

Once Joe and Sandy discovered they were both former secondary science teachers, an instant rapport was formed as they shared common experiences from which to draw. The *duet* model of co-instruction was favored so for each class session, Joe and Sandy agreed on who would present each piece of material and they alternated leading activities throughout each three hour class period. The instructors contributed to each other's discussions and created a dialogue between themselves and their candidates.

As co-teachers, Joe and Sandy found that reflection and planning were more effective if they met immediately after each class to debrief and to plan the next class meeting. In addition, as candidates left class they submitted "exit slips," quick reviews of each session, which Joe and Sandy carefully reviewed as informal measures of the candidates' progress and satisfaction. This feedback was also used to guide pacing and depth of content of course instruction.

Candidates designed a curriculum unit as a core assessment for this course. The unit was peer evaluated and scored in a joint review by both instructors. For the midterm exam, each candidate sat down for a 15-

minute oral interview with either Joe or Sandy. The candidates prepared 17 questions relating to the readings and then answered three of them in a one-on-one conversation that allowed the instructor to probe and clarify candidates' understandings.

Sample Experience: Annette and Kendra

Annette and Kendra co-taught the ACAL course. Before joining the district's induction program, Annette taught high-school English for many years. Kendra was previously a high-school English teacher, and is now an assistant professor of literacy education. Before the course began, the two instructors met to design the syllabus, learning activities, and assessments.

Annette and Kendra decided that their evaluation of candidates' work would be most reliable and valid if each instructor took responsibility for presenting instruction related to one of the assignments, designed the scoring rubric, and evaluated the final product (see Figure A). For example, each candidate was required to prepare a case study of one of his or her own students who struggled with literacy, culminating in a plan of action to support that student's literacy growth. Candidates

Figure 1
Assessment and Lesson Planning for Literary Course

Assessments

1. Case Study: 25% of grade -- ANNETTE
2. Critical Literature Review: 25% of grade -- KENDRA
3. Book Share: 10% of grade -- ANNETTE
4. Best Practice Share: 20% of grade -- KENDRA
5. Participation: 20% of grade -- BOTH

First Session

Introduction to the course: perspectives on adolescent literacy
 Introductory activity -- ANNETTE
 Review Course Objectives, Requirements, and Assessments -- BOTH
 Introduce Book Shares and present rubric -- ANNETTE
 Introduce Best Practice Presentations and present rubric -- KENDRA

Second Session

Conducting Inquiry, Part 1
 Critical Readings of Research Articles -- KENDRA
 Introduce Critical Literature Review and present rubric -- KENDRA
 Introduce Case Studies and present rubric -- ANNETTE
 Group work on literacy and middle/high-school students -- ANNETTE
 Book Share -- ANNETTE
 Best Practice Share -- KENDRA

were also required to prepare critical literature reviews of topics relating to adolescent literacy. Annette took the major responsibility for the case study, an activity that aligned with district induction expectations and paralleled induction activities. Kendra took the lead on the critical literature review, a preparatory activity for the research activities the candidates would undertake as part of their master's program work.

The instructors collaborated during planning, reviewed each other's work, offered suggestions to one another and, of course, both were familiar enough with all activities and assessments to provide support to all candidates.

Themes

The researchers identified four main clusters related to the co-teaching of beginning teachers in an ID program: (1) the candidates' experiences of the co-teaching arrangement, (2) the candidates' perceived impact of learning in a co-taught environment on their own work as teachers, (3) the candidates' perceptions of similarities and differences between the classroom instruction provided by each co-instructor, and (4) challenges presented by the co-teaching arrangement. Each cluster is elaborated and supported with representative evidence from the data sources.

Cluster 1: Experiences of the Co-teaching Arrangement

Everything came across as equal to me... neither instructor seemed to 'boss' the other around. They clearly valued each other's expertise, and gave us a good model for implementing theory and practice.

I am not sure if it [co-teaching] resulted in higher achievement but was very supportive.

The candidates' experiences for this co-teaching model were varied; most spoke of feeling supported by at least one of the two instructors, and, while definitely in the minority, there were negative comments. The majority of the candidates' responses mentioned, in one way or the other, that the co-teaching arrangement strengthened their understanding of the interrelationship between theory and practice, with comments such as, "the district co-teacher had more specific examples of pedagogy they found useful and successful while the university professor focused more on generalities and connecting theory to methods."

The responses as a whole suggested that candidates recognized and valued the depth of the collaboration in each co-teaching arrangement with comments such as, "It was helpful for the two teachers to hear each other. Theory meets practice. Both instructors commented that they

were inspired by the other. That's got to improve our learning." Candidates appreciated that the co-teachers worked together to design and plan courses; and noted that the co-teachers also divided up the work in the class. Not one survey suggested that a candidate did not see the co-instructors as dividing responsibilities equally, although they *did* perceive differences, in keeping with each instructor's traditional role. One candidate's comment reflected that of many of her classmates when she wrote of the CD & E course: "the university instructor was great at lecturing and had a strong understanding of the text and of curriculum design; the district instructor was great at giving district standards."

In general, the candidates' responses were positive, primarily noting the fusion of the university instructor's depth of theoretical knowledge with the district instructor's strength in consistently linking the theory with practice and the needs placed on new teachers within their specific district context. As one wrote, the university instructor "had a good understanding of the curriculum and was able to show how our teaching can differ" from the models followed by their specific schools and district, while the district instructors "offered a variety of strategies and resources in response to [the] needs of our district... with all its requirements and quirks."

From the university co-instructors' point of view, we found co-teaching to be a time-intensive, at times difficult, but overall rewarding process. The time devoted to achieving consensus and finding compromises where demanded by this teaching arrangement is not, of course, necessary when one is the sole instructor. Co-teaching with a departmental or even university colleague carries common assumptions and goals that, in this co-teaching case, had to be negotiated. On the flip side of the time issue, co-teaching allowed us to share the workload during class period and to split the reading and grading of some assignments.

Perhaps of most importance, the discussions required to reach consensus and compromise forced close examination of issues and details relating to our courses. As co-teachers we found we had to progress through a compromising stage before parity developed. The compromising stage was characterized by give-and-take communication, balancing of points of view, and close discussion regarding each instructor's ideas regarding the needs of candidates. Each co-instructor brought his or her own educational background, perceptions, and pedagogical approach to the courses; all agreed that we ultimately gained a great deal through our collaboration with colleagues who did not work within our particular institutions.

We also discovered that co-teaching was a vulnerable endeavor. It forced each co-teacher to expose teaching strengths and weaknesses in front of another educational professional, from another institution, and

who, a short time ago, was a stranger. This could be quite threatening unless a great deal of trust existed between co-teachers. Because as co-teachers we were artificially paired, the bond was not a natural one, but everyone involved worked to build relationships so that all could learn from their partners. If one partner dominated, or led in a direction that the other partner was not expecting, the collaborative relationship was compromised. For example, in one evaluation of the CD&E course, a candidate noted that the instructors were “not always quite on the same page and having two peoples’ opinion makes for more expectations which increased my anxiety.”

The different genders of instructors for this course did not play a role in comments on instructors’ performance; however, experience with grade level did. One candidate commented, “I think both are very knowledgeable in their curriculum areas and in curriculum design. However, they aren’t very knowledgeable in elementary education.” The candidates’ need to immediately apply university learning in their classrooms may have influenced this grade level issue to emerge.

*Cluster 2: Perceived Impact of Learning
in a Co-taught Environment on Their Own Work as Teachers*

If I have to work with a partner teaching, I will release more to the other teacher and play second fiddle without contradiction.

Our principal sometimes talks about co-teaching, but everyone’s nervous to try it. I’m not anymore, but I do see that it’s more challenging than I would have expected. But also more rewarding and better for the kids. I think I will be able to take a leadership role in designing and co-teaching courses at my school.

The candidates’ responses in this cluster suggested several interesting outcomes. For many it was the first time they’d actually experienced co-teaching in a planned, carefully executed manner, and it also brought to life for them ways that different content areas, approaches, and perspectives can be synthesized in a classroom setting.

Furthermore, the arrangement seemed to increase candidates’ confidence in sharing their own instructional practices with others. For example, one wrote that the co-taught classes helped her become “more open to release power of my classroom to other professionals” while another felt that the experience “prepare[d] me for co-teaching situations that I will experience with my literacy administrator and principal.”

This theme ran strongly through our data, more so than we had expected. It was a pleasant surprise, and suggests a benefit of the co-teaching arrangement with far-reaching potential. In relinquishing an

isolationist view of teaching early in one's career. The novice teacher can now open his or her practice to professional collaborations that have the potential to support professional development throughout their careers.

For the instructors, co-teaching a class felt much like a carefully choreographed dance, and candidates were quick to pick up on instances when the co-instructors fell out of step. In the early days of the ID program, the creation of the co-teaching partnerships was akin to blind dates, based solely on subject-area expertise, availability, and interest in co-teaching. After some class meetings, for example, students would note on their exit slips that "one instructor talked all over the other one tonight, or it seems like they didn't discuss this topic a lot before. They kept looking at each other like my parents do when they have to handle some unexpected situation in front of the family. Like they were figuring it out as they went along." This, admittedly, was occasionally true.

The impact of co-teaching on their own work as early-career assistant professors was also evident. While quite eager to try innovative practices, some instructors may be intimidated by the potential impact of co-teaching on his or her career path. If students react negatively to the co-teaching experience and express these opinions in end-of-course evaluation forms, then the co-instructor's university teaching record for tenure and promotion could be negatively affected.

As Appendix B indicates, University course evaluations captured lower scores for co-taught sections of a course while the same course, solo taught, had much higher ratings for the same criteria. For example, "21. Reasonableness of assigned work" was rated 1.3 (on 5 point scale) in the ID co-taught course as opposed to 4.1 in the solo taught section. We can speculate that having a district representative as a co-instructor appears to have given candidates the perception that course assignments were above and beyond what the district expected of them and therefore "unreasonable," whereas for graduate students *not* in the ID co-taught program, the assigned work did appear reasonable.

*Cluster 3: Perceptions of Similarities and Differences
in the Instruction Provided by Each Co-instructor*

You could tell that the university instructor was a little more used to teaching graduate students. You could also tell that the district instructor knew more about what our daily lives were like, and shared many experiences from her recent high-school teaching experiences.

The university instructor was more formal and structured; assignments were not necessarily directly linked to the classroom. The district instructor offered more informal reflections on new strategies we could use in our classrooms.

Nine of the 46 candidates compared instructors to one another in their survey and/or course evaluation responses. Among those who did so, some preferred the university instructors, with such comments as, "I feel more comfortable taking a master's course from someone who is used to teaching master's students." For others, university instructors were viewed as less competent than the district partners, with comments such as "the instructor representatives of the district have been preferable... one taught in [our district] and the other did not. The [university instructor's] point of view seemed out of touch."

The majority of the responses, however, supported the "two heads are better than one" adage. Although in all courses, the co-instructors made visible that the district instructor had deep theoretical knowledge and the university instructors drew heavily on their many years of classroom teaching, the candidates tended to view each instructor through a very specific lens. Most focused on the university instructors' *depth* of knowledge, crediting them with a greater understanding of the scholarly frameworks of the subject area, and the district instructors' *specificity* of knowledge, crediting them with a better understanding of the practicalities of daily classroom practice.

It was not surprising, then, that many of the candidates' responses noted that the university instructors presented material and assignments in ways that closely mirrored their other college course experiences, while the district instructors' demeanor and interactions were more reflective of their district-led professional development activities. This point was an intriguing one, because the teaching pairs had consciously addressed this in their planning. Although the co-instructors kept lectures to a minimum, when lectures were required, each teaching pair took care to divide lectures evenly between them. Interestingly, however, many candidates recalled that the university personnel more often delivered lectures. Similarly, candidates were more likely to recall that the district personnel were more casual in their instruction and more likely to serve as support while university instructors lectured.

As university instructors with extensive secondary classroom experience, it was a surprise to find ourselves labeled as stereotypical representatives from our institutional culture. We felt it created vigor in the presentation of content to cross the perceived borders and create new views of academic and applied cultures. While the university instructors felt that their district partners brought complementary, if not as extensive, educational backgrounds, teaching experiences, and areas of professional expertise, candidates were persistent in their views of the separate and un-equal status of each co-instructor.

Cluster 4: Challenges presented by the co-teaching arrangement

Sometimes the university instructor's focus seemed more on us as graduate students and the district instructor's focus seemed more on us getting us through our first year of teaching. It could be difficult to navigate both positions in one course.

Benefits: university and district (with all its requirements and quirks) perspectives were shared and balanced.

Challenges: not enough time with district rep. who was better able to link theory and practice within the limitations of our district.

Everything depends on how well the two instructors complement each other. During classes when they were in sync, it was better than perfect. If they weren't, it was confusing to know which one to follow.

While the candidates' responses suggested that they did, overall, appreciate the pairing of a university instructor with a district instructor, they also shared some of the challenges of that arrangement. The most notable concern was that all information, delivery of instruction, and, especially, design and assessment of assignments be consistent across the two instructors. Whenever the two instructors were out of sync, the candidates were burdened with such concerns as, as one put it, "Whose viewpoint is most important to my getting a good grade?"

Some comments noted tensions: "It was obvious that the instructors have never worked together before and that they, themselves, were sometimes unsure and unbalanced in their roles." Another respondent noted that the co-teaching arrangement "was effective, but occasionally confusing when assignments were worded a bit differently from each teacher." Because these tensions were ascribed to both teaching teams, not just one, and the activities they reviewed drew upon both duet and parallel models, we felt that they most likely reflected the newness of the program and of the instructors' lack of familiarity with the co-teaching arrangement. It is unclear, of course, how "sure and balanced" any particular teaching team might be, but we did find the candidates' insights helpful and supportive of such practical changes to the program as activities designed to help introduce instructors to one another prior to their co-teaching a course and of making sure each instructor reviews for continuity each assignment the team presents to a class.

One particular challenge related to each instructor's employment situation. For district personnel, co-teaching in the program was a supplemental occupational activity. For university personnel, the courses carried weight with their primary employer, the university. Clearly, there are costs and benefits to each constituency. For district

personnel, the co-teaching meant additional work (and additional pay) and often concerned topics that were outside their daily scope of work; for university personnel, the classes were part of their course load and therefore they had dedicated time in their workweeks to devote to them. On the other hand, the district instructors' work was not part of their usual employment review, while for the university instructors, the course evaluations became part of their permanent file. So to some degree, then, the university instructors were evaluated on work that was shared with their co-teaching partner; this does present some risk to, in particular, untenured faculty teaching in a new program. As instructors in the program, the co-authors noted lower scores on student evaluations for which they felt they were not entirely responsible (and the same can be said for positive comments), which highlights the potential fragility of such a situation. As noted in Appendix B, the course evaluation scores for a single section of a co-taught course in the ID program were considerably lower than a solo taught section of the same course to university students. In addition, the evaluation scores from this ID course were appreciably lower than the School of Education professor median in the main criterion categories.

In several ways, however, our discussions throughout the semester allowed us to turn limitations into opportunities for growth. For example, early in each course, many candidates expressed some confusion as to "when we are supposed to be teachers and when we are supposed to be students ourselves ... I guess we're always supposed to be both?" This point, we felt, was exactly right, and a central concern of all new teachers. We were glad to have the opportunity, through the ID program, to address this directly and transparently. We had the chance to tackle this challenge in discussions of what it means to be a lifelong learner in the education profession. We shared stories of our own professional growth and the ways we were learning from each other and from them. As candidates saw their professional roles more and more as a blend of theory and practice, of teaching *and* learning, we saw this challenge become an advantage.

Discussion

Looking deeper into the theoretical underpinnings of collaboration to discuss partnerships between universities and district personnel, Erickson and Christman (1996) draw upon Foucault's notions of power and knowledge. They warn "Collaboration in inquiry among university-based researchers and public school-based practitioners and parents... involves sharing power across lines of institutional turf, professional

status, and personal identity. When power and prestige are unequal, 'collaboration' can easily result in co-optation, or even in domination masked by a euphonious label" (p.150). The architects of the ID program were well aware of this potential pitfall, and consciously addressed it. As mentioned above, each co-teaching team participated fully in planning, execution, and evaluation of course material; in addition, we took other actions: some classes met at school sites, university instructors did not use the title of "Dr.," and all instructors familiarized themselves with school district requirements and activities.

Despite these efforts, it was clear that candidates privileged what they perceived each instructor had to offer. Each instructor represented an institution, and candidates appeared drawn to one or the other depending on their immediate needs for navigation within that institutional culture. For example, candidates would approach the university instructor with questions about their degrees, and the district instructor with school-related questions. There was no evidence that these tendencies were linked to course content; rather, these behaviors seemed to us to be clearly related to the professional identity ascribed to each instructor by the candidates.

As discussed in Cluster 4, candidates recognized the challenges of the arrangement. As Gately and Gately (2001) noted in their argument that co-teachers progress through a compromising stage before achieving equal status, we noticed that, particularly when classes were held on the university campus instead of at a school site, candidates made such comments as, "Thank you for inviting [the district instructor]," as though the arrangement of instructors were imbalanced, more equivalent to host and invitee than to equal collaboration.

From their responses, it seemed clear that when candidates did perceive the instructors as unequal, then who was actually seen as being in charge was, for our candidates, something of a moving target. In class, the candidates were as, if not more, likely to approach the district instructor first with nearly all questions, which seemed to us a clear indication of the immediacy of practice which dominates these earliest years of teaching. By the end of each course, however, we noted that instead of this being divisive, our candidates eventually learned to see the ways in which the culture of the university and the culture of the district overlapped, and that each institution was contributing to their becoming professional educators. This enhanced the instructional synergy of the co-teaching arrangement.

As pre-tenure instructors ourselves, the authors discovered an additional bonus in the opportunity to work with district personnel and to reflect together on curriculum and pedagogy. While P-12 educators receive

regular professional development opportunities directly targeting their teaching practices, this was not commonly the case for university professors. The opportunity to receive feedback on our pedagogy from professionals from the local district was invaluable, as was the feedback from candidates that compared our teaching to that of our district colleagues.

For all of the instructors, co-teaching was an interesting, challenging, and, in the end, rewarding arrangement. All agreed that the planning, coordination, and constant attendance to the other instructor's role and actions in the classroom resulted in more, not less, actual work. This was more than offset by the pervasive belief that, in the end, the candidates' experiences in these courses were much richer than would have been possible had they had single instructors.

Perhaps the starkest reminder of the differences in instructors' cultures occurred as each course ended and the district instructors returned to their full-time school-based jobs, while the university instructors returned to their jobs as assistant professors and we all were again immersed in our separate daily realities. Although our district co-instructors were fully engaged in the courses, neither was, despite efforts from both constituencies to make the logistics work, able to contribute to this article beyond providing data, as described above, and occasional conversations with the authors as we conducted our analysis.

Another reality was that while teaching these courses contributed to our district partners' resumes and professional experiences, for the authors, the courses carry weight in our lives at the university. End-of-course evaluations become part of our tenure files, for better or for worse. Negative appraisals impact our careers, and we are aware that in co-teaching arrangements we have much less control over the factors that influence the candidates' responses on the evaluations. Some early-career professors may find this cost too high and may opt for single-instructor courses during this vulnerable stage of their careers.

Three years after participation in this ID program, 38 of the graduates from this first cohort remain in the urban school district of their induction. Three candidates moved out of state and one teacher transferred to a small private school. Importantly, this translates into a 90% retention rate of beginning teachers in the school district at the three-year mark; while more time and data will be required to determine if this short-term success will make a long-term impact on teacher retention, it does suggest positive consequences. According to S. Lindemann of the beginning teacher support department for this large urban school district the first year retention rate for teachers starting in the 2004-05 school year was 92.4%, and for 2005-06 school year 96% of beginning teachers returned to teaching (personal communication, October 29, 2007). This

urban school district does a good job in general of retaining first year teachers.

Implications

Negotiating the territory of induction in teacher education holds great potential for addressing the growing need to retain quality teachers. Analyses of the perspectives of candidates in this ID program and the insights of the co-instructors revealed important considerations for others considering team teaching partnership between institutions of higher learning and school districts.

As this and similar programs move forward, this case suggests that program planners and co-instructors emphasize and share with all constituents the purpose of the co-teaching arrangement. In this program, co-teaching was chosen as a method to assist beginning teachers in crossing the border between theory and practice, university and school settings. In future endeavors, we would suggest that such purposes be made visible to candidates, so that they not only become our partners in the effort, but may feel more comfortable negotiating the co-teaching arrangement and not be as inclined to situate specific expertise with one instructor or the other. Clearly, some expertise sits primarily with one instructor or the other, but the candidates' comments suggested that they perceived more differences between instructors than was actually the case.

Limitations

We recognize that the small sample size challenges the reliability of these research surveys; however we constructed the surveys for this particular study and therefore consider them a valid reflection of our research questions. The survey prompts candidates to think specifically about the role and contribution of each co-instructor. The end-of-course evaluations as school-wide standardized instruments are reliable and can be used to measure an instructor's effectiveness and students' satisfaction with courses. While each instrument presents students' viewpoint of a course, the surveys were privileged in answering the question, "How do students experience the co-teaching arrangement?" and the end-of-course evaluations were essential in answering questions surrounding the benefits and drawbacks of offering a partnership program in which all courses are co-taught.

However, it is important to note here that we do not argue for generalization from these two class experiences; rather, it is our hope that readers find points to bear in mind as they entertain ideas for programs

which support the retention of new teachers. We also consider it a limitation that, despite the best efforts of all, our co-instructors were not able to participate in preparing this article. While we used triangulation and member checking to verify our representations of their contributions and perceptions, direct involvement from the district personnel would enhance the analysis. Finally, further data will be required to judge the long-term impact of district-university co-teaching arrangements on the very important issue of retaining good teachers. The snapshot offered here captures, in the voices of those directly involved in such an endeavor, a sense of the challenges and benefits program planners should consider.

Conclusion

The benefits of co-teaching outweighed the challenges, and definitely moved us toward instructional synergy. While co-teaching was more work, time intensive, and difficult, the experiences reported here suggest that a co-taught course approach in teacher education addresses many of the professional development needs of new teachers. By experiencing graduate learning from a co-taught position, these early career teachers gained validation of workplace. The experience of a co-taught course opened candidates to the notion of teaching in public, not isolation. It was remarkable that many said they had never considered co-teaching before but now felt not only excited, but also prepared to tackle such an endeavor. Further, candidates were empowered with knowledge gained in the process of achieving an academic diploma and also gained agency in their workplace through application of theoretically sound strategies.

It seemed clear that the candidates' perceptions of the co-teaching arrangement were influenced by the dual identities the candidates themselves inhabited in their master's classes. On the one hand, they were students studying for master's degrees; on the other, they were practicing teachers undergoing induction programs overseen by the district. We saw our jobs as co-instructors, in part, as drawing these two identities together. We saw glimmers of success in this effort, such as when candidates seamlessly wove theoretical frameworks of the course into creation of classroom activities or responded to academic class discussions from their lived experiences as teachers, instead of relying on what they'd read in the course text.

Co-instructors helped one another by providing different areas of expertise that, when fused together, resulted in enhanced instruction for candidates. These early career teachers understandably felt urgency for immediate application of their learning in their classrooms. It was clear these new teachers enjoyed the increased personal attention,

varied teaching styles, and curriculum strengths that dual instructors provided. The co-teaching atmosphere offered support for realities of the classroom setting and provided a solid link between real-life experiences of employment with academic learning.

Our co-teaching experience provides insights into some of the challenges that can help inform others considering structuring similar programs for beginning teachers. For example, some recommendations we offer to others attempting such models would be to:

- ◆ Involve potential co-instructors in the pairing process and provide a mechanism for co-instructors to become acquainted and become familiar with one another's philosophies prior to focusing on course preparation.
- ◆ Assure that co-instructors are equal contributors to all aspects of each course, whether they choose to share responsibility for the same assignments or to divide assignments between them. Final grades should be mutually agreed upon in all cases and responsibility for the grade made crystal clear to students.
- ◆ Encourage co-instructors to educate one another on their home cultures, so that university personnel can speak with some authority on district issues, and district personnel can help candidates navigate through university procedures.
- ◆ Offer many opportunities in class for the two instructors to co-model instruction.
- ◆ Hold classes both at the university site and at district sites.
- ◆ Invite an outside observer to attend one or more early sessions, and provide co-instructors with their perceptions of how the candidates appear to perceive and react to each instructor, brainstorming interventions if necessary.
- ◆ Allow plenty of time for planning and debriefing each and every class meeting.
- ◆ Instantiate the notion of the university and district as true partners in the professional growth of candidates, rather than as separate cultures coming together for a limited activity.
- ◆ Identify ways to underscore the equality of the co-instructors, such as equalizing professional titles and sharing leadership, to directly address the potential of a perception of a hierarchical structure.

- ◆ Denote the co-teaching arrangement on course evaluation forms.

The co-taught ID program is twice as expensive as a regular Master's program in terms of instructor salary. Is this a good investment? Future research should address the influence of co-taught university courses on the career path of novice teachers. By examining the long-term retention rate of these induction teachers in low performing schools, we will gain a better grasp on the effectiveness of this type of collaborative, intensive academic program for early career professionals. Future work should also examine the role co-teaching plays in influencing the practice of co-taught candidates. While the data gathered for this paper did not show significant differences in response between women and men or between teachers of different ethnicities, a study designed to examine the ways such co-teaching arrangements are experienced differently by these gendered and ethnic groups would also prove interesting.

It behooves all educators to better understand what best supports early career teachers so that they succeed—and stay—in our profession. The ID program is ongoing, and all courses are still co-taught by district and university personnel, with each new set of instructors drawing upon experiences of previous instructors to work toward the goal of instructional synergy. The experiences shared here suggested that teachers—as represented by the candidates in our courses—continue to view the university and the district as very separate entities, but that the ID program has achieved some important goals with the candidates, and, if feedback like this is carefully evaluated and incorporated into updating the program, will continue to contribute to ideas about supporting teachers as they move from pre-service university settings to their own classrooms. To truly achieve instructional synergy in teacher education, we need to continue to work on innovative ways of bridging “the gap” between pre-service and in-service teacher development.

Notes

¹The district is located in a state in which teacher-candidates who complete credential programs and bachelor degrees earn a preliminary credential; after two years and successful completion of induction activities, teachers receive a clear credential. For this reason and because the teachers are also studying for a master's degree, new teachers will hereafter be referred to as “candidates” or “candidate teachers.” The combined induction and master's degree program will be referred to as the “induction degree” (ID) program.

² While much of the literature uses the terms “co-teaching and “team teaching” interchangeably, for the purposes of this paper the term “co-teaching” will refer to the specific arrangements of the ID program.

³Demographic data are included to provide context. Analyses by race, gender, and age suggested that these factors had no significant impact on candidates' responses.

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Appendix A

Survey Questions

1. In what ways did the co-teachers divide responsibilities?
2. What were the similarities and differences in pedagogy privileged by each instructor?
3. What were the similarities and differences in curriculum privileged by each instructor?
4. What were the similarities and differences in assessment strategies privileged by each instructor?
5. Did the knowledge and skills of the co-teachers seem to vary? Please explain.
6. Were there benefits to having co-instructors? Please explain.
7. Were there drawbacks to having two instructors? Please explain.
8. Describe the type of support you received from the district/university co-teacher. How would you rate that support on a scale of 1 (low) to 5 (high)?
9. Could this course be taught in a traditional format (a single instructor) with comparable results?
10. How do you think your experience in a co-taught class will impact your own teaching?
11. Did the course meet your expectations? Please explain
12. What was your work experience prior to teaching?
13. Have you ever been a student in a team taught class before this ID program? If so, describe your experience

Please rate the following co-teaching descriptors.

1= strongly disagree; 2= disagree; 3= neutral ; 4= agree; 5 = strongly agree

Descriptors:

Both voices of the co-teachers were heard during presentation of course material.
 Co-teachers demonstrated a give & take teaching relationship, modeling positive interpersonal skills.

There were opportunities to play one teacher against the other.

Issues in Teacher Education

Instructional collaboration seemed to take more in-class time than single instructor teaching might take.

Each instructor brought a unique perspective into the classroom.

Each instructor had a clear vision of the performance outcome expected from learners.

Co teachers provided ambiguity within their team approach.

Having two instructors strengthened my appreciation for collaborative experiences.

Instruction was significantly different from one instructor to the other instructor.

Having two instructors increased my anxiety during the course.

Appendix B

Course Evaluation Data

Instructional Assessment System Student Evaluation of Instruction

Comparison evaluations for Instructor A:

EDUC 535 (Co-taught, 2004 to ID program induction teachers, N=23)

EDUC 535 (Taught solo, 2003 to pre-service and veteran teachers, N=11)

Excellent (5), Very Good (4), Good (3), Fair (2), Poor (1), Very Poor (0)	Median	Median	School Median
	Co- Taught	Solo Taught	All Courses N=61 Instructors
1. The course as a whole was:	2.6	4.0	4.2
2. The course content was:	3.1	4.3	4.2
3. The instructor's contribution to the course was:	2.8	4.3	4.4
4. The instructor's effectiveness in teaching the subject matter was:	2.6	4.3	4.3
5. Course organization was:	2.5	3.1	*
6. Instructor's preparation for class was:	3.3	4.0	*
7. Instructor as a discussion leader was:	2.5	4.3	*
8. Instructor's contribution to discussion was:	2.6	4.1	*
9. Conduciveness of class atmosphere to student learning was:	2.2	3.4	*
10. Quality of questions or problems raised was:	2.6	4.3	*
11. Student confidence in instructor's knowledge was:	2.7	4.6	*
12. Instructor's enthusiasm was:	2.7	4.8	*
13. Encouragement given students to express themselves was:	2.4	4.6	*
14. Instructor's openness to student views was:	2.0	3.9	*
15. Interest level of class sessions was:	2.4	3.5	*

Excellent (5), Very Good (4), Good (3), Fair (2), Poor (1), Very Poor (0)	Median Co- Taught	Median Solo Taught	School Median All Courses N=61 Instructors
16. Use of class time was:	2.0	3.1	*
17. Instructor's interest in whether students learned was:	2.9	4.0	*
18. Amount you learned in the course was:	2.4	4.0	*
19. Relevance and usefulness of course content was:	3.1	4.6	*
20. Evaluative and grading techniques (tests, papers, etc.) were:	1.8	3.8	*
21. Reasonableness of assigned work was:	1.3	4.1	*
22. Clarity of student responsibilities and requirements were	2.1	4.0	*
Relative to other college courses you have taken: much higher (7), much lower (1)			
23. Do you expect your grade in this course to be:	4.5	5.7	*
24. The intellectual challenge presented was:	5.6	6.0	*
25. The amount of effort you put into this course was:	6.7	6.6	*
26. The amount of effort to succeed in this course was:	6.4	6.0	*
27. Your involvement in the course (assignments, attendance, etc) was:	6.7	6.3	*

* Not available.