Co-planning and Co-teaching in a Summer Writing Institute: A Formative Experiment

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Cover Page Footnote

This article is in MLA format.

This paper reports findings from a two-year study investigating a summer writing institute for students entering ninth grade at an urban high school. The three-week program was staffed by both university researchers and teachers. In contrast to traditional summer school, it was intended as enrichment, not remediation, for a heterogeneous group of students, and a learning experience, not just a teaching opportunity, for practitioners.

Study of the institute was framed as a formative experiment, research seeking to "bring about positive change in education environments through creative, innovative, instructional interventions grounded in theory and guided by systematic data collection and analysis" (Reinking & Bradley, 2008, 6). The pedagogical goals of this intervention were two-fold: 1) increase students' writing engagement and skill while helping them transition to high school, and 2) improve teachers' capacity to teach writing to diverse student populations through co-teaching and co-planning. This paper addresses the second of these goals, the one focused on teachers.

In the following pages, we provide some context for the research and describe the intervention in light of the literature informing its essential elements. We delineate our research methods and explain why a formative experiment was appropriate. We organize our findings around the essential elements—co-teaching and co-planning—most closely related to the teacher-focused pedagogical goal then conclude with discussion and implications.

Background and Context

The summer writing institute was situated within a larger initiative for teachers, administrators, and university partners to transform Robinson High School into an early college high school, where students could earn up to two years of college credit before graduation. The premise behind early colleges is that acceleration accompanied by support, not remediation, creates motivation for youth to excel, including those from groups underrepresented in college such as ELLs and students of color (Rosenbaum & Becker, 2011).

Robinson's early college partners identified writing as a school-wide focus because writing competence is central to postsecondary success. Since the school's 11 English teachers were seen as key contributors, professional development began with them. Initial discussions revealed teachers' concerns that current instruction did not adequately serve English language learners (ELLs) or African Americans. This, combined with researchers' long-term interest in addressing the literacy needs of students identified for special education, led to the establishment of a book club in the summer of 2009 that explored professional texts on teaching writing to diverse populations (cf., Fu,

1995). During the following two school years, Kelly (first author) led monthly, department-wide professional development (PD) sessions grounded in Pearson and Gallagher's (1983) conception of gradual release of responsibility and focused on a small set of instructional approaches that research and teacher resources (cf., Gallagher, 2006; Graham & Perin, 2007) suggested would yield results.

The summer institute was framed as a continuation of this work—an opportunity for teachers to apply learning from the PD in a scaffolded, supportive environment. The institute, like the PD, was supported by an early college grant from the Woodrow Wilson Foundation. Also funded were college visits, after-school tutoring, and professor-led academic enrichment.

Designing the Intervention

Scholars agree that participation in today's schools, workplaces, and communities requires sophisticated writing skills, in part because of technology's significance in most sectors of everyday life (Graham & Perin, 2007; New London Group, 1996). A key feature of the Common Core State Standards is an emphasis on writing, both print and digital (Calkins, Ehrenworth, & Lehman, 2012). Unfortunately, many secondary English teachers are not well equipped to respond to these trends, with little pre-service training in composition (Finders, Krank, & Kramer, 2013). Causing additional concern are data suggesting inequitable access to high-quality writing instruction, with ELLs, students of color, and students with disabilities writing less, receiving less feedback, and earning lower standardized test scores than their peers (Applebee & Langer, 2009).

Robinson team members, both teachers and researchers, were aware of these trends. To address them, the summer writing institute was designed with three essential elements—signature, non-negotiable intervention components (Colwell, Hunt-Barron, & Reinking, 2013)—including: 1) student composing in both print and digital genres, 2) a small set of instructional approaches effective for heterogeneous populations, and 3) co-teaching and co-planning by teachers. The rationale for each of these elements is described below.

Student composing in both print and digital genres. Research on students' out-of-school literacy practices reveals that youth are often deeply engaged in writing, particularly when media and technology are involved (Alvermann, 2010; Lenhart, Arafeh, Smith, & Macgill, 2008). These personal literacies can be tapped in school, but more often the domains remain separate. The disjuncture has been exacerbated by increased emphasis on test preparation, particularly on-demand, print-driven writing scored on a large

scale (Hillocks, 2002). Since students of color and ELLs are more likely to attend under-resourced urban schools under pressure to raise scores (Alston, 2012), they are also more likely to receive test-driven, skills-based instruction failing to acknowledge both their out-of-school competence and the frequently multimodal nature of contemporary composition (McCarthey & Mkhize, 2013; New London Group, 1996)

A number of scholars have reported success in improving writing via after-school or summer programs drawing on young people's interests and desire to use technology. Hull and Katz (2006) found that digital storytelling through a community center motivation and agency for youth. Gutierrez (2008) reported that migrant students in a residential summer program learned to combine home- and community-based language with academic discourse for social critique. But most programs like these are staffed by pre-service teachers or community activists, not practicing teachers, and thus provide less insight into how practicing teachers learn to use those approaches.

By design, the institute required Robinson teachers to facilitate both print and digital composing in order to generate student interest, highlight varied uses for writing, and promote the transfer of strategies across contexts. Students completed one solo-authored print text (a polished personal essay) and one group-authored multimedia text (a digital story representing inquiry into an aspect of writing such as a time when writing changed history). Both products were supported by students' daily use of writer's notebooks, and teachers created the same two texts themselves, to support their ability to model for students. Most teachers were more experienced facilitators of print-based composing, so the combination of required products in the institute allowed them to build from their comfort zones while simultaneously extending their digital repertoires.

Effective instructional approaches for heterogeneous populations. Recent writing scholarship has underscored the importance of coaching students through the composing process, not merely offering them assignments, time to complete them, and feedback on the end product (Applebee & Langer, 2013; McCarthey & Mkhize, 2013). Numerous effective practices in this vein, including strategy instruction and the study of models, were summarized by Graham and Perin (2007). Delpit (1988) argued that instruction providing students explicit access to expectations and strategies is particularly beneficial for students from non-dominant cultural backgrounds. An approach such as a think-aloud (Gallagher, 2006) can offer such explicitness because it allows

teachers to explain their decision-making as proficient writers in ways that account for their students' prior knowledge and existing skill.

In addition, both research and professional resources suggest the effectiveness of instructional practices grounded in the particular realities of student composition. These practices might take the form of writing conferences allowing adjustments in scaffolding during dialogue with learners (Alston, 2012; Anderson, 2000) or of mini-lessons informed by patterns in student work (Atwell, 1998; Gallagher, 2006). The combination of these two approaches allows teachers to accommodate individuals' varying and evolving needs within the same classroom without needing to segregate students by ability—which, in turn, offers a wider range of experiences, resources, and language models on which all learners can draw (Kluth & Chandler-Olcott, 2008).

In light of these bodies of literature, Kelly designed the academic-year professional development to involve exploration of instructional approaches including think-alouds, student work-driven mini-lessons, study of mentor texts, and one-to-one conferences that would help to make writing strategies and genre demands more explicit to diverse populations. A typical PD session included modeling of an approach such as a think-aloud, discussion of how the approach might be embedded in a typical Robinson unit, and debriefing of teachers' experiences using previously-explored approaches in their classrooms during the preceding month. Although some teachers reported integrating aspects from the PD into their practice, Robinson, like many urban schools, was in the midst of multiple reform initiatives and program adoptions. Teachers struggled to address agendas that often felt unrelated to each other. For this reason, the intensive, focused nature of the three-week institute was appealing to participants, as it would offer sustained time and support to experiment with the high-utility approaches from the previous PD.

Co-teaching and co-planning. The National Writing Project, arguably the most influential provider of writing-focused professional development in the United States over the past 35 years, has consistently argued for the value of collaboration in building teachers' capacity to teach writing (cf., Whitney, 2008). More recently, Applebee and Langer (2013) demonstrated the importance of professional networking in teachers' learning to address writing across subject areas. They argued that effective PD must be grounded in the idea "that knowledge in the 21st-century workplace does not rest with an individual, but in the collaboration of a group" (p. 11).

Scholarship on co-teaching—Friend and Cook's (2003) term for instructional delivery by two or more teachers—suggests that students benefit

from increased attention and greater instructional variety in classrooms where professionals work together to meet diverse learning needs (Murawski & Swanson, 2001; Scruggs, Mastropieri, & McDuffie, 2007). Positive outcomes are more likely when teachers have common planning time, treat each other as equals, and vary the kinds of co-teaching they use. Although such research has tended to focus on collaborations between general educators and special educators and has almost always measured impact on reading instead of writing (see Wilson & Michaels, 2006, for an exception), there is good reason to suspect that co-teaching by English teachers might promote growth among student writers, particularly if it facilitates use of approaches such as one-to-one conferences that can be challenging for a single teacher to manage alone.

A separate body of literature on urban school reform suggests the power of teacher collaboration to design and implement a shared curriculum enacting high expectations for all students (Chenoweth, 2009; Childress, Doyle, & Thomas, 2009). When teachers are enfranchised to co-plan such curriculum, they cover topics less idiosyncratically, address common standards more deeply, and align assessments better with instruction. Teachers benefit from the leadership development offered by such collaborative planning, and students benefit from the resulting instructional coherence and consistency (Zavadsky, 2009).

Given these findings, the institute incorporated both co-planning and co-teaching. Teachers volunteered knowing that they would 1) design the institute curriculum collaboratively, and 2) teach in the same space with another person for a big chunk of each three-hour instructional session. They began their work in May and June when university staff hosted five two-hour planning meetings to draft essential questions, map the 15-day curriculum, establish pairings for co-teaching, and master the digital story software. During July, when students were on site daily from 9am to noon, staff convened 30 minutes early to set up classrooms and fine-tune plans with co-teachers. In the afternoon, the full team spent another 2.5 hours together, debriefing instruction, analyzing student work, and planning lessons to be co-taught on subsequent days.

Method

Although formative experiments are not as common in literacy research as quasi-experiments, case studies, or ethnographies, they have attracted interest from scholars seeking to "understand the components of an instructional intervention that are critical to success, as opposed to simply determining that one intervention works better than another or that a certain instructional move produces desirable results" (Bradley, Reinking, Colwell,

Hall, Fisher, Frey, & Baumann, 2012, 411). Goal-directed, adaptive, iterative, and concerned with interacting variables, formative experiments have been used to investigate literacy engagement among English learners (Ivey & Broaddus, 2007), to design and interrogate a school-wide plan for addressing state accountability targets (Fisher & Frey, 2009), and to explore the impact of vocabulary instruction on fifth graders' word knowledge and appreciation (Baumann, Ware, & Edwards, 2007), among others. A formative experiment seemed appropriate for this study because our team wanted to test and refine promising approaches to teaching writing for heterogeneous populations.

Setting and participants. Located in an urban U.S. district, Robinson High School enrolled about 1300 students in 2010, the institute's first year. About two thirds were eligible for free or reduced lunch. Seven percent were classified as Latino, 10% as Asian, 22% as White, and 60% as African American. About 20% were students with disabilities and about 20% were ELLs. Year 1 institute participants (n=62) represented similar demographics to those attending during the school year; Year 2 (n=56) included slightly higher percentages of ELLs and students with disabilities.

In Year 1, six of Robinson's 11 English teachers volunteered to staff the institute, and five of those six participated in the study: Rebecca, Jake, Janice, Sue, and Nicole. During Year 2, two returning teachers (Jake and Janice) were joined by two new teachers (Cynthia and Arlene) and two others from a feeder middle school (Billy and Kristina), all of whom joined the study. Seven of nine total participants were female, two male. All identified as white and native speakers of English. They had two to 14 years of experience.

Data sources and analysis. Each of the two years yielded the following data: a) agendas, handouts, and field notes for the five planning sessions in May and June, b) daily plans for 15 days of instruction in July, c) agendas, and field notes for 15 afternoon planning sessions in July, d) copies of all student work, and e) researchers' field notes and journal entries. Kelly also conducted semi-structured, audiotaped interviews of 40-60 minutes with each teacher several months after each institute, asking questions such as "Tell me about your experience teaching in the institute this summer" and "What suggestions for improving the institute for next summer do you have?"

As is characteristic of formative experiments (Reinking & Bradley, 2008), data analysis began immediately, during each afternoon session. All staff reviewed various kinds of data, using collaborative talk and writer's notebooks to make sense of them, and offered suggestions for improvement, both in the midst of the institute and on its final day in anticipation of next year's version. Subsequent analysis involved coding and discussion of data by

pedagogical goal and by essential element, noting 1) adjustments, 2) enhancing factors, 3) inhibiting factors, and 4) outcomes, all categories suggested by the methodological literature on formative and design experiments (Colwell et al., 2013). Table 1 provides an example of such coding applied to the essential element of co-teaching. Through discussion, researchers came to consensus about patterns within those codes. We stayed close to teachers' perspectives by relying on their words from interviews and planning sessions and triangulating those with daily plans and field notes.

Role of university researchers. University team members played various roles. Kelly, literacy faculty, designed and directed the institute. She typed the group's plans, took field notes, and conducted interviews. Bryan, a doctoral student in English education with National Writing Project training, documented planning meetings with field notes in Year 1. He, like Kelly, occasionally presented mini-lessons and conferred with students. Janine, also a doctoral student in English education, served as a participant observer during Year 2. All three of us identify as White and as native English speakers, and we all taught secondary English. Although some reports from this study have been collaborative (cf., Chandler-Olcott, Burnash, DeChick, Donahue, Gendron, Smith, Taylor, & Zeleznik, 2012), this paper was authored by university researchers.

Findings

Data suggest that the institute achieved its pedagogical goals. Every student in both cohorts completed a satisfactory personal narrative as well as contributed to a working digital story screened at the public celebration. Teachers noted with pride that the Year 2 cohort, which included a higher percentage of ELLs and students with disabilities, created products of better quality, overall, than the previous group—an outcome they did not predict after initial assessments of student skill. Nearly all teachers named the institute as the most useful professional development of their careers, and several months into the following school year, each described concrete changes in their academic-year teaching of writing based on summer learning that included more explicit modeling of writing processes, increased use of exemplar texts to analyze genre with students, and greater collaboration around planning or instructional delivery with departmental colleagues and/or push-in special education partners. Viewed through the lens of the formative experiment, however, these positive outcomes represent the starting point for inquiry, not the endpoint (Bradley et al.,

2012). The question is not whether a reasonable intervention can be made to work but rather how and under what conditions.

Because co-planning and co-teaching were the essential elements of the intervention most closely related to the pedagogical goal for teachers, we organize our findings around these two constructs. Each section discusses the place of the construct in the original intervention framework, details adjustments the team made, and describes enhancing factors, inhibiting factors, and outcomes, as appropriate.

Co-planning. Collaborative planning was an essential element of the institute from Year 1. During 10 hours in May and June, prior to students' arrival, teachers devised the overarching questions, settled on the personal narrative and digital story as products, and created a 15-day overview handout based on predictions about the instructional support students would need to complete those products. Teacher volunteers knew that their days in July would be divided equally between teaching and planning.

The initial framework did not specify, though, that the full team would construct one set of daily plans by consensus. In fact, Kelly's comments during Year 1 pre-institute preparation hint at a different vision of planning, one where individuals and pairs of teachers might take responsibility for devising certain lessons that would be shared with the group: "Everyone is not going to make up fifteen lessons. We will share lessons and perhaps we can rotate [them amongst ourselves]" (Field notes, 5/19/10). This conception was intended to save individual labor and pool the group's best ideas. It was grounded in data from academic-year PD indicating that most Robinson teachers worked long hours to plan on their own, using the district curriculum only sparingly.

By the midpoint of the first week with students in Year 1, however, the team had committed to collective daily planning. The catalyst for this adjustment was a desire to allow team members to go on vacation, worry-free, during the two weeks between the end of the school year and the start of the institute. To this end, the team spent most of its final June session delineating detailed plans for Days 1 and 2 on chart paper, with everyone's input (Field notes, 6/14/10). Kelly then transferred these plans to Word documents and distributed them via email so that each member would have a clear sense of roles and responsibilities. Those first two days unfolded so smoothly and with such student engagement that Rebecca declared during debriefing that "this is the most awesome summer job I've ever had" (Field notes, 7/14/10). Consequently, when it was time to devise a detailed plan for Day 3, the team used a collaborative approach similar to the one yielding the first two plans:

Kelly facilitated a team-wide discussion, using a whiteboard rather than chart paper, and Bryan typed up what Kelly recorded, often messily with many cross-outs, arrows, and deletions. Kelly later cleaned up the notes and distributed them.

Janice joked during that first week that the whiteboard looked like "a beautiful mind" (Field notes, 7/16/10), referring to the scrawled equations by the mathematician played by Russell Crowe in the film of that name. The term stuck as shorthand to describe the collective planning process, which remained substantially the same for the next two years. Billy argued that the process was a critical enabling factor for co-planning in the intervention:

> That is the first thing I picture. . . an amalgam of random randomness on the whiteboard and . . . somebody saying something and then somebody else using that and everybody spit-balling ideas off of each other, tremendous amounts of dialogue, total immersion from everybody in an idea, and respect for each other. (Interview, 12/7/11)

According to teachers in both cohorts, co-planning created space to experiment beyond their preferred approaches, particularly with digital stories, which were less familiar to most than personal narratives. As Sue explained, "[W]hen I plan on my own, sometimes there's big holes. With a group, those holes . . . got filled in so nicely. . . You would try things you wouldn't normally try," such as modeling her own writing process in front of the students. Sue confessed that this process wasn't always pleasant: "I was uncomfortable a *lot* of the time" (Interview, 9/27/10). But she valued the discomfort, as did Jake, a self-described "alpha" when co-teaching in his own classroom with a colleague in special education, who found that co-planning in the summer made him "uncomfortable but not in the negative way. It was in the completely good, I've-got-to-grow-way" (Interview, 10/27/10).

In teachers' view, co-planning was also key to differentiating instruction, using what Janice called "the issues the students were having" as "fuel" (Interview, 9/30/10). According to Arlene,

> We would look at what kids had produced. . . where we were hitting the mark and where they needed some support, and we would talk about how to do that, we would predict what they might need, trouble shoot that ahead of time. . . . So something that was a little lagging never turned into a big slide, it turned into, whoop [gestures as if boosting], "Let me just get you there." (Interview, 11/10/11).

How to create those boosts was increasingly the focus in Year 2, when students' needs and profiles varied more but when the team could use the collectively-authored daily plans from Year 1 as a starting point during

afternoon sessions, an enabling factor that freed up time to concentrate on individual needs. That year, we established a practice of brainstorming lists together, several times a week, of students about whom we had concerns, often after examining notebook entries, drafts, or storyboards. For instance, after we reviewed a set of personal narratives during the afternoon of Day 12, the Day 13 plan had Kristina and Janice escorting two ELLs to the computer lab for extra teacher-supported composing time while other teachers facilitated independent reading and snacks for the rest of the students. The same plan had directives for dyad time that addressed the individual needs identified on the whiteboard list, with a teacher assigned to ensure completion:

As kids edit their personal narratives, provide extra support as needed:

- Amina—Jake (get her to cut stuff!)
- Johnson—Billy (get weird formatting out, make it a little more comprehensible)
- Suri—type from notebook as much as she can; give Kristina or Kelly to finish (Plan, 7/27/11)

Such personalized plans were often not created by the teacher who implemented them. Team members offered suggestions about meeting the needs of all learners, including those not assigned to their dyad, and individuals volunteered to carry out adaptations based on relationships with the student, expertise teaching the needed skill, and availability (e.g., a teacher who was leading a whole-group mini-lesson would not offer to sit next to a student with a learning disability during that lesson to help him organize his notes). Such a system helped ensure that individuals didn't, in Rebecca's words, "fall through the cracks" (Interview, 9/20/10). Janice explained the outcome of this process as, "All those voices and all of those thoughts on the table together helped us craft something that was a good fit for all kids—not just a specific kind of kid that aligns with a specific type of teacher" (Interview, 9/30/10). Such co-planning made co-teaching, discussed next, more powerful.

Co-teaching. Co-teaching was part of the intervention from the beginning. Once the Year 1 staff was set, Kelly assigned pairs to work together, using her knowledge of existing relationships and interactional styles from the school-year PD. To launch productive partnerships within these dyads, she invited Janice, who was dually certified in English and special education and who collaborated with general education colleagues during the academic year, to lead an hour-long session on co-teaching during a June planning meeting. Following the presentation, each pair conferred over a draft of the 15-day overview and identified places to use approaches such as one teach/one assist or team teaching (Friend & Cook, 2003). These ideas were then discussed as a whole group. Such activities helped dyad partners get to know each other

better and reinforced the importance of co-teaching to the intervention. The same process was used during Year 2 (Field notes, 6/14/11).

One reason for the initial emphasis on co-teaching was Robinson teachers' skeptical responses to one-to-one conferences during academic-year professional development. Although teachers agreed that conferences offered numerous benefits in theory, including the development of close relationships with students and the ability to address individual needs such as the finer points of English for ELLs, they confessed to finding this approach frustrating in practice, often because of classroom management difficulties. Having co-teaching partners in the same summer space was intended to help address these concerns: One teacher could conduct planned conferences while the other monitored students at work, offering assistance as needed. We predicted that successful summer conferences would 1) improve the quality of student work, and 2) encourage teachers to give the approach a second look during the school year.

During Year 1, teachers built a round of conferences about personal narrative topics into the sequence early in the first week, but most struggled to use their writer's notebooks to record observations about those interactions, making it difficult to recall details about individual students' writing during debriefing. To address this inhibiting factor, Kelly sent a one-page recordkeeping form to all teachers along with the group-authored plan for Day 5 (Email, 7/16/10). During planning that afternoon, she asked teachers to pass their forms around the table for review by the whole team then she organized discussion around what the notes revealed about students' strengths and needs. That discussion led to a list of instructional foci for personal narratives, including "having a point," "devising a beginning from multiple choices," and "revisiting exemplars with specific purposes in mind" (Field notes, 7/19/10). The same form and process were used for digital stories (see Figure 1 for a completed sample of the form).

Around this same time, researchers observed that in two out of three dyads, one person tended to take more responsibility for planned formal conferences while the other monitored the rest of the students working at their desks or computers—a pattern that seemed linked to teachers' experiences with co-teaching during the academic year. Although such division of labor may have served the pedagogical goal for students, it was an inhibiting factor for teacher growth. Kelly raised this point during an afternoon session early in Week 2 and asked the members of each dyad to swap roles periodically so that each could experience the affordances and constraints offered by both approaches. Observations and conference notes made over the next several weeks demonstrated more equity within the dyads. By Year 2,

teachers were comfortable with the forms and procedures, and several commented that using the same approaches during the school year made their conferences more effective. For example, Rebecca shared her intention to discuss the benefits of conferring with a Robinson teacher who had not participated in the institute (Field notes, 7/26/10), and Janice reported teaching her school-year assistant to conduct and record conferences using the institute model (Interview, 9/30/10)

In addition to increasing one-to-one conferences, co-teaching in the dyads offered several benefits, including sharp pacing and transitions, allowing more material to be covered; and varied instructional scaffolds, often using multiple modes of representation. For example, the team developed an approach to using mentor texts that came to be called "writerly noticings": one teacher facilitated conversation about the text while the other recorded student contributions, often with accompanying names, on chart paper later posted in the classroom for reference. Such an approach is not unusual in the professional literature on teaching writing, and it can be employed by a single teacher, but the dyads reported particular success with it because the presence of another adult kept the process moving smoothly, provided visual reinforcement of ideas expressed orally, and allowed dyad teachers to converse with each other to extend ideas offered by students. Teachers felt that the approach enhanced the power of the exemplars to influence student work.

Opportunities for co-teaching during large-group instruction, as opposed to within the dyads, were less explicitly detailed in the initial framework. Researchers initially assumed it would be easiest to implement approaches such as conferences and think-alouds—those believed by the team to have the most potential to accommodate diverse learning needs—in smaller groups. This turned out to be true for conferences but not for think-alouds. The team increased use of the latter approach, both in frequency and in duration, when hunches about its effectiveness in making aspects of writing explicit were corroborated by observations of student behavior and analysis of their drafts. As Kelly noted part-way through Year 1, students were "better able to actually LEARN in large group than any of us expected" (Reflective journal, 7/20/10).

Co-taught think-alouds in the large-group space built capacity for individual teachers, not just for students. For example, when Sue was nervous about leading a think-aloud on narrowing her digital story topic, Janice, who was not her dyad partner, volunteered to co-teach the lesson, asking Sue questions in front of the students about her decision-making. This approach rendered the process more transparent to students who were struggling to

narrow their own topics. It also helped Sue, who shared that while she had implemented reading-focused think-alouds during the previous school year as part of a district-adopted program, not until she "saw some pretty good think-alouds, and partner think-alouds, in front of [the] whole group" did she see how "significant" think-alouds could be for writing. The "light bulb went on" when Janice coached her through the process and she saw other good examples of the approach in the shared space (Interview, 9/27/10).

Over time, we became more deliberate during afternoon planning about assigning teams to lead whole-group instruction, often in partnerships that cut across the dyads, so that all staff would have opportunities to co-teach with each other—a particular focus in Year 2, after Year 1 participants such as Nicole spoke about the benefits of such cross-dyad work in interviews. These adjustments allowed teachers with particular expertise (e.g., Cynthia, who was facile with the digital story software) to model approaches that individuals could practice more extensively in the dyads. As several participants noted, such an instructional sequence was consistent with Pearson and Gallagher's (1983) gradual release of responsibility model for *both* teachers and students.

Arlene argued that the interface between co-teaching in the dyads and co-teaching as a larger team—an element not elaborated in the initial framework—was a key enhancing factor:

> You had . . . an overall team of strong teachers. . . . And then the very strong teachers paired, so . . . then you have dyad teams that are also strong. But then the dyad teams are also not isolated in their own dyad world, so you don't get dyad dynamics. . . . So everybody works together. (Interview, 11/10/11)

Billy agreed, but he went one step further, linking the various kinds of co-teaching characteristic of the intervention to what he saw as its plan-teach-plan structure:

> There was that depth of planning that allowed us to thoroughly kind of discuss: "All right, you're going to handle that, and then I'm going to handle this part, and then [let's] team teach this, where you're going to focus on this and scribe while I pull from the students." So we were able to sit down and hammer out each individual detail, and then revisit that, and then kind of reflect on it afterwards in the planning afterwards. (Interview, 12/7/11)

As Billy explained it, the pairing of co-planning and co-teaching gave each more power for teachers, allowing both structures to serve as enabling factors for each other.

Discussion and Implications

Co-teaching and co-planning were included as essential elements in the design of the summer writing institute because researchers felt that they would be useful to teachers learning how to address student writers' diverse needs. Data from two iterations of the intervention suggest that this assumption held true, with different kinds of co-teaching promoting different kinds of teacher learning. Co-teaching within the dyads allowed teachers to practice approaches such as conferences that accommodated differences in student writers' needs; co-teaching within the large group offered a wider range of professional modeling. Both types represented richer and more varied interactions with peers than most team members reported from their experiences collaborating with special educators, suggesting that this approach might have value beyond the general education/special education configurations most common in school. Adjustments in pairings for large-group co-teaching and feedback about co-teaching dynamics helped better leverage those partnerships over time.

Co-planning appeared to have significant value as well. Because teachers had a voice in the development of the big-picture framework for the institute, as well as input into daily planning, they were willing to relinquish some instructional freedom, as well as stretch themselves beyond their comfort zones. Consensus-driven co-planning was time-consuming—more consistent with the planning/teaching ratios associated with Japanese lesson study (Tucker, 2011) than the planning time allocated for Robinson teachers during the school year—but combined with co-teaching, it yielded what Janice called a "better fit" for students with a wider range of needs than would likely be grouped together in any single English at Robinson, given its tracking system.

Effective co-planning and co-teaching did not happen automatically, however, and both evolved over the two-year period of the study. Analysis of the intervention's enabling factors and adjustments suggested that it was helpful for researchers to monitor patterns in teacher learning in ways that paralleled teachers' attention to student learning. For example, when teachers noticed groups of students struggling to narrow their digital story topics, the full team planned a mini-lesson to be co-taught by a pair of volunteers during large-group instruction. Similarly, when researchers noted that dyads were struggling to provide each teacher with enough conferring practice, they offered a record-keeping form and debriefing session to address the issue. Although researchers taught a few large-group lessons and conducted some student conferences, their most important contributions to the institute were 1) capturing and sharing instructional

patterns during planning meetings so that the full team could consider them, and 2) structuring collaborative discussions so that the insights they generated could be translated into usable plans and materials reflecting multiple perspectives. This feature of the institute had much in common not only with formative experiments as they have been articulated by literacy researchers (cf., Colwell et al., 2013) but also with multi-tiered teaching experiments more commonly used in mathematics and science education that articulate different but complementary areas of emphasis for teacher and researcher collaborators (Lesh & Kelly, 2000). The roles played by researchers could also be played by teacher leaders in intra-departmental or cross-department opportunities for co-teaching.

Although direct inquiry into the school-year impact of teachers' institute participation was beyond the scope of the study, the program was designed to enhance such transfer to academic-year writing instruction where possible. For this reason, it took place at Robinson, not on the university campus; the main products were designed to be appropriate for curricular inclusion; and students used free digital tools already loaded on school computers. Retrospective interviews suggest that a number of teachers found ways to integrate their summer learning on topics such as conferring with student writers and co-teaching in shared space into their academic-year practice, although they often identified structural barriers such as lack of common planning time that blunted the impact of the moves they made.

Continued refinement of the institute model through the iterative process associated with formative experiments may aid in developing teachers' ability to advocate for themselves in ways allowing for more school-year carryover, particularly with co-teaching and co-planning. More directly, we hope to design a school-year intervention that can be studied, again through a formative experiment, to identify the factors that enhance and inhibit the improvement of writing instruction for heterogeneous populations during academic-year classes.

T/W

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Table 1: Sample Coding Matrix

Essential Element: Co-Teaching   Subcategory: Writing Conferences

Code	Data
Adjustment: More explicitly equitable approach to conferring within dyads	What are our impressions of our fifth day? How did it go—overall? During rotations? • Use notebooks to guide sharing, first quick sharing of highlights, then problems to be solved • Quick check-in about independent reading • Impressions of Rxx visit • Impressions of our conference notes (Afternoon plan, 7/16/10)
Enabling Factor: Time to share researcher observations during afternoon planning	I'm thinking we can do the same thing for personal narrative topics—maybe on Tuesday or Wednesday—with [researchers] taking notes about the conferences, rather than helping out with them, and that will give us useful data (Field notes, 7/17/10)
Enabling Factor: Distribution of a common conference recordkeeping form	I'm also attaching a conference recordkeeping sheet--will bring copies of that for everyone as well as the plan. (Email to Teachers, 7/15/10)
Inhibiting Factor: Teachers' school-year assumptions/ experiences	To be in a co-teaching setting with Janice was *great* and it was such a learning experience. And I'm still trying to deal with that with the person I'm working with, Mrs. Hxx [special education teacher]. We're still trying to get on the same page and stuff and you know it's coming together slowly and I think one of the reasons that I did the summer program was to get out of my comfort zone a little bit because I like--I'm the alpha in the room. I'm the alpha and you're the beta. (Jake, Year 1 Interview)
Outcome (short-term): Dyads discuss their conferences	I appreciated today seeing Sue and Rebecca comparing their sheets and talking about who they had seen. (Field notes, 7/26/10)
Outcome (longer-term): School-year adoption of forms and processes	So I designed it that way on purpose so that I would have a chance to meet with every single one of those kids. And I even brought my TA from my 12th grade inclusion class in and did a little co-teaching training with her and showed her how to do it and gave her a group of kids and she's doing conferences too. (Janice, Year 1 Interview)
Outcome (longer-term): School-year adoption of forms and processes	Rebecca also told me she would share insights about how useful conferring is with Txx, who is teaching regular summer school this week. (Field notes, 7/26/10)

Figure 1: Sample Conference Form

Digital Story Topic Conferences

Student	Topic	Topic: 1=weak, 2=OK, 3=strong	Notes
Cxxxx	Social networking	2	When was 1st—how did pages develop? Facebook page-text language
Nxxxx	Teens lead social life through texting	3	Interview people with cell phone
Txxxx	??? (partner Mxxxx)	?	Sportscaster? Fan clubs?
Axxxx	What sites are available for young people to post writing?	2	Interview

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