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The Renaissance Group

A work in progress: Unraveling the lessons learned in a co-teaching pilot

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Abstract

Colleagues at a midwestern university implemented a multi-semester co-teaching pilot for student teaching, and based on the data collected, are moving toward full implementation in the spring of 2015 for all pre-service teachers in the College of Education (COE). Part of the study replicated work conducted by St. Cloud University (Bacharach & Heck, 2011) and utilized that university's evaluation instruments. However, the lessons learned in the pilot reveal some of the still "unanswered" questions as to how to ensure the quality and effectiveness of the co-teaching model during student teaching. Researchers share results and insights, and suggest action steps for full implementation of the co-teaching model.

What is Co-teaching?

The idea of teachers collaborating and partnering to support the learning of students is not new. Models of co-teaching have been used for some time by general education teachers and special education teachers working together to meet the needs of students in the least restrictive environment possible (Cook & Friend, 1995; Friend, 2000; Friend & Cook, 2006; Murawski & Dieker, 2004). Co-teaching is defined as "two teachers (teacher candidate and cooperative teacher) working together with groups of students; sharing the planning, organization, delivery, and assessment of instruction, as well as the physical space" (Bacharach, Heck, & Dank, 2004, p. 7). The application of the co-teaching model to student teaching transforms teacher preparation to better prepare future teachers and impact students they work with in the classroom (Perl, Maughmer, & McQueen, 1999; Villa, Thousand, & Nevin, 2004).

There are seven co-teaching strategies. These strategies allow both teachers (teacher candidate and cooperating teacher) to be actively engaged in the learning: *One Teach, One Observe; One Teach, One Assist*; *Station Teaching*; *Parallel Teaching*; *Supplemental Teaching*; *Alternative or Differentiated Teaching*; and *Team Teaching* (Bacharach, Heck, & Dahlberg, 2010).

Why Co-teaching?

The St. Cloud State University's Teacher Quality Enhancement project studied and evaluated the co-teaching Model with 826 pairs of co-teachers in 34 pre-K classrooms; 601 elementary (K-6) classrooms; 120 secondary (5-12 & 7-12) classrooms, and 71 special education classrooms over a four-year period. Reading and math proficiency gains were significantly higher in classrooms where there was a co-teaching model. The impact on reading and math achievement of students from poverty (free/reduced lunch eligibility) was significantly increased in classrooms that were co-taught (Bacharach & Heck, 2011). Beyond test scores, students who were given appropriate assignment and the instructional scaffolding to succeed, displayed stronger motivation to learn.

District cooperating teachers report that because candidates become competent in a short time, class instruction quickly becomes more productive. Individual and whole class objectives are met more easily. The positive effect of co-teaching on teachers' attitudes has also been studied, showing that teachers have more job satisfaction and their teaching is energized and more fun (Murawski, 2010; Bacharach & Heck, 2011).

Teacher candidates in the co-teaching classrooms show improved classroom management skills and increased collaboration skills (Heck & Bacharach, 2010). Confidence and excitement about their new careers are lifetime benefits of a successful co-teaching experience. In the co-teaching model, student teachers experience an apprenticeship in teaching which prepares them for a collaborative environment in schools and gives them the skills to work with other adults in the classroom to meet the needs of students (Darragh, Picanco,Tully, & Henning (2011).

Students benefit from the co-teaching model in academics, attitude, and opportunity for engagement. The student to teacher ratio is cut in half and student needs are met more efficiently and quickly. The in-service teacher has a renewed sense of purpose and the teacher candidate develops skills necessary for a collaborative classroom, better suited to meet the diverse needs of children.

Implementing the Co-teaching Pilot

The mid-western university's College of Education (COE) team piloted the co-teaching Model in the 2012-2013 school years with 18 teacher candidates; 20 cooperating teachers; 12 university mentors, and administrators from 6 participating school districts (rural, suburban, and urban settings) in the fall 2012 semester. For the spring 2013 semester, 76 students in more than 21 school districts were placed, more than quadrupling the number in the fall pilot. In the upcoming fall 2014 semester, all teacher candidates will be placed in co-teaching partnerships for student teaching.

Data Collection

Weekly Reflective Journal

The co-teaching team met weekly to monitor and review ongoing data collection. A *Weekly Reflective Journal* (adapted from Bacharach & Heck, 2011) was filled out online by the cooperating teacher and the teacher candidate. The results were reviewed by the team and examined to pinpoint areas needing attention or improvement, as well as noting the strengths and weaknesses of the implementation of the co-teaching model. The *Weekly Reflective Journal* asked participants to share what co-teaching strategies were used in instruction during the week. The pair of teachers (candidate and host teacher as noted above) reflected on the successes and challenges together, and shared one example of a co-teaching lesson.

End of Experience Survey

An *End of Experience Survey* (adapted from Bacharach & Heck, 2011) was administered to cooperating teachers; teacher candidates; university mentors, and building administrators. Questions focused on which of the co-teaching strategies were challenging and which were utilized most frequently. It also invited participants to rate their experiences, to identify benefits to the triad and the impact on children P-12. The results were used to identify patterns and make recommendations for changes to the processes used to implement the co-teaching model.

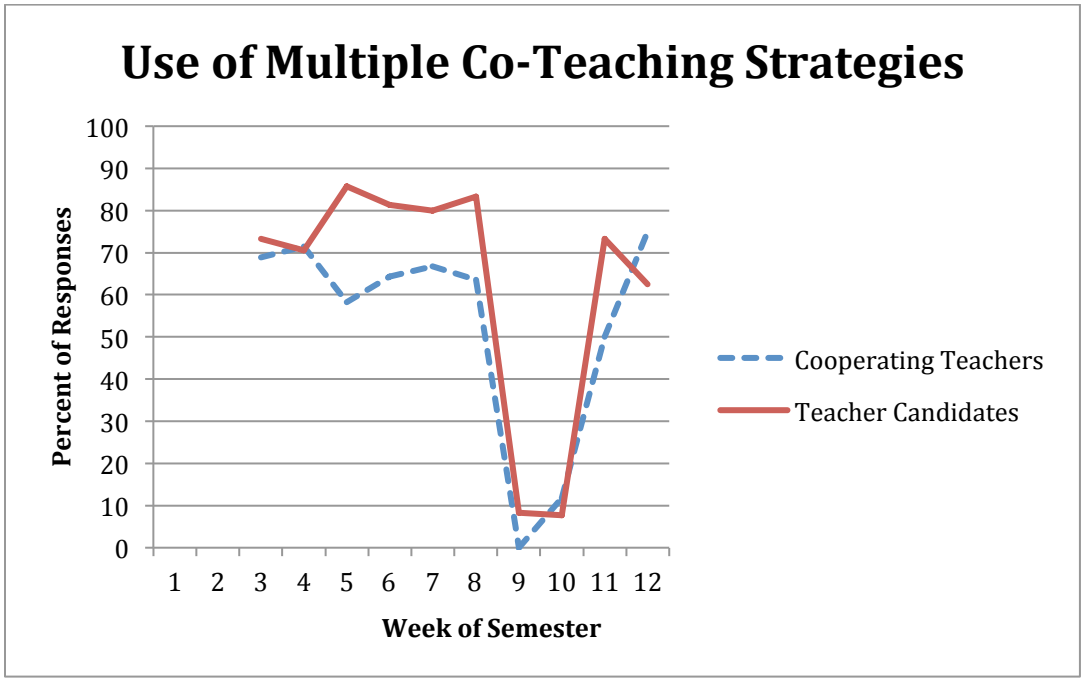
Results

Weekly Reflective Journal

Use of multiple co-teaching strategies.

Over the span of the semester, both cooperating teachers and the teacher candidates reported using multiple co-teaching strategies as shown in Table 1. The reporting for both participants each week was also consistent for the reported co-teaching strategies used in lessons. It is interesting to note that there is a significant dip in the use of co-teaching strategies during Week Eight to Nine. An examination of journal entry reflections for these weeks revealed an overemphasis on preparation for mid-term grades and parent conferences.

Table 1. Use of Multiple Co-teaching Strategies

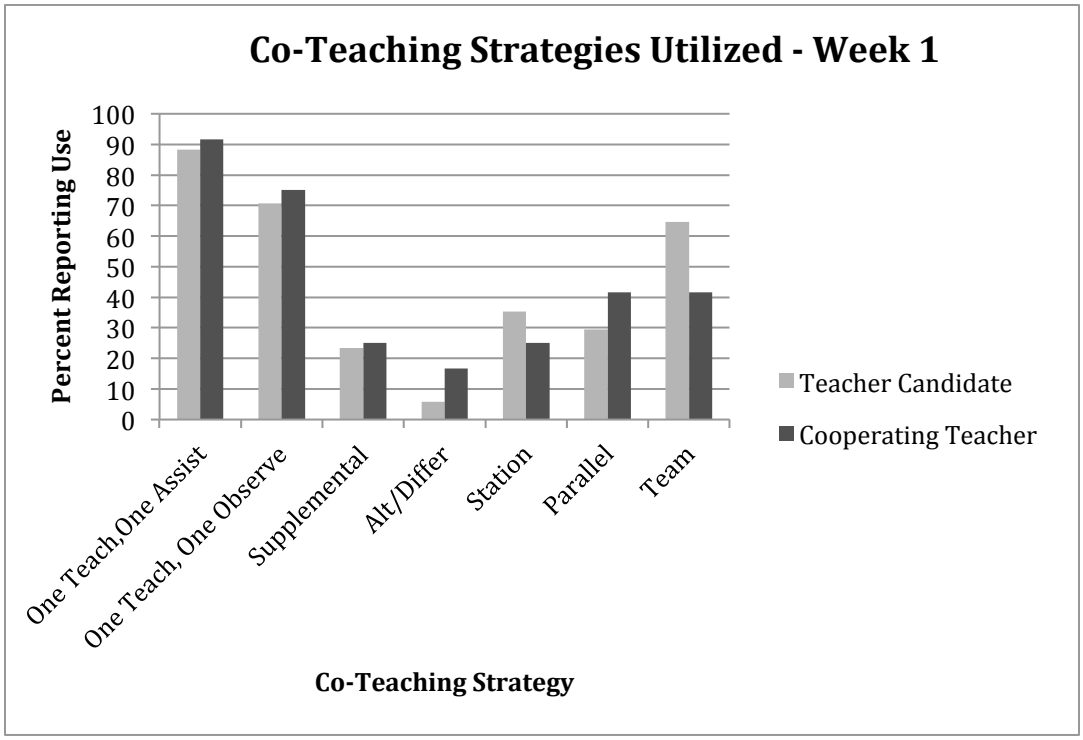


Comparison of Implemented Strategies.

Week One co-teaching strategies .

Each week, the strategies selected for implementation were analyzed to see which strategies were chosen. Journal reflective entries were reviewed to identify patterns that might relate to the chosen strategies. In Table 2, the first week that participants reported the strategies, *One teach, one observe* and *One teach, one assist* was used more than any other strategies reported for that week. This comment is typical of what many participants shared in the first week, "*Megan and I did the One Teach, One Assist method for the first week of school. Megan is still learning how I go about instructing and did a lot of assisting me in my teaching while she observed. During one class, Megan would assist students in drawing and staying on task while I did the main instruction. She also would pass out materials and check to see that students understand during work time."*

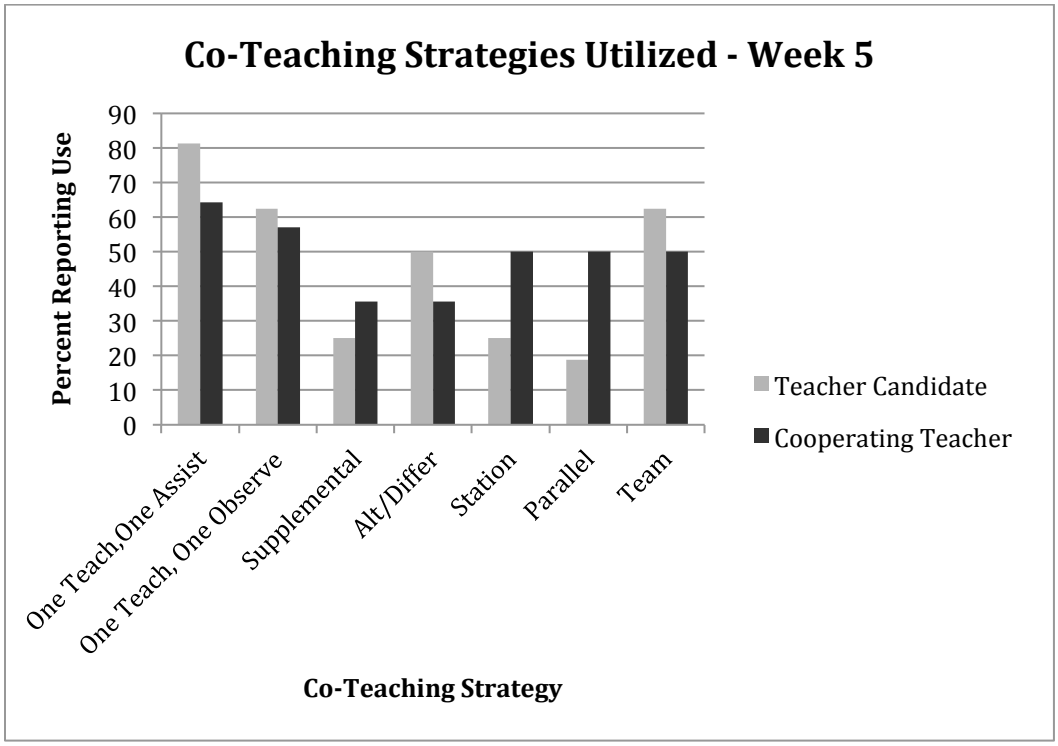
Table 2: Co-teaching strategies utilized-Week 1



Week Five co-teaching strategies.

By Week Five, the researchers noted that all teams were using multiple strategies as shown in Table 3. The first month of school was completed and routines and procedures for classrooms had been established, contributing to a readiness to explore more co-teaching strategies. One participant reported, "*Our successes with co-teaching this week was the actual act of changing, multiple times, the different types of co-teaching in one class period depending on the type of class."* Another participant stated, *"Co-teaching is going on the majority of the time in my classroom. Most of that time, we do team teaching. However, this week we did several Station Teaching lessons in social studies.*

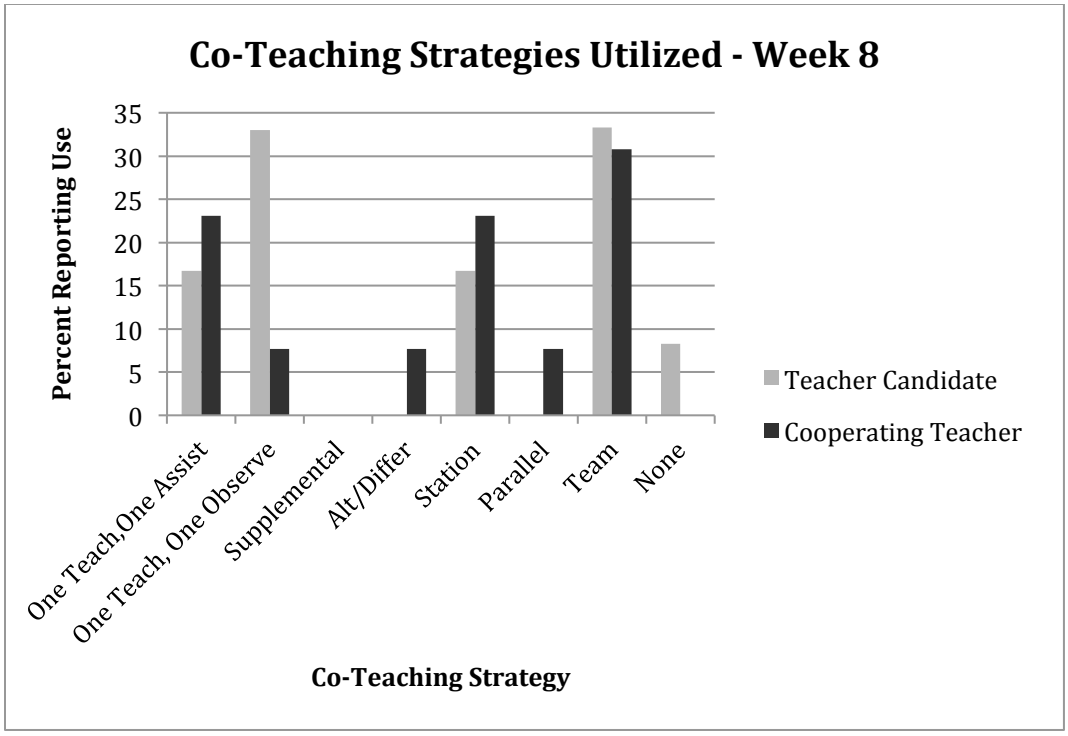
Table 3. Week 5 Co-teaching Strategies



Week Eight co-teaching strategies.

During Week Eight, the researchers noticed a distinct change in the pattern of reported strategies used by teams. (See Table 4). This was nearly halfway through the pilot semester. When journal reflections were reviewed, it was clear that time had been limited during this period to plan for co-teaching strategies. Mid-semester demands for grade reporting and conducting parent-teacher conferences had increased. Stress levels seemed high. One co-teacher shared, "*Not enough time for planning."* Another co-teacher said, *"This week we have been getting stuff ready for our parent teacher conferences. I feel that I have not been a huge part of this process which is a little upsetting. . . "*

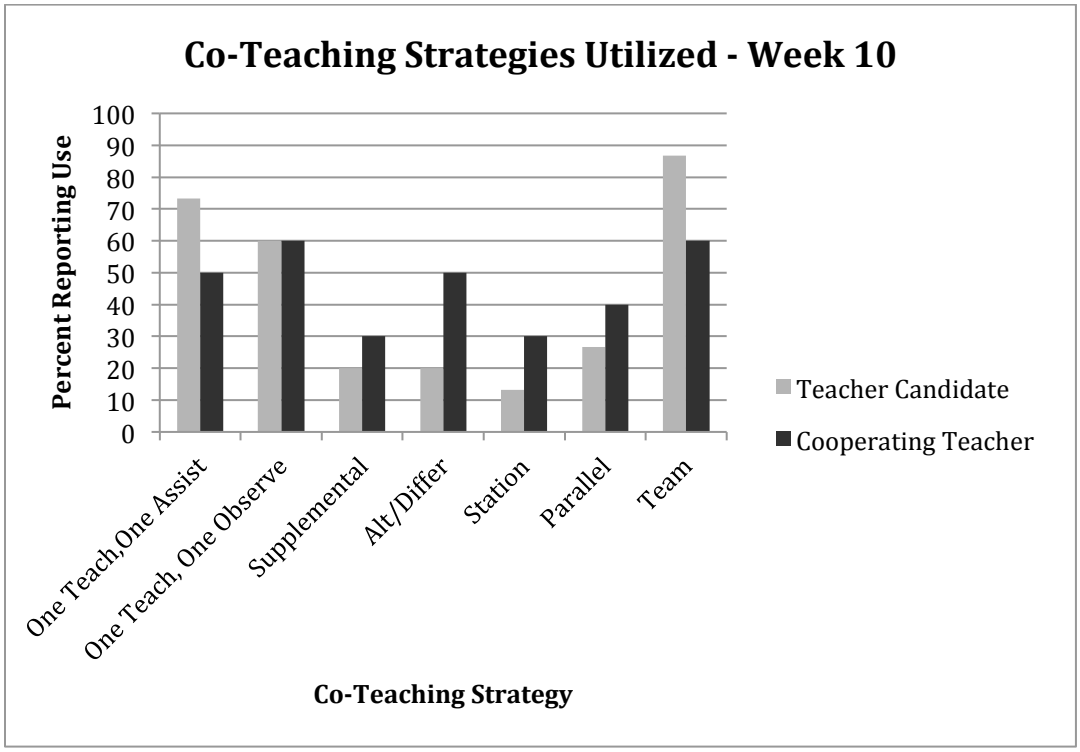
Table 4. Week 8 Co-teaching Strategies



Week Ten co-teaching strategies.

By Week Ten, the co-teaching pair once again began indicating the use of multiple strategies in instruction. (See Table 5). This pattern persisted through Weeks Eleven and Twelve. The pairs reported finding a comfort level and confidence with their ability to work together to meet the needs of students. The following comment is typical of Week Ten, *"I think we're finding a good rhythm with team teaching. It's almost like the lessons become conversations. We ask questions and build on the information each of us provides. These conversations create a less formal environment in the classroom and model thinking-out-loud/questioning for students."*

Table 5. Week 10 Co-teaching Strategies



Co-teaching Strategy Trends.

The researchers analyzed the data for trends, patterns, and differences between the teacher candidate and the cooperating teacher's reported use of co-teaching strategies. In Tables 6-11 (see Appendix) it is interesting to note that the pairs are parallel in their reporting of what strategies were used consistently throughout the semester. This may indicate that pairs talked about when and how to use the strategies and is an indication of strong planning. Table 12 (see Appendix) shows that there was more discrepancy in how the pairs reported the use of station teaching compared to their reporting related to any of the other strategies. This raises some questions as to how the pairs are defining and operationalizing the station teaching strategy in the classroom. A review of the open-ended questions in the *Weekly Reflective Journal* entries provided more insight into this discrepancy. For example, one candidate described a strategy as parallel and station, when it would most likely be categorized as parallel. Examining when training and mentoring pairs, the use of this strategy will be clarified and implementation in future research may help to understand this discrepancy.

Open-ended Responses.

A random sampling of the open-ended responses from the *Weekly Reflective Journal* was coded based on three criteria. The first was whether the candidate's reflection was positive, negative, or neutral in regards to co-teaching. The second code indicated whether the response addressed student engagement, instructional strategies, or classroom management. Finally, the researchers looked for statements regarding personal efficacy, teacher efficacy, or commitment to the profession (Chan, Lau, Nie, Lim, & Hogan, 2008; Ebmeier, 2003). An analysis of teacher candidates' responses to the weekly reflective journal questions showed some trends. Many

candidates reflected on the relationships formed during co-teaching, both with their cooperating teacher and their students. A majority of responses were positive about the relationships developed, and discussed students' perceptions of both as teachers. The results indicate that co-teaching promotes a generally positive and successful partnership between the teacher candidate and the cooperating teacher.

End of Experience Survey

Data for the *End of Experience Survey* was collected in the spring 2013 semester after an initial trial survey was completed with the first pilot group of 16 participants, fall 2012. Nine building administrators, 24 university mentors, 40 cooperating teachers, and 33 teacher candidates responded to the survey.

Co-teaching strategies.

All four levels of participants in the co-teaching Pilot were asked to identify the most comfortable and the least comfortable strategy for partners to implement in the classroom. Team teaching was identified as being the most comfortable strategy for all participants as seen in Table 13. This was also noted in Table 14 as the one co-teaching strategy most observed by both the university mentor and the administrator when watching lessons in the classroom. One teacher candidate summed up the experience of team teaching with the following comment, *"There was a great flow between the two of us. It was a constant give and take and felt very natural."*

Table 13. Most Comfortable Strategy Usage

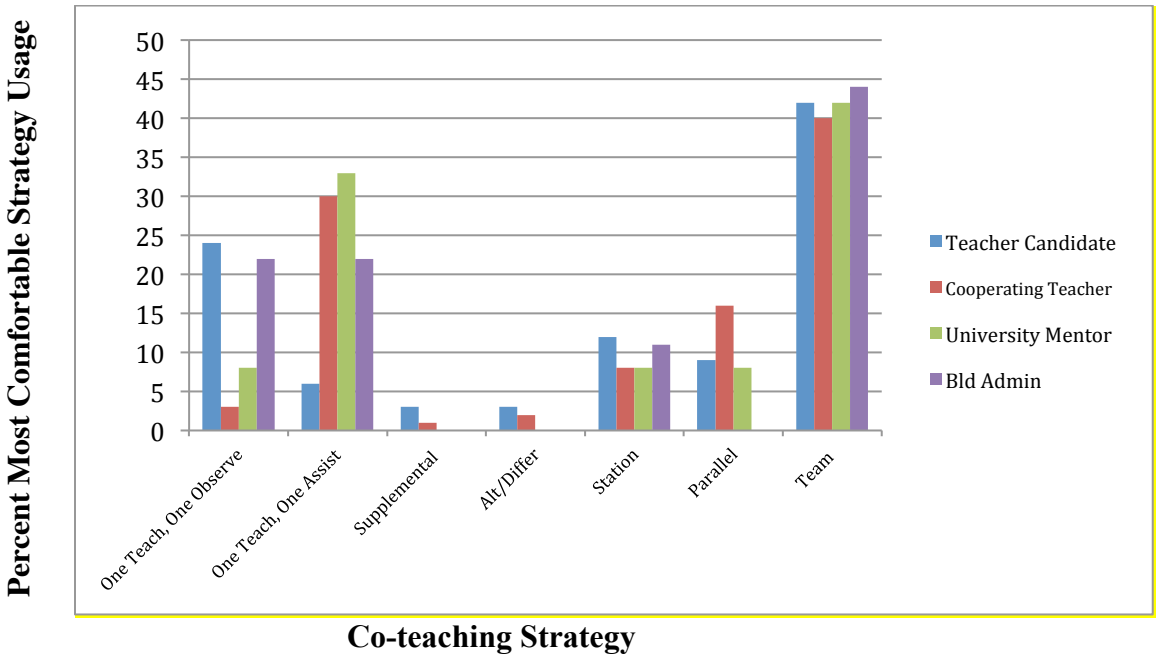


Table 14. Reported Opportunity to Observe Strategies

Percent of Reported Opportunity to Observe Strategies by University Mentors/Building Administrators

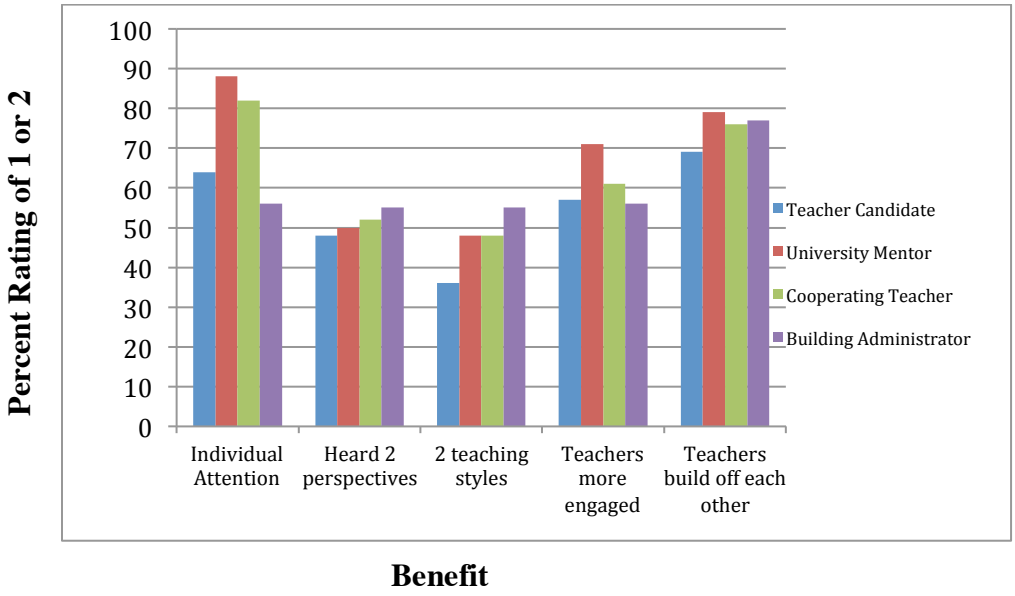
Co-teaching Strategy	University Mentor	Building Administrator
Parallel Teaching	67	44
Team Teaching	88	89
One Teach, One Observe	67	67
One Teach, One Assist	92	78
Station Teaching	50	44
Supplemental	7	8
Alternative Differentiated	26	25

There was no identifiable strategy that stood out from the others as least comfortable for the co-teaching partners [Table 15 in Appendix]. This may be due in part to the fact that participants were asked to try all seven strategies by the end of the semester.

Benefits to P-12 students.

Participants specified many benefits for P-12 students, including the quality of instruction for students in the co-teaching classroom. The university mentor (63%), classroom teacher (56%), teacher candidate (67%), and building administrator (56%) reported that the quality of instruction was better in the co-teaching model compared to the traditional student teaching setting. On additional survey questions, participants rated the statements with most important 1 to 5 least important. The greatest benefit reported with a rating of 1 or 2 was *more individual attention given* to students (56%-86%) as shown in Table 16. *Teachers building off each other* (69%-79%) also showed a significant benefit to the children in the classroom. One teacher candidate stated, "*The ratio of teachers to students allowed for more small group time and to further differentiate their needs…"* This was echoed by the comments from a cooperating teacher, *"Students got more one on one attention and help from teachers."* One administrator shared, *"[I] thought there were amazing benefits to having two teachers in a classroom with students….more immediate feedback is available and instructional time is maximized."*

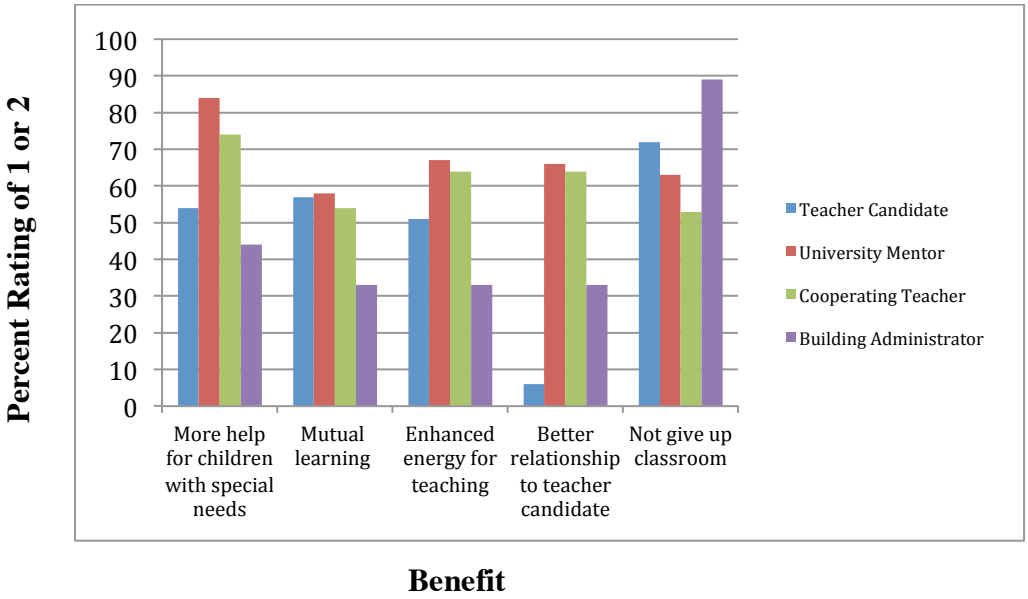
Table 16. Benefits to P-12 Students



Benefits to classroom teachers/cooperating teachers.

The survey asked the pilot group to respond to statements regarding the benefits of the co-teaching model to classroom teachers/cooperating teachers with the same scale of most important 1 to least important 5. There were many benefits identified, including more help for children with special needs, cooperating teachers not having to give up or leave their classroom, and enhanced relationships with the teacher candidate as noted in Table 17 below. Comments from cooperating teachers support these identified benefits. One classroom teacher stated, *"[I] get more time to learn individual students learning styles in depth and can offer more help to both students and the teaching candidate.* Administrators rated *not giving up their classroom* with 89% most important to important as a benefit to cooperating teachers. The following statement by an administrator illustrates this benefit; *"My master teachers felt like it was a great time for true reflection as they worked side by side with their teacher candidates. Intervention could be taking place frequently within the classroom without jeopardizing the core instruction."*

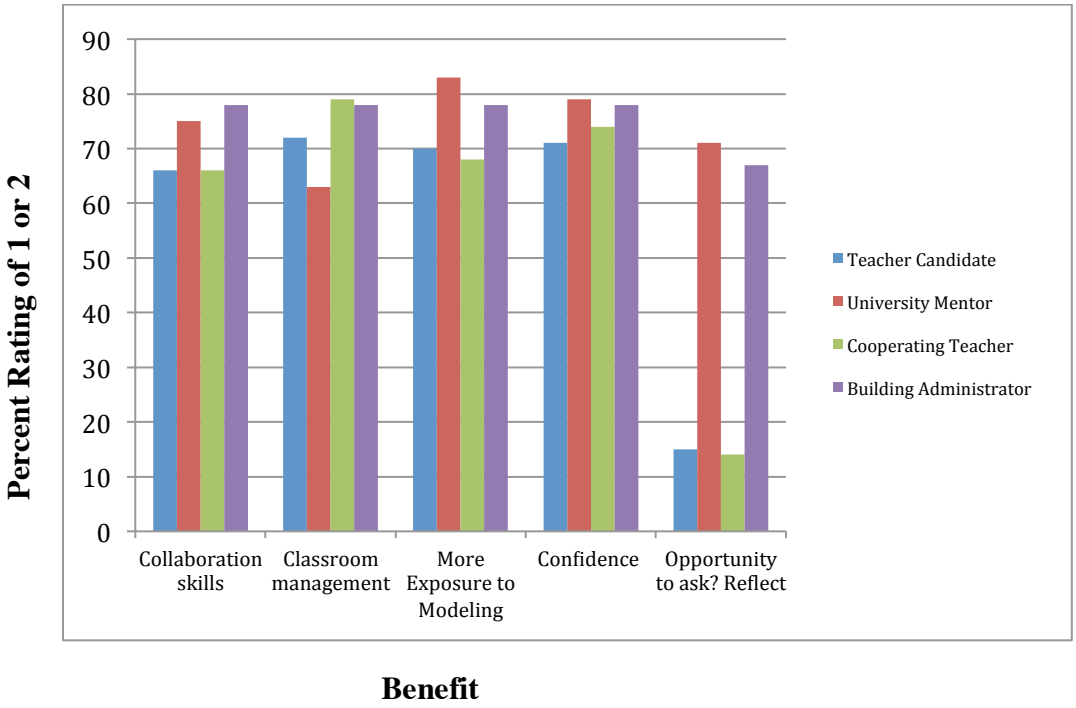
Table 17. Benefits to Classroom Teachers/Cooperating Teachers



Benefits to student teachers/teacher candidates.

The survey asked participants to respond to a series of statements regarding the benefits to the student teacher/teacher candidate using the scale of most important 1 to least important 5. Benefits to the teacher candidate included increased collaboration skills and confidence, more exposure to expert modeling, and an increased awareness of classroom management strategies shown in Table 18. It is interesting to note that the teacher candidate and the cooperating teacher both rated the opportunity to ask questions and reflect as less important. This may be related to the strong relationship between the partners and the trust they had built throughout the partnership as reported by this teacher candidate, *"It was great to have Mrs. P's advice and help instead of just being thrown into a situation with kids you have not built relationships with yet. It made the process more productive and educational rather than just getting through it alone."* The following comment by a cooperating teacher also speaks to the benefits to the teacher candidate. *"They [student teachers] have a chance to get to know the students and the teacher better. Also, this gives them time to build up their confidence without the pressure of just jumping in."*

Table 18. Benefits to Student Teachers/Teacher Candidates



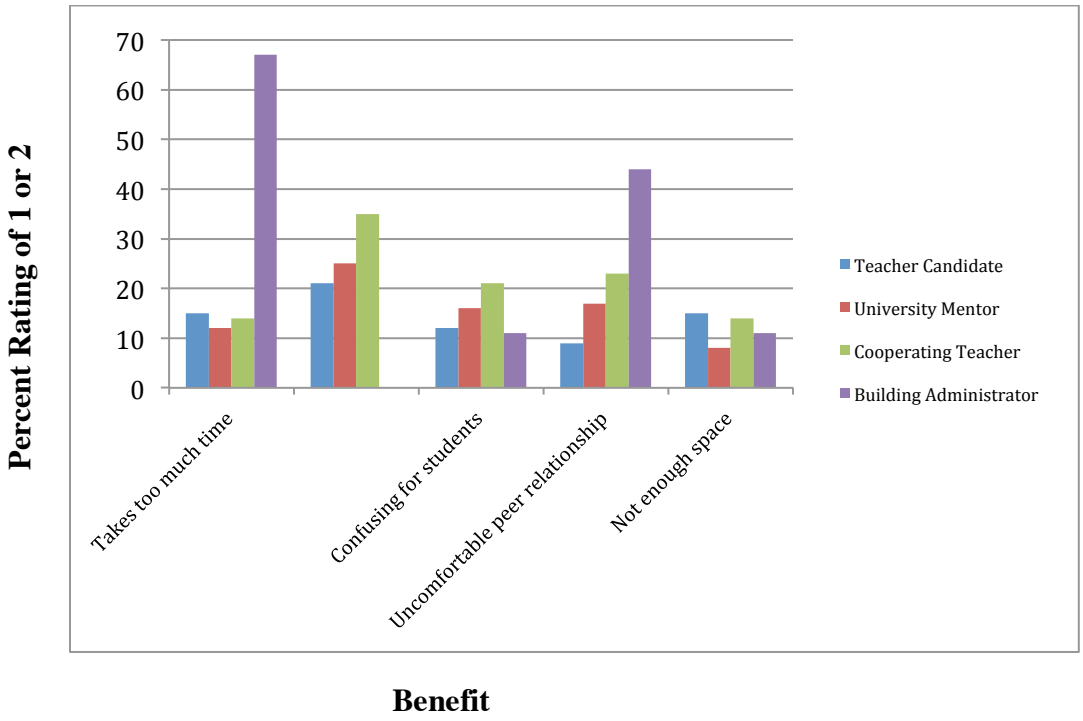
Drawbacks to the co-teaching model.

Although there were many noted benefits to the co-teaching model, some drawbacks were identified by participants (see Table 19). The building administrators reported that the co-teaching model took too much time and that the peer relationship encouraged by the model could be uncomfortable for the cooperating teacher. The administrators rated the need for the teacher candidate to have more time teaching with 0% or with no importance as a drawback to the co-teaching model. The following comment by a building administrator relates to this rating. *"For those who say that there isn't enough teaching time for the candidates, I believe that they need as much time with a master teacher as possible. They will have 30 years of alone time. We need to maximize the learning experience during their student teaching block."*

Although not evident in the ratings on the survey questions relating to drawbacks, there were additional identified drawbacks or concerns in some of the comments shared in the open-ended portions of the survey. This statement by an administrator shows the concern that the co-teaching model may not benefit the pre-service teachers. *"The co-teaching model has great benefit during the school year. However, not as effective for the growth and development of a pre-service teacher."* Another building administrator shared this concern. *"Individual preparation is still necessary for teacher candidates. Co-teaching should not allow for a teacher candidate to be ill-prepared for class. Too much leaning on the classroom teacher was done."* One cooperating teacher shared, *"Behavior changes when the lead teacher is not in the classroom though, and I felt like I couldn't give the teacher candidate a real chance to fly solo in regards to managing behavior as often as I wanted."* A teacher candidate makes similar remarks when they talk about the need for more practice on their own, *" [I] think it does not help us with classroom management, as the supervising teacher does more of the lead, more out of habit.*

This provides us with a great example, but something that young teachers need to practice and get comfortable doing."

Table 19. Drawbacks to the Co-teaching Model



Planning and doing co-teaching again.

Planning is an essential part of the co-teaching process, ensuring successful implementation of the co-teaching strategies. Participants were asked if the pairs had planning time of sufficient length. Overwhelming, all of the respondents indicated *"yes"* with percentages 71% (Cooperating Teacher), 75% (Teacher Candidate), 88% (University Mentor) and 100% (Building Administrator). When asked if they would participate in a co-teaching model again respondents positively reported, *"yes"* with percentages that ranged from 88% to 100% (Teacher Candidate/88%; Building Administrator/89%; Cooperating Teacher/94%; and University Mentor /100%). Both the amount of effective planning for the co-teaching model and the willingness to participate in a partnership of co-teaching affirms that the implementation of a co-teaching model would provide more benefit than drawbacks to all members of the co-teaching partnership.

What Did We Learn?

Many of the benefits that were reported by the St. Cloud University study (Bacharach & Heck, 2011) were also evident in the data collected in the pilot study at this university. In the self-reported instruments used (*End of Experience Survey* and the *Weekly Reflective Journal)* the researchers found similar results to those of St. Cloud University. P-12 students benefited from having two individuals in the classroom, making it possible to better differentiate the instruction for learners. Communication skills were enhanced between the cooperating teacher and the

teacher candidate. The teacher candidates were supported in their developing skills in management and instruction. The evidence served as support for the decision to transition commit to full implementation of the co-teaching model for all COE in the spring of 2015.

A Work in Progress: Looking Beyond the Data to Action Steps

The two instruments provided researchers with the data they needed to answer the research questions. Results supported the decision to fully implement of the co-teaching model for student teaching at this university. It might seem that the researchers could relax and be assured that the implementation of the co-teaching model would go smoothly, but additional questions began formulating almost immediately, and new, unanswered questions now loomed as the date for full implementation approached.

First, student teaching observations and journal entries indicated that the co-teaching training team had not fully recognized the importance of the university mentor in the success of the co-teaching model. The university mentor must be adept at helping co-teaching teams form the relationships necessary to maximize the benefits of co-teaching. He or she must have the knowledge and skills necessary to help the cooperating teacher and teacher candidate work through issues that arise in the partnership. The team has learned that it is essential for the university mentors to receive specialized training that goes beyond the basics of co-teaching and instead focuses on the creation, facilitation, and support of co-teaching partnerships. Such training will be provided for the university mentors in the future.

Next, the team also underestimated the importance of buy-in from all programs on campus. Some teacher education programs on campus supervise their own teacher candidates while others rely on adjuncts to provide supervision. The co-teaching training team quickly learned that faculty in those programs relying on adjuncts must still be very knowledgeable about co-teaching. The idea of co-teaching must be included in the courses education majors take early in their programs as well as in later methods courses. Thus, it is essential that all faculty who work with teacher education candidates be trained in co-teaching.

In addition, the researchers continue to struggle to understand and identify the type of data to collect to really determine if co-teaching is successful. The research team collected quite a bit of data from numerous sources, but there is still the question of whether or not the model is working successfully in terms of the intended roles for cooperating teachers, university supervisors, and student teachers. The researchers are currently working on creating a plan for data collection that includes measures of fidelity for implementation of the model. Such data should provide information on the extent to which the model is truly being implemented, and will be valuable in helping the research team better assess the success of the model.

Finally, the structural organization of the training process for co-teaching has been revised, based on observational and journal data. The new model will include a coordinator from the university to oversee all training and data collection, as well district liaisons who will serve in the role of mentors, coaches, and trainers within individual districts. This will help facilitate the fidelity of the implementation of the model across different districts in the state. A walkthrough observation tool will be developed that will document evidence of co-teaching strategies utilized within P-12 classrooms. It should collect data on the effectiveness of co-teaching partnerships at the building level and address the reporting concerns related to co-teaching strategies. The district liaison will be responsible for the collection and sharing of walkthrough data. This observation tool will provide an opportunity to collect data at all levels of co-teaching. Resulting data will help researchers evaluate the successful implementation of

the co-teaching model. Data will also be used in making programmatic decisions, based on evidence from the field. It will ensure that accountability measures are put into place at the building level site and are coordinated with the university to implement a co-teaching model. The program coordinator for co-teaching will also facilitate the identification of achievement data and data gathering tools that can assess the impact of co-teaching in P-12 classrooms. This will be done in partnership with area districts accepting student teachers for the co-teaching model. Finally, training will be tailored to the specific teaching levels and disciplines in which the cooperating teachers and teacher candidates are placed, appreciating the unique benefits and challenges that each one offers (Berry & Van Dreil, 2013).

Future Research

The area that has been least studied is the use and effect of co-teaching in the secondary and K-12 levels, and in specific content areas (Eick, Ware, & Williams 2003). Future research will include the implementation of a more targeted study, focusing on co-teaching at these levels, as well as a longitudinal study on the long-term effects of co-teaching. The following questions provide a foundation for future research:

1. How can the fidelity of the model's implementation be measured?
2. In what ways can specific content areas and K-12 and secondary co-teaching models be supported and studied?
3. How can the impact on P-12 student achievement be measured and planned for with partner districts?

Conclusion

In the spring of 2015, more than three hundred student teachers from this midwestern university, in all settings (rural, urban, suburban) and across the state will be co-teaching as their culminating experience. These new student teachers will help the co-teaching training team envision the future of the co-teaching model. Data collection methods from the pilot will continue to be used, with minor adjustments. The *Weekly Reflective Journals* will be done bi-monthly instead of weekly due to the large number of student teachers, but remains an informative data piece about the "true" implementation of the co-teaching model. The *End of Experience Survey* will continue to be used to provide information about the benefits to the co-teaching model for the university and partner districts. In addition, the changes listed in the previous section will help determine the future of the program.

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Appendix

Table 6 One Teach, One Assist

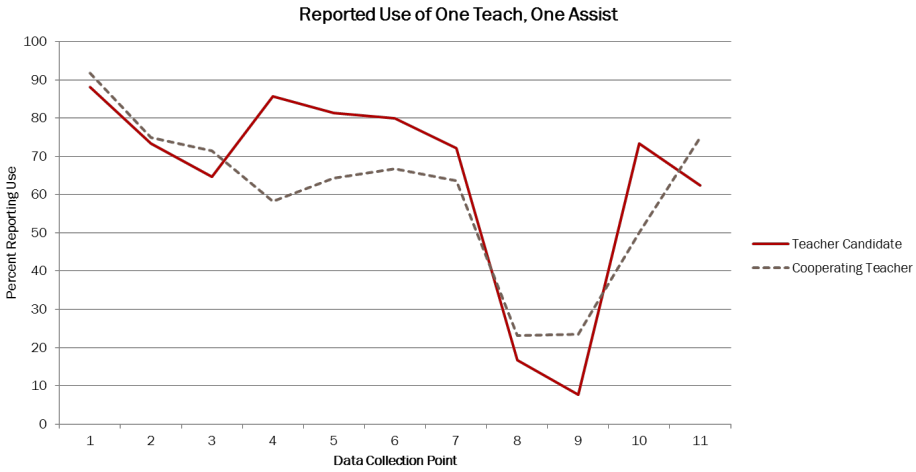

Table 7 Supplemental

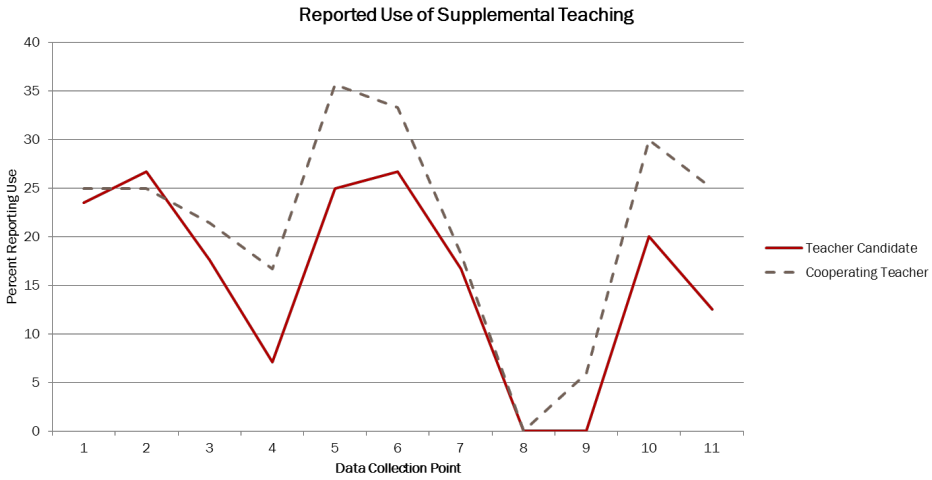

Table 8 One Teach One Observe

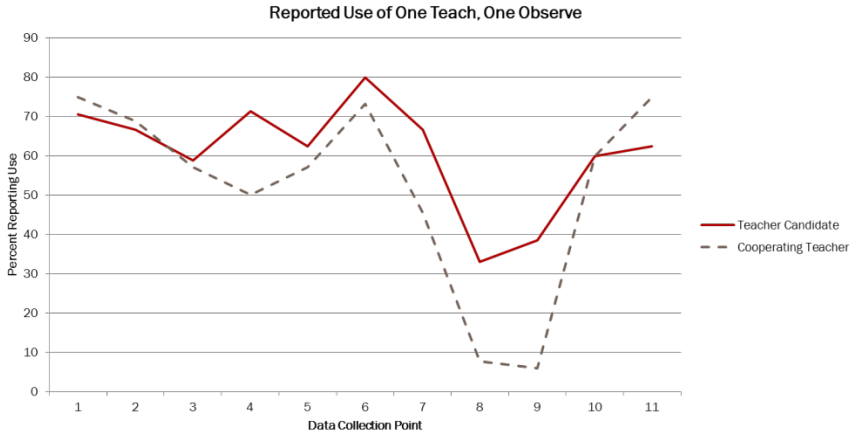

Table 9 Alternative/Differentiated Teaching

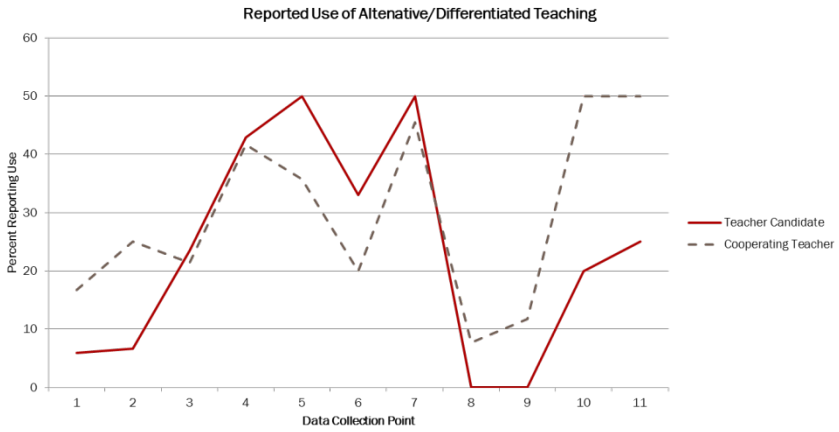

Table 10 Parallel Teaching

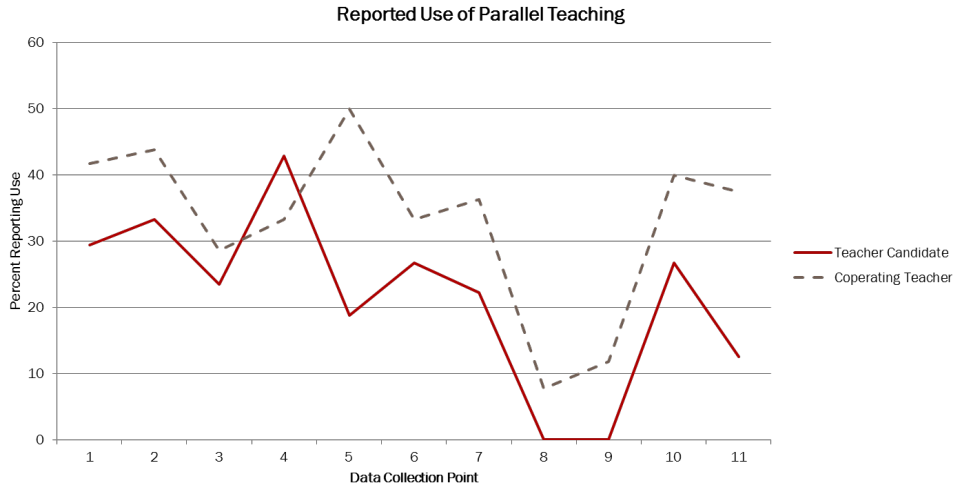

Table 11 Team Teaching

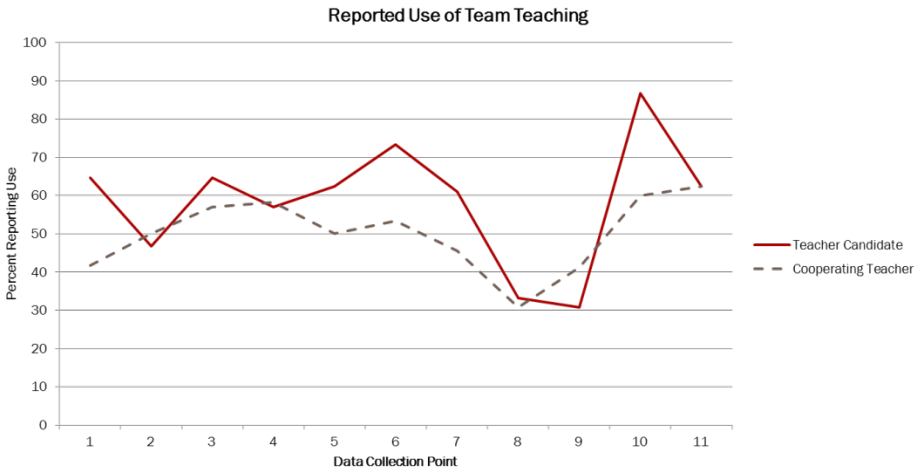

Table 12 Station Teaching

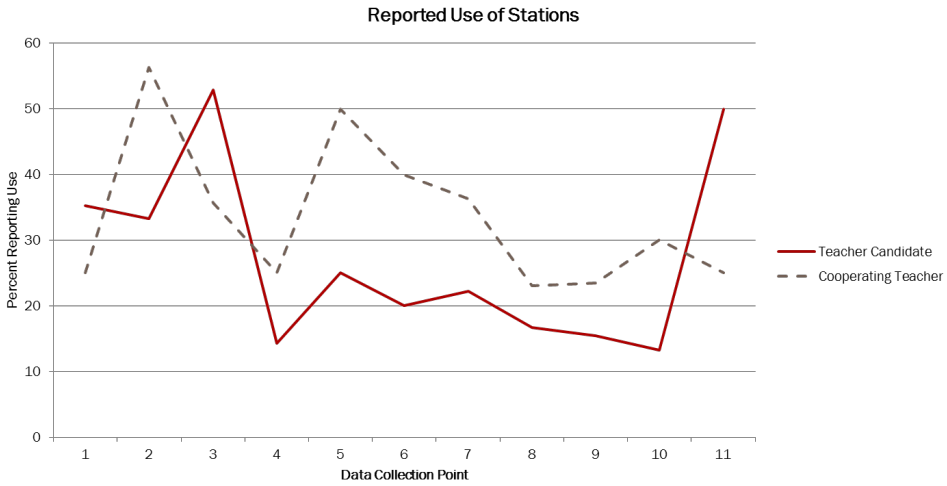

Table 15. Least Comfortable Strategy Usage