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Summer Learning Program Outcomes for Co-Teachers and P-12 Learners

Background

Candidates who enter shorter—usually 10 to 18 months—Master of Arts in Teaching (MAT) programs need to have as much teaching time as possible before entering student teaching and eventually becoming licensed teachers. Structured and supportive clinical experiences at the beginning of the program play an essential role in preparing candidates to become successful teachers. As part of our MAT program, candidates use the co-teaching model to provide summer instruction to local 4th through 12th grade students in a university setting. In this co-teaching model, two teacher candidates simultaneously have responsibility for a common group of P-12 learners. These two adults collaborate in classroom management, planning, instructing, and assessing these students. Research on co-teaching shows that learners taught in two-teacher environments do as well and often better than similar students in single teacher classrooms (Castle, Arends, & Rockwood, 2008; Fisher, Frey, & Farnan, 2004). The focus of this research is to evaluate the impact of the co-teaching model on teacher candidates' professional growth during their initial field experience in a Summer Learning Program (SLP) and to explore the outcomes of the co-teaching model on P-12 learners enrolled in the SLP. Specifically, we investigated how the co-teaching model as an entry clinical experience introduces the teacher candidate to planning, instruction, and assessment of student learning.

Situated cognition (Brown, Collins, & Duguid, 1989) has been the hallmark of teacher preparation's orientation of theory into practice. Teacher candidates will learn about teaching in

environments in which they will *authentically* use their new knowledge. Cognitive apprenticeship tries "to enculturate [candidates] into authentic practices through activity and social interaction in a way similar to that evident … in craft apprenticeship" (p. 37). Co-teaching facilitates an apprenticeship arrangement that encourages modeling of classroom practices for the candidate, a chance to implement directly what is being learned; and, less well investigated, the socialization into teaching practice. The co-teaching model provides teacher candidates increased preparation in an authentic clinical experience.

Zeichner (2010) is optimistic about the positive impact of co-teaching on P-12 student learning, although the complications of pre-service clinical experiences have made demonstration of this impact difficult. Student teaching experiences are limited in time, may not include accurate measures of student learning, and are, by definition, an experience in which the candidate is developing expertise rather than applying already-acquired knowledge and skills. Although it is valuable to track the impact of co-teaching on the teacher candidates as they enter the work force, examination of candidates' impact during student teaching in relation to elements that are likely to assist in improving P-12 student learning are essential for making informed decisions about candidate competency and to provide a basis for mentoring candidates as they progress. Data gathered from the SLP show that the summer co-learning experience is beneficial both for the candidates as they prepare for school district student teaching and for the children who, generally, have shown learning gains at the end of the program.

Literature Review

Co-teaching is defined as "two or more professionals delivering substantive instruction to a diverse or blended group of students in a single physical space" (Cook & Friend, 1995, p. 14). Wenzlaff et al. (2002) have extended this definition to emphasize that co-teaching is "a

collaborative relationship for the purpose of shared work… for the outcome of achieving what none could have done alone" (p. 14). A co-teaching model during candidates' initial clinical experiences allow teacher candidates multiple opportunities to engage in shared decision making over lesson planning, instruction, assessment, and classroom management. It is beneficial for candidates to have a support person at this point in their teacher preparation program, especially when several have limited prior experiences working with children. The co-teaching model during the SLP allows for candidates to be immediately integrated into the teaching and learning process, while simultaneously having a colleague alongside of them with whom to collaborate. Candidates are engaged in an interactive and collaborative approach to learn about teaching and learning.

LeCornu and Ewing (2008) discuss that the co-teaching model can be expanded to form a co-learning model in which there are three constituents of learners: one constituent is the group of P-12 students and the two constituents are the two teacher candidates. The co-learning experience retains all elements of authenticity that are present in the co-teaching experience and that are needed for candidates to use new knowledge, but the program also encourages a move toward creating a learning community in which *all* participants benefit.

Curry and Cunningham (2000) define co-learning as constructing knowledge in a community and suggest that co-learning serves to deemphasize the notion that teachers are experts who provide knowledge, and students are learners or receivers of knowledge. Brantmeire (2005) more emphatically describes co-learning as an empowerment pedagogy for all participants in the learning community. Lawrence (1996) studied co-learning among graduate school cohorts and found students and teachers were able to co-create knowledge when group dynamics and de-centering of authority were part of the group structures.

Whether a co-teaching model or the more powerful co-learning, evidence indicates that collaborative teacher work in classrooms is beneficial to teachers and students alike. In this study, the collaborative model is introduced to teacher candidates even before they have the opportunity to enter more formal school-based instructional spaces.

Methods

Participants. There were approximately 120 4th to 12th grade students who enrolled in the SLP each summer and 50 MAT candidates who served as their teachers in the program. Each *class* typically consisted of approximately two MAT teachers and 4 to 6 school-aged students. Students were matched with teachers in two specific ways: grade level of the school-aged student and level of authorization the MAT candidate hopes to receive licensure in (for example, a group of 4th graders are placed with a candidate focusing on elementary education) and the second way groups are formed is the academic area in which the students need to receive additional support and instruction (for example, a group of high school students who are enrolled in the SLP for math remediation are paired with two MAT students who will be receiving their teaching license in secondary math). The SLP ran from 9:30 a.m. to 11:30 a.m. Monday through Thursday for five weeks. At the conclusion of the SLP, academic learning gains were shared in a student-led conferences with the MAT teacher, student, and parent or guardians.

Assessment. Data gathered from this study include pre/posttest scores of P-12 learners who completed the SLP and end-of-program questionnaires completed by teacher candidates and families. Candidates focused on either language arts or math instruction during the SLP.

Pre/Posttests. Teacher candidates develop the standards-based pre/posttests, administered them at the beginning and end of the SLP, and reported on student learning gains in an end-of-experience, student-led parent conference. Candidates used the pre/post analysis to share student

learning growth with students and their parents. In order to assess the program level learning gains, scores were converted to percent correct, differences in pre and post percent correct scores were computed, and aggregate scores for the cohort were assembled. Gains scores were disaggregated by content area.

End-of-Program Questionnaires. The questionnaires administered as part of the evaluation process of the SLP included one that was to be completed by parents or guardians that asked them to describe their child's experiences, successes, and challenges in the program and another that was for teacher candidates to summarize their learning experiences in the program and to rate their challenges and successes when working with their co-teacher. The parent and teacher candidate questionnaires were analyzed using structural coding (Saldaña, 2013) of dominant themes that emerged during the process. Structural coding was used in order to chunk the data into meaning units. The chunks were named according to overarching commonalities illustrated in the data. Analysis of the data reported in this study was done using an iterative process of pattern coding (Miles & Huberman, 1994).

Results

Parent Questionnaire. Parents were asked to respond to two questions: What academic gains do you feel your child made during the SLP? and What suggestions do you have for improving the SLP? Several themes emerged from the data including increased student self-confidence, improved academic performance in math and writing, and overall satisfaction with the structured environment that the SLP offers their child in the summer.

P-12 Student Self-Confidence. Parents often commented on their student's increased self-confidence both socially and academically. Comments such as, "I have seen my child display more confidence when interacting with peers," and "my daughter has much more confidence

with her writing. I really believe she has increased her writing skills. She's very excited to show her new teacher in the fall what she wrote this summer in the Summer Learning Program!" In addition, one parent commented on the role that the SLP played in her child's eagerness to learn, "I am happy because she was so excited to engage in learning" and "the opportunity to continue to learn in a setting like the SLP will be one that pays off for Luke in school in the fall when he starts the year with more confidence and tools for writing well. Thank you!!!"

Improved Academic Performance in Math and Writing. As part of the application process for the SLP, parents or guardians indicated on which area they would like their child's instruction to focus. Often students were enrolled in the SLP for remediation in math and or language arts, and we hoped that parents would see improvements in one or both of these academic areas. Parents' comments about their children's improved academic performance included:

At the parent conference at the end of the SLP, my child showed me that he got all but 2 questions wrong on the first math test of the summer but when he took it again at the end, he only missed 3 problems. He was very proud of himself and learned a lot from his two teachers.

We feel that our child has improved in math and paragraph structure. He always states writing is hard for him. Now he feels confident going into 8th grade.

I loved how much writing and math was worked on daily. At my daughter's conference, she seemed confident in her gains in multiplication and writing. I'm happy she will begin 5th grade having these gains. She learned and had fun!

Satisfaction with the Summer Learning Program. Parents often commented on how valuable the SLP was in helping their child stay engaged with academics during the "summer

slump." A few parent comments to highlight this included: "My daughtered remembered some things that she had learned in school but forgotten since she had not been there. She learned a lot and is much more prepared for the upcoming school year" and "my child stayed engaged and continued practicing math, reading, and writing!" Overall parents speak to their satisfaction with the program in comments such as "we as a family are so grateful and happy for the program" and "this is Molly's 3rd year with the program. We love this program. It speaks volumes that this was an activity that she chooses for herself for summer."

Teacher Candidates' Professional Growth. The teacher candidates reported that they highly valued having a peer with whom they could plan, teach, and assess. They also appreciated having the opportunity to apply their summer coursework to their tutoring experiences, and they felt better prepared for student teaching because of the opportunity it provided to be both a learner and a teacher in the SLP.

P-12 Student Learning Gains. Candidates commented that the SLP gave them opportunities to teach school-aged students on a smaller scale before they entered student teaching in the fall. Specifically, candidates were asked to address how they felt their teaching impacted the P-12 students during the SLP, and comments often related to learning gains they saw in their students in the areas of math and language arts. Candidates made comments such as "our students made gains in multiplication and general problem-solving skills. They also made improvements in writing and noun identification" and "major improvements in math and the ability to write more clearly with details and punctuation."

Professional Growth. The SLP was a challenging experience for candidates, as many of them were coming into the program with limited previous classroom teaching experiences. The candidates began teaching school-aged students on day five of their program, and this required

quickly learning about lesson planning, assessment, and classroom management. Several of the candidates commented on how the SLP is a "crash course into the teaching profession" and that the program was crucial as it allowed them to "use techniques and lesson plan in real life" and "try out things and see if they worked." One candidate commented that "I learned that things don't go as planned and that classroom management and organization are key!" Linking theory and practice is a cornerstone of this MAT program and it appears that the candidates believed the SLP helped make those connections between coursework and teaching.

Pre/Posttests. The teacher candidates administered a standards-based pretest and posttest to their students in order for them to learn how to collect student learning data that they would be collecting in their formal student teaching experience and to plan and evaluate instruction. Given the short length of the SLP, it would be reasonable to see more gains in targeted math skills than in reading and writing skills. Reading comprehension is something that takes longer to improve than the length of this SLP, and there are instrumentation issues in measuring writing improvement, such as a restricted response range. Additionally, candidates have not had a full course in assessment prior to writing their students' pre-assessments, so often this is their first attempt at doing so. As predicted, data from students ($n = 52$) showed no statistically significant gain in their reading and writing skills, but student ($n = 55$) math score improvement was statistically significant ($p < .001$).

Conclusions

Creating and implementing a co-teaching model for the initial summer clinical experience was examined to determine teacher candidates' professional growth and impact on P-12 learning. This research examined the co-teaching model as one way to help candidates learn about teaching in environments in which they will authentically use their new knowledge. In

addition, we explored if P-12 learners enrolled in the Summer Learning Program also gained new knowledge in this process. This study found that co-teaching facilitated an apprenticeship arrangement that encouraged an interactive and collaborative process for candidates, a chance to implement directly what is being learned in summer coursework, and the socialization into teaching practice.

By design the SLP is a short experience. We would like to examine the impact of this model over more weeks in the summer, but that is not possible because of the logistical limitations of summer enrollment at our university. As previously mentioned, the candidates are beginning to learn about standards-based assessments of student learning in the midst of many other topics that will be necessary for their fall student teaching experiences. Assessments may not accurately serve their purpose in all cases and can be criticized for not being textbook reliable and valid assessments at these candidates' first attempt. Finally, we believe that interviewing a sample of parents may provide more in-depth data than the short survey parents completed. These limitations make us cautious in the midst of our positive findings.

While co-teaching is not a new phenomenon, applying its fundamentals to a co-learning model that investigates the fluidity of knowledge transmission among the students and the teacher candidates is a relatively new area of study. Our data supported this expansion of the co-teaching model. Our emphasis was to demonstrate how P-12 students and teacher candidates grew professionally and formed a dynamic learning community with their students in the Summer Learning Program.

References:

Brantmeier, E. J. (2005). *Empowerment pedagogy: Co-learning and teaching*. Retrieved from
http://www.indiana.edu/~leeehman/Brantmeier.pdf

Cook. L., & Friend, M. (1995). Co-teaching: Guidelines for creating effective practices. *Focus on Exceptional Children, 28*(3), 1-16.

Curry, R. M., & Cunningham, P. (2000). Co-learning in the community. *New Directions for Adult and Continuing Education, 87*, 73-82.

Lawrence, R. L. (1996). *Co-learning communities: A hermeneutic account of adult learning in higher education through the lived world of cohorts* (Doctoral dissertation). Retrieved from Proquest Dissertations and Theses database. (304274428).

Le Cornu, R., & Ewing, R. (2008). Reconceptualising professional experiences in pre-service teacher education: Reconstructing the past to embrace the future. *Teaching and Teacher Education, 24*(7), 1799-1812.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Newbury Park, CA: Sage Publication.

Saldaña, J. (2013). *The coding manual for qualitative researchers.* Thousand Oaks, CA: Sage.

Wenzlaff, T., Berak, L., Wieseman, K., Monroe-Baillargeon, A., Bacharach, N., & Bradfield Kreider, P. (2002). Walking our talk as educators: Teaming as a best practice. In E. Guyton & J. Ranier (Eds.), *Research on meeting and using standards in the preparation of teachers* (pp. 11-24). Dubuque, IA: Kendall-Hunt Publishing.