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Two Teachers Learn from Their Students: Examining Teaching, Learning, and the Use of Learning Centers

Barbara Dian O'Donnell and Rebecca Hitpas

Abstract

Two teachers, a kindergarten teacher and university professor, used action research to study the use of learning centers in their respective classrooms. Becky, a kindergarten teacher, collected and analyzed qualitative data in the form of interviews, work samples, anecdotal records, checklists, videotapes, and culminating performance task documents. She found that at-risk students made progress in achievement, accountability, and motivation. Inspired by Becky's study, her university advisor/teacher redesigned a learning center assignment that proved to be more powerful in getting teacher candidates to understand, design, and use centers.

As a part of my university teaching load, I, Barbara O'Donnell, teach two action research courses which culminate in a final master's project. The inservice teachers in these courses choose a problematic area in their teaching they feel needs improvement. As I support these teachers over a year's time, I find that I continually learn and reflect more about my practice as I examine their work. This paper is an example of what a kindergarten teacher taught me about an assignment I devised for one of my undergraduate methods courses.

Becky, a kindergarten teacher, decided to study her use of literacy centers. Prior to the study, she pulled at-risk students into a small group to work on literacy skills while the rest of her class participated in center activities. As the semester progressed, Becky noticed that these at-risk students were losing their enthusiasm for learning and their attitudes were not as positive as she had hoped they would be. Becky wondered, "What would happen if I reinforce literacy and language skills solely through the

use of literacy center activities instead of small group instruction during literacy time?"

Why was this particular study so interesting to me? First, I wanted to verify that a field-based learning center assignment in my early childhood (K-3) undergraduate math methods course was worthwhile. Many cooperating teachers (and in turn, my undergraduate students) often balked at this assignment, saying that centers were not used in schools anymore. Some of the reasons they listed are: (a) centers are not effective as a method of learning, (b) centers take too much time to develop, (c) classroom management is more difficult, and (d) the curriculum cannot be covered as effectively in the same amount of time. Second, I believe in the use of learning centers because they have the potential to provide students with a sense of self-accomplishment and responsibility that needs to be developed in order to create autonomous learners. I felt that Becky's study might help me to answer my questions: How effective are learning centers? Are they worth the time and

effort to construct? Should I replace this assignment with one that is more meaningful?

Defining Learning Centers

Learning centers are small areas within the classroom where students select from teacher prepared activities to practice and apply the skills they have been taught (Ford & Opitz, 2002; Nations & Alonso, 2001; Turner & Paris, 1995). The National Association for the Education of Young Children (NAEYC) has long held the position that:

Both child-guided and teacher-guided experiences are vital to children's development and learning. Developmentally appropriate programs provide substantial periods of time when children may select activities to pursue from among the rich choices teachers have prepared in various centers in the room. (2009, p. 2)

The rights of young children to shape the context of their learning must be respected, as well as their need for decision-making (Surman & Kennedy, 2002). Teachers should not "abandon play and creative pursuits in favor of worksheets or rote learning tasks... to make literacy teaching look 'serious' in some way" (p. 5). Students need to be actively engaged in literacy centers that accommodate their differing approaches to learning, their playful natures, and their need for choices of multiple entry points into literacy (Wilford, 2000, p. 13). Offering choices helps differentiate instruction in order to better educate diverse learners (Hughes & Valle-Riestra, 2007). Elliot and Olliff (2008) say that it is important to create developmentally appropriate literacy center activities across all domains: physical, social-emotional, and cognitive.

Ford and Opitz (2002) stress that the instruction happening away from the teacher, such as that in literacy centers, "must rival the power of the instruction that takes place with the teacher" (p. 710). In order for center learning to have this power and be successful, the following must be considered: (a) decision-making must be grounded in assessment, (b) activities must "require students to interact

with print while reading and writing" (p. 712), (c) curriculum goals must be accommodated, (d) tasks developed must be doable for the student and valued by the teacher, and (e) centers must be structured for independence, equity, accountability, ease of planning, and must be routine based (p. 713).

Learning Center Benefits

Genisio and Drecktrah (1999) believe that center learning empowers engagement when it is self-directed and based on the learner's strength, ability, and interest. They list such benefits as enhanced language interaction, responsiveness to story, increased art, reading, and writing-like behaviors, collaboration, buddy activity, and independence (p. 225). Morgan, Farkas, Tufis, and Sperling (2008) believe that children need to learn to regulate themselves, be self-sufficient and learn self-control or they will have difficulties meeting the demands of a classroom. Interventions, like learning centers, that target both reading and behavior problems simultaneously will be the most effective.

Motivation plays a critical role in learning, often making the difference between superficial learning and deep internalized learning (Gambrell, 1996; Sweet & Guthrie, 1996). Researchers (Powell, McIntyre, & Rightmyer, 2006; Turner & Paris, 1995) agree that choice, challenge, control, collaboration, construction of meaning, and consequences, commonly found in center learning, were positively associated with student motivation. Classrooms without these characteristics had a higher percentage of off-task behavior (Stuber, 2007) with students being passive learners who actively resist literacy instruction (Powell, et al., 2006, p. 7). Stuber (2007) also found that engaging activities at centers can make teaching and learning more efficient.

Research also indicates that literacy centers provide open-ended activities which reach a variety of learners, allow for practice of skills and strategies taught, and offer opportunities for developmentally appropriate, authentic assessment (Cress, 2004; Genisio & Drecktrah,

1999; Nations & Alonso, 2001; Nielson & Monson, 1996; Truax, Foo & Whitesell, 2004; Turner & Paris, 1995).

Becky's Study

From a class of 15, Becky chose to document the work of six students who were not identified for extra literacy support. In our first action research course, Becky developed a sophisticated plan for data collection which included a timeline for data collection points and ensured data triangulation (Mills, 2007). A variety of qualitative data sources provided a picture of what happened during literacy centers: interviews, formative work samples, her anecdotal records and those of her classroom aide, skills checklists, student checklists, videotapes, and culminating performance task documents. Before beginning the integration of at-risk students in center activities, she interviewed each student to get what she calls a "true feeling for students' enthusiasm and motivation." After eight weeks, she interviewed them again.

Becky and her classroom aide documented each student as they worked at centers. Through the use of checklists, they were able to monitor students' progress and weaknesses, pinpointing specific literacy skills as well as their behaviors. Students also provided data by submitting a work form and a checklist to indicate center completion. To capture telling moments in the midst of activity and to get additional perspectives, Becky's aide videotaped several literacy center sessions. Culminating performance tasks were designed specifically for each student in order to document progress.

Becky performed an on-going analysis of each case individually to determine work and behavior patterns and to adjust center activities. She used a step-by-step process of iterative reading and viewing of videotapes, creation of interpretive memos, identification of initial categories, a second reading and viewing of videotapes, and subsequent inference of commonalities (Mills, 2007; Bogdan & Biklen, 2003). As with any action

research project, Becky knew there might be limitations: lack of understanding of interview questions, the need to please the teacher, variances in data collection between the two observers, and time itself.

Becky began her study in late February after six weeks of using her traditional center method which excluded at-risk students. Breaking from tradition, Becky decided to provide *all* students with a choice of 14 literacy centers, most of which included multiple activities. She designed literacy center activities by blending ideas from an extensive review of literature, particularly Boushey and Moser (2006), Ford and Opitz (2002), and Genisio and Drecktrah (1999). As students completed a center, they would mark that box on their checklist. They could not return to a marked center until all others were completed. Becky and her aide would attend centers with the students "to assist, encourage, extend, and remediate where necessary." Through data analysis, themes of academic improvement, accountability, and motivation emerged. Becky chose to illustrate her findings with the stories of three of the six students.

John

John, one of the youngest students in the class, did not attend preschool and was noticeably behind the other students when school began. Although he made great strides to improve, he was a challenge for Becky, resisting authority and often arguing. As she stated, "He disputed me as well as other adults multiple times on a daily basis." Becky soon found this new center format fit his circumstances well. She determined that he needed to have control over his environment. When center time came each day, his excitement and enthusiasm was apparent, and even contagious to those around him.

Becky used her observations and John's work documents to determine whether he improved academically. Notably, he applied a good sense of letter-sound knowledge to sound out new words, could differentiate between real and nonsense words, and could put his ideas into

words when he authored books on his own, using inventive spelling. Although his story summaries were basic, his inference skills improved. His culminating performance task required him to place 26 words into categories of his choice. John grouped the words into ten categories (examples: initial, medial, and final sounds, rhyming, common letters, etc.) which supported his learning of fluency, letter-sound awareness, and rhyming skills.

Although John made progress academically, he did not always mark his checklist when he completed a center. Becky believed that this was intentional. John enjoyed certain centers, and by not marking them, he could return to his favorites before going to others. She observed that he erased his mark on the computer center so he could play a reading game again. His folder was often found lying around the room after center time. Becky's notes show that John's accountability did not improve.

When Becky talks about her study participants, John stands out as the student who showed the most annoyance with the old way of doing centers. Whenever he was called to work with Becky or the aide, he balked, saying "I worked with you yesterday" or "Awww, I don't want to go there today!" Even though John's final interview did not substantiate a positive change in enthusiasm and motivation, Becky's data showed otherwise. She noted that he was the first student to ask to share his work with others and appeared confident and proud to do so. In contrast to his usual defiant behavior, Becky shared, "He even crawled upon my lap to share his books with me; this is a major indicator of his excitement as he is a child who often physically pulls away from others when being shown affection."

Rachel

Rachel, the youngest of three children and daughter of a fellow teacher, was used to getting her share of attention at home. Although she was normally a cheerful child, she had moments of stubbornness as most

kindergarten children do, which limited her learning and participation.

Prior to the study, Rachel's literacy performance assured Becky that she was making average progress. Collected data identified areas still needing improvement. She tended to omit ending sounds when breaking words apart or writing simple consonant-vowel-consonant words. When writing plural words, she would omit the last consonant before the s. She also showed difficulty in identifying the medial sounds and the number of sounds in a word. The data also showed that Rachel enjoyed story writing and sharing her stories with her classmates. She demonstrated progress in making inferences, describing story structure, and summarizing. In order to determine what she learned by the end of the project, Rachel was shown 15 picture cards to name and write. She spelled the words with 60% accuracy and 87% of the medial sounds were correct. Becky determined that Rachel was making progress since many of the words missed included blends or digraphs that were new content.

Did Rachel become more accountable as a result of the new center format? Videotapes and observation notes show [that](#) she used her checklist to document center work appropriately. Rachel was productively involved on most occasions, but observation notes showed that on a few days she used center materials for actions having nothing to do with literacy, like a hiding game. Her written work samples showed [ed](#) that she was often careless or seemed to be rushed. Despite these occasional problems, Becky felt that Rachel did become more accountable, and given more time, would show more improvement.

When Rachel got the opportunity to self-select center work, she was more enthused and motivated. Interview notes indicate that she enjoyed the new center methods over the old methods because she "learned words and you play with us." Videotapes show her total immersion in literacy activities. Despite these data, Becky observed three sessions in the eight

week period in which her stubbornness overruled her progress and she pouted at her desk. Becky concluded that Rachel's overall experiences indicated that she was usually highly motivated and was often not ready to quit centers when time was over.

Mike

Mike was repeating kindergarten due to health issues. He appeared to enjoy school, and showed confidence even though school work was a challenge for him. No matter how difficult the task, Mike tackled it with effort. Despite his positive behavior, his thoughts wandered, so Becky made a point to keep his attention focused throughout the day. Mike also received extra support from the school resource teacher.

As the study progressed it was evident to Becky that Mike had a good understanding of beginning sounds, but had difficulty identifying ending sounds, and therefore rhyming words. His sight word recognition was also problematic. When attending a center in which he recorded himself reading, he looked at the pictures and made up his own story. Becky realized she would not have been able to determine Mike's weaknesses if she was using the old center format. In his culminating task, Mike was asked to identify sets of rhyming words. He completed the task with 70% accuracy, with mistakes made with words beginning with the same sound, like trip and trap.

Mike took the literacy center work very seriously. He moved from center to center with his folder in hand and studied his checklist daily to see what he needed to do. Once he selected a center, he set to work immediately. Although he enjoyed pairing with classmates to write and illustrate books, he thrived with the independence the centers gave him. There was no doubt in Becky's data that the new center format was beneficial to Mike's sense of pride and responsibility.

Mike was often seen demonstrating his motivation by smiling and pumping his fist

with a "Yes!" when he successfully completed a center task. Interviews revealed that he enjoyed "playing" in literacy centers, and "writing stuff" and reading books. Becky believed that "the self direction provided by this center format was instrumental in promoting positive self-worth in Mike and is credited with his great enthusiasm and motivation during literacy time."

Although Becky studied these three students intensely, she also looked at the class as a whole. She found that literacy time was one of the most engaging times of the day. Students were so busy and involved that there were fewer incidents of negative behavior. More students wanted to share their work with others. The biggest surprise came from students who were in a literacy pull-out program. These students also wanted to participate in the literacy centers. This prompted Becky and the pull-out teacher to revamp the schedule so this group of children could take part in centers once or twice a week.

What Did Becky Learn?

The biggest lesson Becky learned is that she doesn't always have to be in control. By providing choice and individual accountability options, she found that she could hand over control to kindergarteners and still have a very productive learning environment. Becky states, "I felt this method of learning not only gave students more power, it created a sense of self-confidence I had not expected." In fact, students like John and Mike thrived academically in this new environment. Individual accountability increased for Mike and Rachel, but was still a weak area for John. Given more time, Becky felt that he might also improve.

The new centers also provided a setting in which Becky's students could practice self-control over behavior. Students like John needed to be in control of their learning, and when they were, problem behavior diminished. Rachel's bouts of stubbornness still persisted on a less frequent basis, but prompting from Becky helped to keep her in check.

Becky assumed new teaching roles in the literacy center activities. She identified with many roles that a teacher assumes to support literacy learning: discussion leader, storyteller, examiner, instructional guide, informer, learning center monitor, and decision-maker (Saracho, 2002, p. 25). Since Becky was free to work with students, she found more opportunities to assess, modify instruction, remediate, and observe student interactions. Becky learned firsthand about authentic assessment as a preferred way to understand what children know and can do, as well as what they are ready to learn (Cress, 2004; Jacobs, 2004; West, 1998; Vukelich, 1997). Interactive exchanges between Becky and her students made her an active participant in the learning and assessment process (Martin, 1997). She felt these opportunities may have been the greatest contributors to her students' academic successes.

Becky also found that this new literacy center format provided a great way to individualize instruction. Students were able to work at their own pace on the same activities while she restructured activities on the spot to fit the needs of each child. Students were unaware of these modifications and she believed this helped build their self-confidence and motivation.

Finally, this project made Becky realize that "no matter the age of my students, I need to believe that the sky is the limit." She now realizes that her students are "capable of more than I sometimes give them credit." Their independence and high levels of enthusiasm have helped Becky realize that empowering students not only increases their learning but also boosts their motivation and self-esteem.

What Did I Learn?

As I prepared for the fall semester math methods class, Becky's findings kept creeping into my work. I learned that the assignment was worth keeping in the course, but I needed to make some changes in order for it to be effective. In past semesters, teacher candidates

went through the motions of finding three tasks related to the same topic, but didn't fully understand such things as what made one task more difficult than another; if the tasks were problem solving in nature, the underlying mathematical concepts of the tasks; and why centers help students learn. I collected data in the forms of teacher observations, post teaching reflections, scoring sheets, and a final survey.

To improve the assignment, I made the following changes. First, instead of each teacher candidate creating their own three-tiered center, I organized the class into grade level groups and further divided them into groups of three. Each group member developed one level for their group's center. This format proved to be more effective because group members could share ideas and I could more easily conference with 10 groups as opposed to 30 individuals.

Next, I improved my lessons on designing center activities. My goal was for teacher candidates to learn to adjust an activity to meet specific student needs. Previously, students rotated through six different geometry activities and identified the main concepts. This semester they revisited at least two of the activities to practice changing the content, process, and/or product to create each activity into a tiered center (Tomlinson, 2001). All graded assignments met the rubric requirement of being appropriate for various ability levels and illustrating progressive difficulty.

Third, during the weeks prior to the due date of the assignment, workshop time of 30 minutes was allotted at the end of our three-hour class periods. This allowed me to guide groups as they designed their centers. For example, one group was planning a center that consisted of addition fact practice; however, the assignment required that students should explore and solve problems, not just review or practice. After much discussion and researching the difference between basic fact practice and problem solving, the group redesigned their activities. In total, only one group (3 students) designed a

center that missed the problem-solving requirement as opposed to 6 to 8 of the teacher candidates in past semesters. Accurate mathematical content was also an issue [that was](#) resolved in the workshop format. All assignments met the rubric goal of mathematical content being accurate and illustrating that creators are knowledgeable about the topic.

Finally, more teacher candidates were able to test their level in a classroom. Each group of three was fortunate to have a teacher flexible enough to allow testing of the center activities.

Conclusion

Certain themes were common to both of our practices. First, Becky and I found that teachers need to be responsive to their students' needs. Becky's students needed choice and increased responsibility in order to improve their learning and develop self-confidence. Teacher candidates, on the other hand, needed more support and collaboration in order to better understand the advantages of learning centers and how to design them. They also became more confident in the areas of math content, problem solving, and the assignment in general.

Second, assessment to inform teaching is best accomplished when students are making choices and applying strategies (Hannon, 1997) and the teacher is observing and questioning. In the new center format, Becky had the opportunity to watch, question, and determine more accurately what her students understood. In my classroom, I was able to better determine what teacher candidates understood about tiered centers, and therefore, support their needs.

Finally, teachers of all levels can learn from each other. I helped Becky learn to study her practice through action research while she inspired me to question and make changes in my teaching practice.

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