



broken into groups and led through four stations that covered tiers 1, 2, 3, along with universal screening. The high school future teachers enjoyed the stations as each one incorporated a different activity that could be added to their toolbelt. Their evaluations revealed things like: “They were very in-depth with the explanation of the tiers and the universal screening” and “You guys will be amazing teachers someday! Keep inspiring!”

Peppered throughout the session were scheduled brain breaks, where both candidates and cadets participated in short, kinesthetic activities that were fun and promoted healthy behavior such as gentle tapping of the shoulders and forearms, getting in line by birthday, and competitive activities using body language. One cadet wrote, “I really like the brain breaks, kept us all energized. Having the brain breaks was a great idea.”

While this candidate-designed and executed RTI session was only three hours long, the cadets found much value in it as evidenced in their overwhelmingly positive evaluations. “Even better,” said candidate Kelsey Coleman, “I had several students approach me personally to thank me or tell me how much they enjoyed our presentation, which means we made a lasting impression and hopefully had a positive impact.”

When reflecting on their performance, many of the teacher candidates shared a renewed sense of enthusiasm for the profession based on the high schoolers’ passion. Celebrating their

success in the moment and for the future was important for candidates like Watson, who wrote, “I hope that the workshop provided clarity for the teacher cadets that wondered about the details of teaching to students’ needs, and that our passion and enthusiasm for teaching strengthened their desire to become future teachers.”

Several of the high school students shared the sentiment of being inspired by other future teachers who share the same passion. Others recognized that the information from the session would better equip them for the field and noted that they were looking forward to using what they learned in their own field placements within the PDS. Researchers have emphasized that successful implementation of RTI begins with more advanced preparation within general education teacher preparation programs (Brownell, Sindelar, Kiely, & Danielson, 2010). This approach to building RTI practices and skills across the university-school-candidate-cadet continuum provides a strengthened culture and commitment to the effective preparation of current and future educators across the PDS (NAPDS, 2008).

In the end, UHM candidate Brice Namnama, happily noted, “The school benefited because the cadets learned something new and they all left happy; and the community benefited because these cadets may one day be teachers who can use this process in their own classrooms.” This brought the cycle full-circle; that is, until next year.

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Action Research in a Professional Development School: A Pre-service teacher’s path to understanding

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Introduction

This article describes the process of action research and what pre-service teachers learned by utilizing this practice in a pre-K classroom under the supervision of university faculty and practicing teachers. By learning about action research within the professional development school setting, the pre-service teachers were able to utilize this theoretical model to reflect on their behaviors and experiences in the classroom, intentionally make instructional decisions, and improve their practice. This action research was part of an institutional summer research grant.

The two NAPDS “essentials” that influenced this work are #2: A school-university culture committed to the preparation of future educators that embraces their active engagement in the school community; and #4: A shared commitment

to innovative and reflective practice by all participants.

Pre-service Teacher Background

Carole Ann

Since starting my time at Florida Southern, I had been in six clinical experiences. During each experience, I gained confidence, knowledge, and important skills needed of a teacher. I was also able to see many different classroom management styles, which taught me how to be successful in the classroom. Working with cooperating teachers gave me several mentors and connections with educators. I gained supportive advice from my cooperating teachers, as well as learned the type of teacher I hope to be. Conducting research with Dr. Diane LaFrance allowed me to continue learning and provided me with the chance to put my knowledge to practice in a clinical setting. Studying action research gave me the tools I need to be a teacher leader and learn how to conduct educational research effectively. I believe this experience made me a better-equipped and well-rounded pre-service teacher and future educator. Through this experience, I learned how to be an

educational researcher. This will be especially useful as I look for jobs in the future as it sets me apart from my peers. I plan to continue action research when I have my own classroom and I believe this experience was a great place to start.

Emily

Over the last two and a half years at Florida Southern, I have been in three clinical experiences and am in my fourth this semester. From each clinical I gained invaluable experience in the classroom, confidence as a teacher, and many skills. Being exposed to so many different classrooms and cooperating teachers has shown me what I need in order to be a successful educator. I made connections with many educators, and received wonderful advice that has helped me reflect upon the type of teacher I would like to be. Conducting research with Dr. Diane LaFrance gave me the opportunity to grow as a pre-service teacher. By studying action research, I gained valuable tools and knowledge on how to effectively conduct action research. This would make me better equipped and prepared as a pre-service teacher. I also gained the skill and



experience of sorting and coding data, which is extremely useful for an educational researcher. I hope to continue learning more about action research while in my own classroom and this research experience provided a wonderful foundation for me to build upon.

PDS Context

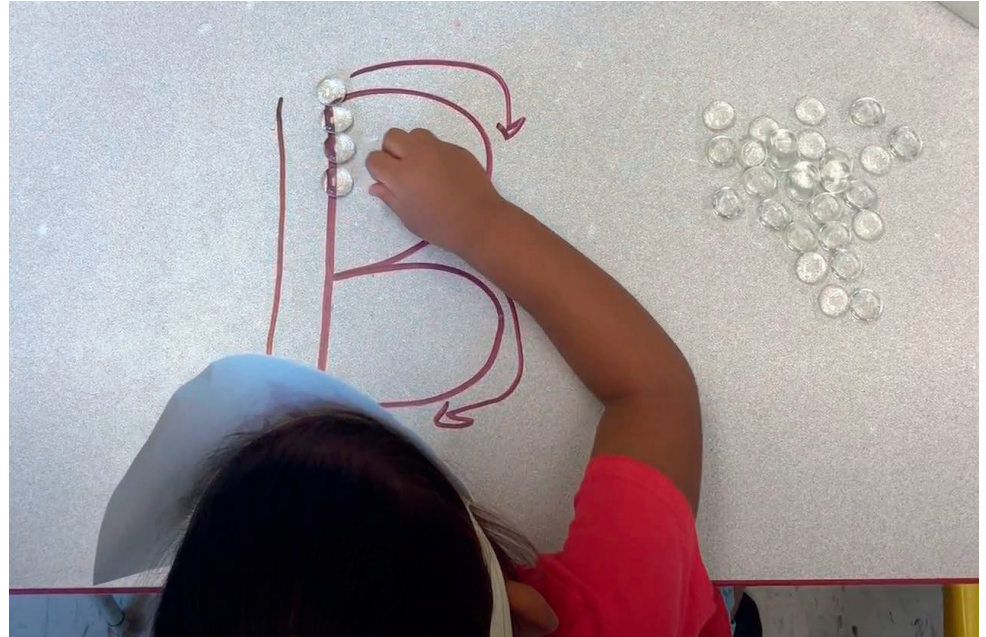
The beginning partnership between the professional development school and a small, rural, religiously affiliated private college allowed for this educational opportunity to occur. The partnership between the college and the lab school began the semester before this research began. The professional development school serves not only the community but also helps prepare future educators. The lab school has a shared commitment to innovative and reflective practices and works with the university not only during the academic year but also during the summer. This study took place in the summer program that served forty-one students. Collaboration occurred between two full-time teachers, two full-time college faculty members, and two pre-service teachers.

The study included two female, pre-service teachers that were enrolled in an elementary education program in a small private college in Central Florida. The two pre-service teachers completed their junior year of a four-year program. During this study, the two pre-service teachers worked for six weeks at the school's Early Learning Lab that is a professional development school. During this time, the pre-service teachers learned about action research and worked with students on letter recognition.

Action Research Process

pre-service teachers can engage in action research, which is a disciplined process of inquiry, to improve as teachers and understand their professional practice. While Lewin (1946) is often credited for conceptualizing action research, other researchers such as Kemmis, McTaggart, and Nixon (2014) have sought to refine the process. The spiral of action research that Kemmis, McTaggart, and Nixon (2014) introduced includes developing a plan, implementing the plan (act), systematically observing the results, and reflecting on the results. The process of going through these steps is cyclical. Once the last step is reached, the process starts again. The following sections discuss each stage of the process of action research as described by Putman and Rock (2018) and our experiences utilizing the process. Often, the steps of this process were integrated with multiple stages occurring concurrently. For example, implementing the plan (act) and systematically observing results occurred at the same time. This can be seen in our description of each of the stages.

The first stage of the action research process is the planning stage. During this stage, it is the researcher's responsibility to gather data concerning an issue he or she wishes to solve and devise a flexible method of resolving the issue. A



crucial aspect of action research is the ability to adapt the plan and process as needed, therefore allowing the researcher the ability to adapt to any unforeseen challenges or circumstances, and it ensures that all data gathered is accurate (Putnam & Rock, 2018).

Once we began our work in the PDS Learning Lab, we turned our focus to reading based on the cooperating teacher's request. To collect data on the students' current status, we administered a pretest on the recognition of letters since we were working with three and four-year-olds. After interpreting the data from the pretest and samples of student work, we concluded letter recognition was an area of weakness. We then met with our teacher in the classroom to design an instructional plan that we could act upon and take an inventory of the resources at our disposal. While reflecting on our past coursework, researching best practice strategies, and also meeting with our professor, we decided to implement small group instruction using a variety of multisensory activities. We found group planning worked better for us than independent planning, and the faculty and classroom teacher support during this step was extremely beneficial. Once the planning stage was complete, we moved on to the second stage of action research.

The second stage of action research is to act. The acting stage is described as a time to reflect and contemplate on how the plan will be carried out. It is not enough to merely act on a problem without first creating a method of solving the problem. It is during this stage that the planned resolution of the identified problem is enacted. The idea of acting may seem easier than it is. Ferrell et al. (2014) suggest that the plan may take time before it is effective. This means that the action should not be rushed, but given the proper time to work.

After looking at the data, we decided to work with the students who knew many of the letters first. We began by pulling four students at a time. Emily and I considered many different activities and decided to work on a few multisensory activities. Some of the multisensory activities we utilized was having them write the letters in the sky with their finger, manipulate playdough to create a letter, and arrange pebbles to outline a letter. We hoped that using different methods would benefit the students. As a formative assessment, we had the students match letters that were written on a paper fish to a letter shark on the wall. We recorded the correct and incorrect responses and compared those results to the first pre-assessment. By doing this, we realized very quickly that the time of day that we worked with the students was important because if other students were watching a video, they would be distracted by the video. As a result, we changed the times that we would pull the students for this intervention. This reflection and ongoing review of the acting stage is one example of how the stages of action research occur concurrently.

After a plan of action is enacted, the next step is to observe the changes taking place and observing how the stakeholders respond to the action. While observing, data is gathered, and the effects of the action are observed and analyzed. Putman and Rock (2018) state that both the intended and unintended effects should be observed and analyzed. In addition, the plan of action and the action itself should be altered when necessary.

An added aspect of observing the effects of the plan is to analyze data impartially without jumping to conclusions or changing the plan immaturity (Ferrell et al., 2014). Observations and analyses should be completed objectively, meaning according to what is there and not what the researcher wants to be present. Only after the



results are properly analyzed and reflected upon can the plan be altered or the action improved upon.

After reviewing the data and adjusting the instructional time, we still found our initial plan of small group instruction was not beneficial to these children. Therefore, we began conducting one on one teaching, which was more effective for keeping each child's attention on task. We also found that we had to adjust our instruction many times during this process. One example of this was when we began working, we started with all the letters and realized this was overwhelming to the students, so going forward we decided to work on two letters per week. That adjusting of instruction seemed to have a significant impact on student achievement. This analysis of achievement occurred during the final stage of the action research process.

The fourth and final stage of action research is to reflect on what has been accomplished. Putnam and Rock (2018) define this aspect of action research as the phase which analyzes recorded observations. Analyzing includes both reflecting at the end of a project as well as reflecting on observations throughout the project to determine what may need to be changed (Putnam & Rock, 2018, Roessingh & Bence, 2017). This is consistent with the original proposal by Lewin (1946) that includes reflection as a part of planning, acting, and observing, as well as its own stage because it acts as a form of formative assessment to inform the next stages of the process and plan.

During the final stage of the action research process, Emily and I reviewed the effects of the interventions to determine if improvement had occurred. We found the data provided evidence of student success for children that consistently attended the lab. We concluded that inconsistently attending school had two effects. The academic effect was that children who did not attend routinely seemed to forget what we were focusing on from one session to the next. This limited the students' ability to benefit from instruction at the same rate as students that attended frequently. Second, we concluded that there was a relational component that was influenced by attending less often. The more the students worked with us, the more comfortable they felt. This general observation occurred during instruction. The students who attended routinely seemed more willing to talk, smiled often, and appeared to trust

us as teachers. This trust helped create a rapport between us as the teacher and the student.

Having reviewed the steps of action research from the perspective of Carole Ann and Emily, we now discuss the findings of this study from the point of view of the college faculty.

Collaboration

Since action research can be challenging for pre-service and novice teachers, collaboration is important (Jaipal & Figg, 2011). Teachers often collaborate with other research facilitators to develop further their own practices (Hardy, Rönnerman, & Edwards-Groves, 2017). Given that the students were just learning about action research and were utilizing it in the classroom for the first time, the college faculty, practicing teachers, and pre-service teachers routinely met. In these meetings, Carole Ann and Emily were able to identify resources that were available to them during the planning phase, clarify their understanding of the action research process, and receive guidance as they worked with the pre-K children. This collaboration was an important part of the pre-service teachers' development.

Student Teacher Reflection

To learn more about the experiences of the pre-service teachers and what they learned, the supervising faculty interviewed them using a semi-structured interview protocol aligned with the four action research steps. Three themes emerged from an analysis of the data; planning, pre-service teacher outcomes, and reflection. Planning included three categories, including background knowledge, resources, and assessment. The "pre-service teacher outcomes" included the categories; pre-service teacher learning and perception of the experience. The reflection theme included the categories of reflection in action, reflection on action, and reflection on student behaviors and challenges.

Planning

One of the primary observations of the pre-service teachers was that their background knowledge played a key component in the planning process. Both discussed their coursework, their faculty supervisor, the cooperating teachers, and professors they worked with as playing a key role in deciding the strategies they would implement for instruction.

Additionally, the resources that were available to them were an important part of the planning

process. For example, Carole Ann noted, "the head of the program let us know what materials she had for the program..... we then went online to get some ideas and strategies". Emily discussed, "we built on what we learned from our methods courses.... we also reached out to our professors."

Finally, assessment played an important role in the planning process. The pre-service teachers used a pre-assessment to identify letters that the students were struggling with and developed instructional strategies for helping students learn those letters. These strategies included multisensory and engaged learning techniques. Carole Ann noted, "We worked with a lot of multisensory activities as well as trying to incorporate as many different methods as possible." For example, students used play-doh to create letters, sky-writing letters, and placing pebbles on letters.

Pre-service Teacher Outcomes

The pre-service teacher outcome theme included a discussion of their learning and their perception of the experience of conducting action research within the professional development school. While teaching at the partner school and utilizing the action research framework, the pre-service teachers noted that action research was an ongoing process. They further discussed the importance of collaboration with each other alongside experienced teachers and faculty as key components to constructing a successful plan. Additionally, they noted despite having a good plan, there was plenty of room for observing what was occurring with their instruction and adapting based on the specific context and needs of the students in real-time. Asking "why?" was identified as a critical component of this logical action research process; plan, act, observe, and reflect. Rather than following the action research process in a linear fashion where planning, acting, observing, and reflecting were occurring independently, the students noted that these steps were occurring concurrently during instruction. pre-service teachers learned that they could take an initial plan, act on it, observe during instruction, reflect on the success of the instruction, and modify the plan in real-time to achieve positive results. Carole Ann suggested, "I really like action research now that I understand it." Emily discussed, "Action research was a lot more in-depth than I had expected."

Their overall perception of the experience was positive. The pre-service teachers concluded

“Learning about this process in an authentic environment while collaborating with practicing teachers and college faculty helped promote this learning.”



that being able to do the work of teachers using the action research framework provided a level of authenticity, which improved the learning experience. Emily noted, "I feel like this is what real teachers do."

Reflection

The theme of reflection included reflection in action, reflection on action, and reflection on student behaviors and challenges. Reflection in action included discussions of the thoughts the pre-service teachers had during their instruction. This reflection in action included observing the students learning and modifying instruction after assessment and also changing up instruction while teaching. While adjusting their instruction, the teachers both recognized their lack of experience as a factor that limited their ability to identify potential pitfalls in their plan. They also recognized that teaching was an ongoing process that aligned well with the action research framework.

While reflecting-on-action, the pre-service teachers discussed multisensory activities that they utilized. They stated the importance of one-on-one teaching and having early interventions within the first week of teaching based on students' ability to identify letters and sounds.

The final reflection centered on the students that they taught. They recognized that there were a variety of challenges that they needed to overcome, including the time of the day that they worked with students, the importance of student-teacher relationships, students being overwhelmed with too many letters at once, and the negative impact when instructional momentum was lost. Students quickly forgot information over time when gaps occurred between instructional days due to a variety of factors. For example,

Carole Ann stated, "We realized very quickly that the time of day that we worked with students was important because a lot of the times the other students would be watching a video. So our student would be distracted by the video". The pre-service teachers also realized that working with all the letters at once was "overwhelming for the student." It was through reflecting on each day's work that led to these conclusions.

Conclusion

Action research can be a time-consuming endeavor. However, the researchers conclude that action research with pre-service teachers at a professional development school leads to a more reflective practitioner. Both Carole Ann and Emily noted that this was a cyclical process that never really concludes. Through constant reflection, their teaching is always changing, hence leading to individual growth. Learning about this process in an authentic environment while collaborating with practicing teachers and college faculty helped promote this learning.

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