

Preservice Teacher Action Research Reports Demonstrate Impact on Pupil Learning

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Abstract

The public school classroom has always provided a “complex ecology” for study; even more so when a preservice teacher is introduced into the setting and asked to study their own teaching. Our research questions asked what (a) qualitative evidence and (b) quantitative evidence of student learning can be found in action research reports, and (c) how these reports help our own efforts as teacher educators to develop an “inquiry as stance” orientation in teacher candidates. Our findings were based on 85 action research reports collected in 2008. We found that teacher candidate assertions of student learning were not adequately grounded in qualitative data. Quantitative evidence supported their assertions that content knowledge was impacted. In terms of improvements in our teacher education practices, qualitative findings need to be grounded in the qualitative data, and pupil learning needs to include more than quantitative evidence and use more consistent measures over time. We discuss how we are using what we have learned to inform our practice as teacher educators.

Objectives or purposes

How does the teacher education program you are affiliated with demonstrate its impact on pupil learning? THAT is the BIG question. The public school classroom has always provided a “complex ecology” for study; even more so when a preservice teacher is introduced into the setting. This paper describes our efforts to utilize action research reports, a program requirement for our preservice teachers, to demonstrate teacher candidates’ impact on their pupils during student teaching. Our objectives include examining the impact our preservice teachers have on their pupils, and developing an innovative means of demonstrating such impact with implications for other teacher education programs in which preservice teachers complete action research projects. Along the way, we have learned much to inform how we teach our preservice teachers to study their practice and report their findings.

Perspective and Connections to Existing Literature

We are teacher educators continually engaged in action research examining and seeking to improve our practice as teacher educators (e.g., Hayes, Smith, Yendol-Hoppey, & Curtis, 2009; Shambaugh, Webb-Dempsey, & Curtis, 2008). We explicitly adopt and seek to foster an understanding of “inquiry as stance” in ourselves and our preservice teachers. “Inquiry as stance” is a grounded theory of action that positions the

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role of practitioners and practitioner knowledge as central to the goal of transforming teaching, learning, leading, and schooling” (Cochran-Smith & Lytle, 2009, p. 119). Teacher research, also called practitioner research, teacher action research, teacher inquiry, or practitioner inquiry, is a process that can help cultivate “inquiry as stance” as reflection becomes a vehicle to improve educators’ practice and pupil learning. Engaging in the process of teacher research moves educators beyond informal reflection to intentional study whereby questions and problems identified through reflection are studied and made public (Dana & Yendol-Hoppey, 2009).

To develop a more concrete understanding of both the processes that generate intentional reflection and the products of reflection, preservice teachers in our program engage in teacher research targeted at developing “inquiry as stance” (Cochran-Smith & Lytle, 2009). Our perspective provides a foundation for a broad program of collaborative research that is situated within a professional development school (PDS) network and a five-year integrated dual degree teacher education program model. Teitel (2003) identified four goals for such school-university partnerships: (a) improvement of student learning, (b) preparation of educators, (c) professional development of educators, and (d) research and inquiry into improving practice. This proposal is one facet of our larger program of research, which (a) looks for impact of action research on student learning and (b) achieves a culture of teacher inquiry by all participants in teacher education. This study is one step toward the goal of understanding how what we do as teacher educators impacts all our students....both pre-service teacher candidates and public school pupils.

Zeichner and Conklin’s (2005) review of evidence related to the impact of teacher education programs revealed that existing literature focused on comparing teacher education program models (e.g., 4-year versus 5-year), and how those models impact teacher recruitment, retention, and quality. Pupil learning is an indicator of teacher quality, arguably the most critical indicator. However, Zeichner and Conklin noted that “Only four studies reviewed in this chapter attempted to examine the links between preservice teacher preparation and student learning” (p. 702). Furthermore,

The few studies in our data set that examined the impact of teacher education or its components on student learning used gains in standardized test scores as the measure of learning. The use of pupil growth in standardized test scores as the only measure of learning is very limited because these tests only illuminate limited aspects of learning (p.703).

Our purpose was to develop a means of demonstrating pupil learning that occurs while our preservice teachers are student teaching. Standardized test scores would not serve this purpose as the grain size is too large and students are taught by cooperating teachers for much of the time between administrations of standardized tests. Instead, we sought an information source specific to the classroom and time period during which student teaching occurred.

In our program, teacher candidates are gradually exposed to action research over a three year period. They develop research questions and frame a proposal during the second year, collecting and analyzing data the third year. This process culminates in an action research report documenting their inquiry focus, implementation of study, and findings. With approximately 100 program graduates each year, these reports over ten

years constitute a rich source of data regarding student teachers' impact on pupil learning. We pursued the following research questions:

1. What *qualitative* evidence of preservice teachers' impact on pupil learning can be found in action research reports?
2. What *quantitative* evidence of preservice teachers' impact on pupil learning can be found in action research reports?
3. How can action research reports inform our practice as teacher educators seeking to develop "inquiry as stance" in our preservice teachers?

Program Description

The Benedum Collaborative is a school-university partnership that supports the delivery of our five-year teacher education program. All candidates in the program are placed in one of the Professional Development Schools (PDS) in the Collaborative network for each of their clinical experiences. Candidates participate in six increasingly intensive clinical experiences across the final three years of the program. The action research sequence is the Masters-level research competency requirement for the program and spans five semesters before culminating in the earning of credit during the final semester of the program. Candidates are introduced to the action research sequence at the end of year 3 in the program and then, after a series of preparatory seminars and guided project development activities, students submit their proposals for their action research projects at the end of year 4. These proposals include a detailed rationale for the project and description of the teaching and research activities, a school permission letter, a work plan, and an agreement form with both PDS and university faculty mentor signatures. Action research projects are conducted during the fall semester of year 5 during the full-time teaching internship with dissemination of action research results occurring via a final paper and presentations at their PDS and a conference during students' last semester. The final reports, which serve as the data source for this study, extend the proposal document with a description of the "action" taken by candidates as they implemented their projects, action taken in their teaching and the procedures for their research activities, including displays and discussion of the results of their projects.

The action research sequence is supervised by a team of Action Research Co-coordinators, university faculty who offer the seminars during years 4 and 5 on topic selection, research techniques, project design issues, and dissemination guidelines. Action Research Co-coordinators also offer professional development for PDS and university faculty who mentor candidates' projects and support the action research process in their schools and on our campus. The development and improvement of the action research process and mentoring support have been informed by ongoing reflection on the nature of candidates' progress and projects, which can be viewed as action research *on* action research (Hayes, Smith, Yendol-Hoppey, & Curtis, 2009; Shambaugh, Webb-Dempsey, & Curtis, 2008).

Data Source and Method

Our data source consisted of 85 action research reports submitted in 2008. Figure 1 and Table 1, respectively, provide an overview and sampling of the topics preservice

teachers chose as a focus of their action research. A mixed methods design with simultaneous triangulation was utilized for complementarity, expansion, and development (Green, Caracelli, & Graham, 1989; Morse, 1991; Steckler, McLeroy, Goodman, Bird & McCormick, 1992). As depicted in Figure 2, we focused qualitative and quantitative analyses on research questions 1 and 2, respectively; integrating those analyses for interpretation and directing an overall synthetic analysis toward research question 3.

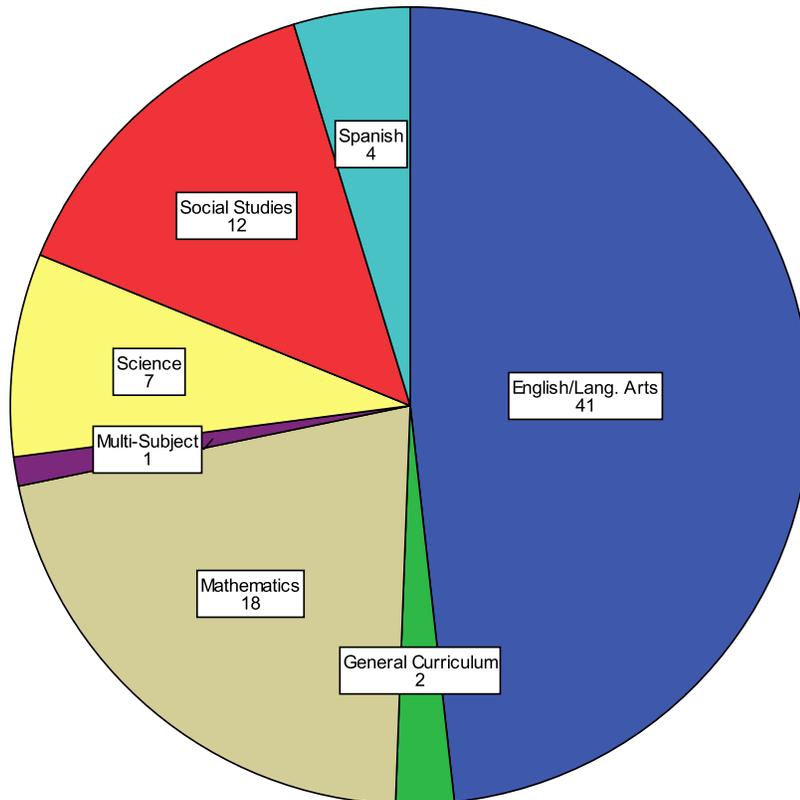


Figure 1. Number of action research projects (out of 85) addressing various content areas.

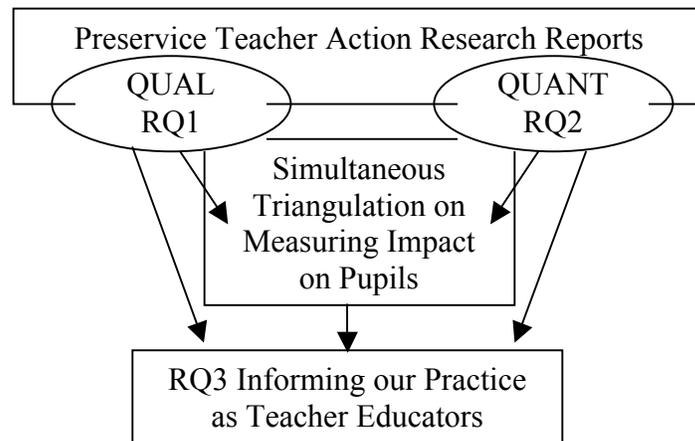


Figure 2. Simultaneous triangulation design for complementarity and expansion.

Table 1

Sampling of preservice teachers' teaching strategies from action research reports.

Preservice teacher	Teaching strategy label	Brief teaching strategy description	Grade	Content Area
<i>W. J.</i>	<i>"Manipulative based activities"</i>	Students conceptualize and apply patterns while touching and feeling objects (e.g., tiles, cubes, buttons).	K	Mathematics
<i>O. M.</i>	<i>"Hands-on instruction"</i>	Students make and manipulate objects and learn through arts.	2	Social Science
<i>H. E.</i>	<i>"Instruction with more visual aids"</i>	Student learning facilitated with visual aids (e.g., pictures, videos, objects)	6	Science
<i>K. R.</i>	<i>"Integrated literacy instruction"</i>	Students connect the classroom to home experience when studying English literature.	11	English/Lang. Arts

Initial qualitative analysis. We selected a subset of five action research reports to utilize for initial qualitative analyses. Final action research reports were texts constructed for the purpose of relating preservice teachers' experiences related to conducting research and how they made sense of their research findings, as well as their concomitant construction of identities as teachers who engage in practitioner inquiry. Because their narratives were created to communicate with particular audiences (e.g., action research faculty, public school faculty and administrators, their peers), we were interested in the events and data they selected, organized, and evaluated as meaningful for themselves and their audience (Reissman, 2008). Our preservice teachers used student journals, short answer surveys, and teacher researcher journals as their qualitative data sources to complement their quantitative data.

Initial quantitative analysis. All 85 action research reports were analyzed quantitatively, extracting pre-instruction and post-instruction descriptive statistics (mean, standard deviation, N) for content knowledge and affective measures wherever reported. We utilized the sign test to focus on whether positive or negative differences appeared, because these scores differed across action research reports on multiple dimensions (e.g., different content areas, different measures).

Thus, quantitative data from tests, quizzes, and forced-choice surveys measured impact on pupils. Narrative analysis, specifically thematic analysis, analyzed how preservice teachers made use of their qualitative data to address their research questions. The thematic analysis enabled us to make sense of the *content* of the action research reports and how the preservice teachers *understood* what happened and with what results. Following the initial qualitative and quantitative analyses described here, we pursued an

emergent analysis path following up on those action research reports that did not report positive impacts in terms of pupil knowledge gains.

Findings and Discussion

RQ1 – Initial qualitative evidence of pupil learning. Preservice teachers asked questions suited to qualitative inquiry, and collected similar types of qualitative data: open-ended surveys, pupil journals, and teacher researcher journals. However, there was little discussion of “analyzing” qualitative data. Even when assertions were made and conclusions reached based on qualitative data, few data excerpts illustrated those assertions. They did not adequately ground their assertions in their data. Typical comments included the following statements:

“Reading students’ journals allowed us to gain insight into their understandings, their abilities to make connections between the literature and fraction concepts, and their enjoyment of specific concepts being addressed. We read and reflected on these journals to determine changes in student motivation and enjoyment throughout the study. Enhancing this data, the researcher journals gave us an additional source to analyze the impact of our instruction. These journals supported us in reflecting on our teaching practices and decisions while guiding us in developing lessons to meet the needs of our unique students. Like the student journals, our researcher journals allowed us to observe students’ progress over the course of our study. Noting instances of other impacts on student performance, such as absences, gave us a clearer understanding of our quantitative data.”

“After analyzing the target students’ journals, it was clear that they could demonstrate the steps to solve a specific problem, but they could not explain the steps they took to solve it.”

Preservice teachers sometimes described their perspectives as to whether they impacted pupil learning, but rarely provided qualitative data supporting their perspectives. Typical comments included the following statements:

“Students’ attitudes and motivations increased over the course of our study.”

“Ultimately, my action research revealed the importance of reviewing concepts. Fluency achievement for sixth grade students improved as a result of the use of a graphic organizer during math instruction combined with repeated practice of single digit multiplication facts.”

Thus, we found qualitative evidence that these preservice teachers *believed* they impacted pupil learning, but were not able to *ground* their beliefs in their qualitative data, at least in the five reports we sampled.

RQ2 – Initial quantitative evidence of pupil learning. There were 79 (out of the 85) action research reports in which mean content knowledge or achievement was given in the text pre- and post-instruction. Post-instruction means were higher in 62 cases, and lower in 17 cases, with no ties. The sign test revealed this distribution to be significantly different than expected by chance with a large effect size, $Z=-4.95$, $p<.05$, $r=.56$, supporting our assertion that preservice teachers positively impacted their pupils’ content knowledge. Similar descriptive statistics for affective measures (e.g., motivation,

attitudes) were provided in only 14 cases: 10 positive differences, 2 negative, and two ties. While a sign test utilizing the binomial distribution indicated this to be significant ($p < .05$), the proportion of reports including affective quantitative data was deemed insufficient.

Following our initial analyses, we were concerned with issues of scale due to different measures being used across action research reports and therefore developed standardized knowledge change scores (Z -scores) for those action research reports that provided either standard deviations or individual scores from which standard deviations could be computed. Fifty-five action research reports were included in this analysis of standardized knowledge change scores. Figure 3 depicts the distribution of Z -scores where the circles indicate those preservice teachers who reported either negative or very large positive impact. There were 46 positive differences, 9 negative differences, and no ties. A sign test on this subset of the data revealed a similar trend to that found with all 79 reports, $Z = -4.85$, $p < .05$, $r = .65$. We were particularly concerned by those 9 negative differences where preservice teachers appeared to have a negative impact on their pupils. Standardized knowledge change scores were used to order action research reports from most negative to most positive change. We then selected the 5 reports with the most negative change scores to enter into additional qualitative analyses (Z -scores ranged from -1.17 to -1.12). We sought to better understand these unusual *quantitative knowledge change* scores through more detailed qualitative analysis.

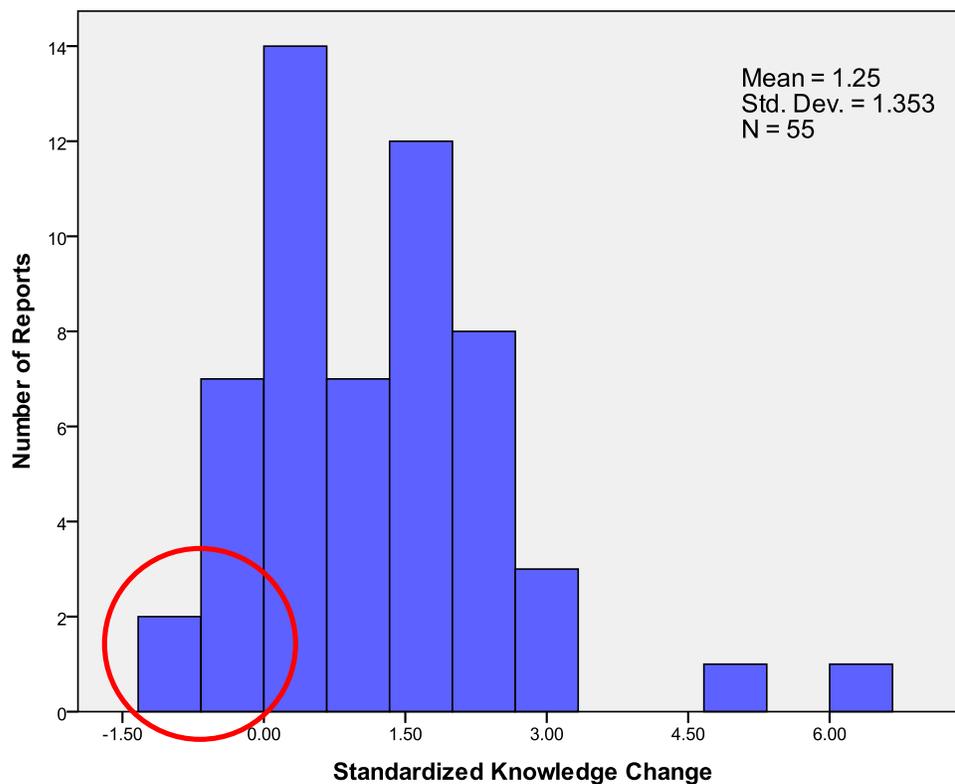


Figure 3. Histogram of Z -score knowledge change.

Qualitative analysis to understand apparently negative quantitative changes. The 5 reports with the most negative quantitative standardized knowledge change scores were analyzed iteratively to develop coding categories. It was decided to utilize the following categories: *Objective, Data Sources, Reasons for poor quantitative knowledge change,* and *Other evidence of pupil and/or teacher learning.* Excerpts exemplifying each of these categories were culled from the reports and used to create a summary sheet for each report. These summary sheets provided contextual detail and exemplary excerpts relative to common themes we discovered across reports. All 5 summary sheets are included in the Appendix.

Looking across these reports, we recognized some of our most talented preservice teachers had designed and conducted these studies and so were particularly concerned that they were reporting what appeared to be negative impacts on pupil learning when we focused on quantitative measures of knowledge change. Delving deeper, we came to understand this apparent negative impact to be an artifact of the quantitative lens being employed, an issue of focus. Across these reports, two broad themes emerged.

First, our novice action researchers used measures of student knowledge that changed across time. Completely consistent with standard classroom practice, the quiz or test used prior to their instructional efforts was not the same as that used during and/or after their instructional intervention. In fact, the content covered typically was not the same either. A common explanation for declines in performance was increasing complexity in content. This makes interpretation of their data difficult if traditional research design concepts are applied. However, it is worth noting that the large majority of the entire group of preservice teachers did evidence positive knowledge gains... a fact now appearing even more impressive.

Second, knowledge gains appeared to be the most difficult to document. Every one of these novice action researchers who reported negative impacts when focused narrowly on quantitative knowledge measures, also reported substantial positive impacts of their action research on their students in other areas (e.g., time on-task, self-monitoring, participation in discussions) and/or on themselves as developing teachers (e.g., individualizing instruction, effective collaboration, behavior management). This is further evidence of the inadequacy of standardized tests, and indeed quantitative measures in general, to capture the full spectrum of the impact acquiring “inquiry as stance” may have on preservice educators (Zeichner & Conklin, 2005).

RQ3 – Informing our practice as teacher educators. Synthesizing across qualitative and quantitative findings, three implications for what we do as teacher educators emerged. These implications are quite specific to our context and may have only limited transferability for teacher educators working with preservice teachers in different contexts. However, in striving to support preservice teachers in developing “inquiry as stance”, one may find implications.

First, we need to figure out how to teach the importance of and ability to ground qualitative findings in qualitative data more effectively. Our preservice teachers often tell us what they have learned through their qualitative data sources, but rarely show us how they learned it. If our preservice teachers are unable to provide evidence that supports their qualitative findings, we cannot be sure of the legitimacy of those findings. If teacher

candidates are going to become effective communicators of qualitative action research findings, they must learn to both show and tell. An added benefit of such show and tell will be their developing richer deeper qualitative evidence of the effectiveness of their teacher education program as evidenced through their impact on their pupils.

Second, we need to emphasize the breadth of the range of possible impacts of action research beyond quantitative knowledge change. We already place great emphasis on diversity of data sources: quantitative and qualitative; student learning, affect, and behavior; and teacher learning to modify instruction and development of “inquiry as stance.” Our current analyses support the importance of these points of emphasis and renew our motivation to continue to engage our preservice teachers on these points.

Third, we need to focus more on traditional research design issues, especially the idea of consistent measures across time. We recognize that the majority of data sources will not have this character due to the complex ecology of the classroom, and certainly are not advocating the use of traditional control groups. Indeed, traditional group comparison research designs are rarely applicable from a purely action research perspective aimed at informing a teacher in their specific context. However, if these action research reports are going to serve as a data source for the *program* and evidence of preservice teacher *quantitative* impact on pupils, then inclusion of additional elements of consistency will be necessary. For example, principles and designs from single case research may hold promise in addition to focusing on consistency of measures across time. As we engage in this discussion, it will be important to remember that these preservice teachers are learning how to teach while also learning to become action researchers. We have so far resisted incorporating too much from traditional research designs that might negatively impede these preservice teachers learning to teach, but this may well be a discussion that needs revisiting given the current educational climate and push for accountability at all levels.

Significance and Implications

The dearth of research on preservice teacher impact on pupil learning must be addressed and should not be limited to learning measured by standardized assessments. Using teacher candidate work products has potential as a way of addressing that gap in the literature. We are working toward developing a system to do just that using a culminating action research report. Our analyses so far demonstrate both qualitative and quantitative evidence of impact across diverse action research reports. However, we also raise concerns about relying on quantitative evidence as it currently exists in these reports, especially regarding those reports that appear to demonstrate negative impact on pupils’ knowledge change.

We suggest the following changes in action research to include (a) a summary sheet providing a sketch of the research design and descriptive statistics for appropriate groups, and (b) more explicit instruction on conducting qualitative analyses, clearly articulating how those analyses are done, and firmly grounding findings in data.

If our experiences are any guide for the work of others, we suggest the balance between developing “rigorous enough” research design and analysis skills on the one hand, and allowing preservice teachers the time and practice orientations necessary to

develop appropriate teaching skills in complex contexts on the other hand. To do this we suggest the following features be considered for an action research requirement:

- Provide past examples of individual PDS action research and illustrate uses of qualitative and quantitative data collection and analysis.
- Develop a strategic use of action research over time in individual schools.
- Create a searchable database to archive action research reports.
- Model “inquiry as stance” across all participants in a partnership model.

We see action research as one way of documenting the impact of preservice teachers on pupil learning, as well as infusing “inquiry as stance” in the public schools, particularly in a PDS. “The practitioner is simultaneously a researcher who is continuously engaged in inquiry with the ultimate purpose of enriching students’ learning and life chances” (Cochran-Smith & Lytle, 2009, pp. vii-ix). As we reflect on our teaching practices in light of information not adequately included in action research reports, we think there may be some “developmental” issues involved. Perhaps our students are more focused on their own practice, rather than on pupil learning. Possibly they do not realize the intricate connection between the two as of yet. This balance of concerns between accountability and pupil learning must be addressed within any action research requirement and is something we as teacher educators, as well as host teachers with whom our students are placed, must scaffold as we teach our students about inquiry.

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Report # 1 (Z=-1.17): 4th grade, Reading / Language Arts, “Post-its”

Objective

“The absolute goal of this project was to improve upon my students’ abilities to construct meaning from text focusing upon three aspects of comprehension. The areas of comprehension that were developed by means of this study were: developing questioning strategies prior to, during, and after reading; making connections (text-to-text, text-to-self, text-to-world), and determining importance in text. In order to reinforce these three comprehension aspects, I utilized post-its as a means of providing a tangible reminder, during the reading of text, to flag various sections, sentences, captions, or pictures that produced a question, a connection, and an area of importance/ excitement for each student during the reading.”

Data Sources

“...quantitative data collection was taken from a small group of seven children. This data was gathered via student scores on reading assessments, which were taken at the completion each story and their accompanying skill unit that centered upon a specific skill, weekly vocabulary, and comprehension questions pertaining to stories taken from the basal reader.”

Reasons for poor quantitative knowledge change

“...due to the time allotted to conduct my research, I must rule my present findings inconclusive within this classroom setting.”

“Throughout the course of my study, two of the seven students within my small group were absent for a prolonged period of time, one due to illness and the other withdrew for a short time. Due to the prolonged absences of these two students as well as the intermittent absences of the others, consequently, may have had a negative impact upon the results of study.”

Other evidence of pupil and/or teacher learning

“After analyzing the qualitative data that was collected, via checklist and teacher observation, I was able to determine an increase of student participation in both initiating and contributing to meaningful discussion based upon the material being presented. The use of post-its not only provided various prompts, i.e. What questions arose during the reading? Did you find yourself connecting to the story?, etc., but it also encouraged those students who are somewhat timid about speaking in class, to have voice and allow their ideas to be heard.”

“Via use of a teacher observation checklist, I was able to continually monitor each of my students’ progress as he/she gained educational awareness of how they learned best and became aware of how to best understand the information embedded within the text. By means of implementing a simple observation checklist, I was able to continually update each child’s current status as they became increasingly knowledgeable as to ways in which he/she learns best and monitor their educational successes accordingly.”

Report # 2 (Z=-.79): 8th grade, Math & Special Education, “Collaborative Teaching”

Objective

“...we chose to study how the effects of collaborative teaching, with a sufficient amount of preplanning, could increase motivation and understanding of math concepts for students with special needs. By combining our in-depth knowledge of content in mathematics and special education, we collaborated once a week to review math content, identify students’ weaknesses, preplan for the following week, and effectively integrate a lesson meeting the needs of all our learners.”

Data Sources

“By using test scores as a data source, it helped us answer our guiding question, “Will collaborative teaching in an eighth grade mathematics class increase students’ with learning disabilities overall test scores?” By having prior test scores we could compare the test scores during the project and yield a conclusion. We collected student work and observed their overall attitude during the sessions to help us answer our question; “Will collaborative teaching have a positive impact on motivation for students with learning disabilities in the regular education classroom?” Our preplanning lessons were a main data source in answering the question of how much preplanning would be necessary to see an improvement in performance. The final guiding question, “What strategies of collaboration will work better than others?” was answered through the use of reflection in a journal.”

Reasons for poor quantitative knowledge change

“A possible factor in the decrease in test scores may be due to the difficulty level of the work during the first 8 weeks of school compared to the difficulty level in the second 8 weeks. During our study, the content increasingly became more difficult and more complex.”

“After reflecting on certain lessons, we found that some co-teaching strategies such as parallel teaching did not have a positive impact on student learning. In this particular setting, students were easily distracted and found it hard to concentrate...”

Other evidence of pupil and/or teacher learning

“In the book, *Learning Mathematics in Elementary and Middle Schools*, the authors express how the most important influence on what mathematics students learn and how that knowledge is constructed is an enthusiastic, understanding, and knowledgeable teacher. At the beginning of the project, neither of us had an established foundation in co-planning or collaborative teaching.” [An example of how they developed such a foundation follows in the report, but is not included here]

“The students were unable to distinguish which teacher was the special education teacher and which teacher was the math teacher. We knew this because questions about content were directed to both teachers equally. This showed we were both comfortable in our roles while co-teaching and provided each other the essential information needed to effectively co-teach.”

Report # 3 (Z=-.42): 4th/5th Special Education Math, “Self-Monitoring”

Objective

“I was interested in investigating whether or not self-monitoring of behavior will have an effect on time on-task and academic grades. I decided to choose mathematics because this is the time when most students are in the [resource] room and they need help focusing on direct instruction as well as independent work.”

Data Sources

“Every day when the students entered the room, they were responsible for putting their name on their self-monitoring sheet. For the rest of the day, when the bell went off, they determined if they were on-task or off-task and made the appropriate check on their sheet. The bells went off at different intervals, because the tape was pre-recorded. This means the students had no idea when the bell was going to sound. I collected the daily self-monitoring sheets daily at the end of the day, and then made the bar graph for the weekly conference. The conferences were brief, but it served as a time where students could see their progress and their behavior. The conferences major findings and discussions were written in my research journal. . . In the journal I wrote about problems in the research, student reactions, conferences and notes about how the project was going. I used this journal as a reference to explain discrepancies in data, and student feelings as well as looking and recording math grades for the week.”

Reasons for poor quantitative knowledge change

“There are some weeks where on-task behaviors were high as were grades, but other weeks where there was no evidence that on-task behaviors affected grades in mathematics.”

Other evidence of pupil and/or teacher learning

“After implementing the project in week two, I saw an immediate increase in on-task behavior. The students were eager to begin and they knew I would be seeing their sheets everyday. They were already beginning to have more on-task marks than off-task marks. All the students were reminding me and asking me to turn the bells on at the start of each day. According to my journal entries, they took pride in making sure they were on-task, so they could mark a “yes” on their self-monitoring sheet. By week three, the students were independently completing their self-monitoring sheet and they continued to increase in on-task behavior. In the final two weeks, weeks four and five, the self-monitoring sheet became part of the daily routine and the all students were about 90% for on-task behaviors “

“The outcomes of this project were much more than I expected. I wanted my students to improve with on-task behaviors, but I never thought they would improve as much as they did. The classroom teacher, aide and students were amazed by the results. This study greatly affected the students’ on-task behavior and reduced the amount of off-task behaviors. The most important result of this study was that all students learned to control their behavior and reduced the amount off-task behaviors.”

Report # 4 (Z=-.26): 4th Grade, Reading / Language Arts, “Learning in Circles”

Objective

“This study was implemented to explore effective ways to manage guided reading groups. I wanted to assess the teaching strategy of using literature circles with the above-level readers and its effectiveness of providing learning enriched experiences for the readers while minimizing direct instructional time, allowing me the time I needed to meet daily with my below-level readers.”

Data Sources

“In order to document the effectiveness literature circles provided in the area of management, I used a tally chart. I simply gave each student a tally mark each time the student was off-task... To collect information concerning the effectiveness of the strategy in order to promote oral discussion of story elements among the students, I created a chart to record scores for responses--five points for each story element they discussed orally within the group. The story elements included in my chart were characters, problem, solution, setting, and main events... I used a similar chart to document the connections made by students during oral discussions—text-to-self and text-to-text. Five points were awarded for each connection they were able to provide... in their written work, I used the same created chart I used to assess the oral discussion.”

Reasons for poor quantitative knowledge change

“...these students struggled with engaging in oral discussions... and had a hard time expressing their understanding of the story verbally. Students also struggled with elaborating on each other’s ideas verbally. I believe this to have occurred due to their lack of experience in listening to another’s perspective, analyzing the thought, and adding additional comments.”

“Student written work did not consist of an increase of student references to the story elements. After reflecting on these findings, I believe this result was due to the fact that written samples were usually taken on Fridays, two days after the oral discussions of the story. Therefore, content of the story may not be fresh in the students’ minds.”

Other evidence of pupil and/or teacher learning

“...students in the literature circles exhibited few off task behaviors, thus the results illustrate literature circles being an effective behavior management strategy for managing guided reading groups with minimal teacher instruction for the above-level group. One student did however struggle with the extra freedom literature circles provided. This student would often make off-task comments during discussions seeking the attention of his peers. The peers ignored his comments, and often prompted to get back no tasks.”

“...I used the ongoing data analysis to guide modifications of the literature circles in areas of group management and tasks. I often simplified job assignments and raised discussion questions based on the previous group session. As for behavior modifications, I used my weekly analysis to be pro-active in eliminating behavior challenges... Other modifications included reviewing appropriate and inappropriate discussion responses.”

Report # 5 (Z=-.12): 8th Grade, Social Studies, “Concept Maps”

Objective

“Understanding the use of concept maps to increase concept retention in is the goal of this action research project... After the students are taught how to use concept maps based on the reading, they should be able to read on their own and pick out the information that will be helpful for them to understand and remember. This learning of concepts will hopefully increase student involvement in post-reading class discussions and student performance on tests.”

Data Sources

“The opinion surveys provided an index of how my students feel about reading social studies texts and other content area texts and whether or not they understand what they have read... The pre-tests measured student performance on the tests given before using concepts maps, and the post-tests will measure student comprehension of the text they read while using concept maps. Finally, my own research journal will allow me to record first-hand observations as to whether or not the students have a difficult time with the concept maps or if the concept maps have helped the students’ comprehension of the text after each lesson.”

Reasons for poor quantitative knowledge change

“There may be a number of reasons as to why I did not see a large change in the pre- and post- tests. For example, the material covered in the pre-tests might have been easier to understand than the post-tests.”

“When completing numerous concept maps in a six-week period of time, students became tired of sitting in class and reading silently while completing these maps.”

Other evidence of pupil and/or teacher learning

“Seventy-five percent of students felt that concept maps allowed them to read the text in a way in which they comprehended more information because they were forced to decide what information was relevant... Sixty percent of the students that I interviewed felt that the concept maps allowed them to do better on their quizzes because they were actually forced to read and comprehend the information in the text.

“My related research also stated that when using concept maps students were receptive to this new technique. I believe this was shown in my teaching because the students I interviewed mostly stated that using concept maps helped them to understand more clearly the information presented in the text. Also, looking at the results of my opinion survey, you can see that 67% students felt that using concept maps while reading Social Studies text improved their comprehension of the text. Overall, even though student performance on the pre- and post-tests had a very small [decrease], student attitude of concept maps and student opinion was very positive when using concept maps.”