Images in Action: Preservice Teachers' Action Researcher Images

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The purpose of this paper is to address the gap that exists in the knowledge base for understanding the repertoire of images that preservice teachers gain as they engage in action research. Data were collected using a variety of qualitative methods: journals, metaphors, narratives, action research reports, and focus group interviews. Data were thematically analyzed to identify recurrent images. Findings revealed two distinct images--images of an action research space and images of self-fulfillment that acted as guides through which participants made sense of their action research experiences. Implications include the need to provide insights into the purpose of action research as preservice teachers understand it; and to provide insights into the nature of preservice teachers as action researchers. Key Words: Action Research and Preservice Teacher Education

Introduction

In recent years, action research has become part of teacher education programs across teacher education programs in North America and is helping preservice teachers experience the concept of teacher-as-researcher before they step into their teaching careers. Yet, there has been very little research on preservice teachers' action research experiences. The purpose of this paper is to address the gap that exists in the knowledge base for understanding the repertoire of images that preservice teachers gain as they engage in action research. In this study, image is proposed as a construct to understand preservice teachers' particularistic knowledge of their action research experiences. Participants' images of their action research experiences were derived from the themes and patterns prevalent in participants' metaphors and accompanying narratives, and from other data (journals, action research reports, and focus group interviews) that were collected to provide a "rich picture" (Johnston, 1992, p. 124) of participants' action research experiences.

Literature Review

A growing body of scholarship has indicated the importance of action research as a component of preservice teacher education (Auger & Wideman, 2000; Chant, Heafner, & Bennett, 2004; Rock & Levin, 2002; Szabo, Scott, & Yellin, 2002). Within this body of scholarship, some studies claim that preservice teachers who engage in action research develop an educational appreciation system (Dinkelman, 1997; Ross, 1987; Woodlinger, 1996). Ross describes the appreciation system of practitioners as one that consists of

"their fundamental values and theories and their repertoire of examples, images, understandings and actions" (p. 135).

Recent research has provided some knowledge on the "range and variety of the repertoire" (Schön, 1983, p. 140) of understandings (Auger & Wideman, 2000; Chant et al., 2004; Gitlin, Barlow, Burbank, Kauchak, & Stevens, 1999; Rock & Levin, 2002; Szabo et al., 2002) and actions that preservice teachers gain as a result of their action research experience (Auger & Wideman; Duffield & Townsend, 1999; Rock & Levin).

Despite the growth of the knowledge base for the repertoire of understandings and actions respectively, very little is known about the contribution of action research to the repertoire of images that also make up preservice teachers' appreciation systems. What little is known about images can be gathered from the studies by Fueyo and Koorland (1997) and Fueyo and Neves (1995). These studies contend that participation in action research projects results in preservice teachers taking up images like inquiry-oriented observers, ethnographers, change agents (Fueyo & Neves) and problem-solvers (Fueyo & Koorland). Most of these images pertain to the four stages of the action research spiral: plan, act, observe, and reflect.

So far, the knowledge base for the repertoire of images only conveys preservice teachers' knowledge of techniques (Fueyo & Koorland, 1997; Fueyo & Neves, 1995) that they need to function within the four stages of the action research spiral but does not provide an insider's perspective into the images that evolve as preservice teachers are engaged in the action research process itself.

On the other hand, a number of studies indicate the importance of how images play a profound role in teaching, learning, and problem-solving (Bullough, 1991; Bullough & Stokes, 1994; Calderhead & Robson, 1991; Johnston, 1992; Russell & Johnston, 1988; Russell, Munby, Spafford, & Johnston, 1988; Zaltman & Zaltman, 2008). Calderhead and Robson (1991) state that "images, whether representation or reconstructions, provide us with an indicator of teachers' knowledge and enable us to examine the knowledge growth attributable to different training experiences and the relationship between knowledge and observed practice" (p. 3). In fact, Zaltman and Zaltman, state that metaphors can unravel the inherent images and the underlying interpretations, stories, choices and behaviors behind most decision-making processes.

Considering the importance of images with what little is known about the preservice teachers' repertoire of images, it is apparent that more research is needed to build up the knowledge base for the repertoire of images that evolve as preservice teachers engage in action research projects. But what is the significance of knowing about the repertoire of images that preservice teachers gain from taking part in action research? Literature cites a number of pertinent reasons for such a research endeavor. First, Cochran-Smith and Lytle (1999) point out that teacher research is moving away from the emphasis of just considering the teacher as knower and as an agent of change to that of how the teacher as a knower and as an agent of change defines and justifies appropriate "outcomes" (p. 22) of inquiry-based teacher education and professional development in light of the standards movement.

Second, Cochran-Smith and Lytle (1999) refer to the dissonance which results when teachers engage in teacher research and how this dissonance can be studied to understand the changing roles of teachers as teacher researchers and the effects of the constraints that challenge the teacher-as-researcher roles. In fact, Cochran-Smith and

Lytle (1999) point out that this dissonance provides avenues for teachers to learn about their own educational settings and seek solutions which then may inform both society and the political agenda. Thus, the identification of dissonance and the associated images that preservice teachers experience when they undertake action research may provide knowledge into the outcomes of their action research experience.

Third, building a knowledge base for the repertoire of images is pertinent for teacher education and teacher educators. Accounts of how preservice teachers reacted to action research assignments in one situation may help teacher educators to gain insights into action research agendas of their present and future students (Dinkelman, 1997). These accounts might further provide for an expanded dialogue between preservice teachers and teacher educators. In addition, the knowledge base can inform and motivate teacher educators and their preservice teachers during the plan, act, observe, and reflect stages of action research and help contribute to their appreciation system (Dinkelman; Ross, 1987; Woodlinger, 1996). In addition, Dinkelman states that despite all the research conducted on preservice teacher education programs, little has been learned about the impact of action research on shaping the professional view of preservice teachers trained in them.

Finally, an investigation into preservice teachers' repertoire of images may shed some light onto preservice teachers as "architects of study and generators of knowledge" (Cochran-Smith & Lytle, 1993, p. 2). By doing so, the images of preservice teachers engaged in "practitioner initiated inquiry" (Gitlin et al., 1999) may be deciphered, leading to further input into the knowledge base for the role of preservice teachers in the action research process. These images might reveal prospective teachers' voices and experiences, school-university collaboration, and scaffolded induction into the profession.

The purpose of this paper is to address the gap that exists in the knowledge base for understanding the repertoire of images that preservice teachers experience as they engage in action research. The following question, "What are the images that preservice teachers use to frame themselves as action researchers?" was the focus of the study.

Methodology

The research question "What are the images that preservice teachers use to frame themselves as action researchers?" prompted me that a qualitative approach to data collection was appropriate, especially with the emphasis on capturing participants' intentions as they engage in the implementation of their action research projects. The literature on using metaphors to unravel the inherent images and the underlying interpretations, stories, choices and behaviors behind participants' intentions (Bullough, 1991; Bullough & Stokes, 1994; Calderhead & Robson, 1991; Johnston, 1992; Russell & Johnston, 1988; Russell et al., 1988; Zaltman & Zaltman, 2008) provided a strong reason to use metaphors and narratives as a method to collect data.

Furthermore, the emphasis on looking for participants' intentions prompted me that a thematic analysis was applicable for the transformation of the collected data for this study. Thematic analysis focuses on identifiable themes and patterns of intentions and behaviors, and the adoption of this analysis approach cohered with the aim of the study,

the need to understand the repertoire of images that preservice teachers gain as they engage in action research (Aronson, 1994; Boyatzis, 1998).

Context and participants

The study was conducted in a teacher education program in a university in northeast United States. The program offers a five-year combined bachelor's and master's program and prepares candidates to teach grades one through six. A cohort of 55 elementary education majors enrolled in the first part of the two-part action research course were given an overview of the study during the fall semester and were asked to volunteer to take part in the study. The 55 elementary preservice teacher candidates who participated in the study were given information sheets detailing the study, consent forms, and the option to withdraw from participation in the study at any time without any disadvantage to themselves of any kind. Participants chose their own pseudonyms and this pseudonym was used in all data collection methods.

At the time of the study, participants were enrolled in the student teaching component of their professional education program and were concurrently implementing their action research projects in their classrooms. Demographically, the participants were predominantly Caucasian, with two African American students and one Hispanic student. All the participants were female, ranging in age from 20- to 45-years-old.

As expressed before, the aim of this study was to capture my participants' images of their action research experiences and in accomplishing this aim, my role as qualitative researcher worked in unison with my role as course instructor. Prior to the start of the study and data collection, I informed my participants that researchers, so far, has been more interested in the range and variety of understandings and actions that preservice teachers develop as a result of their action research experiences and that there has been very little research on preservice teachers' images of action research experiences; images that provide insights into preservice teachers' problem-solving and decision-making processes during the implementation of their action research projects. Furthermore, I informed my participants that the nature of the data collected had no impact on their final grades and that the study was conducted to help me to improve the course structure/content for present and future students. By doing so, I made it clear to my participants my role as qualitative researcher was tuned to the aim of the study.

Instructional procedures

The action research course taken by participants in this study was a two- semester course conducted during the fifth year of the program. The first part was conducted in fall and participants met for two hours for 15 weeks. The curriculum for this course included five key units: introduction to action research (history, definition, characteristics and the action research spiral); teachers as researchers; planning guides for conducting action research (identification of a question to be researched, formation of a plan of action, collection of data, analysis of data, reflection upon findings in relation to plan of action, and planning for new action plans); ethical issues in teacher research; and, designing an action research proposal. At the end of the first part of the course, participants provided a written action research proposal that included the topic, research question, intervention

strategies, review of literature, data collection strategies, analysis strategies, and references. The proposal described the participants' plan of action that was to be implemented in the spring semester.

The second part of the action research course was a hybrid course (Villanti, 2003): an integration of face-to-face classroom sessions and on-line sessions. Participants and the course instructor met on the 1st, 2nd, 6th, 11th, 13th, and 15th weeks of the course for face-to-face sessions while the rest of the course sessions were on-line. At the end of the course, participants turned in their final action research report for grading. This final action research report detailed participants' individual implementation of their action research projects; contained evaluations of the success and/or shortcomings of their plan of action; and provided implications for future implementation of their modified plan of action.

Data collection

During the four months of the study, five data sources were collected: electronic journal postings; participants' metaphors for their action research experience; narratives; final action research reports; and transcripts of focus group meetings. Participants' electronic journal postings were collected on a weekly basis and these postings were gathered throughout the four months of the study. Towards the end of the third month of data collection participants were asked to submit written descriptions, in terms of metaphors, about their action research experience. These metaphors were used as a data source and were also used to generate the narratives. Data from focus group meetings were collected at different points (6th, 11th, 13th and 15th weeks) of the four month study when the participants and instructor met for face-to-face classroom sessions. Students' final action research reports were collected at the end of the spring semester.

Data Analysis

The electronic journal postings (individual and group discussion board) were analyzed for thematic content and followed the analysis procedures as described by Bogdan and Biklen (1998). After initial readings of the electronic journal postings, a number of preliminary codes were developed. The preliminary codes were then applied to the other data (metaphors for the action research experiences, narratives and focus group interview transcripts, and final action research papers) to assess themes and for a saturation of common themes. Common themes from participants' action research experiences were then triangulated with themes across the data sources (multimethods) and through member checking. The last focus group interview (15th week of the course) with participants enabled me to present the major themes of the study to the participants for support, acknowledgement, inquiry, and further insights from the participants' perspectives. For example, initial themes like *comfortable working area, the happy space, and my researcher space* were then grouped into a common theme, *friendly action research spaces,* representative of participants' teacher-as-researcher experiences and insights. In addition, I shared the major themes with the participants and gathered further insights and feedback to come up with illustrative images that capture the themes in the data. Next I will share these illustrative images in the findings.

Findings

Findings revealed two distinct images that encapsulated participants' action research experiences in this study. First, participants' images of themselves as action researchers were constructed within the boundaries of space. Second, participants' images of themselves as action researchers were self-fulfilling. In the following descriptions of the findings, participants' names have been replaced by pseudonyms.

Images of an action research space

Data revealed that when participants implemented their action research during student teaching they defined a space within which to carry out their action research projects. The image of space had two attributes: the friendly action research space and the unfriendly action research space. It must be mentioned that some of the participants held the image of a friendly action research space and while others viewed their action research spaces as unfriendly. The following quote taken from a posting on the group electronic discussion board supports and captures the illustrative image of an unfriendly action research space:

> When doing action research it would probably be easier to do the research in your own classroom as opposed to someone else's classroom. If you do action research while you are student teaching your cooperating teacher has to be willing to let you do the research the way you want to do it. Some cooperating teachers may want you to do it differently or may not want you to do the research at all. (Amy)

The group of participants who had images of unfriendly action research spaces felt that as action researchers the space in which they implemented their action research had to be their own classroom rather than the cooperating teachers' classrooms. In this case, these participants were afraid that their cooperating teachers might assume that participants were trying to take over their classrooms. One participant, Karen, expressed this assumption as "I did not want to step on their toes" (Individual Electronic Journal Posting). In addition, these participants also mentioned that the space in which they were to implement their action research projects were marked by "rules and procedures" and "management systems and techniques" established by their cooperating teachers, thus difficult for them to circumvent. Finally, participants expressed that the implementation of their action projects might disrupt the cooperating teachers' space and they were constantly worried that the cooperating teacher might not like them because of their intrusion into the cooperating teachers' space. One participant, Lisa, expressed this perspective in an electronic journal posting that supports and captures the illustrative image of an unfriendly action research space:

> I feel that if I were to conduct research in my own classroom , where the students know me and my teaching style well, I don't have to constantly worry about what my cooperating teacher is thinking about me and my project. (Individual Electronic Journal Posting)

In contrast to the images of action research spaces being limiting and debilitating, another group of participants viewed their action research spaces as being friendly towards their action research endeavors. The following quote provides a glimpse into this friendly action research space:

> My cooperating teacher was incredibly supportive of my topic. My teacher gave me as much time as I needed to implement my action research project and she even took it one step further by offering to implement the project together. (Melissa, Final Action Research Report)

The action research space was more friendly and supportive for participants' action research endeavors when the cooperating teacher was keen to take part in the participants' action research project; was familiar with action research process; and was keen to subscribe to action research as a form of teacher research in their classroom. When the action research space was friendly, participants' perspectives revealed that they were having more interactions with the cooperating teachers and students in the classrooms and this contributed to their growth as a teacher. The following excerpt from an electronic journal posting illustrates the image of a friendly action research space:

> Your cooperating teacher has the experience that you lack as a student teacher… My cooperating teacher actually helped me to revise my action research project when my ideas were not appropriate for our classroom… she provided background knowledge of our children that helped me to understand our classroom environment and the implementation of our project… the support she offered was extremely valuable. (Kristen, Individual Electronic Journal Posting)

In summary, participants in this study perceived a space within which to implement their action research project. Their definition of this action research space as friendly or unfriendly was a key descriptor of their action research experiences.

Images of self-fulfillment

Data showed that participants' action research experiences carried images of self-fulfillment. Participants in this study had predetermined images of how their action research projects were going to progress prior to implementation of their action research projects. For example, Michelle expressed the following in her narrative that exemplified the importance of the predetermined images: "You have a vision in your mind of what you will look like or feel like before engaging in the action research project." Two predetermined images of action research stood out in the data. One of the predetermined images for action research carried a business enterprise image, while the other carried the image of growth or a growth phase.

Participants who approached their action research projects, during student teaching, with the predetermined image of action research as a business enterprise carried

out their action research project as completing a task that was geared towards just getting a grade. The quote below captures the image of action research as a business enterprise:

> Well, finally finished all this action research business. It was the countless hours spent collecting the data and then analyzing, it was tedious! Now that I've seen the final product, I can see why it is beneficial to teachers and others within the field of education. However, now was not the time to undertake such a project. I feel I would have learned more if I didn't have so many other requirements to deal with at the same time. Research should be something you want to do and enjoy doing, not something you dread having to complete. There were many days that I would have much rather been doing something else - like teaching the class - rather than sitting in the back of the room with the group and watching and taking notes. All in all, it was a good experience to have. (Janet, Group Electronic Discussion Posting)

For this group of participants the action research experience was seen as a product to be made or finished. They were not relating the experiences to their growth as teachers and saw it as an extrinsic activity that benefited only "teachers and others within the field of education." The emphasis on self in relation to the action research experience was not seen by these participants as crucial to their growth as teachers and teacher researchers. On the other hand participants who approached their action research projects, during student teaching, with the predetermined image of action research being an image of growth or a growth phase carried out their action research project as interactive experiences. These interactive experiences were shared between their students and the cooperating teachers. The following quotes express this image:

> I was changing and developing as a teacher and teacher-as-researcher. My journey as an action researcher was one of transformation and evolution. My journey began in a primitive initial state (the caterpillar) and it continued to metamorphose or change into a beautiful butterfly. This change to the butterfly took place over several weeks. These weeks accounted for my action research journey. The point at which the journey changed to a butterfly was when all my data came together and conclusions were able to be drawn. (Emily, Individual Electronic Journal Posting)

> I don't think action research was a waste of time because I learned from it. I feel that I grew as a teacher from this experience. Action research forces interaction with students and your cooperating teacher. It was valuable to me as I got to learn from experiences and thoughts of my cooperating teacher who is more experienced and who has already learned to deal with problems that face us in the classroom. (Marie, Focus Group Interview)

For this group of participants the action research experience was seen as a process of transformation and change into a teacher as a result of the interactions they shared with their students and cooperating teachers.

In summary, data revealed that participants had preconceived images of the implementation of their action research projects. These preconceived images, together with the images of the action research space (friendly or unfriendly), were the dominant images of participants' action research experiences in this study.

Discussion

The purpose of this study was to derive the images (representations or reconstructions) that guide preservice teachers as they implement their action research projects during student teaching. Data from this study showed that the image of space and the image of self-fulfillment were prevalent within participants' action research experiences. The presence of these two images provides an indicator of preservice teachers' knowledge and the knowledge growth attributable to the action research experiences (Calderhead & Robson, 1991; Johnston, 1992). The participants' images for their action research experiences cohered with the images of inquiry-oriented observers, ethnographers, change agents and problems solvers as mentioned in the literature (Fueyo & Koorland, 1997; Fueyo & Neves, 1995). But the findings from this study show that the aforementioned images were accompanied by images of action research spaces. The nature of the action research space, friendly or unfriendly, is a key descriptor of whether participants hold onto the image of an inquiry-oriented practitioner (Cochran-Smith & Lytle, 1993, 1999; Gitlin et al., 1999) or conceptualize the image of action research as a task/big project (Auger & Wideman, 2000).

Although participants did not make any explicit reference to standards (Cochran-Smith & Lytle, 1999), it seems that when participants perceived action research as a business enterprise, their outcomes for taking part in practitioner initiated inquiry was geared towards only finishing the action research project: task oriented. On the other hand when participants' perceived action research as a growth phase, their outcomes for taking part in practitioner initiated inquiry was geared towards interactions with their students and their cooperating teachers, interactions that lead to their growth as teachers and teacher-researchers. Thus, the ways by which preservice teachers perceive the action research process determines the outcome of inquiry-based teacher education (Cochran-Smith & Lytle, 1999).

Cochran-Smith and Lytle (1999) also claimed that teachers-as-researchers might experience dissonance when they carry out research within the constraints of the hierarchical arrangements of schools and universities. A key dissonance experienced by participants in this study was the image of the unfriendly action research space. The hegemony expressed by the cooperating teachers through the rigidity of their classroom rules and regulation, and management techniques were key contributors to the dissonance felt by participants and thus, to the approaches preservice teachers took towards their action research projects.

The presence of the two images (spaces and self-fulfillment) as indicators of preservice teachers' knowledge and knowledge growth attributable to the action research experiences might be the insights that can frame the dialogue between preservice teachers

and teacher educators (Dinkelman, 1997). In addition, preservice teachers' visions of how their action research is going to materialize in their student teaching classrooms and in their cooperating teachers' classrooms are topics that need to be covered by teacher educators.

On considering the perception of preservice teachers as architects and generators of knowledge from their own inquiries (Cochran-Smith & Lytle, 1993; Gitlin et al., 1999) with the findings of this study, teacher educators must consider their preservice teachers' images of the action research spaces and their predetermined images of action research. If these considerations are not taken, the generation of knowledge through an action research experience is going to be limited to knowledge of the dynamics needed to function within the four stages (plan, act, observe, and reflect) of the action research spiral rather than the knowledge needed to grow as a teacher and as a teacher-researcher. Moreover, this study has shown that the repertoire of images that make up the appreciation system of preservice teachers also consists of preservice teachers' images of the action research space and images of self-fulfillment. These two images are conducive to the progression of preservice teachers' implementation of their action research projects during student teaching. Teacher educators need to integrate and take into consideration preservice teachers images (as representations or reconstructions), and correlate them with their specific educational beliefs about teacher research and action research. More research is needed to understand the relationship between preservice teachers and their cooperating teachers during implementation of preservice teachers' action research. Also, research into the espoused beliefs about action research held by preservice teachers might further contribute to the knowledge base for understanding preservice teacher' action research experiences.

Implications

The findings of this study offer interesting landmarks for the integration of action research into preservice teacher education. First, for action research projects to be successful the role of cooperating teachers, and the relationship between preservice teachers and their cooperating teachers have to be seen as crucial components of preservice teachers' action research experiences. Second, the compatibility between cooperating teachers and their preservice teachers in terms of implementing joint action research projects must be assessed. Finally, teacher educators need to derive and discuss with their preservice teachers their predetermined images of action research; images that may influence preservice teachers' implementation of their action research projects.

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