



INTRODUCING PRE-SERVICE TEACHERS TO ACTION RESEARCH

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Introduction

Action research is used in many teacher education programs to promote reflection, inquiry, and a sense of efficacy in pre-service teachers. As teacher educators working with a cohort of thirty-two teachers in a nine-month program, we decided to incorporate action research into the Teacher Education Seminar, a foundational course addressing general principles of learning and teaching. Julian is an experienced university instructor who engaged in several action research projects as a classroom teacher. Dianne, a doctoral student working as a teaching assistant, is also very active in the action research community. Working together, we hoped to design an action research activity that would enrich the practicum teaching experiences of pre-service teachers. We worked with the educational psychology instructor, integrating our two courses to enhance meaningful connections between theory and practice, and to model interdisciplinary teaching. Our project was facilitated by the fact that our students spent fourteen pre-practicum days observing and assisting in the schools of their first practice teaching session. In many cases, something they observed became the issue that they addressed in their action research project.

Rationale and Baseline Data

Guiding our explorations was a shared belief in the power of education to enhance individual lives, allow the fulfillment of potential, and bring about positive social change. From this perspective, teachers are agents of empowerment; what they know and do is important. With this in mind, and as committed practitioner-researchers (Zeichner & Noffke, 2001), we sought to develop in our students an awareness of the complexity of classroom and school cultures, and to give them a tool – action research – to help them adapt their practice to the needs of students within their social contexts (Bullough & Gitlin, 1995).

In his first four years as a teacher educator, Julian had relied on engaging pre-service teacher in reflection to bridge the gap between theory and practice. However, reflecting on his own practice as a teacher educator, he wished to do more to explicitly promote ongoing inquiry and research into practice. Action research, with its emphasis on reflection and inquiry for the purpose of taking positive action, seemed to offer a way to narrow the theory-practice gap and provide a valuable link between pre-service and in-service teaching. Together, Julian and Dianne hoped that empowering pre-service teachers to become action researchers would improve their teaching practice and encourage them to be active in curriculum development, reflective practice and research into practice.

Theoretical Framework

Action research is generally defined as a form of educational research wherein a professional, actively involved in practice, engages in systematic, intentional inquiry into some aspect of that practice for the purpose of understanding and improvement (Cochran-Smith and Lytle, 1990; Kemmis and McTaggart, 1988; Sagor, 1992). In this inquiry, we elected to use the three-phased process of action research described by Bullough and Gitlin (1995, p. 181):

- **Phase One:** Identify and write up a concern or issue; collect baseline data. In light of the data, reconsider and reformulate the issue and write a question.
- **Phase Two:** Write and implement an action plan; gather data.
- **Phase Three:** Assess the plan in the light of the data analysis. Make recommendations for future study and practice.

We adopted Sagor's (1992) perspective, emphasizing that pre-service teachers initiate and direct their own action research project, with the end goal of improving their practice. The degree of individual autonomy offered by this model was consistent with our commitment to empowering pre-service teachers to apply these tools in their own future classrooms.

Developing and Implementing a Plan

After introducing pre-service teachers to the concept and principles of action research, we invited them to develop possible action research topics based on their pre-practicum classroom observation and/or their interests as aspiring teachers. Often, their observations during the fourteen pre-practicum days provided the baseline data in the action research project. We then read the research questions they submitted, gave feedback, and provided guidance if re-conceptualizing and rewriting was needed. The instructor of the educational psychology course asked students to research literature that was jointly pertinent to the educational psychology curriculum and to their action research project. By collecting, evaluating, and responding to their reviews of the literature, she helped them develop a rich theoretical background to support their project work.

Pre-service teachers formulated plans of action prior to the first practicum, then implemented their plans and collected data either during the practicum or during their other field experience days. As they moved into the active research phase, we monitored their work carefully, mentoring closely if this appeared advisable. Upon returning to the university, pre-service teachers wrote final reports assessing their plan, analyzing their data, making recommendations for future action or study, and reflecting on their experience. Each person shared his or her project in a class presentation. Instructors assessed the reports and reflections according to the assignment rubric distributed at the beginning of the project.

Our work with our pre-service teachers complete, we then returned to the data to assess the effectiveness of our own action research project on the implementation of an interdisciplinary action research model with pre-service teachers. On the basis of our findings, we critiqued our practice and developed ideas for further improvements.

Examples of Action Research Projects

Michelle: Authentic Learning in the College-Level English Classroom

Question:

Can I make a vocabulary unit more accessible to disengaged Grade 12 College-Level English students by providing them with authentic learning experiences?

Baseline Data:

During her observation days, Michelle noted most students seemed unenthusiastic about learning and many skipped classes regularly. Also, the vast majority was identified as having either learning or behavioural exceptionalities. Hearing students grumble about the relevance of English, she sought to make her lessons authentic and meaningful by connecting learning to their daily lives and future careers.

Plan and Implementation:

- To better understand her students' thinking, as well as diagnose their writing skills, Michelle asked students to write a simple response to the questions: Where do you see yourself in one year? Five years? Ten years?
- As most identified themselves as entering the workforce within a couple of years, Michelle decided to approach teaching vocabulary by focusing on different types of language: business, legal, figurative and common usage, including slang and profanity.
- Michelle began by deconstructing the meaning of legal language in a sample employment contract. Students worked in groups, contributing according to individual strengths.
- In a second lesson on business language, students used dictionaries to find the meaning of newspaper words they did not understand; they then used the words to play Balderdash. Students also compared the language in Help Wanted ads to legal language.
- The third lesson focused on figurative language, slang and profanity, referring to a sonnet and a poem. The class discussed the origin, use and appropriateness of profanity.

Post Intervention Data:

Students wrote cover letters, selecting appropriate language, in response to a help wanted ad. When compared to the initial writing sample, letters showed a marked improvement; most were typed or neatly handwritten, and displayed increased complexity and variety of sentence structure and vocabulary. Students were engaged in the material; they stopped questioning the relevance of studying English. At week's end, they looked with interest at college education brochures, and attended college information sessions.

Conclusions:

Michelle realized the importance of authentic learning experiences as she observed students who previously were not engaged by English develop critical learning skills (analysis of contract), and apply knowledge while having fun (creating dictionary definitions).

Nadine: Multiple Intelligence and Role-Play in History Class

Question:

Will incorporating multiple intelligences (kinesthetic, interpersonal, intrapersonal, linguistic) through role-play engage students more fully in a grade 10 Canadian History class? In particular, will it tap into other intelligences?

Rationale:

Nadine built on theorists who suggest Howard Gardner's multiple intelligences (1983) should be equally valued in the classroom. She also adopted the strategies for successful role-play described by K. N. McDaniel (2000): background knowledge; perspective; situation; and management. Nadine herself believes active learning facilitates "best" learning.

Baseline Data:

Nadine observed students' body language and responses during Grade 10 Canadian history classes directed to traditional linguistic and logical-mathematical intelligences. She also interviewed a sample of students, asking them to choose and explain an adjective to describe history class; secondly, they were asked to describe their favourite course and explain why they found it enjoyable.

Plan and Implementation:

Students were divided into groups to debate, in role, the conscription crisis of 1917. One group represented Members of Parliament in favour of conscription, while the other group represented MP's who were opposed. To prepare for role-play, students were directed to gather textbook information, develop a character, and write a paragraph defending their character's position, while considering culture, occupation, religion, and the roles of other family members.

Post Intervention Data:

Nadine observed high levels of student engagement with subject matter. Interviews revealed students gained insight into the lives of Canadians in 1917. Students enjoyed role-playing. They cited the heightened use of interpersonal, intrapersonal and bodily/kinesthetic intelligences as reasons for their enhanced interest and engagement.

Conclusions:

Nadine concluded that activities such as role-playing are important as they widen the range of intelligences employed by students. In addition, she found that actively seeking student feedback created a more positive environment. Nadine developed an understanding of using role-play to facilitate identity development amongst students. Perhaps most importantly, she learned "that relatively small modifications in teaching strategies increase the number of active learners in the classroom."

Data Analysis of Students' Proposals and Projects

We were impressed and intrigued by the diversity and the scope of the research questions our students formulated. Those who grasped the concept of action research from the start – about two-thirds of the class – generally found it easy to identify an issue they wished to pursue as a project. Overwhelmingly, 66% of our students' projects focused on their perception of students' needs. For instance, six proposals approached learning from a multiple intelligences perspective, thus respectfully making space for the diverse ways in which people learn and express their learning. A number of proposals recognized that children bring their emotions, as well as their minds, to school. This included those proposals directed at promoting equity and reducing stress and anxiety. Other projects (19%), in which the teacher worked to improve a professional skill, were usually directed at improving the learning environment, which ultimately benefits students. For instance, one person improved her class management

skills; thus, the classroom context became a better place in which to learn. A third category of projects (15%), based on pre-service teachers' experiences as students were often quite poignant, as they addressed issues that had found challenging.

The focus and direction of the projects enhanced the professional development of these future teachers, and enabled them to reach out to children in significant ways. As well, the projects were very revealing of values and beliefs; as instructors, we gained information about the people in our classroom that we might not have gathered without the action research project, and this enabled us to be more responsive to our students. When Dianne first read and commented on the students' proposals, she became enthused by *their* enthusiasm and eagerly anticipated reading the whole story. When the final reports were handed in, they lived up to the expectations set by the proposals.

Approximately one-sixth of the class had trouble reconciling action research with pre-existing conceptions of research. Another one-sixth struggled to find topics. However, ultimately, twenty-three of our thirty-two pre-service teachers successfully applied the action research process in a way we classified as "excellent". Two students exceeded expectations by presenting their action research projects at an educational research conference.

While there were implementation issues that arose from the design of our two-tier action research project and the nature of our teacher education program, most pre-service teachers in SP1 were intrigued by action research. For example, Leslie wrote, "I was surprised and gratified by how well my students responded to my efforts, leading to stronger lessons and therefore more learning." The positive feedback contained in most of the reflections suggests that pre-service teachers can benefit by engaging in action research, and self-directed action research in schools can improve practice by raising awareness, changing conceptions of teaching, and deepening reflection.

Conclusion

In retrospect, we think the achievements of our pre-service teachers indicate that this action research project was generally successful. To begin with, a majority of our students report that they did connect theory to practice through action research. Significantly, many said they found the experience worthwhile and plan to engage in further action research as teachers. The reaction of our students speaks to the power of action research as a methodology that teaches new teachers how to become researchers of their own practice and, as a result, enables them to better address the needs of the students they encounter in their classrooms.

As teacher-educators, we are encouraged by our students' responses. We believe we have made a significant contribution to the empowerment of pre-service teachers in our class, and we hope this sense of efficacy will extend to their future classroom practice.

Educational Significance and Implications for the Field

For ourselves, as instructors, this action research project was significant because it provided us with evidence that action research can empower pre-service teachers by giving them the tools to become effective practitioner-researchers. Also, we enhanced our students' action research experience and bridged the theory-practice divide when we integrated the theory-based educational psychology course with the practice-based TES. Simultaneously, by modeling collaborative action research, we grew professionally ourselves.

When considering the significance to pre-service education, our analysis of the final reports indicates that pre-service teachers are capable of selecting and carrying out projects beneficial to their students. Furthermore, they indicate the enjoyment of choosing an issue of significance to themselves, and the satisfaction derived from the implementation and analysis of their project, is such that they intend to actively research their practice as in-service

teachers. They also indicated that experiencing a collaborative, interdisciplinary model of teaching provided them with a powerful model for developing their practice with future peers and students. In all, pre-service teachers felt empowered as active agents in their own professional development.

Although we, as instructors, are aware of ways in which we will seek to improve this facet of our pre-service teachers' program, it appears the interdisciplinary action research project was a winning growth experience for our students and ourselves.

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Biographical Note:

Dianne Stevens has eighteen years experience teaching in Ontario secondary and elementary schools. Her research interests include teachers' professional development, student engagement, and action research. Dianne is currently a doctoral student at the Ontario Institute of Studies for Education, University of Toronto. Her thesis, entitled "Of Bricks and Butterflies: Four Teachers' Quest for Professional Growth", is a multiple intelligence presentation, and includes prose, poetry and visual arts. Dianne can be reached at thestvns@aol.com.

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