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Utilizing Action Research During Student Teaching: Should Every Teacher Preparation Program Be Doing This?

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Abstract

Action research has been shown to be effective in a variety of ways for teachers in the classroom setting. While the focus of the action research project has primarily been at the graduate level or tailored to the needs of working professionals, we propose that it is possible to do much more for the student teacher as he or she completes the program requirements through the student teaching experience. Through the incorporation of training in methods of data collection and analysis, student teachers will stand to gain a much greater degree of insight into areas of their professional pedagogical disposition through active reflection. This will develop a reflective habit of mind that is crucial for teachers to be effective in their classrooms and adaptive to the changing needs of their students, and allow for a greater degree of professional self-efficacy and satisfaction on the part of the teachers themselves.

Introduction

As faculty members at a school of education, our individual and program goals for the students we serve revolve around the synthesis of a potential dichotomy: first, to educate our students about the challenges they will encounter when they enter the teaching field, and second, to foster beliefs within themselves that they are not bound to narrow pedagogical approaches. They should approach the art of teaching in ways that lend themselves to thoughtful pragmatic experimentation. *However*, increasing instructional effectiveness does not occur in a vacuum. Teachers must implement new approaches to instruction when an approach is not as effective as it could be and then collect the necessary data to evaluate these practices. This involves cultivating the habit and practice of critical reflection. In this article, we will make the case that student teaching should involve action research, which is a type of critical reflection, as a component of the school experience. While we recognize that not all schools practice this approach and that they have their own unique methods in assessment and evaluation, we will argue that the addition of action research as a means to cultivate critical reflection better prepares future teachers. With the attrition rate in teaching between 40% and 50% during the first 5 years (Ingersoll, 2012), it is a professional responsibility to equip teacher graduates with the resources they need to obtain greater job satisfaction, which will result in less attrition. The necessity of critical reflection in teaching situations also requires that teachers have, as a habit, the ability to gather relevant data to better understand the nuanced differences for practices that work versus those that do not and the reasons for each, for this is how knowledge and experience through the art of teaching are created (McNiff & Whitehead, 2010).

For the purpose of this analysis, we utilize Crotty's (1998) definition of critical reflection as being comprised of the synthesis of theory and practice, or *praxis*. Citing Freire (1993), Crotty reminds us that critical reflection involves unifying the dichotomy between objectivity and subjectivity. Interpreting theory and practice as two separate stages or events, rather than an event where the two continuously occur together, robs critical reflection and awareness of momentum. The false trap that new teachers may fall into is thinking that theory directly informs practice, or vice versa, in a positive way every time. Otherwise, theory has no value. As Dewey (1938) argues through experiential learning, any body of knowledge must have proactive and practical application. Part of this application requires a systematic approach to the situation at hand, be it teaching or otherwise, to evaluate and improve what comes after.

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The focus of this article will be the student teaching component of teacher education programs and the addition of an action research component to that same experience. We will address and refine the concept of reflection as it impacts teaching practice and its improvement. We shall also describe what we see as a useful compliment of training for student teachers so that the data they gather, while pragmatic and contextual in nature, can be of use to them. Gaining more knowledge will not involve a range of added responsibilities, but instead, a modification of the same responsibilities. This focus will also address improving the student teaching experience and present a proposal that will benefit professionals entering the field, in terms of the experience and knowledge gained, and the evidence they are able to present in the portfolios that show this same competence. Although not all schools of education utilize teaching portfolios as a requirement for program completion, there are many that do. In this context, portfolios occupy high levels of importance with regard to completing the program and gaining employment. Adding a component that shows the systematic approach taken to gain the insights that allow student teachers to improve professionally provides strong evidence of a commitment to professional growth.

When we hear student teachers or 1st year teachers sometimes refer to the fact that they "survived or are surviving their student teaching," it greatly troubles us. We are left wondering what might have been better learned and internalized if they had been looking at the same situation from the perspective of a teacher-researcher. Informing this perspective would involve the formal gathering of data for analysis so that a particular area of their practice could be better scrutinized over a longer period.

Reflection is of vital importance to the teaching process (Buehl & Fives, 2009; Canning, 1991). At the preservice level, this habit of mind is cultivated through the coursework at the university and through conversations held with cooperating teachers in whose classrooms the preservice teachers are placed. It becomes vitally important as the teacher or student teacher encounters students in classes who have backgrounds different from that of the teacher, be that difference grounded in language, religion, culture, socioeconomic level, or any other aspect (Atiyat, 2006; Li, 2007).

Cultivating the habit of critical reflection has the function in itself of grooming the preservice teacher to think in a forward manner and gaining from hindsight. As teacher identity is something that develops over time and is not arbitrarily built by the student teacher, this habit of mind becomes even more important. Through the synthesis of theory and practice, a teacher develops the necessary praxis (Crotty, 1998). Tabacbinick and Zeichner (1984) find that teacher identity occurs more in a latent fashion as teachers are exposed to and interact with students in their classroom, other teachers, and the overall culture of the school. The relevant component here, again, is the habit of mind teachers take with them into a career that, by nature, means their personal perspective will

change over time. On the scale of the everyday classroom setting, changes occur as any school day proceeds, and small adjustments are commonplace from one class period or subject to the next. The difference in what we propose is taking steps to make critical reflection active and ranging across the spectrum of responsibility that student teachers have through their placements in schools. The process of critical reflection we refer to here is that of active reflection. We define active reflection as being quite different from passive reflection since it implies that a teacher will not necessarily wait until the end of a particular unit to adjust his or her instruction just because the curriculum design of that unit does not lend itself to flexibility. They will also not just simply think about the reactions of their students to particular blocks of instruction based on students' body language, facial gestures, physical or emotional responses, and the like. In this process of active reflection, the student teacher is deconstructing their pedagogy. This type of deconstruction addresses the larger process of the teaching/learning context, of which the teacher is but one component. The part played is often multifaceted and facilitative in nature, and requires that the student teacher go beyond a simple look in the mirror to see whether the students are engaged or accepting of the content they are teaching and the manner in which they are teaching it.

A potential shortcoming in reflecting on practice lies in the nature of the information and sources used in reflecting on their teaching practice. If a person does not have the kind of in-depth information that may be acquired through various means in addition to strict observation or keeping some sort of journal for the day's events, the postteaching reflection will not have the scope or depth that would help to refine practice more effectively.

In our program, students are placed "in the field" extensively prior to student teaching as a part of other methods courses they take. This is done so that they will be more familiar with both the subtle and overt changes from one location, grade, or subject, versus that of another, and become more proficient in the numerous roles a teacher must play. This also enables them with the capacity to stand back at particular points in their program and really observe how events and interactions play out to the fullest. This observation offers the ability to reflect on what is occurring before them in a way that they could not if they were in the middle of teaching the lesson. They have the ability to observe nuanced differences in the body language and reactions of students in class after the teacher has moved on to ask another student a question or to another part of the lesson and so on. Many times, these observations are what provide the greatest degree of insight when viewing someone else's teaching style and the reaction or participation it elicits from their students.

For themselves though, this useful observation is not always possible when they are teaching. During the student teaching experience, many times, the student teachers are just a few steps ahead of their students. At this point, the

systematized observation of and reflection on what is transpiring or what happened earlier, regardless of the context or example, become impossible and turn to water under the bridge. They may be able to go back and think about a few situations in general, but in-depth reflection on smaller points becomes all but impossible. There must be a way to counter this happening.

Action Research

Tomal (2003) refers to the strength of action research as obtaining findings and understandings that are particularized to a specific teaching setting and less concerned with generalizing them from one setting to another. This is the kind of insight that student teachers should be hungry for. Action research has been shown to be an invaluable tool for self-improvement in both practice and planning (McNiff & Whitehead, 2010; Patton, 2002). A formidable challenge for new teachers is often how to merge theory they have learned in their undergraduate classes with the conditions and dynamics they find within the classroom setting. Using teacher inquiry and reflection offers them this opportunity (Dawson, 2006). The difference between the type of research we propose in this situation versus that of everyday reflection about the day's events is that taking the approach of action research means that there is a structure and plan in place for the manner in which student teachers will gather their information, analyze it, and develop subsequent action plans. Depth of understanding is the end goal for anyone desirous of being highly effective in the classroom. This is a fundamental and necessary component that the experience of student teaching should offer future teachers through the host teacher's classroom (Weasmer & Woods, 2003).

The incorporation of action research into the student teaching experience might at first seem daunting, given the perception of the workload. This is partly because student teaching is an experience that can be intimidating because of the lack of complete familiarity with the curriculum and/or classroom responsibilities. McGlinn (2003) also agrees with the "short circuiting" that occurs in student teaching through these "facts on the ground." It would be natural for student teachers to say that they just don't have time or even know where to begin. Having been through this and having had numerous student teachers come through our doors over the years, we dispute that contention. In addition, the mentoring function of the cooperating teachers would be a natural asset here. They would be able to support the student teacher in gathering this data and making sense of it. Weasmer and Woods (2003) assert that the mentoring function of cooperating teachers should necessitate that the student teacher be equipped to thrive, not just survive.

Arguably, student teaching offers almost as much preparation for a teaching career as the university program itself; components of university programs must enable the systematic approach to research and reflection as to teaching through methods courses. Deemer (2009) reports that students utilizing action research projects as a component of their classes experienced a better appreciation and understanding of methodically exploring a variety of issues related to education. Similarly, Rogers et al. (2007) show that teachers conducting action research projects in their classrooms are able to cultivate a more personal and productive relationship with their students. Citing van Manen's concept of "teacher as researcher" and instilling it within the framework of the action research project resulted in more of a "mindful orientation to their students" (Rogers et al., 2007, p. 218). Doveston (2007) cites an example of an action research project where the teacher and students worked side-by-side. This collaboration focused on the development of active listening skills in working within groups. In taking purposeful steps to gather data, both the students and teacher developed ways to work together more productively. This occurred between students and their peers, as well as the teacher.

Naturally, an action research project would require methodology training on the part of the student teacher. This would be in addition to the teaching methodology. Although this would be an additive, we would argue that it would not present a burden to the extent that the student teacher would be overwhelmed. It would require some additional research methods to be taught, but these are complimentary to what is already being covered. Other artifacts and data naturally gathered as a part of teaching students would also lend themselves and their use to an action research project. Student teachers are trained to plan for and execute instruction. They are also trained in classroom management and evaluation. They would be collecting different forms or artifacts of student work to demonstrate their competency as educators, and those entries will be part of their teaching portfolio or could serve as assignments throughout their educational coursework. Videotaping lessons also comes in as a course requirement or portfolio artifact so that they can analyze their effectiveness and presence in the classroom. As we acknowledge at the beginning of this article, not every teacher education program utilizes portfolios, but there are some that do. The relevant issue is that the data that are being collected could serve more than a single evaluative use as they relate to the student teacher's evaluation. We propose that the student teacher should also receive training in two additional areas, namely, that of interviewing and data analysis. With the tools of interviewing and data analysis, qualitative "chunking of data" could be done, and emergent themes and larger patterns analyzed. An analysis of the usefulness of this chunking from one class or setting to another, for example, could tell the student teachers whether they have a proclivity that lends itself to showing favoritism based on personality, and so on. The possibilities are endless.

The benefits to this additional training can be exponential in that the student teachers can apply them to an area of concern they have during their student teaching. Having been trained in this sort of data collection and analysis will help

cultivate that same reflective mind-set recognized as being so necessary. The action research focus during their student teaching could be in any area they choose from classroom management to questioning techniques. They would have the ability to tailor it to what they know or what their cooperating teacher has observed to be a particular area of need.

Understanding the particular needs of a certain instructional setting requires feedback and support. Student teachers rely on the feedback and support their cooperating teachers offer. This is one of the aspects that lead to their improvement as time goes by. They also rely on what their university supervisor has to say. A potential flaw with both of these lies in the fact that the cooperating teacher at one point is no longer in the room, and the safety net they provide goes away. The university supervisors have a limited number of visits in which they can offer any input for the student teacher's consideration. We are not saying that both of these do not present a valuable contribution to the insights the student teachers gain through their experience; rather, we are proposing a way to deepen it and promote a habit that will be taken forward into a teaching career. Citing Dewey (1933) and Kolb (1984), McGlinn (2003) contends that the learning cycle must be experiential in nature and must, perhaps most importantly, possess the necessary elements of reflection to be effective. This reflection is further facilitated through approaches such as interviews and other means of data gathering that comes with an action research project.

The reflective component is one that is active and ongoing. Any teacher will attest to this. Reflection enables the development of critical reflection that will benefit teachers retrospectively for what they have just taught. This also gives them insight into how they can improve their instruction in the future, regardless of the particular context of teaching in which they find themselves, be it urban, rural, or suburban (Canning, 1991; Pai, Adler, & Shadiow, 2005). In this way, they are able to view themselves, and the execution and effectiveness of their pedagogy. More importantly, they are able to see themselves through the eyes of another, and this sort of deep reflection can have the most lasting impact on just how their pedagogy works. Many times, teachers do reflect; this happens instinctively not only from one class to the next through the school day, but also from one unit to the next, depending on the subject and grade they teach.

There are numerous forms that action research can take in the classroom. The strength here lies in what Erlandson, Harris, Skipper, and Allen (1993) refer to as emergent design. The teacher-researcher has the option to choose data sources that are best suited to the particular questions they are attempting to answer, and these sources, as well as the categories and data that emerge, can be adapted to the needs of the study. It should be both remembered and heavily emphasized that it is the reflective habit that is most important here. The amount of work involved in collecting and analyzing the data is minimal in comparison with the benefits that it will reap for the educator. Teachers who are proficient and effective in their art, for that is what teaching truly is, realize the value of feedback. Stairs (2007) refers to improving teaching through being culturally responsive. The particular needs of an urban English class required that teachers renegotiate many aspects of their methods, including teaching, curriculum choice, assessment, and feedback used to improve the instruction. These pragmatic changes facilitated a better experience for both the teacher and the students.

Data Sources

While some of the sources of data to be gathered may require consent forms, this is still quite feasible. Nolen and Putten (2007) cite the necessity for protecting the identities of students who participate in research conducted by teachers. This would be a natural component for any research project. The ethical dimension and principles of action research would need to be addressed through training at the university prior to student teaching. An advantage here is that student teachers will have the guidance of the faculty within their respective programs. Through the training that can be afforded by the faculty, the ethical dimensions of research are soundly adhered to by the design of the action research projects. Since the results of this research are not going to be disseminated, and the student teachers would be able to utilize pseudonyms, they would still be able to conduct the action research. Tomal (2003) and Erlandson et al. (1993) cite options for conducting action research, but contend that the choice for sources of data depend on the emergent design of the study itself. As can be seen below, the kinds of data sources we refer to are also utilized in a variety of other forms of evaluation in educational settings. Listed below are common options available to action researchers:

- videotaping their teaching (also utilized by the National Board of Professional Teaching Standards);
- interviewing students for feedback (also utilized through course evaluations in higher education courses);
- observation (conducted through watching planned activities or group work, but can also be accomplished through the presence and contribution of a colleague);
- surveying students (anonymously or not); and
- archival resources for methods previously tried and found to be effective or ineffective.

The use of videotaping in teaching will enable the student teachers to better assess their method of instruction, questioning techniques, habits of language, and habits of eye contact. Although these are not the only features of teaching that can be evaluated through the use of video, being able to

see them when a person is not in that particular moment will lend an element of critical pedagogical insight that they might otherwise not be privy to.

The use of interviewing students might at first make a person uncomfortable, especially if it concerns evaluating teacher instruction. Teaching and the mannerisms, habits, and beliefs that a person holds can be quite intimate. A crass remark when asking for an honest opinion can cut to the core of who a person is. We believe that for teachers to grow as professionals, it is both useful and necessary to open themselves up to potential critiques for who they are. If teachers want their children to believe and be excited about learning, they must themselves be just as excited about the feedback they might receive.

Observations are also quite useful for the developing teacher. Veteran teachers have the habit and ability to be sensitive to the nuances of their students' conversations, either verbally or through the manner by which they express themselves through participation in the learning space. Simply walking around the classroom and taking notes will enable the student teachers to better gauge how involved, interested, or challenged their students are in the materials at hand. If the challenge presented by the choice of materials is lacking, they will be able to refine the materials so that students are not wasting their time with busywork.

The use of a survey instrument can help a teacher gain insights that are exponential in nature. If students are hesitant to speak this verbally because of concerns about what their peers or teachers will think, then the anonymous route works the best. If, however, teachers can foster an open climate where there are no consequences for honest and constructive feedback, it will enable them to have a conversation with their students—one that the anonymous survey cannot always accomplish.

As can be seen, these different forms and sources of data are utilized in a number of different ways in other contexts of education. Through the training of student teachers by higher education faculty or a teacher mentor, the data can be encoded and analyzed for emergent themes. This will give better insight into longer or broader patterns that may occur across a number of different classes or periods. It would certainly be an interesting way to present an individual's quest into the effectiveness of their curriculum planning or ascertaining how focused and engaging their questioning techniques enable them to be, or even the effectiveness of their classroom management style.

The nature of the action research project could also be an extension of observations made by either the teacher or the university representative. Since the university representative is not there at all times, nor is the teacher observing them in the same methodical way (especially when they have taken over the entirety of classroom operations), going into greater depth in an area of concern may allow the student teachers to reverse instructional habits that may actually be working against them.

The student teachers would be able to tailor their inquiry to fit their own professional needs and have a wide variety of options available to them for sources of data. The final result of slowing down and taking time to look at concepts or practices that may at first seem unrelated may also yield the kind of understanding that may affirm or refute the choice someone has made for a career.

Conclusion

College graduates are expected to put considerable time and energy into becoming effective practitioners. The form of action research we propose would not be overwhelming and would serve as a natural catalyst for critical reflective practice. This is an important dimension of what student teaching is intended to present in the first place: the opportunity to develop and improve one's pedagogy. The difference is that the incorporation of action research would give the student teachers an opportunity to gain a deeper understanding of the subject area, their own teaching style, areas that are strong, and also those that need improvement. This is the precursor for what teachers are expected to be able to continually do when they enter the profession. Regardless of whether a university does or does not utilize portfolios and whether something like an action research project would be included in them, this is a positive approach to developing the professional in ways that are mindful and oriented toward discovering the best methods in education.

There are multiple kinds of resources available to students conducting action research projects. The intent behind this is not to increase the workload of a student teacher but to modify it in a way that makes it more rewarding in the end. Would there be some extra work? Yes, there would, but it would not be so voluminous that it is undoable, and the benefits would instill a habit that would improve a career trajectory. At best, it would have the effect of training a teacher to consider classroom-based research a natural component of their practice. Rather than feeling stuck and unable to move forward, teachers would have the tools to take a much deeper look at who they are professionally and move forward. When we consider the sheer volume of teacher attrition over the first 5 years of a teaching career, we consider implementing critical reflection though action research to be an approach that reflects professional responsibility. There are many reasons for teacher attrition, but we contend that one of them is the fact that student teachers do not slow down and take a deep, hard, and perhaps slightly pained look at who they are professionally and then work to improve. They should stop and ask honest questions in a variety of ways and actively listen to the answers and data they receive.

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