Modeling Constructivist Practice In the Context of a Traditional University-based Teacher Development Program

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Abstract

As a follow-up to a previous article reporting on curriculum research on teacher education for critical pedagogy, the authors describe practices and processes used in a traditional university-based teacher education program to 1) build a collaborative learning community between faculty and practicing teachers, 2) share our pedagogical strategies for the social construction of knowledge and 3) clarify the role of continuous improvement in assessment.

Introduction

In our previous article *Co-constructing a Learner-Centered Curriculum in Teacher Professional Development* (Winter, 2008) we reported on a two-year research study that assessed a curriculum designed to empower our teachers with the elements of critical pedagogy; and meet the diverse learning needs of a disparate group of adult learners. For this paper we will focus on the pedagogical practices and processes we used to 1) build a collaborative learning community between faculty and practicing teachers, 2) share our pedagogical strategies for the social construction of knowledge and 3) clarify the role of continuous improvement in assessment.

According to Grossman (2005), “neither the research literature nor the reform reports of the1980s (Carnegie Forum on Education and the Economy, 1986;

Holmes Group, 1986) had much to say about how prospective teachers should be taught. Yet in teacher education, attention to pedagogy is critical; how one teaches is part and parcel of what one teaches" (Loughran, 1997, p. 425). We have found our work to be unique in that we specifically engaged in reflective practice with practicing k-12 teachers (our students) in order to transform our pedagogy. We reinforced the integrity of our content while at the same time used a learner centered approach which supported a constructivist view of teaching and learning.

In our work with teachers we have noticed that as learners they are well versed in "playing the game of school." By that we mean spending an inordinate amount of time and emphasis on the logistics of assignments, deadlines, and doing what they think the professor wants rather than focusing on the broader concepts of their learning. In our work with teachers it is alarming to hear about the ways in which our teachers have played the game of school but also the ways in which they perpetuate the game within their classrooms. Our work challenges this notion and moves our teachers to question, reflect and take risks in our classroom and in their classrooms.

Pedagogical practices should include the expertise of the teacher and connect to and push their intellectual development as a learner. We view constructivism as a vehicle to aid adult learners to grow developmentally and thus begin to transform their own teaching practices. Baxter Magolda (1999) supports a three

prong approach to developmentally appropriate learning, interpersonal, intrapersonal and epistemological. We view our role as faculty facilitators to create learning experiences and opportunities for our teachers to develop a deeper understanding of their learning needs and development. We value learners as constructors of knowledge and learning in the classroom is a shared construction. We have our teachers integrate their personal and professional lives to enable them to see themselves as both teachers and learners. What follows are four areas of our pedagogical practice that embraced constructivist learning and supported the transference of constructivist practices into k-12 classrooms.

Collaborative Learning Community

How can you establish a collaborative environment?

One way of creating a collaborative learning community is to make visible the hidden curriculum; we make our pedagogy explicit to our students and share our pedagogical choices as faculty instructors. For example, we openly provide students our rationale as to how the three faculty members came to consensus regarding each assignment. Normally this information is unavailable to the learner however it is an important element in situating and scaffolding adult learners. We have found that systematically soliciting our teacher-student feedback and reporting back to them can enhance the learning community and

create opportunities for conversations around curricular decisions, pedagogical practices and the teaching and learning process.

Brookfield's (1995) proposes embedding the critical incident questionnaire (CIQ) as one method to solicit student understandings of their learning and of faculty teaching practices. "The CIQ helps us embed our teaching in accurate information about students' learning… a quick and revealing way to ascertain the effects your actions are having on students and to discover the emotional highs and lows of their learning" (p. 114). The CIQ is comprised of five questions:

1) "At what moment in the class this week did you feel most engaged with what was happening?

2) At what moment in the class this week did you feel the most distanced from what was happening?

3) What action that anyone (teacher or student) took in class this week did you find most affirming?

4) What action that anyone (teacher or student) took in class this week did you find most puzzling or confusing?

5) What about the class this week surprised you the most? (This could be something about your own reactions to what went on, or something that someone did, or anything else that occurs to you)" (p. 115).

We modified and implemented Brookfield's (1995) critical incident questionnaire using an online course management system (WebCT) to post 3-5 questions related to the class day. Students log in and submit their answers electronically. We like this method over pen and paper in that it is efficient and allows us to easily cut and paste student responses into PowerPoint or other data bases.

Typically we start out the class with his suggested questions (listed above) but later create our own questions to respond to student learning needs. Students have one week to answer the questions so that they have time to be reflective regarding their learning experiences. For our students to take this work seriously we give course credit for this reflective work and design reflective assignments that allow them to revisit their class reflections and responses over time. Class reflections provide authentic data on our teaching practices as well as data on teacher development, adult development and students' individual learning preferences.

When we first started using this model we had our students provide their feedback anonymously thinking that they would be more honest in their responses. However, we found that sometimes we wanted to follow-up with a particular student and had no way of identifying who needed the support. So, we decided to have students provide their names and have found no significant differences in student responses but in some ways we have more detailed and richer responses. We are respectful of student comments. If students do not want their responses shared within the class they can request this and we honor that request. Another benefit of soliciting names attached to their feedback is that this presents an opportunity to follow-up with students in a more personal way to address their concerns, needs, and suggestions.

Once students have submitted their feedback we individually read class reflections and identify patterns of responses. As a teaching team we collectively discuss our individual coding categories and come to agreement on the salient themes. We then create a morning opening PowerPoint that conveys the overall themes and ranges of student feedback. Class pictures are juxtaposed with student quotes and music. This creates a great way to open up the class day and also remind students of past class day experiences. It is important to mention that we are working within a continuous improvement framework (Deming, 1995) and work to create a climate of trust, risk taking, and valuing alternative perspectives. The Opening PowerPoint clearly models one way we value alternative perspectives and allows us to share the ways in which class feedback shaped our curricular decisions. For example, students wanted more opportunities to meet within grade level groups, learn practical strategies and more choice in online discussion groupings.

Other times we provide our students with all of the feedback (except names) and use this as a data source for class activities. Students have reported that viewing all class reflections provides them opportunities to see different perspectives and the range of student responses to class day activities. This experience often causes our teachers to infuse student feedback in their own classroom practices allowing opportunities for their students to have ownership in the classroom. Implementing a class reflection model supports the development of a collaborative learning community. It creates a process to systematically sustain

critical conversations over time, make visible our students' understandings, view multiple perspectives and discuss experiences. This model also allowed us to model our risk taking by sharing our thoughts and not "playing the game of school" but instead focusing on the teaching and learning process and all that it encompasses. For example, teachers tend to hold power in the classroom while students tend to focus solely on obtaining a good grade with both parties enacting behaviors towards that end. It is the mutual deconstruction of "playing the game of school" by both teachers and students that attends to authentic learning and the creation of a collaborative learning community,

Class feedback provides a window into learners' experiences within our class. It provides authentic data on learning needs, frustrations and success. Having this type of information available allows us to provide a curriculum that is responsive and fluid. We continuously work toward crafting a curriculum that more effectively meets a wide range of learning preferences and moves our teachers away from "playing the game of school" to a richer view of the teaching and learning process.

Pedagogical Strategies and the Social Construction of Knowledge

Because our work is specifically focused on k-12 teachers we have the unique task of teaching and designing curriculum that challenges our teachers as learners and simultaneously helps them make connections to the teaching and

learning experiences they are providing in their own classrooms. The developmental model that we employ involves various student groupings for the purpose of experiencing multiple perspectives, accountability outside traditional assessment models, and most importantly the role of reflection in the process of learning in a constructivist model.

How do you intentionally create collaborative groupings for teachers to develop multiple perspectives?

We designed our pedagogy to provide opportunities for our teachers to dialogue with individuals they would not normally interact with in the school setting. Our first grouping is the *collaborative school team*. We encourage our teachers to join our program with at least one other person from their school. Most of the time, these teams are made up of multi-grade, multi-subject individuals. It is not unusual for individuals to not know each other as friends or as co-workers upon starting the program. The value in collaborative schools teams is that each individual interprets their learning in the program in different ways. As the collaborative school teams meet once a week they discuss assignments and readings, their understandings of their classroom research projects, and how they are making sense of the ways theory moves into their individual classrooms. The collaborative school teams support our goal of multiple perspectives because teachers do not learn in isolation; they are continuously in dialogue with someone in their own school about their learning.

Grade level discussion groups are a second grouping we employ. Most school environments provide time for teachers at each grade level to talk and design curriculum. However, we have found that if a planning time is provided to teachers the conversations are typically limited to testing, pacing guides and logistical items. Therefore within our program we provide opportunities for grade level groupings in which our teachers can collaborate with others to deepen their understandings of learning strategies, content knowledge, and assessment of k-12 students. For example, we tend to use these configurations: k-2, 3-4, 5-6, middle school, science, English, math, social studies, physical education, and adult education or administrative. This differs from collaborative teams in that a team may consist of a first grade teacher and a fifth grade science teacher. Teachers tell us that the value of grade level configurations is greatest in the transfer of pedagogical application into the classroom.

The third grouping is the use of *cohorts.* Our class, which we have for 2 years, is divided up into 3 or 4 cohort groups. The groups are arranged to provide a k-12 grade configuration and include a variety of school contexts (rural to urban). One goal is to provide our teachers with cross grade dialogue which informs how pedagogical understandings can apply in settings other than their own. Typically the shift to learner centered teaching is a slower process for secondary teachers compared to our elementary teachers; content coverage, standardized testing, district graduation requirements tend to push teachers to use a more teacher centered pedagogical focus toward student learning. However, many of our

secondary teachers report that they are continually surprised by the connections they make to the elementary setting and report infusing those ideas into their secondary teaching practice.

Without the multi-level cohort groupings our teachers may not develop a broader understanding of how our curriculum, readings and individual context specific insights can provide multi-perspectives. Without such cooperative groupings teachers may continue to be myopic rather than challenge and grapple with other teachers' views, and with their own interpretations of the same materials. Our research has found that the cohorts also provide a safe place for our teachers to take risks. This is due to the smaller numbers of approximately 20+ in each group that is consistent over the two years of the program.

Lastly, *choice groups* are formed around similar interests and are configured by the students themselves. For example, when choice is given in assigned readings; students who chose the same book congregate to have book discussions. We learn best when we are interested in and engaged in what we are doing. Therefore, it is important in the constructivist, developmental process to create opportunities for students to dialogue, share ideas, and resources with other individuals that share their passions. Our teachers report that the time flies when they are in choice groups and they talk about being energized by the conversation.

We have found that using multiple grouping strategies maximizes opportunities for our teachers to interact with peers which supported their development and capacity to value multiple perspectives and broadened their understandings of teaching and learning. When embracing a constructivist stance towards learning it is important to use a range of student grouping strategies in order to create varied and multiple opportunities for student learning based upon student interests and needs as well as support curriculum goals and course requirements.

How does the role of accountability increase learning?

As stated in our previous paper, “we work to engage teachers in meaningful learner-centered activities so that they can experience the power of “owning” their learning.” The key point in designing constructivist pedagogical strategies is to require student preparation and participation. The result is that student preparedness and engagement becomes visible and creates a built-in system of accountability with peers. Notice that we are focused on designed accountability from their peers and less so from the instructors. Ironically while it has been long known that peer pressure works with children, it also provides a venue for increasing learning goals for adults.

What pedagogical practices can I use to support constructivist learning?

One practice that can increase student pedagogical accountability is through employing *choice* wherever reasonable. We design learning to be applicable to

teachers. They are experts at what they do, far more than we are in the vast environment of k-12 teaching. Therefore, it makes sense to rely on their expertise in the choices of texts. For example, we require one or two texts per year that provide a foundation for everyone in the class. However, throughout the year our teachers make many choices regarding a variety of texts that feed their interest, passion and context. We also allow for options in demonstrating understanding. Our teachers many times are given the opportunity to employ learning modalities other than linguistic such as kinesthetic, artistic, technological, etc.

A second pedagogical practice is tied directly to the intentional groupings design of the program. Our teachers participate in *weekly online discussion groups* which in the first year are populated with multi-grade teachers. They are required to post questions, discuss texts and classroom applications in this virtual setting. This chat advances pedagogically and increases in accountability when teachers are required to self-assess their postings in connections to the pre-established expectations for the discussion. Individuals not only rate themselves on a Likert scale on several elements, they must provide evidence for their ratings from their postings. Once individuals are finished reflecting on their own contributions, groups get together to discuss how they are performing based on the criteria and what changes they need to make to increase their productiveness and value to each member of the community. For example, if an individual only posts on Friday at 9 pm, the group has an opportunity to express that the late posting

does not add to the conversation and thus the individual must find a more appropriate way to participate.

The third way in which the instructional team employs constructivist learning is in the use of *cooperative learning strategies*. It is important to note that cooperative learning is a double-edge sword pedagogically. We believe that students interact in deeper more meaningful ways than if the instructor were the sole provider of learning outcomes. Conversely, without proper scaffolding the goals for the exercise may be unattained by the learner. This is a good example of when to incorporate the critical incident questionnaire to determine what the learners understood as the outcome for their individual learning for a cooperative learning strategy. If the objective was not achieved then the survey informs the future class day planning.

We primarily use three cooperative learning strategies to promote active engagement with the content. *Jigsaw* is one strategy we consistently use in which in the first phase expert groups discuss a single aspect of a topic. The second phase is that one person from each expert group join together for a discussion to cross-pollinate their expert understandings. The outcome is that each person is an expert in one aspect and has a working understanding in each of the others. Students are accountable for their single topic and for effectively communicating that knowledge to their peers.

A second cooperative learning strategy that requires accountability is called *fishbow*l which we use exclusively for reading discussions. The fishbowl process is used in our cohort of 20+ individuals where students feel safe to speak and ask questions. Ten individuals are chose to be on the inside of the fishbowl circle while the other 10 are sitting on the outside perimeter and have chosen an inside individual to give feedback to after the discussion. Inside the circle, each of the 10 individuals is given 2-3 talking chips. This limits the number of times exuberant talkers participate and reluctant talkers must find ways to add their voices to the conversation. The discussion stems from quotes which each student has chosen from the text and written on the board. Someone starts and the 10 individuals volley through their understandings of a chapter or text in a dynamic fashion. Once the first group finishes those outside the circle provide feedback to their inside partner regarding their contribution to the conversation. Again, the essence of accountability for those inside to contribute in a meaningful way is increased. After the feedback is given the inside group sits on the outside and the outside group moves inside the fishbowl and the conversation continues on a different chapter or text as to not repeat. We have found that teachers struggle outside the circle because they can only listen and are unable to contribute. Those on the inside circle grapple with what are the 2-3 most valuable points they have to contribute.

World Café is the third cooperative learning strategy we use to deepen dialogue around 3-4 critical questions on a topic or text. Within cohort rooms, tables are

set up with butcher paper and markers. A provocative question is written in the middle of the paper and a group of 5-6 teachers gather around the table. They write their contributions to the conversation on the paper as they talk, much like a graffiti board, after about 15 minutes teachers change tables. One student remains at the table to recap what the previous group discussed. In the subsequent conversations they must go to a new and deeper place. This is repeated until all four questions have been discussed by the entire cohort. We ask teachers then to take 30 minutes to journal about how the strategy moved their thinking and their new understandings. This strategy differs from jigsaw in that the goal is not an exchange of information but a depth of understanding and application of the topic. This strategy takes several times before participants understand the levels of contribution required in the later tables in that the surface aspects of the topic have already been presented by the table host.

The Role of Reflection

What role does reflection play in constructing and bridging knowledge and practice?

Reflection could be described as a vehicle toward developmental understanding or more simply what makes learning a personal rather than solely intellectual endeavor. This is at the heart of constructivist teaching and learning. Shadish (1995) reminds us that social constructivism “refers to constructing knowledge about reality, not constructing reality itself” (p.67).

We along with our teachers use reflection and authentic evidence to ask critical questions about teaching and learning. We require our teachers to reflect, which on the surface may appear to be antithetical. However, we have found that in our two year program reflection is a “skill and way of knowing” that must be taught. The goal is to shift the requirement of journaling from an extrinsic requirement to an intrinsic desire. Our teachers begin by journaling about what they are reading. We want them to carry on a dialogue with themselves and the author. We encourage them to agree, note connections and to disagree. These notes are continuously used in the jigsaw, fishbowl and world café experiences to confront our teachers with their prior thoughts.

We ask our teachers to engage in reflection through the use of a journal. Our teachers are required to journal twice a week during their two years in our program. The purpose of journaling is to allow them to document and process the pressing issues which arise in their classrooms. At the end of each year they reread these journals to gain a broader perspective of the bigger issues that drive their pedagogy. For example, if teachers are trying to give students more hands-on activities, they may find that it requires more time. This creates issues in terms of covering the content, and assessment. How is it that they reconciled these aspects in order to allow for the greater student engagement? Journaling over time makes this work explicit.

Journals entries serve as a record of conversations about their teaching practice, their learning, and their thinking and response to outside voices (authors/peers). The entries make teachers' thinking, questions and shifts in their thinking and practice visible. The role of reflection is the conduit that moves our teachers from the intellectual pursuit of learning to a deepened conceptualization of their understandings of teaching and learning which we have found leads to a change in practice in their k-12 classrooms.

The Role of Continuous Improvement in Assessment

How do we as professors know that our students have arrived at a new destination?

We use formative assessments to put our work in a continuous improvement cycle (Deming). In these formative assessments; peers are the assessors. For example, our teachers are engaged in two year-long action research projects and they provided feedback to their peers along the way. School teams conduct Writers' Workshops on drafts and also on final paper drafts during class time. Moving our teachers into the role of assessor can support teacher risk-taking as they work to provide constructive feedback on course assignments. Our teachers have reported that they take time and work towards providing meaningful feedback to their peers. And have also reported on the benefits of receiving peer feedback that helped shape their ideas and moved their work forward. For example, teachers conducted Writers' Workshops on papers and reviewed peer's

work with project rubrics providing commentary that moves teachers to enhance and fulfill requirements. It is not uncommon for our teachers to tell us that they have their classroom students conduct Writers' Workshops but have never engaged in the process themselves. Engaging teachers in a formative assessment process provided them with experiences as critical peers and allowed them to improve their work before submitted for a final grade, undermining "the game of school."

Usually summative assessment is placed squarely within the realm of the faculty. It is faculty that determines test questions and judges how well the students have mastered the content deemed important. However, in our program we placed summative assessment into the hands of our teachers as they craft end of program portfolios to document their professional growth as a result of program participation. Portfolio requirements were kept relatively flexible to allow our teachers ownership in the direction and development of their portfolio. Teachers were asked to identify an overarching theme and several sub-themes to represent their professional growth and to include authentic evidence to support their portfolio narrative. Professional growth was documented using authentic evidence for support as our teachers reviewed their course work, journals, action research, etc. and categorized how they understood their growth. Time, portfolio reflection strategies and graphic organizers were provided during the second year as tools to help our teachers' self-identify areas of growth (Kayler, 2004).

As faculty members we are able to glean salient aspects of our curriculum that impacted teacher development. Through a careful examination of individual teacher portfolios, rich with authentic evidence, we were able to identify critical experiences, texts, and assignments that teachers referenced as meaningful to their own development. For example, teachers reported increased confidence and the development of a professional voice. Class readings were referenced as a major contributor to teacher knowledge and educational language development. In addition, online forum discussions, in-class and team dialogue provided our teachers with alternative perspectives on class readings and assignments. Teachers discussed how the process of articulating and listening to alternative viewpoints and experiences helped clarify and question their own assumptions leading to a stronger sense of self.

Teacher portfolios also served as a source of program evaluation, Teachers' professional journeys helped our program identify meaningful program experiences, curriculum and program structural supports that fostered or hindered their professional growth. For example, our teachers discovered the value of becoming active participants in their own learning and reported opening up the educational process to their k-12 students and became more active in their own educational learning and assessment experiences. Our teachers began to build and enhance learning communities within their own k-12 classrooms as a result of program participation. Teachers exhibited professionalism by addressing

individual learning needs, seeking out alternative explanations and acting as advocates in shaping classroom-learning experiences within our schools.

Moving formative and summative assessments within constructivism can diminish “playing the game of school” as students develop ownership in their learning as they self-assess with authentic evidence, provide feedback to peers, and come to see their grade in a different light.

Conclusion

There are multiple pathways for moving toward constructivist teaching and learning. We have shared four aspects of our pedagogical practice in hopes that you will glean strategies, processes, and ideas to support your own professional development as a facilitator of learning. With increasing diversity and wide range of learning preferences within classrooms we feel that it is important to provide multiple opportunities for learners to construct their own knowledge, draw upon their expertise and feel supported in their own development.

Our work has demonstrated the importance of acknowledging the value of teachers’ content and pedagogical knowledge when confronting the challenges of working within the realities of today’s schools. As teachers interact with one another and learn within a constructivist learning community they come to develop a common language, have ownership of their learning, and transform their pedagogical practices. When teachers come to understand constructivism

by “living the theory” as opposed to “reading about the theory,” they more readily transform their own pedagogical practices to engage their classroom students in meaningful learning experiences that value the richness of their lives as individuals and as learners.

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