The Experiences of Selected Teachers in Implementing Place-Based Education

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Abstract

This study explores the experiences of selected teachers undertaking place-based education (PBE) in a prairie region, the challenges they encounter, and their understanding of the knowledge and skills required to implement PBE. PBE is defined and described. Five individual teachers and one teaching team of two who practice PBE are interviewed. The findings are reported thematically and implications for teacher education are discussed. The varied practice of these teachers is instructive for educators interested in holistic, inquiry-based methodologies rooted in local settings and points to directions for teacher education programs to take in implementation.

Keywords: Place-based education; outdoor learning; community engagement; experiential learning; curriculum outcomes; assessment; teacher education; deschooling

The Experiences of Selected Teachers in Implementing Place-Based Education

This research explores practicing teachers' qualitative experiences in implementing place-based education (PBE), their challenges in undertaking this work, and their understanding of the knowledge and skills required to implement PBE. The latter is particularly instructive for teacher education programs in preparing teacher candidates to take up place-based pedagogies. While PBE is relatively well known in some educational contexts (rural education, environmental education), to date little is known about how teacher education programs engage (or not) this orientation to teaching and learning. Focusing on a select sample of teachers in a prairie region near a university teacher education program, this research aims to advance a conversation between PBE practitioners and teacher educators as to the strengths and merits of PBE and what is needed in teacher education to support its implementation.

Practitioners, researchers, and educators have theorized and documented the potential of PBE to link students' lives and their experiences to formal education for some time (Gruenewald, 2003a; McInerney, Smyth, & Down, 2011; Smith, 2002; Sobel,2004; Smith & Sobel, 2010; The Centre for PBE, n.d.; Buck Institute for Education, n.d.). An evaluation of over 100 American schools with place-based education programs concludes that "place-based education fosters students' connections to place and creates vibrant partnerships between schools and communities. It boosts student achievement and improves environmental, social, and economic vitality" (PEEC, 2010, para. 5; see also, Powers, 2004; Skoutajan, 2012; Sobel, 2004; Smith & Sobel, 2010). Bishop (2004), for example, argues that when students are taught literature written by local authors and assisted to investigate the ecology of the area in which they live and the stories associated with their surroundings or locality, their conscious level of the place increases and they are helped to appreciate the value of their community and develop a sense of stewardship.

According to the Rural School and Community Trust (2005), PBE is learning that is rooted in what is local:

> The unique history, environment, culture, economy, literature, and art of a particular place. The community provides the context for learning, student work focuses on community needs and interests, and community members serve as resources and partners in every aspect of teaching and learning. (cited in Smith & Sobel, 2010, p. 23)

PBE is premised on experiential learning; that is, subject matter is taught in such a manner that it connects to students' experiences in their communities (Beard & Wilson, 2006; Knapp, 2005; Kolb & Kolb, 2005; Roberts, 2012). PBE resonates with progressive educator John Dewey's (1907) conception of an ideal school where the activities of survival and sustenance in daily life are conjoined with book learning to "throw light upon the practical work, [and] give it meaning and liberal value" (p. 94). As noted by Horton, people only learn from the experiences they learn from, not every experience (Horton & Freire, 1990). Intellectual engagement with and reflection upon an experience within community brings multiple perspectives to bear on its meaning and maximizes the potential for learning.

In pre-colonial Indigenous contexts, the community including its natural environment was the classroom (Kirkness, 1998). For thousands of years Indigenous peoples offered their children holistic, experiential education grounded in relationship with the land and community and focused on living well in their surroundings (Kirkness, 1998; Wilson & Battiste, 2011). The

relatively recent nomenclature of PBE stems from concern for rural revitalization (Theobald, 1997) and, in the field of environmental education, from a concern to expand children's experiences in nature as a way to build an ethic of care and respect for the planet (Sobel, 1996). PBE has developed to include the socio-ecological, the cultural, and civic action. (Gruenewald 2003a; see also, Clark, 2012; Smith, 2002; Sobel 1996; 2004). Place-based learning connects experience in the community to the content of the official curriculum, connecting students to the problems and resources of their own locality and promoting civic engagement in the here and now. Place-based educators often use project or problem-based learning with authentic tasks to involve students in the real world outside the classroom (see Buck Institute for Education, n.d; Clark, 2012; Demarest, 2015; McVittie, Lazecki, Loeffler, & Thompson, 2007; Place-Based Activities, n.d.; Smith, 2002; Smith & Sobel, 2010; Sobel 2004). By helping students to question what happened, how it happened, why it happened, and what could happen in relation to a place and its ecology, teachers build *place consciousness* (Gruenewald 2003b; Theobald, 1997) and a personalized understanding of a community's history and potential.

Understanding how local issues are interrelated with global concerns can be facilitated by PBE (Gruenewald & Smith, 2008). While social and ecological justice concerns are not inherent in PBE (i.e., one can teach from place without engaging political issues), the focus on local community naturally opens possibilities to examine critically the interconnected social, economic, and political forces underpinning oppression as it is manifested locally and globally. PBE is compatible with teaching methodologies that have an anti-racist, anti-oppressive, decolonizing, and eco-justice vision. Gruenewald (2003b) advances the social and ecological justice orientation of PBE with his articulation of a "critical pedagogy of place," which combines the tenets of critical pedagogy with PBE to focus on decolonization and reinhabitation against the backdrop of neoliberal global capitalism. Fleshing out what these concepts mean, Gruenewald (2003b) says:

> A critical pedagogy of place aims to (a) identify, recover, and create material spaces and places that teach us how to live well in our total environments (reinhabitation); and (b) identify and change ways of thinking that injure and exploit other people and places (decolonization). (p. 9)

Critical place-based educators encourage their students to inquire into local issues such as pollution and environmental degradation as well as racism and other systemic inequalities with a view to making visible and changing taken-for-granted patterns of thought that support practices of domination. As well, they involve students in action to improve the well-being of communities. Such study and action inform, and areinformed by, global perspectives.

However, PBE is not taken up in concerted ways in teacher education literature. In order for K-12 students to develop knowledge and skills through educational activities rooted in place, their teachers need to gain the requisite knowledge and understanding of PBE. For PBE to be implemented effectively in schools, informed leadership and concerted effort in the educational field are needed (Furman & Gruenewald, 2004; Smith 2007). One impetus for the current study is to learn from teachers in the field who are in various ways practicing what we understand to be place-based pedagogies; that is, pedagogies which acknowledge that place itself is a teacher and which consider "the best place for the best learning" so that children and youth engage with their ecological and cultural contexts (Campbell, Campbell, & Klein, 2009, p.12; see also Archibald, 2002; Kirkness, 1998; Theobald & Curtiss, 2000).

We note that the language of PBE is not widely used in our region; practitioners are more familiar with language such as experiential education, problem-based learning, inquiry-based learning, outdoor education, and community education, all of which are facets but not the whole of PBE (see Furman & Gruenewald, 2004, p. 59). We also acknowledge that ambiguity exists in the theoretical conceptualizations of place, which in turn call into question pedagogies of place (Eijck & Roth, 2010; Gruenewald, 2003a; McInerney, Smyth, & Down, 2011; Tuck & Mckenzie, 2015). Still, in light of the opportunities that place-based pedagogies offer for integrated learning, student engagement, improved academic performance, environmental stewardship, and community revitalization (Place-based Education Evaluation Collaborative, 2010), and its alignment with the philosophies of Indigenous education (see, for example, Stewart, 2011; also Kirkness, 1998), we contend that teacher experiences with this way of teaching and learning will point to foundational and practical ways that teacher educators might begin to integrate the theories and methodologies of place-based learning in their practice.

Methods

As described by Cohen, Manion, and Morrison (2000), purposive sampling was used to select participants for this study to satisfy our desire to learn from the insights and experiences of teachers practicing PBE. We drew from the limited pool of teachers in the region who are known professionally as teachers whose practice is aligned with the philosophy and pedagogies of PBE and who engage community resources in meeting curricular outcomes through authentic tasks and projects. Most teachers interviewed embrace the label of place-based educators; some see themselves as simply using good pedagogy. To gather a range of experiences across grade levels, eight letters of invitation were sent to two teachers from each grade level: kindergarten, elementary, secondary, and special programs with a place-based focus. Seven teachers responded to the letter of invitation including a teaching team of two (identified here as SAS 1 & 2) and one who added a rural perspective to an otherwise urban mix. Twum conducted the interviews using a guide to focus on key elements of PBE and active listening to engage participants in rich conversation (Hesse-Biber & Leavy, 2011). The interviews were carefully transcribed and validated by participants. They were then coded and the data organized into themes following the guidance of Bryman (2004, p. 183). Participants are given pseudonyms.

The first section of the paper focuses on how these particular teachers understand and implement PBE; the next sections focus on challenges of implementation and the knowledge and skills these teachers believe are needed to teach PBE successfully. While the intent of this research was not to generalize from a small sample, our conversations with PBE teachers do point to ways that teacher educators might better prepare novice teachers to take up PBE.

Findings and Discussion

Four main themes were identified in the discussion of teacher experiences in implementing PBE: promoting outdoor learning, promoting community engagement, building effective teaching and learning experiences, and addressing curriculum outcomes and assessment.

PBE in Action

Promoting outdoor learning. Most of the respondents specifically address the value of promoting outdoor learning. In the words of one teacher (PSA):

I am really connected with a garden idea and having some sort of nature close to my kindergarten. Because growing up I did a lot of playing outside. I grew up on the farm at [small town] and we played outside a lot. I see my own children and I see the children that I teach not doing that as often for many reasons. I did send home a survey with my families to ask families if they felt the same way I did. And they list the same reasons: families are too busy, our children are in many different activities, and our families are all working, and then electronics are also something that children put more value in than being in the outdoors. I think my children and my students are not as connected to the outdoors as we were as children. So that was where I started thinking I need to reconnect these children to the earth because if I don't, how can we ask them to take care of where they're from? How can we ask them to clean up and make good choices consumer-wise if they don't love the earth, if they don't love the prairies? That's where I started.

PSA realizes there is little continuity between activities she did when she was growing up and the activities being undertaken by her own children and the children she teaches. Changes in family structures and activities available to children in this computer age are understood as reasons why children are increasingly disconnected from the outdoors, a belief that is underscored and elaborated further by environmentalist Richard Louv (2008). Also, PSA realizes that children cannot be socialized to care for their environment and communities if they stay disconnected from the very environment and community that they are being asked to protect. Her thoughts echo Sobel's (1996) words: "If we want children to flourish, to become truly empowered, then let us allow them to love the earth before we ask them to save it" (p. 39). She makes a conscious decision to connect the children she teaches to the earth through outdoor activity in the place they go to school. PSA explains that her students behave differently when learning outdoors:

And afterwards I thought did they learn? Like did I cover my objectives? And yes! We talked about what we saw; they talked about what we heard, the leaves crunching under feet and in each other's hands. We talked about what we felt [when] the wind was whipping the leaves against their face. So they were [lying] down in the leaves making leaf angels. And I asked, so what did you smell? It smelt old, so they were exploring and using their senses and learning. So to me because of the garden, I've learned that we have to follow their lead outside and they behave differently out there. They are engaged, they want to find treasures. They are into, you know, finding a ladybug or finding a snowflake on a branch, rolling in the leaves.

PSA's students become enthusiastic when they are engaged in learning that takes them directly into their environment. Rather than lessons determined by the teacher to meet predetermined learning outcomes, the learning proceeds in a natural, organic way with everyone involved. The teacher follows the lead of the students. Curricular objectives are not forgotten but are met through exploration and play in the material environment (see also Hall, 2015; Lloyd & Gray, 2014).

Another teacher, APJ, explains how he got into PBE:

I've always been involved in my career by using place to stimulate students to be further engaged. So before creating this classroom [name], and before going for my Masters, while I was teaching Grade 3, 4, and 5, I'd bring my students to parks, we'd go on bike

rides, we'd go on camping trips. And I found that for those students to come together as a classroom and to have everyone the same, you know, coming together as a team, to take on the challenges that sometime education brings, brought a better learning atmosphere for the students.

These teachers indicate that PBE must be connected to the outdoors to counter the current trend of students spending most of their time in indoor activities, to encourage an ethos of care for the environment, and to build capacity to collaborate and problem solve. The local geographical environment and climate are significant for how people manage their lives and the ecological issues that arise. When students become connected to their local outdoor environment, they may be more likely to engage in activities that promote the well-being of communities. Skoutajan (2012) relates a number of studies that validate the efficacy of learning outdoors (pp. 35-36).

Promoting community engagement: The majority of respondents in this study indicate that PBE promotes community engagement. We note that teachers of younger children have less direct involvement with community organizations outside the classroom. Children in the middle years learn to appreciate their communities by exploring and helping to build them. In explaining how PBE helps youth to engage with their communities, APJ states:

> We're not like an adventure program where we go to the best places in [province] to learn about a subject but we do emphasize that our students can make a difference in our community and we show them that by actually giving them projects that are happening in the community, and the end result is always a community presentation to open up to people beyond just the teachers in the program or the parents and [so the] public get to see their work. Actually, some kind of change will actually happen because of our project. We'll build something at the end of the project or sell something, there's a tangible result.

APJ believes that when students are introduced to real-world learning by exploring their communities they become motivated as a team to help find solutions to problems in the community. APJ incorporates community building into the weekly routines of the class:

> Well, to build community we organize our Fridays to a variety of community jobs that our students are in charge of and these are all jobs that are meaningful to us curriculum-wise because they're parts of the curriculum, like in wellness and food studies and horticulture, like they're from those areas, but they also are meaningful in our program because the completion of these jobs helps our community thrive.

Another teacher discusses how students are engaged in the community with the help of collaborators:

> I think our list is over 200 people that we connected with in our community…So I'd say like the first three years [of teaching in a place-based program] was just knocking on people's doors. And just asking, can we connect, can we do something together? And you know most people are really happy; they want to help. They want to have more of a cohesive community and…have an influence on education as well. (DAM)

These teachers confirm a high level of student engagement when students participate in meaningful, facilitated experiences in a wide range of community organizations and services. They work to promote high levels of civic responsibility and concern for others and their

environment and notice that students' motivation is strong to participate in learning experiences that have an impact on the community. As well, community organizations are excited to be part of students' education.

   Building effective teaching and learning experiences. These teachers believe PBE helps to promote effective teaching and learning experiences, where students take charge of their own learning. Students feel empowered through taking responsibility for their studies and learning to work independently and be responsible for their part in collaborative work:

> That kind of real-world learning increases the motivation, by like tenfold, just to see that students acknowledge that there's a purpose to what they're doing and in order to solve problems like that and work on projects like that as a team. Everyone has a unique role in the class as we're completing these projects. So removing that—I don't know what the work is like in regular class—everyone has the same assignments usually and you don't feel like your work is really that important. If twenty other people are doing the same thing as you, you don't really feel like your work is going to contribute to the collective knowledge or understanding. But in our project-based work, where everyone in the class has a unique role, if you don't do it, the class in the end suffers. (APJ)

Another respondent offers insight into the importance of communication within the classroom:

> A lot of circle talks as you can see our classroom here is just like couches— there's no desks. So very often we'll sit in a circle setting and just discuss issues, then from there we ask the kids to participate, because it's that participation that feeds that consciousness. If they sit there very passively, then they're not going to get their brains engaged or you know even, build off each other's conversations. (DAM)

The idea that teachers need to trust that students will learn through PBE comes up often in the interviews as exemplified by this comment:

> Being able to ask questions, inquiring [and] probably to trust that they will gain something if you leave the building. To trust that the children are capable of coming up with their own theories and then testing those theories and then realizing that they are capable of coming up with their own knowledge when they are out [side the classroom]. (SUP)

Two other participants explain their view as to how PBE promotes effective learning experiences:

> SAS 1: Well it makes learning relevant, and I think it hopefully makes it stick a little bit better, beyond just those skills of collective work habits and study skills and pushing your boundaries. So we're really trying to mold independent, responsible, respectful, and capable citizens. And I think our programs do a really good job of helping kids see what their capabilities are. And I think we've pushed them pretty hard, you know— there's a hard, heavy academic load as well as adventure education and the physical education that happens. So that's a tricky balance and, I think it sets them up quite well for, you know, Grade 12 and beyond to see what they're capable of and where their passions lie.

> SEP: The whole philosophical part of it [place-based education] would be largely connected to the [fact that the] teacher does not hold the power. I mean the teacher has

the power—the teacher has the power anyway. So drop the power. [Let] each kid have their own power. And instead of the teacher standing in the front and saying— I have got the knowledge, let me give you the knowledge—the teacher stands back and introduces [students] to an atmosphere and environment where learning is just going to go wild. They stand back and they respect the fact that student could be expert. They could know a lot of different things and you want to give the students a chance to show all that they know.

These place-based teachers assert that when students are given power to direct their learning and when the teacher reduces the power she/he exerts, students can make choices influenced by both their interest and what the curriculum stipulates. When students are trusted to develop authentic tasks or projects, their motivation to effect changes in the community increases as they understand their efforts can lead to a positive outcome. Students create a deep connection between what they read, research, and their experiences in and out of the classroom.

Addressing curriculum outcomes and assessment. Meeting curriculum outcomes and assessing student progress is a large part of all teachers' work, and this is also the case for these place-based educators. Respondents in this study outline different methods they use to address curricular outcomes and assessment. One teacher states:

I don't have specific outcomes but I connect [the activities] to theory of child development and I connect it to the learning and kinda say what they're learning as we do it. Like even when we went out and collected sticks, just naturally the kids started … comparing them and talking about size. Well that's math. So then I can write about that and connect it to math. (SUP)

Another teacher explains an innovative way to ensure curricular outcomes are covered as well as building capacity to self-assess:

Our kids, they do something called curriculum connections. And so they take all their experiences and they have to find how they connect to an outcome in the curriculum, in a certain subject area. Say we go camping at [historical site], it's social studies based but it's also physical, it's also health related. You know history, and there are so many different subject areas that can be covered there. They have to seek out themselves what they've learnt, and then write a paragraph of how they've learned it. They have their report cards next week and they wrote about fifty pages of what they've learned, according to the curriculum. (DAM)

 Other teachers discuss how their methods of meeting outcomes and assessment are increasingly trusted by administrators:

SAS 1: So we have biology, geology, wildlife management, English, and physical education and those things are much related. So it makes it very easy for us to touch numerous outcomes, on one excursion or in one project. I think for the first few years of any integrated program there would be a lot of oversight in terms of addressing curricular outcomes and a lot of administrators checking on that. But I think now the student learning speaks for itself in a way in the sense that we can show admin any project or any assignment we give them and say it hits this, this, and this.

APJ: So what we use is a portfolio-based system where students collect evidence of their learning and tie that to the curriculum outcomes. When we start a project I've got to give them a list of curriculum outcomes from the variety of classes that we give credit for in [subject areas]. And the outcomes that make the list are ones that I know should probably be, or they should probably come up throughout the project depending on what role they have in the project.

One teacher explores how spontaneous activities that arise from her garden project are connected to the curriculum and how she builds on that learning:

I do continually look through the outcomes and indicators and as I go through I highlight everything that we learned through the garden. And I was actually quite surprised in a good way at how much we did cover by building a garden by exploring, just by going outside, and asking … questions. Like I said we would go out and play. But now, I go out with the idea of I've got to ask a question to take their learning further. What did you find? Why did you find it there? Where did you find it? What should we do with it—all of those questions—as they explore. (PSA)

These statements show how these teachers approach meeting curricular outcomes and assessment through PBE. Generally speaking, students take a leading role in assessing what they have done. Whether it is by means of self-assessment, peer assessment, or the construction of a portfolio, the practice of students assessing themselves is developed. Learning how to demonstrate meeting curricular outcomes is an important area for teachers undertaking PBE to ensure that it is viewed as a legitimate pedagogical approach by administrators, parents, and the Ministry of Education. The wider PBE literature gives evidence that state (or provincial) standards can be met or exceeded through PBE (Demarest, 2015; PEEC, 2010; Powers, 2004; Skoutajan, 2012, Smith & Sobel, 2010; Theobald & Curtiss, 2000). Sharing the responsibility of assessment with students is a learning process for both teacher and student, requiring trust, truthfulness, and honesty, which is built through relationship and engagement in authentic tasks (see, for example, McVittie et al., 2007).

PBE Challenges in Implementation

As expected with pedagogical innovation, teachers identify challenges in the implementation of PBE. Challenges include convincing administration and sometimes students of its benefits and helping students make the transition from a model of education where students are produced as passive consumers to one where students are active, creative learners. One teacher (DAM) referred to this process as *deschooling* (see Illich, 1971).

As well, the extreme cold of prairie winters is often a deterrent to planning learning activities in the outdoors or travelling to other locations.

Convincing administrators and students. Convincing school administrators that the benefits of such programs warrant the additional resources required is a particular challenge for special school programs with a place-based focus:

Getting connect[ed] with the school board, getting them on board to know that they are investing into a different type of classroom, that the start-up cost will be a little bit more having two teachers and getting the proper equipment: I know sometimes for legalities the school board likes you to be supervising all the time but we want to empower our

students, to say that they can handle taking the bus to go to a certain location; they don't need us to babysit them. So lots of startup conversation, like what would a classroom look like, what will be the benefit for our school division, how will we know that this program is working. (DAM)

In keeping with their mandates, school divisions are concerned with the safety of students, ensuring curricular outcomes are met, and fiscal stewardship. On the flip side of this challenge, a concern amongst some students, particularly those in high school, is that this type of program may not prepare them for university:

I think selling it to… the Grade 11 levels is a little bit different than Grade 8 level. And there are a lot of reasons for students going into Grade 11 to not think about place-based. Because there is a number of a Grade 11 programs available they have lot of options; they are getting ready for Grade 12 and university and there are credits and [students are] starting to think about marks and … that kind of detract students from it. (SAS 2)

Deschooling. Focusing on the difficulty overcoming the ingrained practices of schooling, one leader of a special PBE program spent several months deschooling the students:

For us the biggest challenge is that [the program] is always dynamic and transformative…you really want to be student-centered and take their ideas and then allow them to understand that they have the freedom to go to the places where they want to learn. And the hardest part for us is the deschooling process. Like some students, by the time they come to our program, they are already ingrained into sitting into desks and listening to the teacher. So for them to be free and to say I'm in charge of my education, [becomes a difficult process,] and presently we're going through that process…it takes four to five months of deschooling the students, [for them] to know…that they're in charge of their education. (DAM)

The weather. Another challenge identified by some participants was leading place-based activities in a region subject to extreme weather conditions, particularly in temperatures that are frequently below -20 degrees Celsius:

In Kindergarten…they're going to get dirty and it's going to be messy; this isn't going to be easy; it's not very warm outside; I don't really want to go outside. As teachers I think we come to school and we're dressed up [to stay indoors] and that makes us not want to go outside. I think that is something that we have to let go of. As teachers we have to come prepared to get out there. Because every day except maybe if it's minus 45 we might go outside. (PSA)

To undertake PBE, teachers, administrators, and students have to be convinced of its benefits in order to engage the work necessary to be successful and to overcome ingrained habits of schooling. While not mentioned by the participants, we believe that teacher educators have a role in bringing the research on PBE forward to convince administrators and students.

PBE Implementation

Knowledge and skills needed. This research was undertaken in part to learn from practicing teachers how to prepare teacher candidates to implement PBE. Respondents outline knowledge and skills needed by teacher candidates to design and implement PBE in their own

practice successfully. With many learning activities taking place outside of a regular classroom, beginning teachers need a strong understanding of the local community, diverse teaching and learning methods, how to manage risk, and how to accommodate students with special needs.

Understanding the local community. In explaining the importance of teacher candidates understanding the local community where their school is situated, one teacher states:

> They [student teachers] have to know [the area] really well if they're going to love it. So there is the need to bring them out and experience these place-based education programs…if all you do is go out to different places and talk about the value of each place and how what activities you could do there—or better do the activities that the students would be doing there, and experience from a student's perspective. Then when university students finish their program, they'll have this huge repertoire of places that they can visit and know the activities that they can do there and what they're like and how to organize them, as opposed to just knowing about the idea of place-based education or having read some books or written some papers about it (APJ)

The teaching team offers the following suggestion:

> Maybe having each teacher candidate have to lead a class…in the community will give them little bit of an idea of what kind of planning might have to go into [implementing place-based program]…there are lots of things that you can learn about your community while you're in university that you can then take into the teaching world. And if you don't know about them you can't provide them as a teacher…That seems I guess basic to us but it take time to develop and they need to learn that and see the importance and the value to a student. (SAS 1 & 2)

Integrated, inquiry-based learning. These teachers focus on the inquiry-based, integrated, and interdisciplinary nature of PBE and the need for teacher candidates to become competent in this approach to teaching and learning including ways to assess student learning:

> Because if you are given the opportunity to teach in place-based education, you're probably also able to do the integrated learning inquiry where you go out and do all sorts of things. So teaching those types of assessments, like how to use exemplars, how to get students to self-assess properly, [and] how to do it enough so they … develop a stronger sense of what self-assessment is and how to self-reflect properly. (SAS 1 & 2)

One teacher suggests that the local teacher education program does not give instruction in the kinds of assessment needed for PBE: "I think place-based educators should sit down with the [name of program] and share what we use for our assessment tools. Because our assessments are different." (DAM)

Safety concerns. The practicing teachers note the importance of preparing novice teachers to address safety issues while encouraging independence and individual and collective responsibility:

> They [teacher educators] definitely need to address risk management. Risk management, I think, is making sure you have knowledge of the situations you're going to be in. And thinking about all the different scenarios that could possibly happen and how you could

minimize and manage risk. So an example might be, when you're out camping you don't run around, you walk carefully. (SAS 1 & 2)

Other teachers also shed light on their experiences concerning risk management and safety:

APJ: We teach them how to transport themselves. We've been getting better at that and we have certain guidelines about how to bike. Our concern with them biking around the city is they travel in giant mobs and when you do that you kind of think that you're invincible so we've got some limits on that and help them make that transition from someone whose been dependent on their parents to pick them up all the time to someone who is more independent.

DAM: Risk management? We do have a category for that…Like we probably do some of the riskiest things just by biking around the city. You know our division sees that as someone could get hurt every day. Well we've never had an incident. If you prepare the kids early enough, you teach them common sense, you teach them that they're vulnerable, not invincible and then you teach them how to be aware of the surroundings you know, to look more than six inches in front of you and to assess everything. For us those are just life skills that you need to have.

Although place-based education gives students more power to manage their own learning, how to guide them in terms of risk and safety is an important area for novice teachers to learn. Many place-based activities are held outside the confines of the classroom and teachers leading these activities should understand and foresee dangers that students might encounter and teach students how to manage such dangers.

Accommodation of students with special needs. These practicing teachers also speak of the importance of accommodating children and youth with special needs and the additional considerations required for activities regularly taking place outside the classroom. They draw on their instructional practice and experience in regular classrooms as they manage inclusion in a wider array of activities and venues than is usually the case:

We being teachers before in a traditional sense, we are really good at adapting the workload within the classroom. So it's just using those skills again…if you have a student with a physical disability or an intellectual disability….As any teacher you should always adapt if you need to, not force a curriculum on a child but make sure you get the curriculum that best fits the child on their terms. So we're always adapting like even this year we have some students…with some really hard learning disabilities. We don't shy away from that because we don't want our classroom to be… a perfect classroom, it should be a real classroom and it should have some real challenges. (DAM)

Other teachers share strategies for working with students with disabilities:

SAS 1 & 2: We do quite a bit of group work….I think probably like all the place-based programs. So that allows for students to shine in different areas as well and there's ways to modify a project within the group to meet the needs of each student. With two teachers it helps [because] you can address individual needs and really differentiate the programming if necessary.

PSA:[Name of child] would be my example. She has [particular syndrome], which is all of her membranes inside her neck above her trachea have collapsed. And so when it's really cold and really windy she cannot go outside. So what we've done is we've brought the outdoors to her. We bring leaves inside and set them on the table so she could also crunch them and she always has a friend with her.

APJ: And for those students [with disabilities] we just need to find a way for them to contribute to the projects….And when you work together as a team, and you find a role for everyone, you can make everyone feel important and scale the level of difficulty, so that they can all contribute in some way.

While novice teachers may be nervous about taking children with special needs outside the school classroom, these teachers draw on strategies of inclusion informed by adaptation, collaboration, teamwork, and shared responsibility, which mirror the strategies used in classroom teaching. While the accommodation of students with particular needs may present some additional challenges, the 'real world' problem-solving approach of PBE includes meeting these challenges with resourcefulness and a spirit of 'we are all in this together'.

Implications for Teacher Education

Given the broad-based evidence supporting the benefits of PBE as demonstrated in the literature and affirmed by these teachers, it is incumbent on teacher education programs to take up this work programmatically and through research and knowledge mobilization. These practicing teachers' insights are instructive for teacher educators in assisting teacher candidates to develop proficiency in PBE. Their knowledge sharing raises a number of questions and possibilities with regard to teacher education programs.

Like PSA who understands that children cannot be socialized to care for their environment and communities if they are disconnected from the very environment and community they are being asked to protect, we wonder how teacher educators might connect teacher candidates with communities beyond the standard in-school experiences. Are there ways that teacher educators can make the community and its natural environment the classroom (Kirkness, 1998)? If we expect teacher candidates to take up PBE, then it only makes sense that teacher educators model ways to make community connections, whether it is knocking on doors asking to do something together like DAM does, or creating assignments and service opportunities that require learning about and engaging with the community and the environment beyond the university and school.

All the teachers interviewed point to the importance of integrated, inquiry-based, projects that enable learning across the subject areas. Would a systematic review of teacher education programs find the type of instructional and assessment practices that these teachers daily practice? Teacher education programs are typically organized around subject-specific methodologies and practical experiences, which may or may not cohere with university course work (Darling-Hammond, 2000; 2006; Zeichner, 2010). We surmise that if teacher candidates do not experience the authentic tasks and project-based learning associated with PBE, they will be unlikely to teach in this manner themselves. As APJ maintains, having preservice teachers actually experience PBE is more efficacious than reading books or writing papers about it.

If teacher educators shed the assumption that the classroom is the primary venue for learning, then teaching risk assessment and management as well as differentiated instruction to accommodate diverse student needs in a variety of contexts should follow. The disciplinary silos within teacher education, which are reinforced by certification bodies, do present real challenges to the delivery of PBE as do timetabling of classes and the high and often competing demands on professors' time. Nevertheless, these teachers in the field offer inspiration and practical ways of overcoming administrative and attitudinal barriers to offer innovative programming.

While teacher educators may well experience different challenges in implementing PBE than their colleagues in the field, the challenges associated with deschooling are likely to pertain to teacher candidates as well. The typical teacher candidate has been well schooled in the passive consumption of standardized knowledge associated with established disciplines, reliance on teachers as the main source of information, assessment procedures based on technical outcomes and ease of marking, and disciplinary practices aimed to control students (Smith, 2007, p.189). Preservice teachers have generally succeeded in school, and might not understand the need for nor readily accept pedagogical practices, which require them to take charge of their own learning, and to resist standardization. To support a broader implementation of PBE, teacher educators will need to deschool their own instructional practice, an uneasy and likely controversial business.

Conclusion

In light of the overarching goal of learning from practicing teachers who teach from place in order to prepare preservice teachers to use this pedagogical approach, we are looking for success stories. The tenor of these teachers' conversations lead us to conclude that beginning teachers have to strongly believe in the importance of experiential learning and connecting students to the community and be highly motivated to implement these practices if they are to win the support of administrators and overcome the challenges posed by the weather, anxieties about student curricular achievement, fiscal restraint, and the instilled habits of instructional practice that keep students in desks confined by narrow views of learning.

While the benefits of PBE are demonstrated in the literature and affirmed by these teachers, teacher education programs are not leading the way in its implementation. These teachers' suggestions and recommendations point to important first steps for teacher educators. First, teacher educators need to convince themselves of the benefits of PBE and accept their role in research and knowledge mobilization. Their vision of the classroom needs to be extended to include the wider community and its natural environment, and their view of learning needs to be (re)imagined as an integrated, inter-disciplinary practice based in inquiry. Just how to do this is another conversation, but deschooling is a necessary and promising beginning. Let us as teacher educators begin to imagine how that would look in a teacher education context.

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