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Article abstract

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LEARNING TO TEACH, IMAGINATIVELY: SUPPORTING THE DEVELOPMENT OF NEW TEACHERS THROUGH COGNITIVE TOOLS

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ABSTRACT. We propose that *teacher candidates need to have extended experiences with learning to teach imaginatively*, which is to say that teacher candidates need to have experiences that enable them to consider new possibilities in education. We first attend to the general theoretical framework offered by imaginative education before moving on to consider the implications of imaginative education for teacher education programs. We conclude with some provocations to the field that we hope will be of use for those who might wish to join us in considering how we might teach teachers to teach in imaginative ways — a complex sentence with an even more complicated set of implications.

APPRENDRE À ENSEIGNER, DE MANIÈRE IMAGINATIVE : SOUTENIR LE DÉVELOPPEMENT DES NOUVEAUX ENSEIGNANTS À L'AIDE D'OUTILS COGNITIFS

RÉSUMÉ. Nous recommandons que les futurs enseignants vivent un éventail d'expériences d'apprentissage et ce, afin d'enseigner de manière imaginative. Cela signifie que les enseignants en devenir ont besoin d'expériences leur permettant d'envisager de nouvelles avenues en éducation. Tout d'abord, nous nous attardons au cadre théorique général de l'éducation imaginative. Par la suite, nous examinons les répercussions de l'éducation imaginative sur les programmes de formation des maîtres. Nous terminons cet article en mettant le milieu au défi. Ainsi, nous espérons que nos propos seront utiles à ceux désireux de se joindre à nous pour repenser la formation des maîtres, dans l'optique de leur enseigner à enseigner de manière plus imaginative...un énoncé bien complexe ayant des répercussions encore plus complexes.

It is not difficult to find ways to critique the current state of teacher education programs in Canada or in virtually any other part of world. Indeed, many core problems of teacher education programs have been clear for at least 100 years, as is made evident through Vick's (2008) consideration of concerns

raised about the nature and structure of the practicum throughout time. Connelly and Clandinin (1995) invoked a useful metaphor for considering one fundamental and familiar problem of teacher education: *the sacred story* of theory into practice. Most teacher education programs, and indeed most professional education programs, are constructed on the tacit assumption that teacher candidates require theoretical, propositional knowledge before moving into a field experience under the watchful eyes of a host teacher — an environment in which they can ostensibly "practice teaching" based on theories learned in the academy.

The problems with this line of reasoning were persuasively argued by Donald Schön (1983), who made a case that professional knowledge was grounded in a kind of artistry of practice that is ill-suited for the kind of technical rationalist — theory-into-practice — assumptions underpinning most professional education programs. Learning to teach has much in common with learning to be an architect, a doctor, or an engineer: it is not reasonable to expect that the aforementioned professions could be fully taught about all of the contingencies they might encounter when faced with a problem of practice. Schön emphasized that professional knowledge develops as knowing-in-action, which is generated through reflection-in-action. Reflection-in-action refers to the process in which professionals — including teachers — attend to the ways in which their actions in a particular context speak back to them and stimulate new ideas and actions. Schön also argued that the process of framing a problem was crucial to developing professional knowledge, as the ways in which a problem might be framed had profound implications for the ways in which a professional might reflect-in-action.

Yet, for all of the similarities between learning to teach and, say, learning to be a doctor or a lawyer, there is one important difference that demands attention from those who teach future teachers: nearly every future teacher has had extended, significant experiences as a student. That is, nearly every teacher candidate has been the recipient of thousands of hours of the practices of other teachers, whereas few future doctors, lawyers, or architects are able to make similar claims. In his trenchant sociological analysis of teaching, Dan Lortie (1975) named this phenomenon the *apprenticeship of observation.* Of course, it is not a true apprenticeship; the purpose of K-12 schooling is not to teach students how to be future teachers. Regardless, the effects of the apprenticeship of observation are long lasting and considerable; most people have rather strong views on what could or should be done to "fix" education, views that often seem predicated on their perceptions of their former experiences as students in the same systems they criticize. As educational reformer Seymour Sarason (1996) noted, nearly all adults come to considerations of educational reform with inherent insider perspectives.

The problems of teacher education, then, seem rather entrenched, and the dismal history of educational reform seems to indicate that change is slow.

The comprehensive report of the AERA panel on teacher education research, now 10 years old, concluded, in part, that teacher candidates tend to question the value of what they do during coursework, labelling the practicum as the most important feature of a program (Cochran-Smith & Zeichner, 2005). This finding is particularly troubling as Lortie (1975) pointed out that the practicum seems to be more of a conservative force in the education of teachers. Bullock (2016) presents evidence that many teacher candidates believe that the quality of their experiences in teacher education programs rests almost solely on their relationship with their host teachers, from whom they hope to learn pragmatic approaches to teaching and to obtain a suitable reference letter for employment.

There have been several useful suggestions, over the years, for addressing both the problem of theory-into-practice and the effects of the apprenticeship of observation — effects that, initially at least, mean that most teacher candidates teach as they were taught (Bullock, 2011, Zeichner & Tabachnick, 1981). In science teacher education, for example, the use of Content Representation (CoRe) as a way of organizing how one thinks about science content and its attendant problems has yielded some promising results (Nilsson & Loughran, 2012). Hoban (2007) has demonstrated the value of teacher candidates representing a variety of curricular content areas through stop-motion animations created using play-dough, a technique he referred to as *slowmation*. On a more programmatic level, Hopper and Sanford (2010) have demonstrated the potential value of eportfolios as a tool to help teacher candidates make sense of what they learned in their programs. Petrarca (2013) attempted to address concerns about inconsistent practices and expectations of host teachers by developing an innovative, web-based, learning tool designed to help mentor host teachers into their new role.

These innovations, and many others, show some promise for dealing explicitly with problems of teacher education in the 21st century. In this paper, however, we wish to propose another solution: *teacher candidates need to have extended experiences with learning to teach imaginatively*. On first consideration, it may be that the term "imaginative education" is yet another slogan in education — after all, few would argue that we want teachers to be unimaginative in their teaching, or that teacher education should be an unimaginative place for professional learning. We hasten to point out that, for us and for many other teachers and teacher educators, imaginative education has a particular meaning that provides specific warrants and methods for what we call an imaginative approach to teaching and learning. In the remainder of this paper, we first attend to the general theoretical framework offered by imaginative education before moving on to consider the implications of imaginative education for teacher education programs. We conclude with some provocations to the field that we hope will be of use for those who might wish to join us in considering how we might teach teachers to teach in imaginative ways — a complex sentence with an even more complicated set of implications.

IMAGINATIVE EDUCATION

Imaginative education, in its most general form, offers a somewhat new way of conceiving of education and of how knowledge grows in the mind, which in turn has implications for a changed curriculum, changed teaching practices, and changed forms of teacher education. The imagination in this theory is conceived as the ability to think of the possible, not just the actual; it is the source of invention, novelty, and flexibility in human thinking; it is not distinct from rationality but is rather a capacity that greatly enriches rational thinking; and it is tied to our ability to form images in the mind, and image-forming commonly involves emotions. As Wordsworth (1850) noted in *The Prelude*, "Imagination...is Reason in her most exalted mood" (Bk. XIV, line 192).

To simplify the most general features of the theory and indicate what is unique and original about it: imaginative education characterizes how knowledge grows in the mind in terms of a succession of *kinds of understanding*, which are called somatic, mythic, romantic, philosophic, and ironic. These kinds of understanding are constituted by sets of *cognitive tools* (following and elaborating the Russian psychologist Lev Vygotsky's usage), which, in turn, are connected to the acquisition of major "toolkits" that come with:

1. Our bodies (*somatic*) — whose toolkit includes our senses, emotions, humour, musicality, intentionality-infused gesturing, etc.;

2. Oral language (*mythic*) — whose toolkit includes story-shaping of events and facts, metaphors, emotionally charged abstractions (e.g. good / bad, brave / cowardly, security / fear, etc.), forming binary oppositions and mediating, forming images from words, jokes that encourage viewing language as an object and not just a behaviour, engaging puzzles and mystery, play;

3. Literacy (*romantic*) — whose toolkit includes attraction to extremes and limits, associating with the heroic, collections and hobbies, humanizing meaning, narrative structuring, the sense of wonder, changing contexts, revolt and idealism, etc.;

4. Theoretical language (*philosophic*) — whose toolkit includes craving for generality, forming metanarratives, realizing social / historical / psychological agency, forming general schemes and anomalies, searching for authority and "Truth", definitions of self, and so on;

5. Highly reflexive language use (*ironic*) — whose toolkit includes a sense of where we end and the world begins, a modulator of the previously acquired forms of understanding, recognizing the limits and ambiguities of our attempts to grasp the world in words, Socratic buoyancy in the face of recognizing how little we understand.

These *cognitive tools* are aids to thinking developed in human cultural history and learnable by people today to enlarge their powers to think and understand.

We might also think of cognitive tools as those things that enable our brains to do cultural work. They perform for us like mental prostheses. When applied to educational practice, imaginative education and its forms of understanding are unique in the ways it uses feelings and images, metaphors and jokes, rhyme and rhythm, stories and wonder, heroes and the exotic, hopes, fears, and passions, hobbies and collecting, and much else in engaging the imaginations of both teachers and learners. In short, it provides a specific set of warrants and methods for engaging the imagination (Egan, 1997, 2011).

Nearly all methods recommended to pre- and in-service teachers for planning their lessons and units derive from procedures spelled out in 1949 by Ralph Tyler, and developed in the 1960s by Hilda Taba (1962), among others. They all emphasize the need to begin by stating one's objectives, then selecting the content to be taught, then choosing the methods by which the content will be taught, and then evaluating to ensure the content has been learned according to the initial objectives. This is a planning procedure directly transported from the development of factory procedures, for building cars and refrigerators, and described by Fredrick Taylor (1911) in his *Principles of Scientific Management*, which was one of the key documents of the Efficiency Movement in American industry — blueprint; materials required; methods and skills for putting the materials together on the assembly line; quality control. As an alternative or supplement, imaginative education has led to designing new kinds of planning procedures derived from the principles of the general theory, since elaborated and further developed by members of our Imaginative Education Research Group and teachers and professors who have worked with the group. There are varied forms of planning techniques, both for new and experienced teachers, and also for students at different age levels. Using these techniques for engaging imaginations can make teaching and learning, and developing understanding of the content of the curriculum, more interesting, thought-provoking, and pleasurable for students and teachers.

A principle that underlies much of our theoretical and practical work is that all the knowledge in the curriculum is a product of someone's hopes, fears, passion, or ingenuity. If we want students to learn in a manner that will make that knowledge meaningful and memorable, we need to bring it to life for them in the context of those fears, passions, hopes, or ingenuity, either in the lives and emotions of the originators of the knowledge or in the lives and emotions of people in whom the knowledge finds living purposes today. The agent that enables us to do this routinely in our classes is the imagination. If this is the case, then it becomes important to make understanding of and the ability to use these tools of imaginative engagement parts of teacher education programs.

If one makes imagination, in the sense indicated above and counter to some woozy notions of "imagination," it becomes clear that the more one knows about something, the easier it is to be imaginative about it. One problem with current schooling is that we teach students a great many things rather

superficially. As this is the reality of schooling, facing a curriculum that is, in the common phrase, "a mile wide and an inch deep," pre-service teachers are prepared, through some combination of coursework and field experiences, via a regimen of relatively superficial coverage of a huge range of topics and a testing regime that is designed to provide incentives for the students to learn in this fashion. Indeed, many teacher candidates may view so-called curriculum methods courses as the places where they learn the "best" ways to teach particular content in the most efficient ways. A problem with this form of schooling at both K-12 and university levels, however, is that students rarely learn anything in sufficient depth to adequately engage the imagination in the topics and also to expose to them what is wonderful about said topics. The curriculum is supposed to reflect to the child the wonders of our world, but the sense of wonder is not the most prominently evident feature of everyday classrooms.

In addition to its range of methodological innovations for teachers and for pre-service teacher education programs, the superficiality of so much schooling is a further challenge that has been addressed by the Imaginative Education Research Group (IERG). Consider one of the programs designed to help overcome this problem. The Learning in Depth (LiD) program aims to ensure that every student becomes an expert on *something* during their school career. Here is a brief outline of the program, taken from its website:

> Learning in Depth is a simple though radical innovation in curriculum and instruction designed to ensure that all students become experts about something during their school years. Each child is given a particular topic to learn about through her or his whole school career, in addition to the usual curriculum, and builds a personal portfolio on the topic. To the surprise of many, children usually take to the program with great enthusiasm, and within a few months this program begins to transform their experience as learners. The program usually takes about an hour a week, with the students working outside school time increasingly. (Learning in Depth, n.d., para. 1)

It is an unusual program and tends, after the first simple description, to elicit enthusiasm from some people and hesitation from others. While the basic idea is quite simple, we think the potential implications of the program for students, teachers, and schools are profound.

The program began in two British Columbia classrooms in 2008/9; one in Langley and one in Victoria. Since then it has spread to more than a dozen countries, with more schools in Canada and abroad beginning the program each year. This program can be initiated by a single teacher trying it out and seeing where it takes the students. Even if such programs are found to be too disruptive of the usual routines of current schooling, they are examples of ways in which distinctive new programs can affect learning and potentially contribute to the aims of education espoused by most ministry and school "mission statements." As such, they make useful additions to any teacher education program by introducing theoretical issues of considerable impor-

tance and plausibility tied into immediately accessible practice, thus helping to introduce a clear relationship between theory and practice of teaching. If nothing else, they offer rich topics for discussion that can open pre-service teachers minds to new possibilities.

IMAGINATIVE TEACHER EDUCATION: CHANGING THE LANDSCAPE

The preceding discussion positions imaginative education as a theory that encourages learners, regardless of age or subject, to engage any number of cognitive tools so that richer understandings of curriculum might be obtained. If we hope that teacher candidates might teach using some of the ideas from imaginative education, then we should heed Sarason's (1996) caution that new teachers are unlikely to engage in approaches to teaching that they have not experienced as learners. In this section, we offer four potential catalysts for thinking about teacher education program reform in light of imaginative education: a commitment to imaginative pedagogy; a reframing of curricular methods courses; changes to field experience; and continuous, rigorous research.

Imaginative pedagogy

Pre-service teachers must be imaginatively engaged in most, if not all, of their program experiences. An imaginative teacher education program needs to give pre-service teachers regular opportunities to learn using the tools associated with their bodies, oral language, and literacy (as well as those associated with theoretic thinking, as is more typically done in teacher education programs). Imaginative pedagogy ensures that pre-service teachers are imaginatively engaged in their learning, and are given on-going opportunities to observe, participate in, practice, reflect upon, and critique imaginative education. They require the space to imagine what might be possible in education, beyond the effects of their apprenticeships of observation.

Pre-service teachers should be given numerous opportunities to observe and practice a wide variety of pedagogical approaches in varied settings, such as alternative schools, natural setting, artistic centres, home schooling programs, etc. This will help develop a vaster sense of imaginative possibility in pre-service teachers than graduates of more typical teacher education programs tend to have. For a program that aims to support teachers' ability to transform current educational practices, giving pre-service teachers ample opportunities to expand their experiential and imaginative sense of potential is crucial.

New and reframed curriculum methods courses

Imaginative teacher education needs to reframe and refocus existing courses to achieve new ends. Specifically, it is unlikely that, upon program entry, most pre-service teachers will have the necessary subject matter understanding required to successfully create, teach, and critique many imaginative units and lessons for *every* course they might teach in their careers. For example,

one of the authors frequently teaches science methods courses in which those with biology degrees express trepidation about the possibility of teaching high school physics, and vice-versa. Methods courses, which have traditionally been based on the assumption that pre-service teachers *do* have adequate subject matter understanding upon program entry, will need to shift from a focus on breadth (as has been done traditionally) to depth. In such courses, pre-service teachers will explore selected topics more thoroughly than they tend to do in more typical teacher education programs, to develop or deepen their subject matter understanding. By introducing pre-service teachers to various stories of the subject, teacher educators making explicit their own philosophic understanding of the subject, and asking pre-service teachers to continually reflect upon and articulate their own understanding of the subject's story, curriculum courses can help pre-service teachers develop rich philosophic subject matter understanding.

In their courses, field experiences, and other aspects of the teacher education program, pre-service teachers will encounter various educational approaches, interpretations, and theories at work. In order to support the development of pre-service teachers' philosophic understanding of education, imaginative education, etc., an imaginative teacher education program needs to create a course designed for the exploration and integration of pedagogical understanding. Such a course might not require more than an hour or so a week, but, extended over the whole program, it could be significant in helping to develop both program coherence and rigour and rich philosophic understanding (of pedagogy, curriculum, etc.) in pre-service teachers.

Finally, imaginative teacher education needs a course where pre-service teachers can consider the relationship between themselves and imaginative teaching (Chodakowski, 2009). Imaginative educators' self-understanding is critical for two reasons: they must be reflexive about their own teaching; and they must recognize that how they interact and connect with students is central to effective imaginative teaching and learning. The course will not be an exercise in self-absorption; rather, it will draw on contributions of educators from both formal and informal contexts, related literature, and reflections from pre-service teachers' own teaching experiences to help pre-service teachers develop an imaginative understanding of themselves as teachers and a deeper sense of how relationship are fundamental to effective pedagogy. Again, such a course need not take more than an hour or so a week. Ideally, it would continue throughout the year; if this were not possible, then it would be most effective nestled around the field experience.

Changes to field experience

The field experience of an imaginative teacher education program should give pre-service teachers a deep sense of the imaginative possibilities of education: that children, the curriculum and they as teachers are capable of more than

they had originally supposed. The field experience of more typical teacher education programs tend to initiate pre-service teachers into the profession — characterized by a focus on the practical — by way of imitation and isolation. In contrast, an imaginative teacher education field experience will be based on *experimentation*, *inquiry*, and *collaboration*.

Experimentation. More typical teacher education programs tend to encourage pre-service teachers to imitate their cooperating teachers; safety and predictability tend to be highly valued. In contrast, an imaginative teacher education program will want to encourage pre-service teachers (and cooperating teachers) to take intelligent risks. A good deal of this experimentation will be considered and discussed in advance by pre-service teachers, cooperating teachers, and supervisors. Yet, some may be spontaneous, emerging out of the particular context existing between pre-service teacher, students, and curriculum. All members of the triad (preservice teachers, cooperating teachers, and supervisors) must be given opportunities to experiment, to reflect on the success or failure of those experiments, to consider the place of failure in teaching, and to build effective professional relationships that take into consideration the place and effect of experimentation.

Inquiry. Basing the field experience on inquiry means that pre-service teachers will need to spend less time teaching during field experience and more time observing and critiquing student learning and their own and others' teaching. This shift means that the triad members' expectations will be broader and richer. Pre-service teachers will still need to demonstrate adequate management of the challenges of teaching the curriculum to real students. However, they will also need to inquire critically into many aspects of education. Field experience, then, must give pre-service teachers exposure to a rich repertoire of educational possibilities, so that they can consider those possibilities using the theoretical tools they are developing. Action research is one possible framework for this kind of inquiry.

Pre-service teachers will also need time to inquire about the particular students with whom they are working; effective imaginative teaching requires familiarity with the characters, interests, sense of humour, etc. of the individual students with whom one is working, so that these may be taken into consideration in the planning, teaching, and assessment of imaginative units and lessons.

Collaboration. Even if cooperating teachers with whom pre-service teachers are paired are fairly confident and adept imaginative educators, the relationship between them (as well as the relationship of both with the supervisor) will not be that of an expert initiating a novice. Rather the relationship will be characterized by more reciprocity — a give-and-take of interests, needs, and benefits. Central to imaginative education is the teacher's own imaginative engagement with the curriculum, or some degree of personal ownership of (or authentic, meaningful relationship with) the curriculum. In other words, it is impossible

for a pre-service teacher to simply imitate a cooperating teacher in her or his imaginative practice to become a successful imaginative educator. More collaborative — and thus dynamic — relationships between triad members clearly require allotted time to be successfully built and sustained. An imaginative teacher education program, then, must allot time and a safe environment in which triad members can reflect upon and communicate the goals, successes, and challenges in their collaborative work.

Triad relationships based on collaboration and reciprocity require supervisors to spend more time in schools during the field experience — observing, participating in, and reflecting upon imaginative planning, teaching, and assessing. Such relationships also require pre-service teachers to assume more responsibility than they tend to do in field experiences of more typical teacher education programs — playing a more central and active role in conferences, assuming a leadership role in education sessions for cooperating teachers, etc.

Indeed, basing the field experience on experimentation, inquiry, and collaboration requires some adjustment to the roles and responsibilities assumed by cooperating teachers and supervisors in more typical teacher education programs. While we do not have space to explore this topic in this article, we should note that an imaginative teacher education program will want to make the roles and responsibilities of supervisors and cooperating teachers clear to all, and that those roles will need to be explored, and perhaps reframed, in the context of an imaginative teacher education program.

Rigorous, ongoing research

The reflexivity and inquiry central to imaginative teaching must be embedded in the structure of the imaginative teacher education program itself. Ongoing rigorous research is one way in which this can be done. Program research must be *comprehensive*, integrating the perspective and experiences of all program participants (including pre-service teachers, their students, cooperating teachers, teacher educators, etc.). Data should be collected on a *continual* basis, so that changes in understandings, and possible sources for those changes (such as particular program features or specific experiences or individuals), can be noted. Data should be collected on program entry, during coursework, during field experience, and once graduates have entered the teaching profession. Obviously, data collection needs to be triangulated / conducted in a variety of ways (self-reporting, observation of behaviour, etc.) and contradictions and nuances noted. Research findings need to be *well documented*, and made *available* to all members of the imaginative teacher education community, as well as to the wider educational audience. Findings should be used to *shape future program policy and practice*. An imaginative teacher education program must keep itself open to critique and to the ways in which changing contexts must be considered in program design and delivery. In this way, research can be used effectively to keep the particular design features of imaginative teacher education vital and evolving.

It is impossible to implement the theory of imaginative education as theory-into-practice: built into the theory is self-critique, an acknowledgment of contextual variance and inadequacy, etc. As a living educational theory, imaginative education has myriad possibilities for manifestation. Classroom teachers, then, can also be rich research sources – their experiences and perceptions can be used to further understand and shape the theory as well as the program's future direction.

CONCLUSIONS

Teacher education programs can be at once regarded as successful and unsuccessful. There is no shortage of caring, committed, professional educators who are deeply invested in working with students in thoughtful ways. From this perspective, teacher education programs should be thought of as being successful, at least in a certain sense of the word. Yet teacher education programs are frequently derided by new and experienced teachers, and by faculty members themselves, as having dubious relevance to the actual work of a teacher and as being not particularly rigorous or engaging – at least beyond the practicum experience. Considerable research exists that highlights a pervasive concern about the efficacy and value of teacher education programs. For those of us who believe that teacher education programs can contribute meaningfully to the development of future teachers, it is important to articulate the ways in which programs might be changed to stimulate new ways of thinking.

Schön's (1983) critiques of technical rationality were, for a time, heavily cited in the literature on professional education. LeCornu and Ewing (2008) argued that the addition of ideas about reflective practice to considerations of field experiences in the years following Schön's (1983) book partly stimulated the move from talking about "practice teaching" to talking about "practicum experiences." Indeed, a fundamental tenant of adopting reflective approaches to learning to teach seems to be adopting what Schön (1987) later referred to as a coaching mindset – pre-service teachers are not empty vessels to be filled with techniques to practice in the field; they require opportunities to explore forms of teaching together with an experienced practitioner. Imaginative education may lend itself, in particular, to joint reframing on ideas about teaching and learning because it begins with cognitive tools and forms of understanding, rather than particular methods for dealing with specific curricular content. Herein may lie a particular challenge – that of finding space and time for the kinds of Schönian joint experimentation we advocate.

The forms of imaginative education described above are greeted by many pre-service teachers with relief, in that the approach seems to them to warrant forms of teaching they would like to employ but for which they feel no support or approval from their institution's program or from the schools they go to practice in. Sometimes they are embraced because they provide forms of

teaching that they find attractive and would not otherwise have known about. And, of course, there are also those who find them either too alien to their preferred approaches or not adequately supported within their conception of the teacher's proper role. But, for many others, imaginative education offers a challenge to their initiative in forging an approach to teaching that does not follow the patterns they experienced as students. For these students, especially when they do not have direct access to instruction in Imaginative Education and/or modelling, the challenge is to gradually incorporate some of the cognitive tools among their personal teaching resources.

Any such exploratory process with cognitive tools will also stimulate reflection on teaching practices in general and even on the aims of education itself. That is, engaging students' imaginations in learning, if incorporated into a teacher's daily resources and approach, is not simply a means or technique that aims to be more efficient at achieving the same previous aim. As John Dewey (1897) argued in his "pedagogic creed," means and ends in education are inseparable. In choosing our means, in some inescapable degree we are also making choices about our ends. Engaging our students' imaginations is not merely a value-free utility but also a value we enact in the process of educating, and encouraging the development of students' imaginations, as a means and aim of our pedagogy, is quite different from putting relatively little value on this aspect of our experience.

The changes to the principles and practices of teacher education that we advocate are rather idealistic. We realize that our suggestions would need to be adjusted, given the very real constraints of particular teacher licensing boards, university budgets, recruitment possibilities, etc. However, even with modifications in their implementation, these suggestions have the potential to challenge the sacred story (Connelly & Clandinin, 1995) of theory into practice and the apprentice of observation that seem to perpetuate teacher education program inefficacy. Because imaginative education radically alters how pre-service teachers learn to teach and how they learn about teaching, at best, it could significantly improve pre-service teachers' and K-12 students' learning and their enjoyment of the process. At the least, it would make teacher education programs more imaginative, more transparent, more rigorous, etc. In our view, either of these options is a significant improvement to what is currently being done in most teacher education programs.

For the last decade, Imaginative Education Research Group at Simon Fraser University, we have been experimenting with how imaginative education might shape our teacher education programs. This has included: offering particular courses on imaginative education within the structure of current teacher education programs (add-on); designating imaginative education cohorts within the structure of current teacher education programs (theme-based); and offering Masters degrees and professional certificates in imaginative education (program

creation). We encourage other faculties of education to experiment with their own program design and delivery to consider ways in which they might make the imagination more central to the process of learning to teach.

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