Educating Teachers and Fostering Authentic Professional Learning in an Era of Austerity, Global Competition and Quality Assurance Rhetoric

Jeff Stickney

Ontario Institute for Studies in Education, University of Toronto,

jeff.stickney@utoronto.ca

Abstract

Writing from the perspective of both an instructor in a teacher education program at University of Toronto and more importantly as a mentor for teacher candidates in the classroom, hosting for over twenty years student teachers from six universities in Ontario and New York, the paper explores the master-apprentice relationship within the practicum placement in schools – drawing philosophically on Martin Heidegger's reflections on apprenticeship, Donald Schön's pragmatic emphasis on studio work and Lee Shulman's focus for training on developing subject related pedagogical-content-knowledge, to resituate the significance of what many educators and student-teachers say forms the core of teacher education. Subtle changes in teacher education over the last thirty years, set against dominant themes of professional autonomy and agency within sweeping educational and economic reforms such as the neo-liberal accountability and austerity movements, are sketched in order to follow their arc or trajectory into possible futures. Using a Foucauldian genealogical approach, the author aims to show how we could think and act differently in our practices and governance of teacher education.

Keywords

teacher education – accountability – professional autonomy – education reform – Heidegger – Foucault – teacher agency – normalization – technology – mentoring

1 Introduction

Addressing the broad topic of ‘The Future of Teaching and Teacher Education,’ it is humbling to consider the limitations on one’s own perspective as each of us invests our time and energy in only a small sector of the educational field. Here I reflect on my experience as a secondary school teacher for thirty years, focusing in particular on my role as a mentor, hosting teacher candidates from six universities in Ontario and New York for over twenty years. As an academic, for just over a decade now I have worked as an instructor at the Ontario Institute for Studies in Education at University of Toronto, teaching graduate students in philosophy of education (the subfield where I mostly publish) and teacher-candidates in the secondary-level subjects of geography, social sciences, and philosophy. Although my activism as a teacher advocate in education reform movements has given me considerable insider perspective,¹ it is localized within the Province of Ontario in Canada, and even more narrowly in a highly ranked York Region ‘lighthouse district’ on the fringes of the Toronto metropolis. My reason for dwelling biographically is to concede that the terrain is so vast around this topic that nobody could claim to have a synoptic view of the whole field (past/present/future). The literature, too, is beyond encapsulation, comprising numerous journals and volumes such as the *Handbook of Research on Teaching* or the *Encyclopedia of Teacher Education*. With these reservations now in the foreground, what individual authors can contribute are the storied paths we have walked, marking the trajectories we have traced throughout our careers, researches and activism (see Goodson 2008).

I first survey (in section 2) two major discourses in education – authenticity and accountability rhetoric – and then demonstrate (in section 3) how my own teaching and mentoring experience was affected by the confluence of these two currents of thought. I begin with enduring qualities in the apprenticeship relationship between in-service teachers and pre-service teachers, something valued when deemed ‘authentic’ both philosophically and in several current educational reform initiatives – on both grounds, well worth actively preserving into the future. I then contrast econometric accountability language used in global education reform movements, what Finnish educator Pasi Sahlberg

1 I served on curriculum review teams for the Ministry of Education, co-authored and advised on textbooks and teacher resources for secondary education, served as Department Head and Regional Co-chair in my subject, worked as a central agent in a district-wide educational change initiative in York Region along with my Teachers Federation and was an active member of the union (delegate to the annual meeting for fifteen years and serving on two Provincial campaign teams for executive).

(2012) refers to caustically with the acronym GERM, with more locally responsive reforms, showing how education systems can become entrenched in command and control functions related to accountability. In taking these up, I look briefly into technology as both a promising and dangerous intervention in education, framing the conversation with Heraclitus' (1979) aphorism: "The bow and lyre are one in the same." Offering these brief vignettes of teacher education I am working genealogically rather than empirically in that these narrative constructs are neither precise chronicles nor vapid futurology but rather probing surveys: using immanent critique to assay the liminal ground of potentiality found in recent or present circumstances. How these cases actually develop in the future is uncertain, open to many contingencies we cannot determine now, but in extrapolating from our current surroundings we can better see or *problematize* how our situation could be otherwise (see Foucault 1994a).

2 The Confluence of Two Currents in Educational Discourse: Past, Present, and Future

Words only have meaning in the river of thought and life.

WITTGENSTEIN, 1967, *ZETTEL* §174; CF. §173

In educational discourse there are many cross-currents of thought: some which endure for millennia and others that spring up with great splash and fanfare only to dry out quickly. These are the linguistic 'resources' (Old French, 'well-springs') we draw on almost automatically when talking about present or future affordances and restraints on teaching and teacher education. As Wittgenstein remarked, "Conversation, the application and interpretation of words flows on, and only in the *flow* of life does a word have its meaning" (*Zettel* §135), by which he meant to say that our expressions only have meaning in the present contexts of usage, embedded within our shared, evolving practices and second-nature reactions into which we have been gradually trained and acculturated. These flows of thought and words are channelled by the 'riverbanks' of our deeply sedimented but continuously eroding and redepositing knowledge and value-systems, on which we tacitly draw when making judgments of the rightness or wrongness of various educational reforms (see Wittgenstein 1969, OC §§94–98; see Peters & Stickney 2018, Ch 4). What appears at a given time to 'us' – those who share overlapping elements of cultural-linguistic ways of seeing and regarding (Wittgenstein 1968, PI, pp. 104–214) – to be a 'sound' educational practice or 'likely' and 'preferred' prospects for future development

depends upon this shared base of historically and linguistically contingent, ontological ground (Stickney 2009a, 2009b, 2012).

2.1 *Authentic Relations within Teacher-Pupil, and Master-Apprenticeship Relationships*

One of these ancient tributaries to present and future thinking is authenticity discourse, harkening back to a Delphic tradition in philosophy with Heraclitus and Socrates' admonitions to examine and know ourselves. Heraclitus' (1979) proclamation, "I have searched my nature", takes pedagogical expression in Pindar's exhortation (*Pythian Ode*, II, 72; in Heidegger 1959, 101): "Mayest thou by learning come forth as what thou art" (*genoí hoios essi mathon*). This catchphrase became Nietzsche and Heidegger's motto for their non-essentialist philosophies: ontological projects of searching one's genuine potentiality for being and becoming (Nietzsche 1965, 2–6, 129; Heidegger 1996, I.V.31,136; see Thomson 2005). The theme of moral perfectionism and self-flourishing to reach one's latent capacities is also found in the virtue ethics of Aristotle and Confucius, but Nietzsche extends a path toward self-overcoming and self-stylization that is more re-evaluative and creative. Education, on these accounts, begins with discovering what Nietzsche calls the 'higher self' and earlier Emerson the 'over-soul': "Your true nature lies, not concealed deep within you, but immeasurably high above you, or at least above that which you usually take yourself to be" (Nietzsche 1965, 129; cf. Emerson 1965, 267 & 300). Although a liberation motif also runs through Plato's "Allegory of the Cave" in the *Republic* (1968, Bk.7), in Nietzsche's *Schopenhauer as Educator* (1965, 6) this takes stronger form: "Your educators can be nothing more than your liberators." In this project of self-discovery and self-overcoming, exemplary role-models may be the catalyst for change, thus becoming one's 'educator'.

Certainly, there are other means of finding oneself, of arriving at one's self out of the narcosis in which one usually moves as in a black cloud, but I know of no better way than to think of one's educators and molders. (1965, 6)

As Heidegger (1996, 167) explains it in *Being and Time*, authenticity is not however something 'hovering above our entangled everydayness' but rather (existentially) a 'modified grasp of everydayness'; thus, the process can never be completed or finished (BT, §179). In Heidegger's writing this takes the form of ebbing and flowing between our ordinary states of inauthenticity and fleeting, heightened moments of awareness when we grasp our ordinary condition of

tranquilization within the public they-self (cf. Bonnett 2001, 25–26; cf. Bonnett 2002).

The phenomena pointed out of temptation, tranquilizing, alienation, and self-entangling (entanglement) characterize the specific kind of being of falling prey. We call this kind of “movement” ... the *plunge*. [We] *Da-sein* plunges out of itself into itself, into the groundlessness and nothingness of inauthentic everydayness. But this plunge remains concealed from it by the way things have been publicly interpreted so that it is interpreted as “getting ahead” and living “concretely.”

The kind of movement of plunging into and within the groundlessness of inauthentic being in the they constantly tears understanding away from authentic possibilities and into tranquilized supposition of possessing or attaining everything. Since the understanding is thus constantly torn away from authenticity and into the they (although always with a sham of authenticity), the movement of falling prey is characterized as *eddyding*. (Heidegger 1996, 166–67; B&T I.V.38, §178)

This tidal event also occurs within teaching, taking both teacher and pupil into momentary, rare states where ‘authentic learning’ can take place, occasioned by a ‘releasement’ (*gelassenheit*) toward the Otherness of the pupil (and teacher).

Heidegger depicts this process of self-learning through a description of the master-pupil relations with apprenticeship, comparing teachers to cabinetmakers. In becoming a ‘true’ cabinetmaker as opposed to someone just doing busywork, Heidegger says the person acquires a ‘relatedness to wood that maintains the whole craft’, learning to “respond above all to the different kinds of wood and to the shapes slumbering within the wood” (1977a, 355). Heidegger expounds (1977a, 356), taking us into a meditation on what it means to teach and learn, and lamenting that people are not valuing enough the role of the teacher (356–57):

Whether or not a cabinetmaker’s apprentice, while he is learning, will come to respond to wood and wooden things depends obviously on the presence of some teacher who can teach the apprentice such matters.

True. Teaching is even more difficult than learning. We know that, but we rarely think about it. And why is teaching more difficult than learning? Not because the teacher must have a larger store of information, and have it always ready. Teaching is more difficult than learning because

what teaching calls for is this: to let learn. The real teacher, in fact, lets nothing else be learned than – learning. His conduct, therefore, often produces the impression that we really learn nothing from him, if by “learning” we now automatically understand merely the procurement of useful information. The teacher is ahead of his apprentice in this alone, that he has still far more to learn than they – he has to learn to let them learn. The teacher must be capable of being more teachable than the apprentice. The teacher is far less sure of his material than those who learn are of theirs. If the relation between the teacher and the learner is genuine, therefore, there is never a place in it for the authority of the know-it-all or the authoritative sway of the official.

“Knowing one’s material” is a familiar refrain for teachers, and is frequently coupled with an equally important aspect of teaching: “knowing one’s students.” A frequently heard slogan in education goes: “I teach students, not subjects.” (see Moje 1996). Profiling or charting students’ interests, hobbies, aptitudes and needs is a contemporary example: a practice in which teachers are then encouraged to tailor curricula to individuals by seeking opportunities for differentiated instruction and assessment, and thus not running the class as though everyone was on a canoe trip and arriving at landings or camp sites at the same time. Taking this further, we are again hearing questions (recall the 1960s) about whether we still need traditionally defined subjects like history and geography, biology and art, or whether we should move toward more inquiry- and project-based learning? Some educators worry, however, that too much would be lost in reorganized schooling around individual interests and skills transferable to occupations instead of conserving our Western heritage of liberal arts (see Hirst 1965, criticizing the Harvard reforms): what Oakeshott (1972, 1975) famously described as conversations begun in the ancient forests and brought to finer distinctions as the liberal arts. Does cross-disciplinary work presuppose the integrity and development of these subjects, and what would teacher education become if we did not maintain subject expertise as a foundation for teaching?

While still cherishing subject-based content in teaching, David Hawkins (1974a, 25) makes personalization the foundation of his philosophy of education: “Not to recognize individuality is not to educate.” Hawkins emphasized the need to cultivate organic learning experiences in curiosity-based learning, gained from working with existing student interests and resources instead of maintaining allegiance to a set agenda, as in programmatically adhering to the rigid and measured learning goals of a pre-planned curriculum. Hawkins

(1974a, 28) is critical of this elitist form of technical expertise, indifferent to the needs and capacities of individual teachers and students: “Somehow one was supposed to be wise enough to define an all – encompassing set of ends before one had acquired the slightest bit of good sense about the nature and potentialities of the materials....” Standardized curricula are delivered to students without regard for their existing interests. The goal there is to achieve uniform outcomes; all students learning the same things in the same ways, at the same times. Hawkins (1974a, 29) counters: “...we should first involve children in observation and inquiry with the tools they already possessed....” Inspired by Martin Buber’s (1970) relational work in *I and Thou*, in his essay “I, Thou and It” Hawkins (1974b) adds to this dynamic human interaction a vital relationship with the content or subject-material. Dawkins’ triadic relationship forms the “instructional core” within the Harvard-based educational reform initiative, *Instructional Rounds in Education* (City, Elmore, Fiarman, & Teitel, 2010). It is also endorsed albeit underplayed in practice, without explicit reference to Hawkins, in the *School Effectiveness Frameworks* (SEF) initiative found in the UK, Canada and the US. I will return to this in the next section, as it is an example of the other major current in educational discourse: more technological and economic in its terminology, overriding this aspect of authenticity.

Authenticity has a rich history in educational discourse, and is likely here to stay for many generations to come (see Cooper 1983; Bialystok 2018; Bialystok and Kukar 2017). Of course, authenticity rhetoric too is open to critique, and its use in education may be suspect. Are computer simulations really authentic (see Petraglia 1998), or do they contribute to the gamification of education? More dashingly, Foucault (1988, 4) takes self-stylizing even further, not into an authentic self (the projects of Sartre and Heidegger) but more freely “becoming what one is not” (Foucault 1988, 4; see Stickney 2013). Who, after all, decides on what counts as being authentic, or from what objective vantage point can we ascertain when this event has been achieved even if momentarily?

2.2 *Accounting for our Practices: Verificationism in Education*

Our second tributary current in educational discourse is traceable very generally to the rise of positivism in the early 20th century, and to forms of *scientism* seen in large-scale social engineering projects (from tree plantations to urban design; see Scott, 1998), but also in ‘systems improvement’ and ‘system alignment’ initiatives in global and local educational reform movements (see Stickney 2015). If there is a motto here, it can be heard in calls to be “data-driven” and to follow “evidence-informed” theories and practices. Adherents to this way of thinking and speaking will likely find this narrative paper to be a rather fluffy conceptual ‘think-piece’, its claims and methods sadly lacking

in empirical validation and analytical-statistical form. Are my findings valid and generalizable? Nods to quantification and empiricism are consistent with positivism, as is regarding verification as the token of meaning or shibboleth for administrative approval. Apparently, even students' perceptions of teacher authenticity can be measured (De Bruyckere & Kirschner 2017).

Working within this mindset, performance indicators or assessment criteria are sought to gauge student and teacher success against competitors (see Stickney 2009a), using both state/provincial tests and international metrics like the OECD's PISA scores. "To not rely on these 'tools' is to incur needless waste of public funds," so the flow of words goes, which brings us into a different ethical model: Featuring the virtue of thrift, it appeals to austere conservation of resources and quality assurance in expenditure in an effort to make informed, efficient use of tax dollars – an economy of measurable value-for-expenditure. As Peters (2005) describes this thinking, its hallmark is actuarial reasoning, where probabilities are assigned to events to ensure probable success and minimize risk, as in curtailing school trips and sports that might involve injury and thus litigation. Many veridical discourses in education move within this larger current, for instance when we discuss the merits of same-sex or combined classrooms, assessing the benefits of focusing the curriculum on STEM or STEAM,² or using wider distribution of technology as with the Los Angeles school board spending \$30 million to provide students at 47 schools with Apple's I-pads (2014, <https://www.latimes.com/local/education/la-me-lausd-laptops-20140630-story.html>).

The econometrics behind this thinking also impact teacher education, as we now talk about a 'value-added' approach to professional development (see Price 2014), as though manufacturing teachers from raw materials and marketing their skill-sets. Some critics, echoing Michael Oakeshott (1972, 1975), see this as a betrayal of traditional liberal education as the pursuit of knowledge for its own sake and the development of students more fully as human-beings (Peters, R.S. 1965; Ridley 1998). As purveyors of these skills, teachers are considered 'capital' assets, a financial term in relation to teacher enhancement, although sometimes used in the more benign anthropological form of cultural or social capital (see Bourdieu 1998; Hargreaves, D. 2001; Hargreaves, A. & Fullan, 2012). Illustratively, Farrell (2015, 461) speaks in these managerial terms with respect to capturing school-generated data and mobilizing various resources to work in concert toward shared goals of enhancing student success, cited by the Toronto District School Board in its efforts to align resources toward 'school effectiveness' (see Sinay & Ryan 2016, 17–18):

2 Science, Technology, Engineering, Maths; or, adding in Arts to STEM = STEAM.

Human capital, technology and tools, and organizational practices need to be aligned in order to increase knowledge flow ... [and] Human capital resources, such as dedicated support positions (e.g., coaches) and professional development, are critical for collaboration, co-construction of new ideas, and joint work. These social interactions help establish social norms around information sharing and provide opportunities for shared sense-making.

These concepts and metaphors, which alter over time along with the ontolinguistic ground for our thinking about education, both reflect and '*tropologically* preconfigure' our thinking about teacher education (White 1973; Lakoff & Johnson 1980/2003; Miller 1995). As Wittgenstein (PI §570) says:

Concepts lead us to make investigations, are the expression of our interest, and direct our interest.

The venerable authenticity discourse is likely to continue for another two millennia; I would argue that accountability rhetoric is also likely here to stay, at least for the foreseeable future. Despite positive trends in education over the last two-hundred years (see Roser and Ortiz-Ospina 2018), there are growing disparity gaps within and between jurisdictions.³ Ontario, for instance, is a wonderful place to live but is also the most indebted subnational entity in the world, with growing deficits incurred to maintain its two major budget items: world-class healthcare and education systems. Cutbacks in education are already under way with the new government in Ontario, and court challenges to curriculum change⁴ and labour unrest are on the horizon as I write.

The Ontario government is also challenging the Federal government over carbon taxes, marking a global battleground over the costs to our economy in pursuing the Paris Accord's internationally recommended conservation efforts. As the 2018 UN report on climate change warns, with average temperatures approaching 2 degrees Celsius above pre-industrial times, we are drifting in the late Anthropocene toward global environmental catastrophe and with

3 Although demographers forecast world population levelling off at 12 billion (Rosling 2013) by the end of the century – five times the number when I was born in the 1950s.

4 Last spring the newly elected Doug Ford Progressive Conservative government retracted the 2015 sex education curriculum and reverted to the 1998 one, resulting in challenges from Elementary Teachers' federation and human rights groups in Ontario. Teachers were warned not to go against the reversal, and a 'snitch line' was set up for parents to report teachers who transgressed the policy.

this degradation of earth (not to mention the possibility of another world war) the likelihood of economic and perhaps even as archaeologist Ronald Wright (2005) suggests, civilization collapse.⁵ Many faculties of education around the world (such as OISE) are now incorporating environmental sustainability education as a mandatory, transformational component of teacher training, striving to address the altruistic UN Sustainable Development Goals (ambitiously, by 2030) by preparing students for the 21st century global competencies they will need – such as independent inquiry, critical thinking and team problem-solving skills – as well as feelings of sensitivity to and collective responsibility for environmental and humanitarian crises. Learning to “become who one is,” will continue to be conducted within a mantra of learning within one’s means, and possibly just learning to survive. As we see in the next section, this applies also to teacher education, where frequently discovery and care of the self is coupled with accounting for oneself and one’s methods.

3 Teachers’ Formation in the Cross-Currents of Educational Discourses: Cultivating Authentic Professional Learning and Growth during an Era of Restraint

In the final section I offer a narrative account of how these two currents of educational discourse have intersected in my own teaching experience, noting their impact on how I worked with colleagues and teacher candidates. Looking back historically and more deeply into present conditions, I am using Foucauldian genealogy to develop perspective on teachers’ normalization, agency and governance. Although fraught with difficulty, I also try to anticipate or envision how this enterprise in teacher formation might continue to develop in the future.

3.1 *Teacher Education as an Emergent and Evolving Institution within the Modern Nation-State*

When high school students graduate we hold “commencement ceremonies,” giving families opportunity to celebrate their child’s achievement in completing twelve years of formal education. The origin of the term dates back to when graduation day ‘commenced’ the next phase, where the student potentially

5 See the documentary films, *Anthropocene: The Human Epoch* (2018) by Jennifer Baichwal, Nicholas de Pencier, and Edward Burtynsky, <https://www.youtube.com/watch?v=puE32LuxPz4>, and their earlier film *Manufactured Landscapes* (2006), <https://www.youtube.com/watch?v=ie5SJ39LsDg>.

becomes a teacher. It is easy to take for granted the professionalization of teaching, begun relatively recently in the mid-19th century (1897 in China; Li 2012) as national school systems emerged within modern nation-states.

Prior to 1847 no training or certification was required to teach in Ontario. Most teachers in the 'common' schools that served the general public were barely literate, poorly paid and itinerant. In 'grammar schools' that served the financially secure, teachers were usually clergy or university graduates with no training in pedagogy. (Kitchen & Petrarca 2014, 57)

Today we would hesitate to recognize the preparedness of such young, untrained persons with limited knowledge, and reasonably expect post-secondary education in the liberal arts or other professions (e.g., law, engineering, medicine, athletics, etc.) before or concurrent with teacher education. In some jurisdictions like Finland, a Masters' degree is required to better ensure competency within a subject area, possibly granting more relative autonomy in terms of curriculum choice and development (Sahlberg 2011). After completing my Masters' degree, I entered a one-year teacher training program at University of Toronto's Faculty of Education 140 years after Superintendent Edgerton Ryerson had founded his Normal School and Model School, establishing a system of both teacher training and inspection. A decade later, Ontario created its College of Teachers, like the College of Physicians and Surgeons regulating licensure and discipline, officially declaring the professional status of teaching. Provincial legislation also mandated teacher inspections: twice in the first year for new teachers, and once every five years thereafter. As of 2014, Ontario moved to a two-year program in teacher education; as Dean Jane Gaskell of OISE had noted, prior to this change hair dressers required ten months training compared with eight for teachers. Whether twenty-four months produces better teachers is debatable, but most graduates of our faculties of education spend many more years doing supply teaching for absent teachers or teaching abroad (often promoting English language learning) before interviewing for a permanent contract teaching position. Readiness to teach is a variable standard, but the trend is toward lengthening the time spent in preparing for and training in teaching, and then reassessing their competency in periodic intervals of interviews and classrooms visits.

Another trend, however, seen increasingly in the UK is toward extending the time spent in schools doing practicum placements, at the expense of time spent in university settings doing more theoretical work toward research-informed practice. Coupled with this trend toward in-school apprenticeship

is the perception of teaching as a craft (see Winch 2019), and possibly with this de-professionalization less oversight by faculty of education professors, reduced pay and benefits (extended medical, pension, etc.). When my teacher candidates say that their practicum placement is the most important aspect of their training, I remind them of the danger of de-professionalization and also of the difference between ‘teacher training’ and ‘teacher education’ – the latter having more to do with the formation of a professional self that is capable of growth and increasing autonomy (self-regulation and development) over the span of their career (see Heilbronn, 2019).

3.2 *“Becoming who we are” through Teacher Training and Practicum Placements*

The reason most teacher candidates hold their in-school placement (practicum) in higher estimation than their university coursework is that being in the schools and classrooms is considered more “authentic” than anything we can simulate or discuss in our university-housed seminars, and developing lessons they actually teach is more genuine than writing essays or doing projects on teaching. Even when we assign projects like developing units of study for a segment of a course, or have candidates conduct mini-lessons before their peers, these gestures toward authentic assessment pale in comparison with developing lessons one delivers the next day in front of thirty students and the discerning eyes of one’s associate host-teacher. Not all placements are authentically good, however, and so we worry about our candidates being rushed too quickly into taking full responsibility for the hectic cycle of instruction and assessment, or in the process receiving advice that is antiquated in its techniques and based on stale habits rather ‘best practices’. My student teachers at OISE tell me that often their Associate Teachers leave them unsupervised in the classroom, which is a circumvention of their legal and contractual obligations to be adult (substitute parent, *in loco parentis*) responsible for the students. Some reformers liken the common knowledge and practice in schools to folk medicine, and ask if we would train doctors by sending them into the country not to share their knowledge (as in China’s barefoot doctor program) but to acquire in the field methods that are not research and evidence-informed; however, there is something rather arrogant in this phrasing, in making knowledge transmission a one-way, top-down flow from universities and normal schools to the field (where grows some of the most powerful ‘ginger’).

In a constructive mentorship relationship, there are healthy exchanges of ideas and techniques between associate host-teacher and guest candidate-teacher. Both parties open themselves to inspection by the other: very quickly it is clear where both stand in terms of their mastery of subject content and

skills, their array of pedagogical practices (including use of technology, the division of time and arrangement of space, but also the protocols around who speaks and how), and their modes of assessment, governance and discipline. For both parties, the element of anxiety in the encounter can be revealing of their 'worlds' (see Stickney 2009b) – the nexus of practices and procedures, knowledge-base and pedagogical repertoires, that comprise one's way of teaching. The power imbalance can prove stifling for the pre-service teacher, however, raising questions about how beneficial this experience is for many student teachers. Spencer (2015) narrates how even teacher candidates who express a strong sense of agency in developing their own, rich and more authentic assessment techniques, often defer to their associate host-teacher (e.g., using easy to mark multiple choice tests) in order to better fit in and gain a positive final report.

Unfortunately, it is hard to find enough experienced, competent and caring teachers to undertake the mentoring role, and there is virtually no training, supervision or follow-up assessment for those who volunteer. Consequently, for many student teachers the practicum is less a convivial learning laboratory and more a 'right-of-passage' to endure: like some internships for prospective lawyers, a stint of subservient, unpaid labour. Whether these mentorship positions should continue to be filled by volunteers (perhaps on a small stipend) or by more highly paid, proficient or qualified experts, will continue to be an issue for the future. The more one moves toward the latter, the less subject-related the expertise is for the evaluator, a problem encountered when administrators (principals or superintendents) conduct classrooms visit outside the domain of their own teaching practice. Are they able to discern expert moves and adroit innovations within the subject curriculum, or are they attending to generic competencies like maintaining discipline, managing students' use of time to stay on task instead of doing student-directed (intrinsically motivated) inquiry that may look more like play?

In my own experience, it was helpful to have teacher candidates observe me first for a few days, and then gradually share in the teaching (team-teach or alternate portions of a lesson) and ultimately take over as teacher for whole classes. This way, by first showing my mastery of the subject (I was Department Head and senior author on their Philosophy textbook and advisor on the Geography one) and both competency at engaging students in learning and developing rapport, I had more credibility as an 'expert' in conveying constructive feedback to the teacher candidate, writing extensive notes on the student teacher's lessons and then going over these to compliment successful moves and develop coping strategies where challenges arise. My student teachers at OISE tell me this is rare to non-existent in their experience, which

is very concerning. Are the student teachers being left to “sink or swim”? Generally, as the practicum progresses it is less about demonstrating the host-teacher’s exemplary practices, and increasingly important for the mentor to see the potential capacities of the student teacher, allowing these to grow through trial and error. Here again I find some inspiration in Heidegger’s reflections on apprenticeship as ‘letting learn’, but also recognizing the wisdom in Foucault’s admission that there is nothing wrong with sharing one’s expertise in master-pupil relations: a declaration recognizing that knowledge is inextricably linked to power and position, and these reversible pedagogical power-relations are bound up with our varied modes of governance (Foucault 1994b):

I see nothing wrong in the practice of a person who, knowing more than others in a specific game of truth, tells those others what to do, teaches them, and transmits knowledge and techniques to them. The problem in such practices where power – which is not in itself a bad thing – must inevitably come into play is knowing how to avoid the kind of domination effects where a kid is subjected to the arbitrary and unnecessary authority of a teacher, or a student put under the thumb of a professor who abuses his authority. I believe that this problem must be framed in terms of rules of law, rational techniques of government and *ethos*, practices of the self and of freedom. (Foucault, 1994c, 298–299)

Although educational faculties, institutes and normal schools have little control over the conduct of associate host-teachers in schools – beyond an arms-length advisory role and check-in during classrooms visits by faculty advisors with teacher candidates on placement – they do have opportunity to work cooperatively in their university seminars. Instead of explicating their expert knowledge, Rancière (1991, 15) points us toward a pedagogical approach where faculty professors and instructors can collaborate in designing instruction and assessment within ‘a circle of students’ need’, working under a presupposition of equality (1991, 46, 137) instead of replicating the hierarchical organization (*archè*) of pastoral supervision. ‘Whoever teaches without emancipating stultifies’ (Rancière 1991, 18). Authenticity figures into this picture of learning also, in that students are encouraged to find their own ‘orbits around the truth’ (Rancière 1991, 59) instead of simply taking knowledge and technique on authority. What both host and guest teacher end up with through their exchange of curricula, is a more robust albeit eclectic repertoire of techniques and scripts at their disposal (see Schwab 1971), which they can then improvise through the iterative process of better knowing and teaching their students. This does not

however mean that “anything goes” in education, leaving us adrift in a post-modern epistemic relativity with regard to judging the merits and efficacy of various pedagogical techniques or reform initiatives.

Genealogy does not ‘vindicate a lyrical right to ignorance or non-knowledge’ in averring positivistic questions of veracity or pragmatic ones of warranted assertability (Foucault, 1980, pp. 83–4). Nor does uncertainty undermine political resistance to administrative censure or erasure of useful or unsanctioned, exploratory practices. Caring for themselves and their students, teachers conserve and invent practices that apparently work regardless of whether they align with current initiatives and appear ‘dated’ or ‘mad’ to inspectors. Diverting from ‘pathways’ mapped by education officers appears obstinate denial of authorized power/knowledge (*is/oughts*), but self-governance requires critical awareness instead of obedient rule-alignment. Teacher-agency is freedom to transgress artificially narrow limits, exploring educational pathways in that ‘permanent provocation’ between the will and power (1994b, 342), undertaking practices of ethical self-formation. (Stickney 2012, 658)

3.3 *Teacher Formation through Professional Development*

Similar power imbalances operate in the relations between in-service teachers and their administrators and curriculum consultants, with the same effect of curtailing agency, creativity and authenticity. All too often, professional development (PD) is conducted in the form of mass education, using cafeterias and library spaces to show *PowerPoint* presentations to the assembled. The educational reforms or initiatives being presented (e.g., brain compatible learning) are often couched misleadingly in Kuhnian terms as a “paradigm shift” (see Kuhn 1996; Hassard 1993; Stickney 2006), though often repackaging elements of Dewey’s Progressive movement from a century before (e.g., applied learning based on student interests or inclinations) and despite the lack of scientific rigour and apparatus needed to account for anomalies not explained by prevailing theories and normal practice. The effect of talking “paradigm shift” is that those who do not switch over (migrate) to the supposedly new paradigm on offer are cast as recalcitrant resisters to change who lack the requisite ‘growth mindset’ (Dweck 2012). Generic PD of this kind can be stultifying: it ensures the visibility or legibility of those compelled to be there, but offers little assurance of genuine learning or even legitimate attention. Teachers often drift off into marking papers or like their students, using cell phones to

escape the tedium of enervating 'knowledge'-transfer. If called to account, most teachers easily dissimulate compliance with the educational reforms being presented, becoming conversant in the slogans, acronyms and phrase-regimes that signal allegiance, developing cover-stories that mask their true professional identities (Connelly & Clandinin 1999) and performing the 'public scripts' expected from authorities while under supervision – temporarily genuflecting to authority only to revert to their habitual practices, ordinary wording and thinking when not under purvey (see Scott 1990; Sonu 2012). Attempts to measure achievement of reform targets often lead to dishonest reporting (see Hargreaves 2013), reminiscent of Soviet State Farm managers always (out of fear) reporting they had met their five-year plan quotas when a nation with space-age technology was lacking adequate food. The failure of this centrist, top-down and technical model of PD in effecting real educational reform is one reason some historians of education have noted that despite the grand rhetoric, very little change takes place behind the doors of the classroom (Tyack & Cuban 1995) and even the diminution of teacher autonomy may be overestimated as they easily elide administrators' attention in everyday conditions of isolated practice (see Smaller 2015). The success of PD remains highly dependent on the quality of school administrators, and whether they have an ability to not only motivate change but tap into teacher interests, needs and capacities (see Hargreaves & Fink 2009; Hargreaves & Shirley 2012; Liu & Hallinger 2018).

For over a decade I was a strong advocate in my district for subject-specific professional development, practicing a form of truth-saying (*parrhesia*) that goes back to Socrates (see Foucault 2001). Writing frequently in my local teacher union's newsletters, I gradually gained support from both the teachers federation and senior administration when I pointed out that sending students home for a day to allow teachers to engage in PD had an opportunity cost for the province of Ontario \$40 million: a considerable investment to squander. Similar to what happens when our Provincial subject associations (History, English, Math, etc.) host annual conferences, once a year we moved to having a designated school host PD on a given subject, sending Math teachers to one campus and History teachers to another, in order to hear guest speakers in their field of expertise and to have expert teachers conduct several concurrent workshops in classrooms. Student teachers on placement also attended, extending the benefit of local leaders teaching others teachers and engaging in focused, self-directed professional discussion. In promoting this shift from generic to subject-specific PD, I shared with Superintendents and our Director the writings of Lee Shulman on cultivating not just content knowledge but also the pedagogical-content knowledge (PCK) needed to effectively deliver

instruction to adolescents, and Donald Schön's emphasis on learning *in situ* (through studio-based work) the mindset of a reflective practitioner needed to master the art of effective architecture, design or teaching: not new to educational theory, but unfortunately seldom recognized in the busy flow of educational practice. Acknowledging that teaching "is perhaps the most complex, most challenging, and most demanding, subtle, nuanced, and frightening activity that our species has ever invented," Shulman (2005, 504, 517–19; see Thomasian 2007, 25–6) noted, school reform has to include making schools genuinely educative for teachers: "Any school that wishes its teachers to teach well had better provide the conditions for them to be learning continually". Shulman advocated the creation of a community of learners, following six principles: generative content, active learning, reflective thinking and practice, collaboration, passion, and community or culture (Thomasian 2007, 25). But turning over control of PD to teachers brings risk, even in terms of ensuring they attend yet alone participate meaningfully.

We have not yet created the conditions in schools, in institutions or in teacher education that will not only tolerate the creation of uncertainty and unpredictability, but will in effect develop values that will support teachers and learners in those communities to engage in such activities. (Shuman 2005, 497)

As staff meetings in the late 1990s into the 2000s increasingly took on less a quasi-political function of collective deliberation – where teachers might be involved in some discussion and decision-making around school operations (e.g., How, in the interests of learning, can we best schedule our days or semesters, or conduct final exams?) – they took on the focus of delivering top-down modes of PD ("How can we implement the district plan for continuous improvement in our school?"). Responding to what felt like a waste of our time after school, I and other in-school representatives of the teacher's federation met to negotiate with our school principal better ways to use this district-mandated PD along a more educative manner: using professional learning communities (PLCs) to focus learning around goals set by teachers sharing similar interests, such as use of technology or differentiated assessment, or health and wellness.

But this teacher-driven initiative to take more control of the conduct of PD and make it genuinely useful was discontinued as Ontario and thus my District in suburban Toronto joined in the global reform called *School Effectiveness Frameworks*. Coming over from Scotland and Wales in 2008–2010, but also found in New Zealand and parts of the US, the goal was to align school planning and classroom practice with internationally established correlates

for school effectiveness. Staff meetings were dedicated to focusing PD on ways of meeting (or outwardly demonstrating compliance with) these District goals, such as implementing training to meet targets on the use of technology – something SEF inspection teams of administrators would then look for when entering classrooms during their sweeps through schools. These practices of audit and inspection are aptly described by Michael Power as costly and potentially detrimental ‘rituals of verification’ (Power 1997). The highly ranked Finnish education system offers a counter-example to this trend (see Sahlberg 2011, 2012), where accountability measures such as state determined curricula and standardized testing along with teacher inspection were replaced with greater responsibility coupled with increased teacher-autonomy, placing trust in the abilities of well-educated teachers to uphold their professional duty as educators. To many in senior management, this may seem like naïve faith as it flies in the face of the accountability rhetoric in which they trained and now dwell, but it also finds support from educational leaders looking past standardization as a panacea in educational reform (see Hargreaves 2008).

3.4 *Postscript on Modern Learning and Technology*

As I was finishing my secondary teaching career the York Region District School Board (YRDSB) launched a “modern learning” initiative, often focusing in practice (as the name suggests) on innovative uses of technology (<http://www.yrdsb.ca/AboutUs/BIPSA/Pages/Modern-Learning.aspx>). Within this program we can discern streams of both authenticity and accountability rhetoric, as well as specific reference to Shulman’s concept of PCK and Schön’s reflective practitioner (discussed above).

Modern Learning Theory of Action *If we:*

- build knowledge and capacity;
- foster deep learning, innovative teaching and sound assessment
- plan for sustainable and flexible environmental design; and
- create collaborative learning communities,

then students will be engaged in authentic, relevant and deep learning that enables them to create, connect, communicate and share their learning with the world and to be future ready.

Professional Learning

Continuous professional learning is a crucial part of board and school improvement processes. The following principles have been identified to support planning for professional learning.

Principles for Effective Professional Learning

Professional learning is effective when it is:

- responsive to students' identities, thinking, learning, achievement and well-being as evidenced by a range of data gathered from and about students, including perceptual, demographic, program and achievement;
- developed through inquiry, as educators, facilitators, researchers, and/or partners engage in co-learning;
- based on high-quality, evidence-based research;
- built upon a collaborative culture of curiosity and risk-taking;
- differentiated by the educator's readiness and needs, recognizing that different people learn in different ways (e.g., experiential, social, formal) and through different modalities;
- an iterative approach, informed by ongoing analysis, reflection and feedback; and
- focused on developing, deepening and connecting both content knowledge, pedagogy and pedagogical content knowledge.

Although YRDSB's *Modern Learning* initiative language seems more balanced than the alignment discourse of the SEF era, also taking inspiration from and more in tune with the less top-down reform approach of Hargreaves & Shirley (2012), *how* it is actually implemented will vary with each school administration team. Despite outward appearances of unity and collaboration, the implementation of educational reforms almost invariably results in archipelagos of divergent interpretation and implementation, instead of the alignment envisioned in the *paper theatre* of educational theorists and planners: again, pointing to Hawkins' (1974a) observation that education is not a *technai* but an improvisatory, innovative and dialogical field (see also Hunter 1994).

Where is modern learning and technology taking us in the future? When I began teaching in the 1980's there was no internet or personal computers: only overhead projectors, 16mm film projectors for which we ordered delivery of films in canisters through a central distributor in my District office, and libraries with books and print copies of magazines (which we had to order at the desk by looking up journal articles manually in catalogues, called the Periodic Guide to Literature). We used scantron cards to machine score multiple-choice and true-false exam questions, whereas today there are programs for not only detecting plagiarism (*Turn-it In*) but for electronically assessing student essays (see Perrotta 2014). Space probes launched in the 1970s, recently having left out solar system had less sophisticated computers than we have in our cell phones and cars today. This bio-history makes me something of a 'digital alien', whereas by the age of three my grandchildren are clearly digital natives (Prensky 2001): navigating cell phones, tablets and digital television, but also as they age facing regimes of screen-time rationing and even on-line

addiction therapies, which include treatments for sleep deprivation due to blue-screen viewing late into the evening.

In my former District (YRDSB) as in Toronto, bandwidth in schools is largely taken up by Netflix and Facebook, meaning that students are more likely watching movies, registering 'likes' and updating their profile on Facebook instead of watching the documentary or *Powerpoint* presentation from the teacher. Unfortunately, the same of student diversion onto electronic devices is a constant problem now in our university classrooms – including our teacher education courses. We not only use ubiquitous cell-phone technology and social media but they in some sense use us, for better or worse altering the way we communicate, think and behave (see Burbules 2016). We now have digital cameras on our phones capable of taking high quality videos; we used to make Super 8 films, and later used expensive cam-recorders signed out for student use by a school technician. This also means that students can video tape their teachers and post these to social media sites like *Instagram*, creating a host of new legal issues in education. In our current WiFi era, we are also expected to respond to student or parent emails almost immediately, even on weekends and evenings, or take in feedback and poll results during lectures to gauge uptake or comprehension, and of course upload documents to on-line course platforms we continually maintain from home as well as the office. *When and how* education work takes place has changed and will continue to evolve with new technology, but this brings both opportunities and challenges.

Aiding teachers in being reflective practitioners, for those seeking honest feedback on their teaching methods, lessons can be recorded quite easily now and reviewed with colleagues in building relationships between critical viewers and teachers, not for surveillance and rating of performance (see Mourlam 2013; Estapa, Pinnow, Rachel, & Chval 2016; Vossoughi & Escudé 2016). In areas where high quality teachers are scarce, as in some rural or intra-urban districts, so-called 'smart classrooms' can be set up and networked with other schools, bringing improved PCK and technology into previously less advantaged or stimulated classrooms (see Lui and Slotta 2013, 2014). Although it could be argued that misuse of this technology reduces pedagogy to a more teacher-centred and explicative approach, reminiscent of using closed circuit TV to broadcast lectures into other classrooms or halls during the height of crowded campuses in the baby-boom (c. 1960s–70s), instead of engaging students in small-group problem solving or independent inquiry, it is not an *either/or*, where everything shifts to one mode of curriculum delivery, thus reducing the local classroom teacher to a facilitator or monitor of student engagement with the presentation being broadcast. Here the technology is a 'capstone' to collaborative learning instead of replacing more student-centred pedagogies.

The design of our immersive environment is based on a pedagogical model known as Knowledge Community and Inquiry (KCI), where students work collectively to establish a knowledge base which then serves as a resource for subsequent inquiry activities.... To achieve a room-sized immersive simulation, we employ a 'smart classroom' where the physical space is transformed using several large projector displays. In such a space, students interact with peers as well as the environment itself. (Lui & Slotta 2014)

The KCI program can also be itinerant, allowing for the home-base to relocate to another school, thus distributing leadership and skills throughout a network of smart-schools (Slotta 2010; Slotta & Najafi 2013). Students in biology classes, for instance, can now use augmented reality systems to virtually enter a tropical rainforest, experiencing with their peers almost first-hand what it is like to walk in these rich biomes and learn about the interconnectedness of all life, to each other and to abiotic substances or systems (Lui & Slotta 2013). Documentaries using computer graphic imaging (CGI) have evolved to such an extent over the last thirty years that we can now visualize the interactions between the sands of the Sahara desert and the hydrologic cycle over the Brazilian rain forest, using WiFi-connected LCD projectors on big screens instead of Closed-circuit TV, Beta or VHS recorders connected to television sets (see *Earth From Space*, PBS NOVA 2013 <https://www.pbs.org/wgbh/nova/video/earth-from-space/>). Although seemingly contradictory, there are technological aids of use today in educating young people toward environmentally sustainable development.

On the other side of this Janus-faced trend are rather sad accounts of adapting facial recognition software, originally intended as a tool to assist educators in understanding autistic students, to now measure the 'effectiveness' of teachers' pedagogy and the 'happiness' or focused engagement of the students (see Hangzhou Number 11 High School in eastern China, in Connor 2018). Here the technology seems to turn against educators, as in using software to instantly recognize the gait of pedestrians in public spaces, or monitoring key strokes to determine the suitability of search strings on the internet (see Hope 2018). Are we teaching independent, authentic problem-solving and critical thinking as competencies for the 21st century, or using technology to enforce (through operant conditioning and surveillance) outward signs of compliance with socially constructed models of 'good conduct' (see Landahl 2013), coupled with rewards and punishments through a state-run social credit system (see Fan, Das, Kostyuk, & Hussain 2018)? In the West, these uses of technology – aided by tech-firms located in the United States (e.g., Google, Yahoo, Facebook, Cisco, etc.)

and found also even in liberal democracies like the UK (see Birnhack, Perry-Hazan, & German Ben-Hayun 2018) – are seen as highly problematic, taking accountability discourses to an absurdly dystopic conclusion (the state as a Hobbesian, giant monitor) at the expense of teacher and student autonomy.

Of course, authenticity discourses are all too often flagged and saluted in the West without sufficient regard for their nurture or cultivation in actual educational practice, eroding some of the basis for criticizing educational practices in other cultures. The point here is that although technology usage is considered an essential competency of modern learning and even a ‘virtue’ to perfect (Ma 2018) – included in my university’s program as another mandatory course that all student teachers take – it is ‘ethically thick’,⁶ allowing for a great deal of slippage or wiggle-room as in saying things like, “Technology can be invasive and self-abrogating, and yet transformative and inspiring.” Recalling Heidegger’s metaphor of the ‘plunge’, eddying in and out of everyday tranquilization into momentary states of authentic awareness of one’s higher potential for being and learning, the now ubiquitous use of technology in education is clearly (like laser, nuclear and neuroscience technologies) an example of what Heraclitus meant by comparing archers to harpists: We all get the point and see the potential for security and harmony, and yet many increasingly worry about the *pathos* of this deeply resonating rhythm in educational discourse. “But where danger is, grows/The saving power also.../...poetically man dwells upon this earth,” (Hölderlin, in Heidegger 1977b&c, 316).

References

- Bialystok, Lauren (2018). Authenticity in education. *Oxford Research Encyclopedia*. <http://oxfordre.com/education/view/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-168>.
- Bialystok, Lauren and Polina Kukar (2017). Authenticity and empathy in education. *Theory and Research in Education*, vol. 16, 1: pp. 23–39.
- Birnhack, Michael; Perry-Hazan, Lotem; German Ben-Hayun, Shiran (2018). CCTV Surveillance in Primary Schools: Normalisation, Resistance, and Children’s Privacy Consciousness. *Oxford Review of Education*, v44 n2, pp. 204–220.
- Bonnett, M. (2001). Martin Heidegger, 1889–1976. In J. Palmer (Ed.), *Fifty modern thinkers on education: from Piaget to the Present day*, 23–27. London and New York: Routledge.

6 Using Putnam’s (2002, 34) term, which he applied to teacher ‘goodness’, as in saying “That teacher is good but cruel.”

- Bonnett, Michael (2002). Education as a Form of the Poetic: A Heideggerian Approach to Learning and the Teacher-Pupil Relationship. In Michael A. Peters (Ed.), *Heidegger, Education, and Modernity*, 229–244. New York and Oxford: Rowan and Littlefield.
- Bourdieu, P. (1998). *Practical reason. On the theory of action*. Stanford, CA: Stanford University Press.
- Buber, M. (1970). *I and Thou* (W. Kaufmann, Trans.). New York, NY: Charles Scribner's Sons.
- Burbules, N.C. (2016). How We Use And Are Used By Social Media In Education. *Educational Theory*, 66 (4), pp. 551–565.
- City, E.A., Elmore, R.F., Fiarman, S.E., & Teitel, L. (2010). *Instructional rounds in education. A network approach to improving teaching and learning*. Cambridge, MA: Harvard Education Press.
- Clark, J. Spencer (2015). “My assessment didn’t seem real”: The Influence of Field Experiences on Preservice Teachers’ Agency and Assessment Literacy. *Journal of Social Studies Education Research*, 6(2), 91–111.
- Connelly, F.M., & Clandinin, D.J. (1999). *Shaping a professional identity*. New York, NY: Teachers College Press.
- Connor, Neil (2018). Chinese school uses facial recognition to monitor student attention in class. *The Telegraph*. May 17.
- Cooper, D. (1983). *Authenticity and Learning*, London: Routledge & Kegan Paul.
- De Bruyckere, Pedro & Paul A. Kirschner (2017). Measuring teacher authenticity: Criteria students use in their perception of teacher authenticity. *Cogent Education*, Vol 4:1, Sammy King Fai Hui (Reviewing Editor).
- Dweck, C.S. (2012). *Mindset: How you can fulfil your potential*. UK: Constable & Robinson Limited.
- Emerson, Ralph Waldo (1965). “The Over-soul,” and “Self-Reliance,” in William H. Gilman (ed.), *Selected Writings of Ralph Waldo Emerson*. New York: Signet Classic.
- Estapa, Anne; Pinnow, Rachel J.; Chval, Kathryn B. (2016). Video as a Professional Development Tool to Support Novice Teachers as They Learn to Teach English Language Learners. *New Educator*, v12 n1 pp. 85–104.
- Farrell, C.C. (2015). Designing school systems to encourage data use and instructional improvement. *Educational Administration Quarterly*, 51(3), 438–471. doi:10.1177/0013161X14539806.
- Foucault, M. (1980). Two Lectures. In Colin Gordon (Ed.), *Power/knowledge* (pp. 78–108). New York, NY: Pantheon Books.
- Foucault, M. (1994a). What is enlightenment? In P. Rabinow (Ed.), *Essential works* (Vol. 1, pp. 303–320). New York, NY: The Free Press.
- Foucault, M. (1994b). The Subject and Power. In J. Faubion (Ed.), *Essential Works*, Vol. 3. (New York, The New Press).

- Foucault, M. (1994c). The Ethics of the Concern for Self as a Practice of Freedom. In P. Rabinow (Ed.), *Essential Works*, Vol. 1, 281–302. New York: The New Press.
- Foucault, M. (2001). *Fearless speech*. J. Pearson (Ed.). Los Angeles, CA: Semiotext(e).
- Foucault, Michel (1988). *The Final Foucault*, eds. James Bernhauer and David Rasmussen. Cambridge and London: MIT Press.
- Goodson, I. (2008). Schooling, curriculum, narrative and the social future. In C. Sugrue (Ed.), *The future of educational change: international perspectives* (pp. 123–135). New York, NY: Routledge.
- Grossman, Pam and Sam Wineburg (2001). Lee S. Shulman, 1938–257. In J. Palmer (Ed.), *Fifty modern thinkers on education: from Piaget to the Present day*, 257–262. London and New York: Routledge.
- Hargreaves, A. (2008). The coming of post-standardization. Three weddings and a funeral. In C. Sugrue (Ed.), *The future of educational change international perspectives* (pp. 15–33). New York, NY: Routledge.
- Hargreaves, A. (2013). *Uplifting your performance, your people and yourself* (TEDxUnison 2013) Retrieved from <http://www.youtube.com/watch?v=zW3BmmsJd0I>.
- Hargreaves, D. (2001). A Capital Theory of School Effectiveness and Improvement. *British Educational Research Journal*. Vol. 27, No. 4, Educational Effectiveness and Improvement: Developing New Theories and Methods (Sep.), pp. 487–503.
- Hargreaves, A., & Fink, D. (2009). Distributed leadership: Democracy or delivery? In A. Harris (Ed.), *Distributed leadership* (pp. 181–193). London: Springer.
- Hargreaves, A., & Fullan, M. (2012). *Professional capital. Transforming teaching in every school*. Toronto: Teachers College Press.
- Hargreaves, A., & Shirley, D. (Eds.), (2012). *The global fourth way: The quest for education excellence*. Thousand Oaks, CA: Corwin Press.
- Hassard, J. (1993). *Sociology and organization theory*. Cambridge: Cambridge University Press.
- Hawkins, D. (1974a). Mind and mechanism in education (1968). In, *The informed vision and other essays* (pp. 18–38). New York, NY: Agathon Press.
- Hawkins, D. (1974b). I, Thou and It (1967). In, *The informed vision and other essays* (pp. 48–62). New York, NY: Agathon Press.
- Heidegger, M. (1977a). What Calls for Thinking? In D. Krell (Ed.), *Basic Writings*, 345–367. New York: Harper & Row.
- Heidegger, Martin (1977b). The Question Concerning Technology. In D. Krell (Ed.), *Basic Writings*, ed. David Krell, 283–318. New York: Harper and Row.
- Heidegger, Martin (1977c). Poetically man dwells. In *Poetry, Language, Thought*, trans. Albert Hofstadter. New York: Harper Collins.
- Heidegger, Martin (1959). *An Introduction to Metaphysics*, trans. Ralph Manheim. New Haven and London: Yale University Press.

- Heidegger, Martin (1996). *Being and Time*, trans. Joan Stambaugh. Albany: State University of New York Press.
- Heilbronn, Ruth (forthcoming, 2019). Teacher Educators: Philosophical Perspectives. In, Michael A. Peters (Ed.), *Encyclopedia of Teacher Education*. Singapore: Springer.
- Heraclitus (1979). *The Art and Thought of Heraclitus: A New Arrangement and Translation of the Fragments with Literary and Philosophical Commentary*, ed. Charles H. Kahn. Cambridge: Cambridge University Press.
- Hirst, P. (1965). Liberal Education and the nature of knowledge. In R.D. Archambault (Ed.), *Philosophical analysis and education* (pp. 113–138). New York, NY: The Humanities Press.
- Hope, Andrew (2018). Creep: The Growing Surveillance of Students' Online Activities. *Education and Society*, v36 n1(May), pp. 55–72.
- Hunter, I. (1994). *Rethinking the school: subjectivity, bureaucracy, criticism*. Sydney: Allen and Unwin.
- Kitchen, J., Petrarca, D. (2014). Teacher Preparation in Ontario: A History. *Teaching & Learning*, 8(1), 56–71.
- Kuhn, T.S. (1996). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Lakoff, G., & Johnson, M. (1980/2003). *Metaphors we live by*. Chicago, IL: University of Chicago Press.
- Landahl, Joakim (2013). The Eye of Power (–Lessness): On the Emergence of the Panoptical and Synoptical Classroom. *History of Education*, v42 n6 pp. 803–821.
- Li, Jun (2012). The Chinese Model of Teacher Education: Retrospects and Prospects over a Century. *Frontiers of Education in China*, v7 n3, pp. 417–442.
- Liang, Fan, Vishnupriya Das, Nadiya Kostyuk, Muzammil M. Hussain (2018). Constructing a Data-Driven Society: China's Social Credit System as a State Surveillance Infrastructure. *Policy & Internet*, Vol. 10:4 (December).
- Liu, Shengnan, and Hallinger, Philip (2018). Teacher development in rural China: how ineffective school leadership fails to make a difference. *International Journal of Leadership in Education*, vol. 21, no. 6, 633–650.
- Lui, M., & Slotta, J.D. (2013). Designing immersive environments for collective inquiry. In O. Smørdal (Chair), Hybrid spaces for science learning: New demands and opportunities for research, J. van Aalst, K. Thompson, M.J. Jacobson, & P. Reimann (Eds.), *The future of learning: Proceedings of the 10th International Conference of the Learning Sciences (ICLS 2012)* (Vol. 2, pp. 12–14). Sydney: International Society of the Learning Sciences.
- Lui, Michelle & James D. Slotta (2014). Immersive simulations for smart classrooms: exploring evolutionary concepts in secondary science. *Technology, Pedagogy and Education*, 23:1, 57–80, DOI: 10.1080/1475939X.2013.838452.

- Ma, Ying (2018). "Techne," a Virtue to Be Thickened: Rethinking Technical Concerns in Teaching and Teacher Education. *Research in Education*, v100 n1 pp. 114–129, May.
- Miller, J.H. (1995). *Topographies*. Stanford, CA: Stanford University Press.
- Moje, Elizabeth B. (1996). "I Teach Students, Not Subjects": Teacher-Student Relationships as Contexts for Secondary Literacy. *Reading Research Quarterly*. Vol. 31, No. 2 (Apr. – May – Jun.), pp. 172–195.
- Mourlam, Daniel (2013). Lights, Camera, Reflection! *Learning & Leading with Technology*, v40 n5 (Feb), pp. 22–24.
- Nietzsche, Friedrich (1965). *Schopenhauer as Educator*, trans. James W. Hillesheim and Malcolm R. Simpson. Chicago: Henry Regnery.
- Oakeshott, M. (1972/1989). Education: Its engagement and frustration. In T. Fuller (Ed.), *The voice of liberal learning* (pp. 62–104). Indianapolis, IN: Liberty Fund.
- Oakeshott, M. (1975/1989). A place of learning. In T. Fuller. (Ed.), *The voice of liberal learning* (pp. 1–34). New Haven: Yale University Press.
- Ontario Ministry of Education (2013). *School effectiveness frameworks (2013). A support for school improvement and student success*. Ontario: Ontario Ministry of Education.
- Palmer, Joy A. (Ed.), advisory editors, David E. Cooper and Liora Bresler (2001). *Fifty modern thinkers on education: from Piaget to the Present day*. London and New York: Routledge.
- Perrotta, Carlo. (2014). Innovation in technology-enhanced assessment in the UK and the USA: Future scenarios and critical considerations. *Technology, Pedagogy and Education*, v23 n1 pp. 103–119.
- Peters, M.A. (2001). Michel Foucault, 1926–84. In J. Palmer (Ed.), *Fifty modern thinkers on education: from Piaget to the Present day*, 170–174. London and New York: Routledge.
- Peters, M.A. (2005). The new prudentialism in education: Actuarial rationality and the entrepreneurial self. *Educational Theory*, 55, 124–137.
- Peters, R.S. (1965). Education as initiation. In R.D. Archambault (Ed.), *Philosophical analysis and education* (pp. 59–75). New York, NY: The Humanities Press.
- Peters, M.A., & Stickney, J. (2018). *Wittgenstein's Education: "A Picture Held Us Captive."* Singapore: Springer Nature.
- Petraglia, Joseph (1998). *Reality by Design: The Rhetoric and Technology of Authenticity in Education*. New Jersey: Lawrence Erlbaum Associates.
- Plato (1968). *The Republic*, Allan Bloom (trans.). New York: Basic Books.
- Power, M. (1997). *The audit society. Rituals of verification*. Oxford: Oxford University Press.
- Prensky, Marc (2001). Digital Natives, Digital Immigrants Part 1, *On the Horizon* 9, no. 5: 1–6.

- Price, Todd A. (2014). Teacher Education under Audit: Value-Added Measures, TVAAS, EdTPA and Evidence-Based Theory. *Citizenship, Social and Economics Education*, v13 n3 (Dec) pp. 211–225.
- Putnam, Hilary (2002). *The Collapse of the Fact/Value Dichotomy, and Other Essays*. Cambridge, MA and London: Harvard University Press.
- Rancière, J. (1991). *The ignorant schoolmaster. Five lessons in intellectual emancipation* (T.K. Ross, Trans.). Stanford: Stanford University Press.
- Ridley, A. (1998). Afterword. In, R.G. Collingwood. *A philosophy of art* (pp. 50–53). London: Phoenix Paperbacks, Orion Publishing.
- Roser, Max and Ortiz-Ospina, Esteban (2018). “Global Rise of Education”. *Published online at OurWorldInData.org*. Retrieved from: <https://ourworldindata.org/global-rise-of-education>.
- Rosling, Hans (2013). *Don't Panic: The Truth About Population*. BBC Two, November. <https://www.gapminder.org/news/dont-panic-watch-it-online/>.
- Sahlberg, P. (2011). *Finnish lessons: What can the world learn from educational change in Finland*. New York, NY: Teachers College Press.
- Sahlberg, P. (2012). GERM that kills schools: Pasi Sahlberg at TEDxEast. Retrieved from http://www.youtube.com/watch?v=TdgS-gZg_o.
- Schön, D.A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Francisco, CA: Jossey-Bass.
- Schön, D.A. (1991). *The reflective turn: Case studies in and on reflective practice*. New York, NY: Teachers College Press.
- Schwab, J. (1971). The practical: Arts of the eclectic. *School Review*, 79, 493–543.
- Scott, J.C. (1990). *Domination and the arts of resistance: Hidden transcripts*. New Haven, CT: Yale University Press.
- Scott, J.C. (1998). *Seeing like a state: How certain schemes to improve the human condition have failed*. New Haven, CT: Yale University Press.
- Shulman, L. (2004). Those who understand knowledge growth in teaching. In S. Wilson (Ed.), *The Wisdom of Practice: Essays on Teaching, Learning, and Learning to Teach* (pp. 187–216). San Francisco, CA: Jossey-Bass.
- Sinay, E., & Ryan, T.G. (2016). *Research series on school effectiveness and school improvement: Characteristics of effective school improvement planning and key steps*. (Research Report No. 16/17-04). Toronto, Ontario, Canada: Toronto District School Board.
- Slotta, J.D. (2010). Evolving the classrooms of the future: The interplay of pedagogy, technology and community. In K. Mäkitalo-Siegl, F. Kaplan, J. Zottmann, & F. Fischer (Eds.), *Classroom of the future: Orchestrating collaborative spaces* (pp. 215–242). Rotterdam: Sense.
- Slotta, J.D., H. Najafi (2013). Supporting Collaborative Knowledge Construction with Web 2.0 Technologies. In: Mouza C., Lavigne N. (eds) *Emerging Technologies for the*

- Classroom. Explorations in the Learning Sciences, Instructional Systems and Performance Technologies*. New York, NY: Springer.
- Smaller, Harry (2015). The Teacher Disempowerment Debate: Historical Reflections on “Slender Autonomy”. *Paedagogica Historica: International Journal of the History of Education*, v51 n1–2 pp. 136–151.
- Sonu, Debbie (2012). Illusions of Compliance: Performing the Public and Hidden Transcripts of Social Justice Education in Neoliberal Times. *Curriculum Inquiry*, v42 n2 (Mar), pp. 240–259.
- Stickney, J. (2006). Deconstructing Discourses about ‘New Paradigms of Teaching’: A Foucaultian and Wittgensteinian perspective. *Educational Philosophy and Theory*, 38, 327–371.
- Stickney, J. (2009a). Wittgenstein’s contextualist approach to judging “sound” teaching: Escaping enthrallment in criteria-based assessments. *Educational Theory*, 59, 197–216.
- Stickney, J. (2009b). Casting teachers into education reforms and regimes of inspection: resistance to normalization through self-governance. In Michael A. Peters, A. C. Besley, M. Olssen, S. Mauer, & S. Weber, (Eds.), *Governmentality Studies in Education* (pp. 235–256). Rotterdam: Sense.
- Stickney, J. (2012). Judging teachers: Foucault, governance and agency during education reforms. *Educational Philosophy and Theory*, 44, 649–662.
- Stickney, J. (2013). A paradox of freedom in “becoming oneself through learning”: Foucault’s response to his educators. *Ethics and Education*, 8, 179–191.
- Stickney, J. (2015). System alignment and consensus discourses in reforms: School Effectiveness Frameworks and Instructional Rounds. Philosophical responses with Oakeshott, Mouffe and Rancière. *International Journal of Leadership in Education*, 18:4, 487–513.
- Thomasian, Michael (2007). The Wisdom of Practice: Essays on Teaching, Learning, and Learning to Teach, by Lee S. Shulman. *Catholic Education: A Journal of Inquiry and Practice*, Vol. 11: 2, 25–52.
- Thomson, Iain (2005). “How We Become What We Are,” 141–82 in: *Heidegger on Ontotheology*. Cambridge: Cambridge University Press. Also, in Michael A. Peters (Ed., 2002), *Heidegger, Education, and Modernity*, 123–150. New York and Oxford: Rowan and Littlefield.
- Tissenbaum, Charles E., M., Whittaker, C., Lui, M., Dugdale, M., Slotta, J. (2011). Co-design of collaborative collective knowledge environment. *9th International Conference on Computer Supported Collaborative Learning*. Hong Kong, China.
- Tyack, D., & Cuban, L. (1995). *Tinkering toward Utopia. A century of public school reform*. Cambridge, MA: Harvard University Press.
- Vossoughi, Shirin; Escudé, Meg (2016). What Does the Camera Communicate? An Inquiry into the Politics and Possibilities of Video Research on Learning. *Anthropology & Education Quarterly*, v47 n1 (Mar), pp. 42–58.

- White, H. (1973). *Metahistory: The historical imagination in nineteenth-century Europe*. Baltimore, MD: Johns Hopkins University Press.
- Winch, Chris (forthcoming, 2019). Three contested conceptions of the teacher and their implications for teacher education. In Michael A. Peters (Ed.), *Encyclopedia of Teacher Education*. Singapore: Springer.
- Wittgenstein, L. (1967). *Zettel* (G.E.M. Anscombe, Trans.). Oxford: Basil Blackwell.
- Wittgenstein, L. (1968). *Philosophical investigations*. 3rd ed. (G.E.M. Anscombe, Trans.). Oxford: Basil Blackwell.
- Wittgenstein, L. (1969). *On certainty* (D. Paul and G.E.M. Anscombe, Trans.). Oxford: Basil Blackwell.
- Wright, Ronald (2005). *A Short History of Progress*. New York: Carroll & Graf.