

POLANYIAN INSIGHTS ON “PROFESSIONAL” TEACHER PREPARATION



Timothy L. Simpson

Keywords: teacher education, accreditation, professional, tacit dimension, Harry Broudy, Michael Polanyi

ABSTRACT

To demonstrate the power and scope of Polanyi’s thought, this paper will establish the importance of Polanyi’s abundant insight for the accreditation of educator preparation programs in higher education. This inquiry will begin with a brief summary of the role and purpose of accreditation of educator preparation programs, highlighting the positivist presuppositions driving the current assessment process. With the aid of Harry Broudy, a close student of Polanyi, the essay will identify the implications of those presuppositions for educator preparation programs. Broudy’s analysis suggests that, despite claims to the contrary, the current assessment process fails to produce a professional teacher. In contrast, inspired by a rejuvenated perspective informed by Polanyi’s monumental elucidation of the tacit dimension, assessment of educator preparation programs may instead cultivate a truly professional teacher for our schools. The closing section of this study will provide an outline of such a renaissance.

While it is widely understood that Michael Polanyi is a penetrating philosopher of science who offers a revolutionary epistemology and theory of meaning, I believe with David Rutledge that it is even more profitable to view Polanyi “as a visionary who, despite *not* fitting neatly into the academic discipline of philosophy, nevertheless presents insights about basic problems that illuminate wide areas of intellectual life” (Rutledge 1991, 5). To demonstrate the power and scope of Polanyi’s thought, this

paper will establish the importance of Polanyi's abundant insight for the accreditation of educator preparation programs in higher education.

This inquiry begins with an overview of the nature and purpose of accreditation of educator preparation programs (EPPs), highlighting the positivist presuppositions driving the current assessment process. With the aid of Harry Broudy, a renowned philosopher of education and close student of Polanyi, the essay reveals that these presuppositions create an attenuated conception of teaching and the teacher. Indeed, Broudy's analysis suggests that, despite claims to the contrary, the current accreditation process fails to produce a *professional* teacher—a term whose unique meaning for Broudy will be discussed more fully in section three. In contrast, inspired by a rejuvenated perspective informed by Polanyi's monumental elucidation of the tacit dimension, educator preparation programs may instead cultivate a truly *professional* teacher for our schools. The closing section of this study will provide an outline of such a renaissance.

CAEP Assessment and its Positivist Presuppositions

In 2013, the Council for the Accreditation of Educator Preparation (CAEP) formed to become the “new, sole specialized accreditor of educator preparation” (CAEP 2013). Cochran-Smith, et. al. maintain that “CAEP was designed to be a ‘watchdog’ of teacher quality and accountability by marshalling professional control of teacher education, while maintaining ‘external objectivity’ regarding individual programs” (Cochran-Smith 2018, 76). “CAEP’s approach to accreditation,” claims Mary Brabeck, Chair of CAEP Board of Directors, “will further professionalize the field” (CAEP 2013).

Unique to CAEP’s “new direction” to revolutionize educator preparation is its “evidence based accreditation” (CAEP 2016b, 5-6). CAEP’s “new direction” is elucidated in their diagnosis of the problem in educator preparation and their prescription for it. CAEP diagnoses the problem of educator preparation as a prior focus on “process oriented system of accountability” (Brabeck and Koch 2013), which lacked valid and reliable evidence for assessing appropriate outcomes. This focus was exacerbated by the fact that programs were unable and/or unwilling to move away from “theoretical, academic preparation” (Ibid.). CAEP’s prescription for this problem was to establish accreditation as an evidence-driven accountability mechanism that was grounded in the assumption that more rigorous standards and systematic collection and analysis of valid and reliable evidence would ensure high quality candidates and programs (CAEP 2015). So, whereas in the past educator preparation programs failed to collect, analyze, and utilize “quality” evidence to ensure candidate and program quality, CAEP insists on it.

Critical to this “new direction,” then, is the notion of “quality” evidence. The “CAEP Evidence Guide” states that non-quantifiable evidence is acceptable, but it

prefers observable, measurable, objective performance as evidence (Ibid.). In “Report Highlights: Building an Evidence Based System for Teacher Preparation,” a key supporting document for CAEP’s “Evidence Guide,” of the thirteen (13) Key Effectiveness Indicators, indicating that an educator preparation program produces effective teachers, “9 are clearly statistics gathered from tests, numbers and percentages of students, and surveys, including ‘value-added’ statistics” (Teacher Preparation Analytics 2014 as cited in Schwarz 2015, 110). CAEP itself contends, “[C]ertainly, where available and appropriate, quantitative data will be powerful and it is expected that much of the information an institution advances in support of its claims for capacity and educational effectiveness will be in numeric form” (Western Association of Schools and Colleges 2013 as cited in CAEP 2015, 6). Additionally, CAEP demands that any evidence must be “valid, reliable and fair (free from bias)” and must meet “accepted research standards” (Ibid., 8). In short, CAEP’s notion of “quality” evidence reveals that we know only what we can formulate in explicitly observational terms and we are certain we know it only if we can use an empirical test to validate it. Otherwise, we possess no “quality” evidence of knowing.

CAEP’s understanding of “quality” evidence betrays the positivist presuppositions driving assessment of EPPs. Broadly put, positivism, in the tradition of Comte to 20th century logical positivists, holds that what we can know is observable, empirical, and measurable evidence and that we can know it only through scientific or empirical observation (Kneller 1984). Further, such knowledge should be gained from a value-free, impersonal, and objective approach to the evidence. Ideally, positivism contends that through such a series of observations we may identify a causal relationship between two facts. Like positivism, CAEP wants instructional and program objectives stated in observable, measurable form. It prefers evidence that is valid, reliable, and fair which means that it is evidence gained through objective and empirical means. CAEP, like positivism, assumes that through such methods it will draw a causal relationship between the EPP teachers and program practices and the quality of its candidates and program. Without empirical data and scientific observation required by CAEP’s “culture of evidence,” CAEP contends that the EPP cannot claim to know if it is producing a quality teacher candidate and causing high impact learning in P-12 classrooms.

Impact of CAEP’s Positivist Presuppositions on EPP’s

CAEP’s positivist presuppositions significantly impact EPPs in several, perhaps unexpected and unintended, ways. Such presuppositions shape 1) what the EPP teaches, 2) what the EPP accepts as learning, 3) how the EPP teaches, and 4) the expectations of teaching by teacher candidates.

CAEP asserts that EPPs must ensure that candidates develop an understanding of content and pedagogical knowledge (CAEP 2016a, Standard 1). However, if it is

assumed, as CAEP does, that only that can be tested which can be stated and measured objectively, then only that shall be taught which can be stated and measured objectively. CAEP accepts non-quantifiable and non-objective evidence, but they clearly prefer observable and measurable evidence. Thus, any content knowledge taught, such as knowledge of content standards, must be in propositional form. A premium, then, is placed on teaching facts, definitions, rules, and principles, stated in explicit, objective form. The case is similar for pedagogical knowledge. CAEP requires that teacher candidates know and use “evidence based strategies of instruction” (CAEP 2015, 18). Such strategies or operations are taught as formulas for memorization and replication.

CAEP’s positivist presuppositions also influence a notion of learning. With a high premium on teaching measurable information, there is an emphasis on the teacher candidate reinstating, or literally re-stating, the original learning pretty much as learned in response to definite cues. CAEP seems to assume that “only school inputs that can be replicated are properly said to have been learned, and that inputs which cannot be replicated need not and perhaps should not be taught” (Broudy 1970, 92). Thus, CAEP’s assessment of EPPs reinforces a theory of knowledge that regards learning primarily as storing and fixing associations among inputs. We may, using Harry Broudy’s formulation of “uses” of schooling, identify CAEP as adhering to a “replicative” use of schooling (Broudy 1981). A successful EPP, then, is one that certifies that teacher candidates can replicate learning inputs on demand as transmitted.

A focus on teaching and learning information further drives the EPP towards adoption of an instructional mode. What instructional mode is most successful for imparting and imprinting information? To ensure that facts and strategies are learned for rote recall, a didactic mode of instruction is preferable (Broudy 1972a, 5-6). “By didactics is meant the style of teaching that organizes materials in systematic segments: presentation of the task, illustrations of desired outcomes, testing trial responses, drill, correction of trial responses, and end-of-course testing” (Broudy 1983, 5-6). For example, multiplication tables, spelling words, events and dates of history, solving equations, are all included under didactics. In sum, this mode of instruction is designed to ensure facts, formulas, and processes are imprinted in the student for immediate recall on demand. When not employing a didactic mode, teacher candidates must demonstrate adoption and execution of “evidence based strategies of instruction.” The best evidence, according to CAEP, that a teacher candidate is successful “involves forms of assessment in which candidates are asked to perform tasks similar to those they will face in their initial employment as education professional” (CAEP 2015, 18). In other words, when not adopting a didactic mode, teacher candidates are replicating research based practices in the classroom to ensure the replication of learning objectives.

What is more, CAEP’s requirement that EPPs demonstrate that teacher candidates “cause a high impact on all P-12 students” further reinforces adoption of a didactic

mode and replication of strategies by said candidates (CAEP 2016a, Standard 2). By “high impact,” is meant a statistically significant increase in student scores on standardized tests (CAEP 2015, 30, see fn 30). Because standardized tests used in schools share the same positivist presuppositions on content and learning as CAEP, that is, they expect recall of objective, measurable information, teacher candidates must also ensure measurable, objective evidence in student learning. Like the EPP teachers, P-12 teacher candidates are led to embrace modes of instruction to ensure demonstration of high impact learning. Thus by example and exhortation CAEP reinforces adoption of the replicative use of schooling and a didactic mode of instruction.

Deprofessionalization of Teaching: Craft v. Profession

CAEP contends that its “evidence-based accreditation” will ensure that EPPs produce professional teachers. CAEP’s positivist presuppositions appear to support implementation of a replicative use of schooling and a didactic mode of instruction. Is the impact of CAEP’s positivist presuppositions on teaching creating a *professional* teacher? Or, ironically, might CAEP’s adherence to those presuppositions deprofessionalize the teacher and teaching?

We are aided in our analysis of these questions by Harry Broudy. Broudy was a renowned philosopher of education in the mid-twentieth century who wrote and presented extensively in a wide variety of venues addressing a diverse array of educational policy and practice issues. A primary focus of his scholarship was the concept of teaching and teacher education. He provided commentary on the first National Council of Accreditation of Teacher Education (NCATE- a forerunner of CAEP) statement on teacher education (Broudy 1959) and was requested to comment on American Association of Colleges of Teacher Education (AACTE) teacher education policy recommendations (Broudy 1967a; Broudy, 1972a). A leading motive of Broudy’s work was defining and defending teaching as a profession against what he believed was a diminution of the profession. To that end, he explored the distinction between a “craft” and a “professional” conception of teacher education and teaching (Broudy 1956, Broudy 1962, Broudy 1965a, Broudy 1965b, Broudy 1967a, Broudy 1972a, Broudy 1972b, Broudy 1980, Broudy 1983). We shall explore that distinction here to aid our assessment of CAEP’s impact on EPPs.

Broudy acknowledges that craft and profession share much in common. Both require a level of mental engagement, a measure of manual proficiency, and a degree of skill and energy to complete a task. For Broudy, though, a defining element of craft is rule following. He offers an example of a plumber (Broudy 1988, 8-9). In life, the plumber is tested by both his ability to *replicate* what he has learned formally and to *apply* relevant selections from that instruction to the set of tasks that make up his vocation. Broudy states,

The plumber is a craftsperson who has learned the standard tasks and solutions as an apprentice to a master plumber. Drilled in the procedures for correcting a specific set of predicaments in plumbing equipment, he applies the procedure to each instance of that class. There is the class of predicaments that might be labelled 'stopped up drains,' and if this trouble is recognized as an instance of the class, then the rule of procedure for stopped-up drains is put into practice (Ibid).

On Broudy's view, the craft teacher operates in much the same way. Like the plumber, a craft teacher is also tested by both her ability to *replicate* what she has learned (e.g. content and pedagogical knowledge) and to *apply* relevant selections (e.g. "evidence-based strategies of instruction") from that instruction to the set of tasks that comprise her vocation. Drilled in the strategies for instruction for correcting a specific set of teaching-learning problems, she applies the strategy to each instance of that class. For example, there could be a class of predicaments labelled "unruly child" or "mixing up of 'x' and '+' in math facts" and if this trouble is recognized as an instance of a class, then the rule learned for that class is put into practice.

Broudy acknowledges that such a craftsman may be skilled, efficient, and successful and that the advantages of such a preparation program are not lightly dismissed. After all, he argues, "the best proof that T can do X is that he is already doing it" (Broudy 1975, 27). In addition, the performance of a teacher can be judged as successful at any given moment via observation or student assessment. Further, Broudy contends that if we could train, in his words, "technicians" to perform most classroom functions by following rules, then we could significantly increase the school's productivity. Thus, for Broudy, to identify teaching as a craft is not to denigrate it, but to recognize it for its unique and useful quality of rule following.

While acknowledging the skill and advantages of a craft teacher, Broudy asserts that such teachers are limited to technical proficiency. They perform rule-governed and nearly automatic, prescribed behaviors. For this reason, Broudy often equates a craft teacher with "technician," "didactical machine" or "paraprofessional," but not a professional (Broudy 1972a, 12-14: See also Broudy 1980, Broudy 1983).¹ Broudy exposes the limitations of a craft teacher through his discussion of the plumber. He states, "If the rule [used by the plumber] does not work, [a rule] for another class of difficulties may be tried, but there is a limit to the plumber's repertoire of procedures" (Broudy 1988, 8). Eventually, all procedures could be exhausted and the difficulty remain. Likewise, there is a limit to the class of difficulties possessed by the plumber used to identify a difficulty. What if the plumber cannot account for the cause of a problem? How would he know which procedure to use? It is conceivable that not all difficulties experienced by a plumber are within his scope of classifications. What then?

If the techniques and classes of the plumber are exhausted, then, for Broudy, “a higher authority” must be invoked. The higher reaches of application and classification, he argues, “entail understanding of principles and theory that generate hypotheses as to the causes of the difficulty as well as suggestions for coping with [it]” (Ibid., 8-9). Who possess such understanding? In this case, the sanitary engineer; or, in Broudy’s terms, a professional.

For Broudy, the difference between a craft and professional is the role theory has for each, and in the degree to which theory and practice are united in the person (Broudy 1956, 178). A professional, as opposed to a craft, possesses a theoretical foundation that unites with practice. What exactly Broudy means by theoretical foundation and its advantage begins to emerge through the following question: “Why then, despite, these advantages [of a craftsmen’s skill gained through apprenticeship training], did law, medicine, engineering, and education move from apprenticeship training to the establishment of formal institutions to prepare practitioners?” (Broudy 1975, 27). Because, for Broudy, formal institutions provide the theoretical knowledge to both address and advance beyond the limitations of a craft. “Medicine,” claims Broudy, “was a craft so long as it was confined to trial-and-error knowledge. It became a full-fledged profession when biology, chemistry, physiology, and bacteriology provided a theoretical foundation for its practice” (Broudy 1956, 178). Such disciplinary knowledge gives the doctor a broader conceptual context by which to diagnose ailments and prescribe solutions. It is the knowledge the doctor “thinks with” and “judges with” but may not utilize directly to remedy the patient. Similarly, Broudy maintains that “there is no alternative to a program of teacher education in which theory that enables the practitioner to be rational about rules plays a prominent part. But what sort of theory is available for this purpose?” (Broudy 1972b, 54). Broudy rejects the idea of “applicational theory,” such as the application of, say, “Skinnerian theory of operant conditioning to the designing of teaching machines or to the maintenance of discipline in the classroom” (Ibid., 55). He believes that the amount of empirical theory that can be applied to practice in education in this way is “pitifully small” (Ibid.). Instead, Broudy advocates for what we can term “interpretive theory.” From “interpretive theory,” however, Broudy argues “no rules for pedagogical practice can be deduced” (Ibid., 56). Consequently, its usefulness is endlessly questioned by teachers, administrators, and policymakers, such as CAEP, as it provides no toolkit for immediate classroom application. However, Broudy believes this kind of theory is useful in another sense. The most plausible defense of interpretive theory is that it provides “context of practice” rather than rules for practice (Ibid.). He remarks,

Thus, an understanding of the sociology of poverty does not directly give rules for healing the diseases of the poor, but the dietary prescriptions that a physician might give to the poor will be more

enlightened if he does understand the sociology of their condition. Knowledge of social context, therefore, affects the general strategy of education, of appraising the teaching situation in many dimensions, and for making decisions that take account of these dimensions (Ibid., 56-57).

For Broudy, then, even though it does not prescribe rules, it is nonetheless useful because it sites “educational problems in their appropriate context—psychological, historical, philosophical, societal. Together with the cognate content of selected academic subjects, these supply the ideas and attitudes one teaches *with*, not *to*, pupils” (Ibid., 58). The entire teaching style of a teacher may be influenced in unspecifiable ways by the layers and shades of meaning that the study of theoretical knowledge builds into the background of the teacher. Broudy, betraying the influence of Michael Polanyi, states, “For, paradoxically, some studies function not because they are retained as learned, but rather because we forget selectively, so that only a framework of cognitive and evaluative categories remain to shape perception and feeling without themselves being perceived” (Broudy 1975, 33). For Broudy, then, the teacher with theoretical knowledge who can interpret or contextualize the educational situation addresses and advances beyond the limitations of a craft teacher because she thinks with, feels with, judges with, knows with, and teaches with a theoretical knowledge that perceives the educational endeavor from a broader, richer perspective and, thus, is able to generate hypotheses to the causes of teaching-learning difficulties and recommend paths for addressing those difficulties.

With a working distinction between craft and professional, we may return to evaluate CAEP’s impact on the teacher. Is CAEP producing a *professional* teacher? With the aid of Broudy’s analysis, this essay contends that CAEP produces a teacher more closely resembling a craft teacher than a professional teacher.

First, CAEP rejects the knowledge essential to a professional. Recall that for Broudy a professional possesses a body of theoretical knowledge and unites that theory with practice in the act of teaching. CAEP, however, identifies “theoretical, academic coursework” as a primary cause of the past poor performance of EPPs. Further, it replaces it with coursework in content and pedagogical knowledge for replication in conjunction with replication of strategies to improve student test scores.

Second, a professional’s knowledge does not meet CAEP’s standard for “quality” evidence. For CAEP “quality” evidence means observable, measurable performances. Can theoretical knowledge translate to observable, measurable performances? For example, can InTASC Standard #2, “understanding of individual differences,” be an observable, measurable performance? (Council of Chief State School Officers 2011, 8). It would seem that some measure of theoretical knowledge is necessary for understanding an individual and their differences. Are there observable performances that

could demonstrate this understanding? Unless you transform such understanding into facts and definitions, then it seems difficult to imagine such understanding becoming an observable, measurable performance. Of course, when you transform understanding to facts and definitions, which CAEP does, you reduce theory to information. Thus, a professional's distinctive knowledge is denied as a legitimate source of evidence of a quality teacher.

Third, by rejecting theoretical coursework in educator preparation and rejecting theoretical knowledge as legitimate evidence of a quality teacher, CAEP rejects the interpretative theory of the professional for applicational theory of the technician. Recall that for Broudy the professional's knowledge of theory provides rich, context-building to view the teaching-learning transaction. Such interpretation affords deeper appreciation for the human complexities of the situation, but is not a source of rules for direct, immediate application. CAEP's support for replicative learning and application of prescribed strategies produces a teacher more akin to a didactical machine that follows rules. What matters most is executing canned strategies to raise student test scores not deep, contextual knowledge of the situation to diagnose problems and reflect on solutions in the teaching-learning transaction.

In sum, CAEP threatens the professional status of teaching by supporting the view that educator preparation should consist only of a) subject matter to be taught and b) practice in teaching it. On this view, "teacher education should be reduced to 'knowings that' to be taught and some 'knowings how,' to teach it, but there would be no room for 'knowings with,' i.e. for knowledge that would not necessarily be transmitted to pupils but which would be necessary to construct contexts for the teaching-learning transaction" (Broudy 1970, 96). "Yet," argues Broudy, "on the possibility of such knowledge for 'teaching with' rests the validity of the argument for genuinely professional teacher education" (Ibid.). In search of an epistemology and conception of knowledge that explains and supports "knowing with" and "teaching with" Broudy turns to Michael Polanyi. Polanyi's revolutionary notion of the tacit dimension provides a plausible justification for *professional* teacher education and the *professional* teacher.

Tacit Dimension as Justification for a Professional Teacher and Teacher Education²

When Broudy challenged the positivist presuppositions in educational thinking, he found a fellow explorer in Michael Polanyi. A principal objective guiding Polanyi's work was to break the dangerous hold of positivism upon the modern mind. Given CAEP's positivist predilections, Polanyi remains salutary today. Indeed, no small part of Polanyi's "popularity comes from the fact that Polanyi's epistemology furnishes the critics of positivist theories of knowledge with powerful ammunition by an authentic card-carrying scientist" (Broudy 1984, 22).

At the heart of Polanyi's revolutionary epistemology is the tacit dimension which seeks to demonstrate that all knowing, from perception to the most advanced scientific discoveries, "must be a personal act and involve a personal judgment and commitment, in contrast to the explicitness, critical testing and impersonality" required by positivism (*SM* 18, Allen 1978, 168). In the *The Tacit Dimension*, Polanyi begins his explication of it with the simple but profound insight that "we know more than we can tell" (*TD* 4). From there he articulates the logical and dynamic structure of tacit knowing that accounts for that insight (*TD* 9-10). As many readers of *TAD* well know, the basic structure involves two things or two kinds of knowing. The first kind is focal knowing. Focal knowing is attending directly to something. It is the focus of our gaze or our attention. It is what we have before our mind and can be explicitly identified and described. The second is tacit knowing. The tacit is what we attend from to something else. We know the object in front of us or that which we are attending to by relying on our awareness of something else to attend to it. In this case, the tacit element is like a clue or a sign that points beyond itself to something else. It is that tacit element of which we have knowledge that we may not be able to tell. Such knowledge must be applied and the details integrated into a complete performance. This integration of focal-tacit can take place only through a personal act which is necessarily unspecifiable and is hence a tacit integration. For Polanyi, all knowing has this structure; all knowing involves the from-to functional relationship.

All knowing entails a context that operates to concentrate our attention towards something else. Such a context might be an experience, theory, idea or view. Whatever it is, we see the focal object 'in terms of' that tacit element. We cannot escape the influence or shaping of the tacit element; it is essential to knowing. As a matter of fact, the cultivation of the tacit element enables us to enrich our lives and deepen our ability to recognize and assimilate new experiences.³ And yet, for Polanyi, the tacit functions despite being beyond immediate explicit recall for identification and description. For example, consider how we engage in "skills which while we know that we know how to do the things in question, we cannot specify in terms of details how we do those things" (Allen 1978, 169). Broudy explains Polanyi's point through the example of a physician reading a medical journal focusing on the chemistry of the body. If you asked the physician to recall specific chemistry terms, facts and formulas, the physician is unlikely able to do so. Yet, the physician would be able to follow the gist of the article. Why? Because the facts and formulas regarding chemistry were explicit learning inputs in chemistry class but they transformed from a focal knowing, i.e. explicit knowledge, to schema or maps that the physician sees with or, in this case, reads with. What was known explicitly still functions in the act of knowing but is not immediately recallable as it functions from the tacit dimension.

Assuming the tacit dimension is real and functions as described briefly above, then it gives a theoretical grounding for Broudy's notion of a professional teacher and teacher education.⁴ According to Broudy, the validity of the argument for a genuinely professional teacher rests on the possibility of knowledge that would not necessarily be transmitted to pupils but which would be necessary to construct contexts for the educational endeavor. Polanyi's tacit dimension shows that we use tacit knowledge as subsidiary clues to interpret a situation. In addition, it shows that during this act of interpretation we cannot recollect and be aware of our tacit knowledge focally, for we are using such knowledge tacitly. As a result, teachers know more than they can tell in the act of teaching. Teachers operate with tacit knowledge informed by various inputs such as theories and experiences that shape how they interpret themselves, their students, and their interactions. In this way, Polanyi's tacit dimension supports Broudy's contention that a professional teacher possesses knowledge to teach with, but not to, students.

If all knowing involves tacit knowing, then all teachers, including craft and professional teachers, teach with a measure of tacit knowledge. What separates the professional from craft teacher is not simply that one uses tacit knowing and the other does not, but rather the richness, breadth, and depth of what Broudy terms "the allusionary base" from which to draw from for interpretation (Broudy 1988, 25). If, as Polanyi shows, the tacit dimension informs what we see and how we interpret it, then expanding the resources for seeing and interpreting better enables us to understand and respond to situations appropriately. Further explanation and justification are needed, but I believe Broudy's professional teacher possesses what Polanyi identifies as the "educated mind" (*PK* 102).

For Broudy, to achieve a richer, broader, and deeper allusionary base, teacher education must include what CAEP excludes, namely academic, theoretical coursework. Inspired and supported by Polanyi's tacit dimension, Broudy outlines a teacher education curriculum (Broudy 1962, Broudy 1967b). For Broudy, every profession is defined by its problems of practice. Like medicine or law, Broudy contends, that education also has unique problems of practice. He identifies four general problems: 1) aims or objectives of education; 2) curriculum; 3) organization of education; and 4) teaching-learning. Before a teacher can address a problem of practice, she first must know what the problem is. A study of the major problems allows her to better identify the problem before her and identify resources appropriate to that problem to address it. Resources, suggests Broudy, come from studying these problems from the perspective of general professional studies for interpretative use (more commonly known today as "Foundations of Education"). These studies are not meant for simple recall nor immediate application. Instead, these studies afford understanding of the primary problems of education in deeper detail. Within general professional studies, argues Broudy, are

four dimensions—history, philosophy, sociology and psychology. The first two are considered “humanistic” and the last two are “scientific” studies of education. But all of them address educational problems from unique vantage points providing the teacher multiple contexts to appreciate the problem confronting them. These dimensions offer images, concepts, and ideas that can be vehicles used for interpretation. Studying the problems within each dimension intensifies, refines and broadens the teacher’s capacity to perceive, clarify, and judge the teaching-learning situation. From an enhanced capacity to see ‘in terms of’ the teacher’s ability to respond flexibly to the moment increases. CAEP’s narrow understanding of “quality” evidence excludes unnecessarily the professional teacher’s robust allusionary base to teach with and reduces teaching to mere technique. If we were to follow CAEP, the increasing capability of instructional technology poses a real threat to the teaching profession. If we truly want professional teachers equipped with interpretative powers, then, according to Broudy, EPP’s must ensure a thorough grounding in the academic, theoretical study of the academic disciplines and general professional studies known as foundations of education courses supported by Polanyi’s tacit dimension.

Conclusion

This essay sought to demonstrate the power and scope of Polanyi’s thought by establishing the importance of the tacit dimension in relation to teaching and teacher education. The current assessment of educator preparation programs unnecessarily restricts teaching to a technical, mechanistic process due to its positivist roots. Polanyi’s revolutionary epistemology reveals the limits to that approach. With the aid of Broudy, a close student of Polanyi, and inspired by the tacit dimension, we attempted to formulate a truly professional teacher and outline a professional teacher education program. It should be clear now that Polanyi has much to contribute towards this goal. In addition, I hope we see that there is much more to be explored and I invite others to join me in that exploration.⁵

ENDNOTES

¹Given the importance of ‘craft’ for Polanyi, I believe it is unfortunate that Broudy chooses that term to compare to professional. I believe that Broudy does not appreciate Polanyi’s use of that concept and is on safer grounds when he uses the term ‘technician’ rather than craft to contrast with professional.

²In this section, I explore the potential contribution of the tacit dimension to a rationale for teaching and teacher preparation. This is an application investigated by Harry Broudy in the 1960s, 70s and 80s, but then ignored by educational theorists. (For an exception, see Jon Fennell’s essay “Polanyi and the Secular Age: The Promise of Broudy’s ‘Allusionary Store’” in *Philosophy of Education 2016*, <https://ojs.education.illinois.edu/index.php/pes/article/view/5236/1632>). My paper intends to remind Polanyi and education scholars of the potential of Polanyi to illuminate major educational

questions. This essay is a step forward on my path to a growing appreciation of Polanyi. The astute Polanyi scholar will quickly recognize my novice understanding of Polanyi. I did not want my lack of understanding, however, to impede my growing appreciation of his importance and so I accepted the invitation by TAD. As a fellow explorer, I welcome additional guidance in understanding the revolutionary work of Polanyi.

³Here I am alluding to Polanyi's "educated mind" in *Personal Knowledge* (1958, 102-104).

⁴I believe Collin Barnes' observation, in personal correspondence, is correct that Broudy not only needs Polanyi's epistemology, but also the ontology that flows from it. I believe Broudy assumes that there needs to be a more nuanced, comprehensive conception of the person whose entire composition and dynamic existence cannot and should not finally be reduced to measurement. That point is for further study, but space does not permit here.

⁵I want to thank Jon Fennell, Chris Beckham and, especially, the guest editor, Collin Barnes, for their thorough, careful review of this essay and insightful recommendations. This essay is better due to their assistance. All errors, misjudgments, and omissions remain mine alone.

REFERENCES

- Allen, R T. 1978. "The Philosophy of Michael Polanyi and its Significance for Education." *Journal of Philosophy of Education* 12: 167-177.
- Brabeck, Mary and Christopher Koch. 2013. "Why the New Teacher Ed. Standards Matter." Accessed July 3, 2018. https://www.edweek.org/ew/articles/2013/09/18/04brabeck_ep.h33.html.
- Broudy, Harry S. 1956. "Teaching – craft or profession?" *The Educational Forum* 20, no.2: 175-184.
- _____. 1959. "Abstracts of Recent Addresses: The NCATE Statement on the Teacher Education Curriculum." *Journal of Teacher Education* 10, no. 1: 107-12.
- _____. 1962. "The Education of Teachers of Teachers." *Journal of Teacher Education* 13, no. 3: 284-91.
- _____. 1965a. "Criteria for the Professional Preparation of Teachers." *Journal of Teacher Education* 16, no. 4: 408-15.
- _____. 1965b. *Education As a Field of Professional Study*. Portland, OR: Northwest Regional Educational Laboratory.
- _____. 1967a. *The Continuing Search for Criteria*. AACTE Evaluative Criteria Reference Paper, No. 3. Washington, D.C.: American Association of Colleges for Teacher Education.
- _____. 1967b. "The Role of the Foundational Studies in the Preparation of Teachers." In *Improving Teacher Education in the United States*, edited by Stanley Elam, 1-22. Bloomington, IN; Phi Delta Kappa.
- _____. "On Knowing With." In *Proceedings of Philosophy of Education Society 1970*, edited by H. B. Dunkel, 89-103. Carbondale, IL.: Philosophy of Education Society.
- _____. 1972a. *A Critique of Performance Based Teacher Education*. Performance Based Teacher Education Series, 4. Washington, DC: American Association of Colleges for Teacher Education.
- _____. 1972b. *The Real World of Public Schools*. New York, NY: Harcourt Brace Jovanovich.

- _____. 1975. "PBTE/CBTE—Do They Mean What They Say?" In *Regaining Educational Leadership: Critical Essays on PBTE/CBTE, Behavioral Objectives and Accountability*, edited by Ralph A. Smith, 24-34. New York, NY: John Wiley & Sons, Inc.
- _____. 1980. "What Do Professors of Education Profess?" *The Educational Forum* 44, no. 4: 441-51.
- _____. 1981. "The Uses of Schooling and Their Evaluation" *Capstone Journal of Education* 2, no. 1: 5-13.
- _____. 1983. "Whys and Wherefores of Competency Based Teaching." *The Journal of Classroom Interaction* 18, no. 2: 2-6.
- _____. 1984. "Review of Beyond Empiricism: Michael Polanyi Reconsidered." *Tradition and Discovery: The Polanyi Society Periodical* 12/2: 22-28.
- _____. 1985. "The Uses of Schooling in Professional Life." *Tradition and Discovery: The Polanyi Society Periodical* 13, no. 2: 4-9.
- _____. 1988. *The Uses of Schooling*. New York, NY: Routledge.
- Cochran-Smith, Marilyn, et. al. 2018. *Reclaiming Accountability in Teacher Education*. New York, NY: Teachers College Press.
- Council for Chief State School Officers. 2011. *Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards: A Resource for State Dialogue*. Washington, DC: Author. Accessed December 17, 2018. https://ccsso.org/sites/default/files/2017-11/InTASC_Model_Core_Teaching_Standards_2011.pdf
- Council for the Accreditation of Educator Preparation. 2013. "New Accreditation Standards Adopted to Ensure Quality in Educator Preparation." Accessed June 7, 2018. <http://caepnet.org/about/news-room/statements-press-releases/new-accreditation-standards-adopted>
- _____. 2015. "CAEP Evidence Guide." Accessed May 24, 2018. <http://caepnet.org/-/media/Files/caep/knowledge-center/caep-evidence-guide.pdf?la=en>
- _____. 2016a. "2013 CAEP Standards". Accessed June 20, 2018. <http://caepnet.org/-/media/Files/caep/standards/caep-standards-one-pager-061716.pdf?la=en>
- _____. 2016b. "CAEP Accreditation Handbook, Version III March 2016." Accessed June 20, 2018. http://caepnet.org/-/media/CAEP%20Accreditation%20Handbook_March%202016.pdf?la=en
- Kneller, George F. 1984. *Movements of Thought in Modern Education*. New York: J. Wiley.
- Polanyi, Michael. 1958. *Personal Knowledge: towards a Post-critical Philosophy*. Chicago: University of Chicago Press.
- _____. 1966. *The Tacit Dimension*. Garden City, N.Y.: Doubleday.
- _____. 1969. *The Study of Man*. Chicago: University of Chicago Press.
- Rutledge, David W, et. al. 1991. "The Tacit Victory and the Unfinished Agenda." *Tradition and Discovery: The Polanyi Society Periodical* 18, no 1: 5-17.
- Schwarz, Gretchen E. 2015. "CAEP Advanced Standards and the Future of Graduate Programs: The False Sense of Techné." *Teacher Education Quarterly* 42, no. 2: 105-17.

Teacher Preparation Analytics. 2014. "REPORT HIGHLIGHTS: Building an Evidence-Based System for Teacher Preparation." Edited by Michael Allen, Charles Coble, and Edward Crowe. Accessed July 8, 2018. <http://caepnet.org/-/media/Files/caep/accreditation-resources/tpa-report-highlights.pdf?la=en>

Western Association of Schools and Colleges. 2013. "2013 Handbook of Accreditation." Accessed April 12, 2018. <https://www.wscuc.org/resources/handbook-accreditation-2013>