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How the Conception of Knowledge Influences Our Educational Practices: *Toward a Philosophical Understanding of Epistemology in Education*

Introduction:

This essay is written for practitioners and educational professionals wanting to become more familiar with technical philosophical issues in education, specifically, the issue of epistemology, or knowledge theory, as it relates to forms of learning, pedagogy, and assessment in the curriculum. There exists a gap between educational theorists and educators, which is traced by McCutcheon (1984) to the dense and overly technical language that academics often employ when communicating their philosophical ideas, “writing in jargon that renders the work inaccessible to practitioners” (p. 46). Herein, I distill the essence of the philosophical issues I am dealing with and present them in a way that is both accessible and understandable without sacrificing their depth or weight. Philosophy, after all, if it is of any importance, must be, in addition to logical and well-reasoned speech, communicable. For it is only through communication, as the “aim of philosophy,” that its “other aims are ultimately rooted: awareness of being, illumination through love, attainment of peace” (Jaspers, 1954, p. 27). Bringing systematic philosophy and a formal methodology to bear on the problems of education represents an instance where philosophy contributes in a direct and positive manner to the active and ongoing processes of current educational reform.

The goals and aims of education determine the planning, writing, and implementation of the curriculum. The manner in which we conceive knowledge, along with the valuation of certain forms of knowledge, relate directly to our conception of education along with the understanding of the student’s potential for intellectual, emotional, and social development. In this paper, I analyze the relationship between our fundamental epistemological beliefs, pedagogy, and the modes for assessing student learning within the curriculum. To this end, two fundamental epistemological beliefs concerning knowledge forms as they manifest in the instruction of will be examined. In the first section, I provide a general introduction to epistemology and its relation to education. In the second section, I demonstrate the unique way in which knowledge manifests in the curriculum through the analysis of two reading theories and their respective notions of pedagogy and learning. In the final section, *touchstone theory* is explored in relation to validating competing theories of education, i.e., I explore the manner in which the reading theories presented in the previous sections of the paper might be philosophically analyzed for their epistemological validity.

Epistemology and Education:

Epistemology is a branch of philosophy concerned with the origin, reliability, and criterion of knowledge. Philosophy, concerned with the reliability and justification of

knowledge, asks the following interrelated questions: By what means have we acquired knowledge? What is the scope and dimension of our knowledge? How can we trust the reliability of our truth-claims? It is important to understand how we obtain truth along with the manner in which we judge and determine the ‘truth-value’ of our propositions and other expressions of knowledge. It is crucial that our claims to knowledge are resistant to the ultimate challenge of skepticism. This is also the case with our educational practices and the fundamental knowledge forms around which we structure the curriculum. The systematic and philosophical understanding of knowledge and epistemology is “especially relevant when we raise the question of how to justify a particular conception of education, or program of education” (Walker & Evers, 1982, p. 213).

According to the ancient Greeks, the ways in which we know that world are many and varied. For example, Aristotle points out in the *Nicomachean Ethics* that we know things by means of wisdom (*sophia*), scientific knowledge (*episteme*), practical insight (*phronesis*), perceptual intuition (*aisthesis*), and technical ‘know-how’ (*techne*). Indeed, the complete life for Aristotle includes the crucial understanding of how to organize these various legitimate forms of knowledge into a working whole that represents the complete life of ‘human flourishing’ (*eudaimonia*). Each unique form of knowledge that Aristotle outlines has its appropriate function and purpose, and importantly, these various forms of knowledge are experienced, understood, organized, transmitted, and instilled through the processes of education. Contemporary philosophers have a similar view of knowledge and its varying forms, and it is possible to understand the types of knowledge, and their concomitant modes of reasoning, manifesting in the curriculum according to the following epistemological divisions: (1) Analytic knowledge, which is truth by definition, e.g., rudimentary mathematical equations and grammatical tautologies; (2) Synthetic knowledge, which synthesizes many ideas, e.g., the propositions of the empirical sciences (*logical-analytic*); (3) Normative understanding, which represents value judgments, and, a closely related form of knowledge; (4) Aesthetic intuition, which is a form of perceptual insight associated with the arts and humanities (*intuitive-perceptual*).¹

The central aims of education define the curriculum, which includes approaches to pedagogy that best serve these aims and objectives. There is a complex relationship between the establishment of educational aims and goals and their enactment in the practical activities of the classroom. The relationship between aims, goals, and the respective view of education concerns such issues as the philosophy of learning, the definition of competency, the interpersonal relationship between teacher and student, and ultimately, a conception of personhood, or the issue of human identity. There is a fundamental epistemological issue underlying this web of relations: the form of knowledge that education embraces and values grounds the entire curriculum and determines the way in which education is understood and unfolds. For example, if we take the issue of human identity as related to specific forms of knowledge, we see that the

¹ Philosopher David Best clearly elucidates the revelatory encounter with art in the curriculum, specifically literature, in terms of a *noetic* experience, or experience of knowledge. In line with the *cognitive* view of the arts, Best argues for the link between the emotions that art inspires and cognition, understanding, and reason. He refers to the form of perceptual knowledge that art facilitates as “emotional rationality.” Best, David (1989). “Feeling and reason in the arts: The rationality of feeling,” in *The symbolic order*, (ed.) Peter Abbs, Falmer Press: Philadelphia.

way in which knowledge is conceived reflects directly our conception of human essence and the subsequent modes of education that are best suited for facilitating human development. A brief examination of *rationalism*, the philosophical view that foundational knowledge is discovered through self-evident insight by means of the power of pure reason, and *empiricism*, the view that experience is the inroad to all knowledge, will illustrate this point.²

If we adopt the view that knowledge emerges through self-evident insight (*rationalism*), as we find in the philosophy of Descartes, we understand the human being in terms of a ‘thing that thinks’ (*res cogitans*), i.e., the human has an indelible and immutable essence located in its capacity and capability to use its mind. This view of the human is found in *essentialist* models of education (e.g., the educational philosophy of Mortimer Adler), and the aims and goals of education are consistent with the understanding of the human. Teaching in this model for education is directed toward the development of reason because it is our essential human nature. If, on the other hand, we adopt the view that knowledge emerges through experience (*empiricism*), as we find in the philosophy of Locke, we understand the human being in terms of a blank slate upon which experience writes. Here, as opposed to an essence that is given in advance (essence precedes existence), our essence, as it were, is something that develops. In this view, our personal identity is constructed throughout our life as we engage in the activity of experiential problem solving (existence precedes essence). This view of the human being is found in *instrumentalist* models of education (e.g., the educational philosophy of John Dewey), and the aims and goals of education in these models are “based on experience – which is always actual life-experience of some individual” (Dewey, 1963, p. 89).

Pedagogy is designed to best facilitate the student’s accomplishing the goals that determine the direction her education will take, and this includes instructional methods along with appropriate and reliable means for assessing and evaluating the student’s work. As related to the philosophy of knowledge, Moore (1979) confirms that our educational practices, the modes and methods of instruction for taking our students through a variety of specific, goal-oriented activities, are grounded in epistemological concerns. “Differences in conviction about the nature of knowledge, that knowledge is basically mathematical in character, or basically scientific, or religious will result in different theories, with different emphasis on methods related to practice” (p. 12). In order to investigate how the conception of knowledge determines pedagogical methods and modes of assessment that are consistent with the knowledge source, I move to examine: (1) Knowledge from the *essentialist* cluster, which is a traditional and conservative view of knowledge that adopts the ‘objective’ view of truth and the *Either-Or* philosophy of knowledge, and (2) Knowledge from the *instrumentalist* cluster, which

² Throughout this essay, I employ *essentialism* and *instrumentalism* as epistemological terms referencing two distinct forms of knowledge: (1) *essentialism*, which relates to the belief that things have essences, and an explanation or definition, if it is accurate and true, will capture this essence in knowledge; and (2) *instrumentalism*, which relates to the belief that ideas are correct when they create possibilities for efficacious and beneficial actions that satisfy our needs and purposes. In this latter view, the notion of truth and falsity, as we find in traditional epistemology is not so much an issue. Rather, *instrumentalism* is concerned with positions (or perspectives on the world) that are more ‘useful,’ and hence, more ‘correct,’ than others in facilitating the accomplishment of our goals.

adopts a ‘pragmatic’ view of knowledge and the *Both-And* philosophy of knowledge. In this view, knowledge occurs between the interaction of the student and her environment, as it is grounded in the student’s unique experiences and holds a legitimate practical value in both the life of the student and her community.

Essentialist Approaches to Reading

Philosophical and educational *essentialism* first appears in Plato’s *Republic* and a close reading of the Allegory of the Cave reveals Plato’s entire philosophy of education (*paideia*), which expresses the infamous distinction between transient realm of the senses and the immutable, eternal realm of the forms (*eidai*). Plato’s understanding of the world and the human is explained through Grand-Narrative, and this explanation serves to ground the curriculum for educating the ideal Athenian state, which produces a “ruling class” of philosopher-kings who “govern in the light of ultimate truths revealed by reason” (Bonnett, 2001, p. 29). Not only does Plato’s philosophy explain the essence of truth (the objective form of the Good), it also provides the legitimate epistemological means by which to access it. For Plato, truth is transcendent and objective; so he advocates abstract, contemplative philosophical thought (*theoria*) above methods of inquiry that are based on the ‘subjective’ senses or rooted in experience. The movement of Plato’s thought through the history of philosophy and education (as Platonism), graduating as it does through *essentialism* and *idealism*, it eventually finds its way into the contemporary ideological view of curriculum-education known as the *Scholar-Academic* model.

Practitioners are perhaps more familiar with this view of education as it relates to the *essentialism* of Adler and his *Paideia Proposal*, which stresses the same curriculum for all students and treats them as essentially minds or intellects to be developed through the immersion in and transmission of perennial and canonical works of high cultural significance. Adler’s essential curriculum model is grounded in the notion that student’s cannot be great, or even considered educated, until they read the great books, acquire a command of grammar and rhetoric, and demonstrate a higher understanding of mathematics and logic. All these courses of study are intended to develop the power of the student’s mind, and studies are organized sequentially and systematically in order to maximize the various stages of the student’s cognitive development. The curriculum is transferred through three methods of pedagogy, all of which emerge from a didactic model of instruction. Although Adler refers to the methods of “coaching” and “supervised practice,” along with “maieutic or Socratic questioning,” these various approaches to teaching are not concerned with ‘knowledge construction’ through discussion, or critical dialogue.³ Rather, these methods work to broaden and deepen the things initially learned through methods of didactic instruction (Adler, 1982).

³ In his analysis of Socratic teaching, which resembles a process of *meaning-making* through discourse, Rud (1997) claims that although Adler advances a three-pronged approach to pedagogy, the so-called “Socratic Method” he advocates in the later stages of education depends exclusively on the information transferred in the first stage of learning to the student, which is highlighted by knowledge acquisition through lectures and techniques of memorization. Rud, Anthony, G. (1997) The use and abuse of Socrates in present day teaching, *Education Policy*. 5 (20).

Since it is the case that when we determine what knowledge is and why it should be valued, we structure our educational practices around these beliefs, we must ask the following interrelated questions: Who are the authorities making decisions regarding the curriculum content? Who is in possession of the privileged knowledge that is taught to students? There is a problem associated with the *essentialist* conception knowledge relating to the privileged status of those deciding on the content of the curriculum. For example, in the *scholar academic model* of education, Hirsch (1998) advocates the notion of cultural literacy, arguing that students should become familiar with certain works of high culture that “reproduce the shared cultural structures that underlie literate communications of the present day” (pp. 135-136). Hirsch, along with several other intellectuals from the Western canon of the sciences and the humanities, goes on to compile a list of essential names, dates, and events throughout history, which are deemed important to all students, despite their race, culture, or social class status. In this age of multiculturalism and marked economic displacement, we should be skeptical, and further, highly critical of educational practices that reproduce the reigning ideology within our classrooms in terms of outdated conservative ideals, as a form of authoritarian and elitist cultural imposition. In relation to this issue of cultural elitism, is the issue of cultural exclusion, and Young (2008) addresses this when writing of *knowledge of the powerful*, “defined by who gets the knowledge in a society,” and *powerful knowledge*, defined in terms of the superior “intellectual power it gives those who have access to it” (p. 14). This indicates the unique problems that arise when access to the knowledge that is most ‘useful’ in a society is denied to certain segments of the population.

When Cunningham & Fitzgerald (1996) elucidate the formal conceptions of knowledge in the curriculum, along with the epistemological cluster under which the various types of knowledge are subsumed, they argue that *essentialism* holds the following beliefs with respect to knowledge in the curriculum: (1) Knowledge exists at an objective remove from the knowing subject; (2) Those who possess knowledge and deem it valuable select it for inclusion in the curriculum; and (3) Knowledge can be taught, or transmitted, effectively to the mind of the knowing subject (pp. 44-45). Stated philosophically, in the curriculum embracing an *essentialist* view of knowledge and approach to reading instruction, when the student grasps the text’s objective meaning, he or she is said to have knowledge. As stated, *essentialism* employs the *Correspondence Model of Truth* when validating truth-claims, which works off the logic that an idea is true, if and only if, there is a correspondence between the thinking subject and the objective state-of-affairs. In this epistemological view, the locus of truth resides in the valid locution or proposition (either spoken or written), and the essence of truth is the agreement between knower and known, between idea *as* representation and reality (Heidegger, 1967).

Cunningham and Fitzgerald (1996) outline a theoretical model for reading instruction grounded in the *essentialist* epistemological cluster. It is possible through analysis to demonstrate how pedagogy and assessment emerge in the reading or language arts curriculum when these practices are based on an objective notion of truth with its concomitant model for verification. The authors begin by presenting an analysis of a reading model based on the research of Rumelhart, and detail the manner in which the conception of knowledge actively influences both reading instruction and the forms of assessment consistent with *essentialist* philosophy. Thus, in approaching Rumelhart’s

theoretical model for reading in a philosophical manner, we should be asking the following questions: Where is knowledge, or meaning, located? Is it situated in the text or the reader? How does knowledge obtain? What is the criterion for truth in this theoretical model? Addressing these questions will reveal the knowledge source and related criterion for verification. It must be noted that the manner in which we determine the validity of our knowledge must be consistent with the view of knowledge we are adopting.

Rumelhart's theoretical reading model can be understood in terms of a dualistic approach to knowledge in the curriculum, which embraces the notion of the 'subject-object' divide. This clearly indicates where knowledge, or meaning, is located in the process of reading: In Rumelhart's *interactional model*, the "reader and text are separate, and meaning occurs between the two, as they interact" (Cunningham & Fitzgerald, 1996, p. 52). Initially, the authors state that in this view meaning is both discovered and created. However, after a critical assessment of Rumelhart's findings, aside from the slight cognitive-linguistic variations that arise in the reading process, e.g., the manner in which readers vary with respect to non-sensory knowledge, the correctness of language, the efficacy of assessing signs and symbols, and other elements of Rumelhart's information processing model, the process is ultimately reducible to the 'discovery' of meaning, and the final word on knowledge in this model rests with the text along with the educator's understanding of it. For in this model embracing both metaphysical and epistemological dualism, the meaning of the text is situated at an objective remove from the reader; it is objective knowledge that stands beyond the thinking subject.

This form of *essentialist* knowledge associated with this model for reading instruction is also classified as *pre-procedural*, i.e., "knowledge simply exists and there is no need to construct it" (Brownlee, Boulton-Lewis, & Berthelson, 2008, p. 459). Within the *essentialist* curriculum the preferred method of instruction is didactic to insure that truth is directly and effectively transferred to students who are viewed as passive, empty vessels requiring content, waiting and needing to be filled with knowledge that is in the possession of authorities. When considering the notion of objective truth grounding the educational paradigm, Katz (2000) concludes, "When what is known is tantamount to a found knowledge object accessible only to authorities, teaching becomes an excursion in telling (or showing), and learning an exercise in remembering" (p. 137). Freire (2009) views this form of education, which he terms the "banking concept" of teaching, as exploitive. "In the banking concept of education knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing" (p. 72). This model for teaching is oppressive because educators project ignorance and a sense of inferiority on those who are subjugated, manipulated, and domesticated under the yoke of a conservative ideology that insidiously shapes and drives the processes of education. In addition to setting up a hierarchical, asymmetrical power balance between teachers (as authorities) and students (as subordinates), it is also problematic "because of the social-psychological knowledge of human beings volition and proactivism" (Brosio, 2000, p. 70). *Essentialist* models for education ignore the temporal-historical aspects of learning and the potential for change and *becoming* within the curriculum, and as a result, hypostatize the present, or *praxis*, which leads to a fatalistic position that is resistant to historical change and the potential for authentic social reform (Pinar, 1994).

Since the *essentialist* curriculum is structured around a set of predetermined standards for competency, the chosen method of didactic instruction excludes self-directed or cooperative learning as knowledge construction, or *meaning-making*, which precludes the inclusion of the emotional and intellectual biography of the student in the learning process. As a result, little or no sense of ownership, or ‘personalization,’ of knowledge occurs. According to Balleck (1964), within the *essentialist* view of education, there is a relationship of identity between the ends and goals of the curriculum and the student’s preconceived needs, which ultimately determine the “way in which knowledge should be organized and taught to meet these ends and needs” (p. 263). Assessment in this model is reduced to a process of measuring, gauging, and judging, “the closeness of the fit between what is told (or shown) and what is remembered, be it through a formal test or classroom discourse structure” (Katz, 2000, p. 139). Teachers have the answers in advance and know exactly what they are looking for. Thus, it is common to find a grading tool for evaluation and assessment based on the traditional “A through F” system. In this view of education, the “traditional report card along with failing grades – is justified because it is linked to a curriculum that is in turn integrally part of reality,” and what is ‘real’ in the *essentialist* view of knowledge refers to objective truth that is in the possession of professional authorities or educators (Brosio, 2000, p. 63).

Education in this view is grounded in the drive to uncover the objective meaning of the text, which ultimately stands beyond the creative interpretive powers of the reader. Thus, as in all *essentialist* thought, there is external meaning which must be acquired by is taught, or given over, to the students by the teacher. Since the knowledge experience that occurs through the interaction between reader and text depends for its correctness on the author’s message, when assessing a student’s comprehension of the reading material, it is the educator that determines whether or not the readers’ ideas about the text are reflective of the actual meaning of the text. Thus, by means of the *Correspondence Model of Truth*, the student’s interpretation is linked with the established, authoritative interpretation of the objective text. As related to the study of literature or poetry in an institution of higher learning, it is the case that no critical commentary by an author exists, as in the case of the Greek tragedians. For example, when studying classical poetry, meaning or correctness is based on the canonical interpretation of one or another scholarly authority, which means that the educator incorporates the trusted literary views of established experts in the field, such as classicists or well-respected literary critics in the discipline of comparative literature.

Instrumentalist Approaches to Reading

In the history of education, it is possible to understand the *instrumental* view of knowledge, as found in *progressivism* and *constructivist* models of education, as emerging from the tradition of *realism* in education, which in turn emerges from the *empirical* philosophy of Locke, as it is interpreted and expressed in the education philosophy of Herbert Spencer. Although Spencer favored moral training and the cultivation of the intellect as overarching concerns of education, his philosophy of teaching, emphasizing science and psychology, shares much in common with Dewey’s notions of pedagogy and child-centered learning. Spencer’s view of knowledge and

knowledge construction prefigures the understanding of knowledge as experiential, progressing from the concrete to the abstract, from the particular to the universal. In fact, it is possible to view Spencer as constructing the bridge between *essentialism* and *progressivism* in education, for he advocates an approach to education stressing experimentation and the collective problem-solving method in the classroom. Rather than handing over ready-made truths to the students, in the form of abstract principles, Spencer believes that children “should be led to make their own investigations, and to draw their own inferences. They should be told as little as possible and induced to discover as much as possible” (Spencer, 1888, pp. 124-25).

In contrast to *essentialism*, *instrumentalism* represents the ‘philosophy of knowledge’ (epistemology) championed by Pierce, James, and Dewey, who are all associated with the philosophy of pragmatism. Although each thinker has ideas unique to their respective vision of pragmatism, these philosophers concur on the following philosophical points: (1) Pragmatism is a method for solving problems and answering questions without relying in the first instance on abstract principles for practical action; and (2) Pragmatism is a method that favors experience as the inroad to knowledge, which occurs between the interaction of the human and her environment through the implementation of a ‘scientific method.’ To reiterate an earlier point, pragmatism is a form of philosophy that embraces a ‘theory of knowledge’ that is instrumental in nature. Hence, to be an *instrumentalist*, one “interprets the meaning of a statement in terms of its practical consequences, a position is either true or false according to its results” (Pojman, 2006, p. 258). The propositions that ground, guide, and direct our practical activities must demonstrate their efficacy at problem solving within real-world situations; the practical ‘effectiveness’ of our ideas serves as the ‘gold-standard’ for determining the correctness of these ideas, their *truth-in-usefulness*, as it were.

Truth, according to Dewey, gives us the ability to change the environment as it affords us with “genuine experience,” and “every genuine experience has an active side which changes in some degree the objective conditions under which experiences are had” (Dewey, 1963, p. 39). To be accurate, Dewey opts for *warranted assertability* when justifying truth-claims, which amounts to validating the hypotheses that direct our actions and allow us to effectively bring our activities to a close in a suitable manner. What is true terminates a situation in a sufficiently unified manner and allows us to envision and facilitate coherent activities in the future. While those who hold to the *essentialist* view of knowledge demand utter certainty to their knowledge, and further, believe they can have it, those adopting the *instrumental* view believe that knowledge is always beyond categorical justification, for it is malleable, always in the process of being reworked, always in the process of evolving by means of our attempts to continually refine our theories about the world based on previous experience (Dewey, 1990). Jonas and Nakazawa (2008), writing on the Nietzsche’s philosophy and its relationship to *pragmatism* and education, express this aforementioned view nicely in terms of a knowledge-system composed of tentative assertions, a collection of coherent, instrumentally correct perspectives that comprises the context of lived experience, wherein some perspectives offer superior contributions to solving our problems.

Indeed, for Nietzsche there are only perspectives – but a close examination of his concept of perspectivism reveals that some perspectives are ‘truer’ than others.

This does not mean that they are truer according to the traditional standard of better reflecting ‘absolute reality,’ but rather that they better reflect our perspectival reality, the reality before us every day (p. 270).⁴

In this view, knowledge emerges through a process of construction, or *meaning-making*, where the students’ personal experiences, beliefs, desires, and needs play integral roles in learning. Knowledge is constructed as new information is assimilated within the students’ store, or archive, of existing knowledge. Knowledge is always in a process of *becoming*, it is always being reshaped and reconstructed as the students’ cognitive capacities change, adapt, and develop to accommodate new and unique experiences. As opposed to the *Correspondence Model of Truth*, as was introduced in the section on *essentialism*, where ideas are true if, and only if, they correspond with external reality, the *instrumentalist* view of knowledge adopts the *Coherence Model of Truth*, which focuses on the manner in which our thoughts, beliefs and opinions cohere within a general system of meaning. Katz (2000) expresses this notion of coherence when arguing that within a *progressive* curriculum, “people and ideas are interrelated, abilities, needs, interests, and learning styles of students are integral factors that shape the program” (p. 138). However, although *instrumentalist* models focus on the subjective experience of the individual, this is not to indicate that the model for education degenerates into epistemological relativism.⁵ For there is a way to ‘objectivize’ the subjective knowledge of the student: knowledge in this case is inter-subjectively verified by relating potential knowledge or new knowledge to the “archival tradition,” and by considering beliefs in light of that which is taken to be “true” communally, learners

form and revise their beliefs on the basis of evidence accumulated in the public store. In this way a bridge is built between the subjective properties of individual knowers (i.e., their beliefs and interpretations) and that which is generally known and from which learners are held accountable (Ibid, 142).

In contrast to *essentialism*, *instrumentalism* leads a to a completely different set of assumptions regarding goals, pedagogy, and assessment. This program of education, which is associated with a *progressivism*, or child-centered model for education, in addition to stressing knowledge construction, highlights the social aspects of learning and embraces radically unique view of the teacher-pupil relationship. According to Dewey (1963), a curriculum should include a form of instruction that allows for a unique

⁴ It must be acknowledged that this classification of Nietzsche, as a so-called pragmatist, has its origins in the philosophy of Arthur Danto and is not common among Nietzsche scholars. For example, translator and commentator Daniel Breazeale limits his classification of Nietzsche to that of an epistemological *instrumentalist*. This position is clearly articulated in Nietzsche’s early essay, “On Truth and Lies in a Non-Moral Context” (1873).

⁵ *Epistemological relativism* can be traced to the ancient Greek sophist, or ‘wise-man,’ Protagoras (“Man is the measure of all things: of things that are that they are, and of things that are not that they are not.”). This position states that our subjective claims to knowledge, which are grounded in subjective sense perception, can’t be verified with certainty in an objective manner: Truth remains relative to the individual. This position relates to both philosophical *solipsism* and *subjectivism* in metaphysics and epistemology.

experience of learning to occur in the “give and take between teachers and pupils” (p. 72). Learning for Dewey is experiential, and experience consists of ‘democratic’ social interaction, wherein the school facilitates the student’s capacities and capabilities required for a democratic life by structuring an environment where democratic principles are integrated within their learning activities. Dewey’s philosophy is an important instance of knowledge as ‘social construction,’ an idea that continues to inspire our educational practices, e.g, the *social construction* model, wherein the school is conceived as a “miniature community, an embryonic society,” and its aims are the “development of social power and insight,” which opens the possibility for a liberation from the aims of utility in order to expand “the possibilities of the human spirit” (Dewey, 1990, p. 18). Education is really concerned with the processes of rational and imaginative problem-solving, in terms that relate directly to the understanding of the curriculum as a democratic social-historical context for developing the type of student who might one day make legitimate contributions to the society through the understanding that comes through communal learning.

One important aspect of teaching within a curriculum stressing *meaning-making* over knowledge-transfer is the focus on organizing the curriculum in such a way that the learner is guided through activities that are initially inspired by her spontaneous interests. From the analysis of the student’s needs, wants, desires, and interests, in relation to the ‘public sphere’ of knowledge, educational goals arise. For Dewey, social learning and knowledge construction are related directly to overcoming of the false dichotomies, or ‘dualisms,’ of traditional *essentialist* education. Since all learning is practical activity for Dewey, the learning is always an active and dynamic process, as opposed to the *essentialist* notion of knowledge as inert, which is passed along through the method of knowledge-transfer. The teacher facilitates the student’s capacity for change and adaptation. Education inspires the student’s ability to reconstruct experience to suit her developing needs in the present as they might authentically relate to her future activities. Although Dewey’s instructional methods undoubtedly allow for spontaneity in the learning process, the spontaneous aspects of the learning process do not result in unstructured, impulsive activity on the student’s part. Dewey is clear that instruction always attempts to guide “intelligent activity” based on the “formation of purposes,” which take s into account that knowledge emerges when student are actively assimilating their surroundings, acutely aware of what happened previously in similar situations, and, consciously exercising the “judgment which puts together what is observed and what is recalled to see what they satisfy” (Dewey, 1963, p. 69). Since knowledge is not limited to discovery, and does not occur through teacher-monologue or transfer, a *personalization* of knowledge occurs. When knowledge is a matter of interpretive construction, it embraces the particularities and uniqueness of the student’s educational experience.

This leads to the consideration of the instructor’s role in the *instrumentalist* model of education, which is best described as a facilitator of learning and a co-participant in the processes of *meaning-making* in the classroom. This presupposes that the educator is aware student’s personal intellectual and emotional makeup and sets out organizing both he classroom environment along with planning and organizing the activities that encourage the further development of their intellectual and emotional biographies. This notion of the teacher-pupil relationship undoubtedly stands at odds with the *essentialist* understanding of the teacher as the ‘all-knowing’ authority figure, who is in complete

control of the classroom, as the sole possessor of 'knowledge.' The model for the teacher we encounter in Dewey is also present, as mentioned above, to contemporary models for curriculum. For example, we find a similar model advocated by Shore (1992) who stresses teaching for 'social justice,' wherein the classroom and activities are structured by the teacher in such ways to optimize the students' freedom, facilitating a democratic environment for communal problem solving. Shor avoids direct instruction in the classroom, and instead opts a method of dialogue that empowers students, and encourages them, in an atmosphere of equality, "to learn more and to develop intellectual and affective powers to think about transforming society" (Ibid, p. 111). When learning unfolds as dialogue, through a problem-posing pedagogy, democratic virtues that Shor speaks of are instantiated within the structure and organization of the activities as learning transpires.

To continue with this point, in this model, teachers do not 'talk at' students but rather talk with them, teachers do not pose questions to which they already have easy answers to, rather they "pose the problem for dialogue as a participatory opening, thus inviting students to assume authority in making the curriculum, " by becoming co-participants in the process of problem-solving" (Ibid, p. 86). Although initiated and facilitated by the critical educator, the dialogue that transpires is receptive to all students contributing to the discussion, which serves as the medium through which the classroom is united in the pursuit of learning, in the processes of meaning-making. Shor views the authentic teacher-pupil dialogue as representing "the threads of communication that bind people together and prepare them for reflective action" (Ibid, p. 86). In this alternative pedagogical model for teaching, which is opposed to direct instruction, not only do pedagogical methods differ from the traditional *essentialist* model, but modes of assessment also assume unique forms. For example, *formative assessment* is stressed above the exclusive reliance on *summative assessment*, which takes into account the fluid nature of knowledge construction. The visions and intentions of learning are always open to assessment and reevaluation, and the educator in this model must always have an eye toward potentially changing the direction of the lesson in response to the student's developing and expressed needs.

While the following suggestions do not exhaust the possibilities of assessment and evaluation within a *progressive* model, they provide critical insight into the marked difference between the two philosophies of education that I am examining, and include: (1) systematic observation and the recording of student progress, noting the ways in which they adapt themselves to new situations as they acquire new knowledge; (2) student self-assessment, where students journal about what they have learned and what they would like to learn, along with the successes and difficulties they have encountered, including the manner in which they attempted with success or failure to overcome certain obstacles in their path. A sense of ownership accompanies this form of assessment, because it allows the student to assess her personal abilities as opposed to relating or comparing her achievements and progress to other students; and (3) teacher-directed portfolio assessment, which incorporates a rubric for assessment that allows for the teacher and student to relate the development of the student's experience to the evolution of the overall depth of her interpretive abilities. Such modes of assessment take into consideration the reflexivity of the student and the crucial notion self-understanding in the process of becoming a holistic learner, of developing an authentic sense of self-hood.

I now turn to examine the second theoretical reading model that Cunningham and Fitzgerald outline, which is Rosenblatt's *transactional* view of reading instruction. Rosenblatt's model is consistent with knowledge that is actively constructed within an experiential context, which is referred to as *procedural knowledge*, and this form of constructed knowledge affords the student the ability to grasp the coherency between ideas within a system, as well the "relationships between systems of ideas" (Brownlee, Boulton-Lewis, and Berthelson, 2008, p. 459). Rosenblatt's position states that meaning happens between the reciprocal action of reader and text, within a shared horizon, or context, for meaning. Rosenblatt argues for two modes of interpretation: the *efferent* and the *aesthetic*. The former relates to the analytic and logical aspects of interpretation, associated with scientific meaning, and the latter relates to the emotional, associative, and personal elements of reading. Just as in the *progressive* model of education presented above, Rosenblatt's theoretical model is concerned with the personal and subjective elements of the reader's constitution, which includes her knowledge store and the emotional aspects of her being. The reader, in this instance, is an active participant in and contributor to the process of meaning. Whereas traditional (essentialist) reading for comprehension proceeds in a linear fashion and presupposes the text's established, universal meaning, Rosenblatt understands the reading process as developing by means of a vertical spiral, where there is no universal meaning presupposed and meaning develops through hermeneutic interpretation; reading is an active, heuristic endeavor.

It is possible to state that Rosenblatt conceives knowledge in terms of the possibilities of Both/And philosophy as opposed to the traditional Either/Or conception of knowledge associated with *essentialism*. Since interpretation cannot be measured against a definitive textual meaning, the educator's task is to encourage and nurture the kind of creative, imaginative thinking that will allow for the possibilities of ever deepening interpretations on the part of the student. However, and this relates to what has been said about warranted assertability and knowledge of an instrumental nature, although a definitive interpolation does not exist, it is possible by "agreeing on a criteria of evaluation and interpretation, there can be warranted assertions, or alternative truths with some more accurate than others" (Cunningham & Fitzgerald, 2006, p. 54). Although this store of warranted assertions is certainly not an objective store of absolute knowledge, we might imagine the public store of knowledge to which the student has access in terms of a collective system of meanings and inter-subjective agreements. According to Brownlee, Boulton-Lewis, & Berthelson (2008), the more students believe in "procedural and constructed knowledge, the more likely they are to consider that learning takes time and is a constructed process, which results in better performance in course work" (p. 459). With respect to assessment, we might incorporate several of the methods as outlined above including portfolios and personal journals, which allow educators to determine whether or not the student's interpretations are becoming more profound in depth, asking whether the student is growing as a human being by increasing her store of acquired-knowledge, working toward honing old techniques while actively incorporating new techniques for interpretation.

Touchstone and the Validation of Educational Theory

In this final section, I briefly deal with *touchstone theory*, which Walker and Evers bring to discussions on education and epistemology. This theory, or meta-theory, is originally derived from Imre Lakatos (1922-1974), the philosopher of mathematics and science, and serves as the background theory against which we determine the validity of competing theories. All theories share similar ‘touchstone points,’ e.g., ‘observations’ and facts that are relevant to their claims, and they share “theoretical machinery” for organizing their data: logic, mathematics, and semantics. It is the work of *touchstone* to reveal and clarify, through analysis, the sets of observations and facts, and their organization, that best provide a solution to the problem to which each is addressed. For the purpose of this essay, it is possible to incorporate *touchstone theory* to analyze and evaluate the knowledge-claims that the two theoretical reading models discussed above offer, determining the problems that they seek to address and forming an understanding of what might be counted in the first instance as *touchstone*. It must be noted that although *touchstone theory* is employed in the service of policing rival theories, it is not an instance of a superior theory, for it “is not made up of epistemologically favored statements,” and it is not providing us with absolute, categorical assurances that one theory is superior to another (Walker & Evers, 1984, p. 220). Rather, it offers good reasons, with tentative proof, to support one theory over another by means of logical and informed arguments. Since educational theories arise out of our contextual social-historical practices, there are no “eternally justified or necessary truths, no final foundations. We have to work out our epistemic positions by reference to the theoretical structures and using theory-laden techniques currently available to us in our concrete historical, practical situation” (Ibid, p. 221).⁶

Herein, I have focused on the forms of instruction and assessment that were consistent with a reading theory based on an understanding of the curriculum’s foundational view of knowledge. However, if our goal were to assess in detail, for the purpose of adoption on a district-wide level, each of the reading theories, *touchstone* would include to the epistemological analysis the data provided by other disciplines in order to expand the context of the philosophical analysis. At this point we would turn to areas of study that are the “province of the sciences, disciplines such as child study, child psychology, sociology. These behavioral and social sciences provide descriptive theories about children, about how they grow, develop, about the effect on them of familial,

⁶ *Touchstone* is yet another instance of theory, and in fact, there are no formalized views of the world that are not theoretical in nature. The moment we describe, categorize, and organize our observations, we are producing theory-laden views, or perspectives, on the world (Lakatos, 1978). We cannot see the world *specie aeternitatis*, for there is no God’s eye view of things to which we have access. In addition, since we are dealing with educational theories, and hence practical theories, we must be aware that no matter how logical or well reasoned they are, they can never obtain with the same certainty as scientific theories, which not only describe and explain things, they also predict with accuracy what will occur in the future when tested and validated. Theories of education, practical theories, do not function in this manner. For practical theories “do not set out primarily to *describe* the world or to predict its future, but to tell us what we ought to be doing in it” (Moore, 1979, p. 11).

neighborhood, and linguistic environments (Moore, 1979, p. 14). In addition to explicating the fundamental forms of knowledge underlying the theory in question, using *touchstone* educators would also search out potential inconsistencies in the theories, work to identify their principle of focus, and search for points of similarity and overlap.

The quest for epistemological justification for our competing theories begins when “T1 is in competition with T2” and “one or more of the claims of T1 is contrary to claim(s) of T2. For this situation to obtain, T1 and T2 *must be addressed to the solution of at least one common problem*” (Walker & Evers, 1984, p. 221). In order to decide which of the two reading theories is best suited for the curriculum, we begin by stating that both reading theories attempt to address the concern of how students learn through reading instruction, along with the concomitant concern of whether students learn more effectively through the limited ‘teacher-student’ model of education (a knowledge-centered view of education) or within the open model of social groups (a student-centered view of education). With the goal of comparing, contrasting, and ultimately assessing the validity and potential effectiveness of each, we are concerned with the manner in which knowledge is experienced, assimilated, and cognized by the reader. As stated, *touchstone* in education incorporates logic, semantics, and mathematics, and also, when necessary, the findings from a variety of fields and disciplines such as educational sociology and educational psychology. *Touchstone* is necessary, first and foremost, “for the clear and rationally ordered statement of rival theories,” if the comparison and assessment is to have weight and validity (Ibid, p. 224).

For the sake of brevity, I limit my analysis to relating the effectiveness of each reading theory to the issue of “early literacy” in education by employing the interpretation of early literacy found in the analysis of Neuman (2010), which focuses on the critique of the definition of literacy as established by the 2008 National Early Literacy Panel (USA).⁷ Literacy, as defined by the panel, is narrow and tends to overlook the important aspects of both background (archive) knowledge and *meaning-making* (as knowledge-construction) in their link with code-based skills in developing literacy in the young reader. The author, against the findings of NELP, argues that

code-based skills do not sufficiently account for early literacy development. Rather content-rich setting in which skills are learned through meaningful activity help children acquire the broad array of knowledge, skills, and dispositions that build foundation for literacy learning (Neuman, 2010, p. 301).

Neuman’s study indicates that code-based skills can be more effectively acquired in actual instances where the student is actively immersed in the reading process itself, i.e., these skills need not be taught, and further, should not be taught in isolation and then later applied in situations where students read for content and comprehension. Neuman moves away from the model for literacy grounded in the “old fashioned notion that learning to

⁷ For the most part, the panel’s report reduces early literacy to “code-oriented” intervention techniques for teaching reading. “The bulk of the studies panel reports – more than 40% of them – focused on code based interventions: NELP discovered that alphabet knowledge (code), phonological awareness (code), phonological memory (code), writing one’s one name (code), and rapid naming of letters (code), were the strongest predictors of later measures of literacy” (p. 301).

read precedes reading to learn” (p. 301). Neuman does not deny the importance of the cognitive mechanisms involved in reading, for “code-related skills, the essential alphabetical principles that make up our language, are a crucial components in learning to read” (Ibid, p. 303). However, she goes on to add that although these skills are necessary, they are certainly not sufficient in and of themselves, and must be accompanied by a large store of archival knowledge that emerges through a process of knowledge-construction. Neuman’s claims are grounded in arguments related to the empirical observation that children desire to know and learn in the company of others, and whether it’s about cars, rockets, dinosaurs, or jungle animals, it is the goal of knowledge driving “their abilities to come to school to learn about literacy among many other skills, not the ability to ‘rapidly name a sequence of reporting random sets of pictures and objects” (p. 303). Her findings indicate that the most effective way to ensure literacy is to adopt a philosophy stressing an approach where code and content learning occur simultaneously occurring within the activity of reading.

We must consider that Rumelhart’s theory incorporates a detailed formal analysis for processing information, which focuses on the “internal mental mechanism of reading, and [...] depicts these mechanisms by analyzing and compartmentalizing them and explaining how they work together” (Cunningham and Fitzgerald, 1996, p. 51). This ‘theoretical’ model for reading is grounded in the concerns of cognitive psychology, wherein the reading process is outlined as beginning in the initial stages of symbol divination as graphic information is decoded and assimilated. This information is then distributed to the various message centers of the brain. The reader then actively works through the centers of information in order to form “hypothesis that are continually generated, modified, confirmed, and discarded, until the most probable hypotheses are determined to be the correct one” (Ibid, p. 51). In light of what has been presented, even if young readers were the focus of educators, this theory provides a formal view of the cognitive processes of reading that, while potentially valuable from the perspective of the early acquisition of reading skills, is dogmatically opposed to the type of constructive *meaning-making* required to authentically increase the child’s background knowledge. This store, or archive, of knowledge cannot simply be given over to children through a process of rote transfer, a form of learning this reading model endorses – recall knowledge in this model is *pre-procedural* in nature. Rather, in order for children to legitimately acquire this store of knowledge, which is a form of *procedural* knowledge, they require “time to actively play with ideas, accumulate experience, ask questions, and connect new learning with what they already know” (Neuman, 2010, p. 303).

This exposes two potential problem with Rumelhart’s reading model, as it fails to acknowledge either (1) the notion of knowledge-construction, or *meaning-making*, which we relate to a learner-centered view of education, or (2) the influence of the student’s social surroundings on the processes of literacy and the experience of reading, which we relate to knowledge as a social construction. For this reason, Rosenblatt’s theoretical model, which is grounded in a contextual approach to reading, offers a different understanding of the processes of student learning. Neuman argues that code related interventions coexist with content learning, and there is in fact a reciprocity present to their relationship. It is possible to judge Rosenblatt’s reading model superior to that of Rumelhart’s model, for it is a more effective and holistic way for inspiring student literacy through reading instruction, as it leads to the improvement of both the student’s

general knowledge and her vocabulary as it simultaneously sharpens her decoding skills. For as opposed to the concern with code-related skills, such as print referencing, at a remove from the context of authentic reading, it returns “book reading to its original purpose: learning about ideas and the words that convey them” (Neuman, 2010, 303). In the following passage relating to the practical activity of reading, grounded in a model similar to that of Rosenblatt, Neuman describes the interdependence of the two aspects of early literacy in *praxis*:

We read to little 4-year-old Abigail a story about kings and queens. Instead of going on to a new topic, over the next few days we read more stories about kings and queens, both fiction and non-fiction. Over the course of the readings, Abigail learns how they lived, what they did, and what problems they had to solve. Her questions become more pointed; her curiosity is piqued as she develops a growing knowledge base on the topic. We develop some activities; perhaps some play settings that allow Abigail and her friends to use what they are learning, constructing new meanings through play. And chances are good that Abigail will increase not only her general knowledge but the vocabulary she uses to express her ideas (Ibid, p. 303).

This reading model also has important implications that transcend the stages of early reading acquisition and relate to advanced notions of ‘literacy,’ e.g., reading comprehension and the higher-level interpretation of literature in terms of *meaning-making*, which is consistent with the type of communal dialogue that unfolds in institutions of higher-learning through hermeneutic interpretation. As the foregoing epistemological analysis indicates, Rosenblatt’s theoretical model stresses that reading, and indeed all instances of learning, transpires in a non-dualistic manner as dialogue within a context where there exists an active reciprocity between educator, student, and text, a context within which both teacher and student contribute to a communal environment of learning. We might imagine the contemporary implications of this model for reading if we relate it to the philosophy of *social construction* in curriculum and the notion of teaching for ‘social justice.’

For example, the notion of ‘text’ might be employed to all manner of social-cultural-political institutions and organizations as signifying the context, or locus, of a highly complex interplay of signs and codes for the construction of meaning, which includes an understanding of the relation of ‘power sources’ to the construction of knowledge (Foucault, 1980). Since this relates directly to the notion of knowledge-construction as a social phenomenon, our analysis would include examining the work of those who have studied the relationship between social structures and literacy, wherein the social environment plays a crucial role in reading acquisition and the development of literacy, which includes the classroom, familial settings, and the community at large. It is possible to link the epistemological and axiological implications of Rosenblatt’s reading model to the notion of ‘critical literacy’ that we find in the writings of Arnowitz and Giroux (1985):

[C]ritical literacy is linked to notions of self and social empowerment as well as to the process of democratization. In the most general sense, critical literacy means

helping students, teachers, and others learn how to read the world and their lives critically and relatedly; it means developing deeper understandings of how knowledge gets produced, sustained, and legitimated; and most importantly, it points to forms of social action and collective struggle (p. 132).

Conclusion

It has been my goal to understand the influence of epistemology on our educational practices and student development, and in the process to argue that philosophy holds the potential to make an active and viable contribution to the study of education. By exploring the conception of knowledge in the curriculum, I have elucidated the connection between our foundational and fundamental conceptions about knowledge and its relationship to influencing our pedagogy and methods of assessing student progress. In addition I have included a brief discussion on the verification of our epistemological claims as related to the justification of competing educational theories. As stated at the outset, by engaging in this study, my goal was to show the influence of a systematic understanding of epistemology on education, and in addition, to demonstrate the importance of philosophy in the process of coming to understand the systematic and formal inter-workings of our programs of education.

Ensuring that our culture continues to develop and evolve through the personal growth and the contributions of our students, calls for a project that must include a systematic understanding of knowledge and its impact on the curriculum. By taking into consideration these two forms of knowledge, the various criteria for justification, and the unique ways in which humans assimilate knowledge, it is possible to maximize the student's potential for self-initiated development, when we plan such our reading instruction in ways that are consistent with the philosophical understanding gleaned through our analyses of epistemological issues. In short, students will benefit from educators approaching this issued in a critical manner. The attempt to understand the influence of epistemology on pedagogy and student development is but one way in which philosophy holds the potential to make a legitimate contribution to educational studies.

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