

# The Truth of the Matter: A Defense of Critical Thinking as the Principle Aim of Education<sup>1</sup>

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**Abstract:** With the rise of state sponsored standardized testing and curriculum alignment, it is important to consider the impact such practices may have on educational aims. In this paper, I argue that critical thinking ought to be the principle aim in every educational pursuit, and that practices such as “teaching to the test” may be detrimental to its development. I maintain these claims with a discussion of the philosophical works of Harvey Siegel, Israel Scheffler, and John Dewey. Operating from their definitions of critical thinking, rationality, and education respectively, I offer support for my conclusion based on one’s ability to challenge the soundness of claims, and the revisional quality of true belief. The issue of critical thinking as general or subject specific is also addressed. Using Siegel’s notion of a *critical spirit*, I propose that a universal quality of critical thinking lies in its normative as opposed to technical aspects.

In the introduction to *Reason and Education*, a collection of philosophical works in honor of Israel Scheffler, Harvey Siegel states that all *significant* philosophers of education have made lasting connections between philosophy of education and philosophy in general.<sup>2</sup> Consequently, philosophers of education ought to

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<sup>2</sup>Harvey Siegel, ed., *Reason and Education: Essays in Honor of Israel Scheffler* (Dordrecht: Kluwer Academic Publishers, 1997): 4.



make their philosophies applicable and relevant to the broader philosophical traditions such as epistemology, philosophy of language, and philosophy of science. Part of achieving this aim will be to distinguish between philosophy of education and educational theory. Therefore, I will provide a satisfactory distinction between educational theory and philosophy of education.

There are many individuals working in universities and other facilities of education who have deliberated thoroughly and appropriately about educational aims, curricular content and implementation, teaching and classroom schemata, and have accordingly conceptualized comprehensive theories of education to suit their various goals. Such theories often take an interdisciplinary approach, including elements of such subjects as physiology and sociology.<sup>3</sup> Philosophy of education differs from this in that it insists on asking fundamental questions and making precise distinctions in regard to education. For example, a philosopher of education may speculate about how a school, as an educational institution, is distinct from a place for training people, the philosophical issue being the precise distinction between *schooling* and *training*.

With the current educational climate in the United States (US), philosophy ought to seriously consider how educational practices impact educational aims. Of primary concern in this paper is the practice of primarily utilizing standardized tests as indicators of student and institutional success, and therefore the achievement of educational aims. If this educational trend continues, the education system risks losing sight of its fundamental purpose: to foster critical thinking skills. In what follows, I show how critical thinking is essential to social and scientific development, and that certain practices in the US educational system threaten its development. My main thesis: the development of critical thinking ought to be the principle aim in all educational pursuits, for without critical thinking one cannot effectively challenge the soundness of belief.

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<sup>3</sup> A physiological question regarding education may be at what age do people learn most effectively, and a sociological question may inquire about what the social impact of a certain public school system is. The answers to these inquiries are empirical in nature. The questions, therefore, are not philosophical in the strict sense.

Support for this argument comes from various sources including, but not limited to, the technical skills required for sound scientific pursuit, sound moral reasoning, and sound political and philosophical discourse. The key word is *sound*. Using this word in its technical and logical sense, I will show how the primary support for my conclusion is in the revisionist quality of true belief. Let us start with a comparison between the educational ideal of critical thinking and an extrapolation of a current educational practice, namely “teaching to the test.”

To be clear, “teaching to the test” is not necessarily an educational practice that should be avoided; however, as will be shown, if such a practice is not implemented carefully it can be detrimental to social and scientific progress. For example, in multiple-choice testing “teaching to the test” entails focusing on the specific content that will be on the test, and often utilizes the form of the test as a foundation for teaching. Since this kind of teaching primarily leads to an improved test-taking ability, increased test scores do not necessarily indicate an improvement in other areas of academic performance, such as writing composition and public speaking. Additionally, many multiple-choice tests do not assess a student’s ability to organize or communicate ideas, and teaching to these types of tests can narrow classroom curriculum by forcing teachers and students to concentrate on the rote memorization of facts. This practice oftentimes takes for granted the skills required to connect facts in a theoretical framework. Therefore, if one defines a successful student as more than just being a good test taker, then merely teaching to a multiple choice test does not adequately prepare students to be successful learners.

In a thought experiment, suppose that teaching to a multiple-choice exam was the sole educational practice. It is plausible that in such an education system the teaching of critical thinking skills would be absent, for all answers would be presubscribed as a part of a standardized body of information. If this were the case, then the role of a student would be diminished to a passive recipient of information. Such an education system would be set on a strict hierarchical structure in that the teachers would be the knowers, and the students would be the receivers of their knowledge. In this way, there would be minimal mutual interaction between teacher and student. Information would be seen as an absolute, for the engine that challenges the validity of claims, namely critical thinking, would be absent. Unchallengeable facts would be disseminated down to the unknowing students like water filling a glass. Each teacher would know what all the other teachers



knew; they would be the same in this regard. The goal of education would therefore be to make the students the same as the teachers, for when a student's brain was completely full, that student would be educated just the same as the teachers. Many critical pedagogy theorists, including Paulo Freire himself, refer to this as the "banking concept" of education.<sup>4</sup>

In this situation, the quintessence of science, namely the exploration of the natural world, would be far from attainable. Fundamentally, science is inquiry: asking good questions and, by means of the appropriate tools, investigating and adequately answering those questions. Education ought to challenge students to be critical and creative; not merely tell a student what they ought to know, but give them the tools and experience to suitably react to the new challenges of an ever-changing world. Critical thinking is the foundational aspect of these educational aims. The thought experiment implies a question regarding whether education ought to create a homogeneity of knowledge. If the goal of education were to merely re-produce a standard, then there would be no real progress. There would only be a re-presentation of definitive facts. *The way it is* would be static; and this is contradictory to contemporary ecological discourse characterizing the natural world as a constant process, as well as many instances of social progress, e.g. the abolishment of slavery.

In an elaboration of what Harvey Siegel calls the *reasons conception* of critical thinking he argues that: (1) to be a critical thinker is to be appropriately motivated by reasons, and (2) to be a rational person is to think and act on the basis of reasons. He concludes that a conceptual connection, via the notion of reason, exists between critical thinkers and rational people.<sup>5</sup> It is a truism that our education system ought to teach people to be rational. Without critical thinking, this is impossible. Critical thinking is best understood as an educational equivalent of rationality, for critical thinking, as Siegel puts it, is simply education meant to foster rationality.<sup>6</sup> More specifically, critical thinking as an educational ideal is aimed at

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<sup>4</sup> Paulo Freire, *Pedagogy of the Oppressed* (New York: Continuum, 2000): 83.

<sup>5</sup> Harvey Siegel, *Educating Reason: Rationality, Critical Thinking, and Education* (London: Routledge, 1988): 32.

<sup>6</sup> *Ibid.*, 33.

the development of rational people. Siegel continues with a characterization of a critical thinker as one who appreciates and accepts the importance and commanding force of reasons.<sup>7</sup>

By accepting Siegel's argument, critical thinking can be understood, fundamentally, as a method of questioning assumptions. Critical thinking is thinking about ideas, i.e., thinking about thinking and the objects of thought. Here the action of thinking is motivated to challenge the ideas one has about a given subject or situation. In this way, critical thinking is a reflective exercise, deliberation about what to do, think, or believe. The "banking conception" of education as exemplified in the thought experiment is in opposition to the critical thinking ideal, in that education ought not to be aimed at telling individuals *what* to think. Education ought to teach students *how* to think. Implicit in this educational duty is the notion that the capacity to reason is taught. Society educates its members to be rational agents. Rationality is not inherent, but acquired. Thus, the task of education is to empower individuals with the capacity to soundly reason.

Siegel is clearly informed by Israel Scheffler. Scheffler states that rationality is a central aspect of critical thinking and the teaching thereof.<sup>8</sup> To be clear, Scheffler does not refer to rationality as belonging to a distinct faculty of the mind. Rationality is not something that could be labeled as pure reason. By contrast, Scheffler's rationality uses specific *reasons* or *evidence* as its content, and refers to the capability to involve oneself in a critical and open assessment of rules and principles in all areas of life.<sup>9</sup> In other words, rationality is "the free and critical quest for reasons."<sup>10</sup> Thus, at its core, rationality is the guiding force behind the pursuit of truth, and constantly challenges the adequacy of our understanding of the world; this is the principle reason why education ought to concern itself with teaching students to be critical thinkers.

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<sup>7</sup> Ibid.

<sup>8</sup> Israel Scheffler, *Reason and Teaching* (London: Routledge, 1973): 62.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid., 63.



Operating from his conception of rationality, Scheffler goes on to construct a definition of “teaching.” He characterizes teaching as an instructive activity that engages the mind.<sup>11</sup> Accordingly, the teacher must be ready to acknowledge the student’s right to ask questions, e.g., inquire for the elucidation of subject matter. It follows that teaching is the commitment to, and initiation of, free rational discourse. John Dewey, writing in 1916, argues a similar point when he states that the principle significance of schooling is the degree to which it fosters a desire for continued growth, and equips the student with the appropriate means for making that desire effective in pursuing facts.<sup>12</sup>

The *growth* Dewey writes of is similar to Scheffler’s notion of a student’s *critical quest for reasons* in that each concept refers to a constant skeptical reflection on propositions. Moreover, Dewey’s growth metaphor provides an interesting addition to Siegel’s *reasons conception* of critical thinking, in that it affords a continuous critical deliberation. In other words, the educational process, as Dewey argues, is a constant re-direction and transformation that focuses on using the correct reasons to justify true belief.<sup>13</sup> The point is that there is no specific time when an individual becomes fully educated. In fact, properly understanding education may deem inappropriate the use of the word *educated* at all, for the verb’s past tense construction may entail an ending or completion, and according to Dewey, education never ends: “It has no end beyond itself.”<sup>14</sup>

What follows from this discussion is that critical thinking ought to be understood not only as an ability to analyze arguments, but also as a never-ending pursuit of truth. The latter portion of this means, to use Siegel’s terminology, that critical thinking requires a certain *critical spirit*. An individual may be skilled in argument analysis but use it to deceive people, i.e., use one’s ability to turn people away from the truth. Using Siegel’s criteria, such an individual would not be considered a critical thinker, for, as mentioned above, a critical thinker ought to be *appropriately* motivated by reasons toward arriving at some fact or truth. Here, the

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<sup>11</sup> Ibid.

<sup>12</sup> John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Dover Publications 2004): 25.

<sup>13</sup> Siegel, *Educating Reason*, 59.

<sup>14</sup> Ibid., 51.

word *appropriate* suggests a certain normative character in the student. One must have certain mental habits that encourage a motivation toward pursuing truth. Thus, qualities such as being a skeptical person, caring about the truth of the matter, and the like, are constituent elements of the definition of critical thinking. If this is so, then critical thinking is fundamentally connected with matters of personal character and not just matters of technical skill. Critical thinkers must be interested in the evaluative process not to further their own ends, but because they want to know the truth of the matter.

Every discipline from chemistry to civics, biology to studio art, physics to literature, relies on the justification of our beliefs, assumptions, ideas, knowledge sets, etc. To progress such disciplines one must question the justifications used to substantiate claims to truth. One is reminded of the 16<sup>th</sup> century astronomical debate between geocentrism and heliocentrism. Copernicus, as well as many of his followers, was a critical thinker in that he derived his beliefs regarding astronomy directly from observed scientific evidence and cared about finding the truth regardless of its social implications. He eventually revolutionized the study of astronomy. It follows that, without critical thinking as an educational ideal, society may be bound to an education system that does not teach individuals to advance knowledge. Such an education system would not privilege a student's ability to properly substantiate their beliefs, find answers themselves, or appropriately deliberate about their personal educational goals and outcomes.

Therefore, one of the main tenets of liberalism, namely that people deserve equal concern and respect, necessitates that education concerns itself with the development of critical thinkers. In this way, political democracy only functions to benefit the common good if people are critically engaging with the social, cultural, and existential aspects of political life. From this social perspective critical thinkers ought to be skeptical of the status quo, for it is often ideas that cut against the grain of dominant ideology that motivate progress in society. Take, for example, the American South before and during the civil rights movement. At this time the social ontology in America was extremely racist. Even so called "progressives" in the North regarded segregation simply as the way southerners wished to live. Now we understand segregation as completely absurd, for it is a blatant violation of civil liberties. However, if it were not for individuals like Martin Luther King, Jr. and Malcolm X, people that critically engaged and challenged the reality of their



social situation, society would not have progressed as such. It follows that teaching students to accept *the way it is* as stagnant, inert, and permanent, short circuits the potential to change society for the better.

In accordance with Scheffler's notion of education as the initiation of students into free rational discourse, a student learns the proper evaluation of reasons by being *initiated* into the traditions in which rationality plays a pivotal role. Siegel agrees with Scheffler by arguing that if one understands education as teaching students the rational traditions, e.g., mathematics, science, history, literature, politics, etc., and this consists, at least in part, of helping the student appreciate the criteria of rationality that has governed the development of the reasons in each tradition, then one should be compelled to regard critical thinking as an ideal in education.<sup>15</sup> Moreover, becoming a critical thinker necessarily involves understanding and acknowledging the role of reasons in the rational traditions. This entails acquiring the type of *critical spirit* that fosters attitudes and dispositions that encourage a willingness to revise our reasons in the process of validly grounding ideas and beliefs. It follows that education—insofar as it aims to produce the most promising participants in the rational traditions—ought to educate students to be critical thinkers.

In light of this discussion, let us return to Dewey's claim that education is an end in itself. To realize Dewey's insight, education must be aimed at producing critical thinkers. The ideal of critical thinking fosters education as an end, insofar as a critical thinker is moved by appropriate reasons. The reasons that are appropriate to substantiate valid claims are not static, and the principles in the rational traditions are always evolving. To account for this evolution education must be understood as an end in itself. Since critical thinking fuels the evolution of principles in that it challenges claims to validity, the critical thinking ideal supports education as an end in itself.

It is now clear that critical thinking ought to be the principle educational aim for the rational traditions. However, there appears to be an issue regarding whether critical thinking is a broad capacity that all rational individuals can apply to any subject, or if being a critical thinker is, in some restrictive way, subject specific. To argue that critical thinking ought to be the principle aim in all educational

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<sup>15</sup> *Ibid.*, 59.



pursuits, as I do, seems to suggest some general ability, or rather a foundational set of abilities, acquired through the teaching of critical thinking. One may argue that there cannot be such an ability, for the objects of thought that are entailed in any sort of thinking are necessarily diverse in both quality and kind. Due to this diversity there is not one limited set of abilities that can be applied to the wide range of topics and disciplines in which critical thinking can be functional.

This line of argumentation correctly understands that the rise of academic specialization entails that the diversity of academic pursuits have greatly increased. I do not dispute that the existence of a constant set of critical thinking skills that can be applied universally between these disciplines may be unlikely. Empirical knowledge is found through various methods, which are often so specific to their intellectual fields that they have little application in other areas. I want to highlight, however, that most successful intellectuals typically have a critical perspective on their subject matter. Understanding what is meant by Siegel's notion of a *critical spirit* is important here. As discussed earlier, critical thinking is more than just technical skill. For this reason, one should not seek a general *technical* skill of critical thinking. The universal quality of critical thinking is a normative perspective, not a set of empirical skills. In this way, a *critical spirit* is the general normative character required of all critical thinkers. This critical perspective of the world has its roots in the scientific revolutions of the 16<sup>th</sup> and 17<sup>th</sup> centuries, and later in the Age of Enlightenment. In the tradition of the modern era of intellectual inquiry, education ought to reform society and advance knowledge. It follows that there is a fundamental connection between all areas of intellectual pursuit via Siegel's concept of a *critical spirit*.

In both primary and secondary educational districts, high standardized test scores have become one of the most important indicators of a school's success. Because public funding is so strictly linked to high test scores, administrators and teachers encounter a necessity to produce high standardized test scores. In reaction to such pressures, educational institutions slim down and modify classroom curriculum to align it with the state's exam. Whether intentionally or not, the heightened focus on standardized testing systematizes education in such a way that may reduce education to an astringent expression of what one ought to know, or how one ought to think. This is why philosophy of education must concern itself with a defense of critical thinking as an educational ideal. I concede that: (1) having



a standard of excellence in education does not necessarily prevent critical thinking from being an ideal, (2) having such a standard entails a testing of it, and (3) society must have some method to assess what the student actually knows. However, establishing a rigid conception of what one ought to know is a step that ought to be taken very carefully and cautiously, for it is possible that, by standardizing all claims to fact, one may greatly devalue a student's ability to challenge such claims.

How educational success is defined is an important issue here. Simply equating high test scores with school success is a mistake. School districts ought to have a more nuanced understanding of what success in education is. It is easy to think of examples of students who can perform well on tests but lack some essential skills, such as communication skills, that are necessary to succeed in life. Critical thinking ability is foundational to the development of such skills. It is only when a student: (1) challenges the truth of the reasons that support a claim, and (2) is consciously motivated to get at the truth of the matter, that one is considered a critical thinker. Importantly, Siegel's definition of a critical thinker does not allow for the use of technical rational ability to be put at some end other than the end of truth (or at least as rational a position as possible).<sup>16</sup> A critical thinker is simply one who engages with the validity of the principles, criteria, and reasons society uses to verify a claim as true.

Upon reflection, it is evident that furthering the aims of the rational traditions necessitates educating students to be critical thinkers. This is not entirely because of the practical implications of doing the rational traditions well, e.g., discovering a renewable source of energy because a critical thinker challenged an inadequate principle, but also because, using Dewey's language, education is a constant *growth*. Students and educators alike are bound together by the constant pursuit of truth, and because truth is never complete truth, i.e., what we understand as true is always in revision, education must be aimed at producing critical thinkers. Critical thinking is the only way that our false assumptions, incorrect judgments, and inaccurate accounts can be challenged and thereby revisited and revised. In this way, remediating issues of social justice and encouraging scientific progress are both inextricably linked to critical thinking as an educational ideal. ❖

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<sup>16</sup> Harvey Siegel, "Truth, Testimony and Trust: Alvin Goldman on Epistemology and Education," *Philosophy and Phenomenological Research* 71.2 (2005), 350.