

Education and the Value of Knowledge

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Abstract

One of the many recurring problems that besets education as a discipline is that many of the thorny issues it raises remain contested without much hope or sign of definitive solutions in sight. Problems in education that baffled both practitioners and theorists alike in the past are still hotly debated, dividing teachers and curriculum specialists into opposing schools of thought. The ultimate ends of schooling, the instructional methods teachers should adopt in the classroom, and the means by which students should be evaluated are some of the many issues that fail to yield overriding agreements amongst those engaged in educational debates. The place and status of knowledge in the curriculum is another issue that spurs acrimonious discussions. While some uphold the transmission of knowledge as a worthwhile educational endeavor, others view it as both a meaningless and inane undertaking that should have a more marginal place in schools. The purpose of this present study is to show that the core criticisms voiced by those critical of the teaching of knowledge don't seriously undermine its importance.

Keywords: provisional knowledge, access of knowledge, retrieval, critical thinking, lectures, educational biases

Introduction

Natural science is venerated as the paragon of rationality or the beacon of light that ends ignorance partly because its history bears witness to a cumulative and incremental growth in our understanding of the universe. Natural phenomena like thunder, planetary orbits, and animal behavior that remained steeped in mystery for centuries and defied countless attempts to comprehend their underlying mechanisms are now understood thanks to cutting-edge research. Problems that seemed utterly impenetrable and inscrutable are now satisfactorily solved in light of well-corroborated theories. Needless to say, the growth of natural science has in turn revealed new anomalies that were not only unknown to early scientists - how the four fundamental forces of the universe are interrelated, what initially triggered the Big Bang, the origin of life from inanimate matter, etc. - but

that inspire contemporary scientists to continue their search for truth and understanding. But given the spectacular success of unveiling what previously remained hidden and obscure, there is little doubt that science will ultimately unlock, however tentatively, their mysteries and further expand the frontiers of knowledge.

The history of science can be characterized as a long and progressive journey of overcoming ignorance and ushering in enlightenment, a feature not shared by many disciplines. Contemporary philosophers, for example, are to this very day engaged in abstract metaphysical questions concerning the nature of goodness, beauty, and truth that were formulated and articulated by Socrates and Plato more than two thousand years ago. Arguably, we are on philosophical matters still groping in the dark, failing to engender clear and concise answers that were sought after by our ancient forebears. Though itself a much younger discipline, psychology too is characterized by opposing theoretical paradigms that disagree on fundamental issues such as the mode of inquiry to be adopted, the fundamental aims of psychological inquiry, and the questions that should be addressed in the first place. While Freudians are committed to the potent power of suppressed unconscious drives as a viable area of concern, those who distance themselves from what they conceive to be a non-empirical approach in psychology argue that questions susceptible to rigorous empirical testing alone should be pursued scrupulously. Historians, for the most part, don't disagree over the veracity of historical facts unearthed by historical inquiry but markedly differ in their ways of interpreting or making sense of what the data signify. Historians who champion Marxism as their ultimate frame of reference will impose meaning to historical events that differ radically from those who embrace a different philosophy of history. Social inequity found in capitalist society is often construed as an inevitable byproduct of a perfectly legitimate social system by supporters of capitalism. Marxists are inclined to view the gap between the rich and the poor as an inherent fault within a corrupt social order. Literary criticism is another subject where disagreement is the norm. Critics passionately differ over what they conceive as canons of great literature. Admirers of Shakespeare, Chaucer, and Dante are often ridiculed for their penchant for classical writers who are both male and white, and defenders of traditional literature in turn rebuke their critics for lowering the standards of great literature by applauding the works by second-rate writers simply because of their gender or ethnicity. Literary critics also espouse hermeneutical principles that are often at odds with one another. Because followers of deconstruction believe that there is no inherent meaning in any given text waiting to be discovered by the reader, literary interpretation is an entirely

subjective act of trying to make sense of texts that are open to multiple interpretations. Feministic critics believe the central task of literary criticism is that of exposing the myriad forms of male bigotry and chauvinism that underlie many works of literature. Once one steps outside the domain of natural science, theoretical disputes are pervasive, where researchers fail to reach a consensus that is both acceptable and binding for further investigations.

Education, alongside such disciplines as philosophy and history, is another subject riddled with perennial controversies that lend themselves to very little consensus. From educational goals and the measures of assessment to pedagogical strategies and the exact role and function of knowledge in education, everything and anything in education is mooted, breeding conflicting agendas and voices that stir much debate with very little agreement. Defenders, for example, of a standardized curriculum argue that all students, irrespective of their race, sex, or upbringing, must be taught the same core curricular subjects. Others seek non-standardized curricular guidelines that reflect and are more sensitive to the values and needs that are deemed important by the communities in which students are reared. According to this view, teaching, say, Shakespeare and Newtonian physics to students from urban ghettos is both insensitive and counterproductive. The question of which aim teachers should serve in education is an additional source of never-ending debate, eliciting a wide array of opinions. Many are convinced that students should acquire both the competence and knowledge that enable them to become agents for social change, whereby they take proactive measures to rectify the many social-political ills that pervade society. Others are adamantly opposed to this idea of blending politics and learning; they argue that the job of the teacher of literature is to teach Dickens, not how literary knowledge can be used to help promote social justice and the social science teacher's primary responsibility is to articulate and delineate the philosophy underlying communism as clearly as possible without defending or questioning its theoretical plausibility in class. As one critique of politicized education argues, "No question, issue, or topic is off limits to classroom discussion so long as it is the object of academic rather than political or ideological attention" (Fish, 2008, p. 15). Another disputed issue concerns how teachers should conduct their lessons. Progressive educators contend that teachers should act more as facilitators by replacing didactic lectures with more learner-centered tasks that require their students to learn amongst themselves in groups. Critics of progressive education, on the other hand, denounce this mode of teaching. Teachers, they argue, must play a more central and pivotal role in education, imparting their knowledge and wisdom for students to acquire, because they are after all experts in their field. Another source of

disarray in education revolves around the viability of assessment. Those who champion grades are keen to point out how they serve as a psychological incentive or impetus for students to work harder to earn higher grades. Opponents of grades typically respond by arguing how grades inevitably create a competitive ethos in schools, where the sole purpose of learning becomes nothing other than learners outperforming their peers by earning higher marks on tests and quizzes while failing to experience the joy that accompanies true learning. The question whether schools should transmit more or less knowledge is an additional moot point. Traditionally schools were held accountable for imparting the vast corpus of human knowledge in order to expand the students' minds and enculturate them to the rich intellectual heritage established by their forebears. The delivery of knowledge was deemed paramount because it was thought that students cannot be considered cultured and educated unless they were acquainted with the foundational knowledge that characterized and defined the core curricular subjects. Thus, students were exposed to a rich and wide range of human lore, ranging from art and literature to science and mathematics. In recent years, however, teachers, curriculum specialists, school administrators, and politicians are questioning this fundamental mission of education. They jointly contend that the transmission of knowledge should not have a central place in schools and that it should be replaced with sounder, more invigorating, and more motivating teaching practices. The purpose of this study is to critically examine the common arguments put forth by those who eschew the centrality of knowledge in education and show that they don't seriously undermine the more traditional, knowledge-based form of education that has hitherto been the norm.

1

Vociferous opponents of curriculums that place a premium on knowledge commonly argue that students shouldn't be required to acquire what educators regard as the trove of human knowledge because the facts and information they impart will be found to be erroneous in the not too distant future. Knowledge, according to critics, is always provisional, where new theoretical research and empirical findings question or refute what we currently hold as true beyond doubt. Historically, truth-claims that were once thought to be impervious to doubt in science, history, and math have subsequently been falsified or radically revised. Aristotle's physics, for instance, which construed the universe as eternal was undermined when astrophysics uncovered how the universe came into being when an infinitely dense primordial matter exploded roughly fourteen billion years ago,

giving rise to stars and planets. Though shared by many historians, the view that the Middle Ages was marked by blind obedience to oppressive religious authority has in recent years been reexamined when documents and records suggestive of an intellectual milieu more open to rational thought and speculation were found. Because what were regarded as binding, universal truths have been falsified in the past, there is no reason to doubt that what we now unconditionally accept as incorrigible truth will be subject to the same fate. And imparting truth-claims that were or will soon be discarded as unfounded, misleading dogma is an educational waste of time. Schools can pursue more laudable and valuable pedagogical aims by forsaking the dubious yet historically entrenched goal of instilling the minds of students with claims that reveal nothing more than our hubris and ignorance.

The argument enunciated by those critical of a curriculum rooted in knowledge faces a number of problems. First, it assumes that knowledge is by nature provisional, always open to change and revision in the future and that it makes very little sense to speak of knowledge that is incorrigible. This epistemological view is contentious, to say the least. Mathematical and logical truths are both known for their certainty and universality. Their truth, once established, is not relative to a particular theory, race, point in history, or gender. That is, basic mathematical and logical truths don't undergo change because they are studied at a different time in history or geographical region. And their truth is incorrigible because they are true in virtue of the meaning we assign to the logical and mathematical concepts we use. Triangles cannot exceed 180 degrees given what we mean by angles and lines, and truths in arithmetic are assured in virtue of the meaning we assign to numbers and concepts such as addition and division. Furthermore, in any given discipline, there exist what experts in the field consider to be incontrovertible truth-claims upon which the entire edifice of disciplinary knowledge is built. And this foundational knowledge functions as a bulwark against claims and conjectures that don't chime with what it maintains. It helps set the parameters within which researchers must follow if their work is to be taken seriously. Thus, when historians deny the innumerable atrocities committed during the Holocaust, their contention is discarded as unhistorical, biased, and ideologically motivated because their claims don't correspond to what is regarded as bedrock truth in historical inquiry. Those who uphold the existence of alien beings visiting earth on spaceships or claim to communicate with the dead work on the fringes of science, for what they assert violates some of the fundamental tenets of physical science validated by a wealth of evidence. And creation science or the belief that species miraculously appeared on earth in their present form without undergoing any change is held in suspicion by most biologists because

they have marshaled a wide range of evidence ranging from DNA analysis to fossil records that demonstrate the truth of evolutionary change across species beyond reasonable doubt. And in theology, it isn't uncommon to come across extraordinary claims - that Christ favored capitalism, that Moses wrote the Old Testament, that the early church shared a unified outlook on important theological matters - that are not supported by biblical scholarship. These bizarre contentions may inspire novelists to create stories with a gripping plot but those within the theological community will only relegate them to the library of intellectual oddities. And literary critics who study the works of Shakespeare and Milton must engage in textual analysis and criticism that assume the truth about their work and life shared by scholars in their field. Though literary critics are expected to contribute something original and new, their contribution cannot deviate radically from, and must arise from, what their predecessors in the field have helped establish as binding truths for future research. Contrary to what critics argue, therefore, research undertaken in disciplines characterized by skeptical inquiry rests upon a deeply entrenched body of foundational knowledge that is rarely questioned. As Egan (2008) writes, "Even if some ideal, absolute certainty is inaccessible to us, claims that can be made with greater confidence than others can be sorted out" (p. 79).

Critics of a knowledge-based curriculum denounce the value of learning anything that has been found to be untrue. For critics, teaching theories, hypotheses, and alleged facts that failed to withstand the test of theoretical scrutiny amounts to feeding the students' minds with useless, obsolete data that should belong in the shelves of libraries, not schools. Yet students should be exposed to past errors, blunders, and shortcomings made in the name of science, history, and philosophy. Once students become acquainted with past modes of thought and assumptions that are no longer shared today, they can become more skeptical of and distance themselves from what they take for granted because history repeatedly shows that deeply held beliefs often reflect and are relative to the unquestioned biases of a particular period in history. After having learned how the belief in witchcraft and the efficacy of exorcism were a passing phase in human history, they can in principle turn a more critical eye to the beliefs they dogmatically embrace and accept them more with a grain of salt. As Roche (2010) rightly maintains, "Furthering our knowledge of the past is an ideal way to obtain distance from the clichés and biases of the present" (p. 142). A non-dogmatic adherence to beliefs is an important precondition for intellectual engagements with those with different systems of belief. People, generally speaking, are less inclined to listen attentively to opposing views and learn from them if they are absolutely

committed to their own beliefs. Furthermore, past epistemological errors can teach students how we shouldn't seek knowledge, thereby indirectly insinuating the ways in which we should pursue truth and understanding. Though commonly practiced in many ancient civilizations, appealing to demigods and deities to explain the nature of earthquakes and famines is both an abortive and unreliable mode of explanation since it invokes religion to help understand what strictly is a scientific question that must be addressed empirically. Just as one cannot use science to help determine whether the doctrine of atonement or incarnation is true in theology, one cannot refer to God to help settle empirical questions. By becoming blind to the past, avoidable errors can be repeated. Thirdly, any understanding of the past that doesn't refer to what people endorsed as true knowledge is bound to be insular and incomplete given how knowledge shapes how people view the world they live in. Our understanding of the Greco-Roman civilization, for example, will remain superficial and one-sided unless we take into account the misogynistic views that were shared by the people and how their belief in demigods shaped their understanding of the meaning and purpose of human existence. Any historically reliable account of the time Christ lived in Palestine must incorporate the strange belief in the existence of evil spirits or demonic possession embraced by virtually everyone who lived during that particular period in history. Besides such factors as technologies, political systems, and cultural conventions, the past cannot be unveiled without paying close attention to what people thought and believed in, however primitive and unscientific their worldview may seem in light of what we know to be true today.

Critics of curriculums that give pride of place to knowledge fail to take sufficient account of how new, groundbreaking knowledge is established in any discipline when they eschew the teaching of knowledge on the ground that it isn't immune from error. Students who enter any field of study must first immerse themselves in the rich intellectual tradition established by the painstaking researches conducted by members of the academic community. Students of biology must learn the fundamentals of evolution and natural selection and neophytes engaging in research in physics must become familiar with the basic principles underlying Newtonian mechanics. Not everything they inherit from tradition is incorrigible. The more speculative theories and the theoretical claims that lack much empirical support found in any given tradition can and often do contain errors that must be corrected. Yet if students are not exposed to the academic paradigm that shapes how researchers work in the field, they won't be able to expand the frontiers of knowledge by correcting and amending the parts that need to be revised. Any field of study will forever remain stagnant, making

very little intellectual progress, if new researchers are not introduced to what is regarded as well-established knowledge. Theoretical changes to tradition can only be made by those who are well-versed in their field. New vistas cannot be opened by those who have very little knowledge and understanding of the methods and knowledge that define their field of research. Advances in physics or history cannot be made by those who don't stand on the shoulders of giants. New breakthroughs and discoveries can only stem from past contributions made possible by the ingenious and meticulous work of past scientists and historians.

2

In the not too distant past, knowledge was hard to come by. Before the printing press was invented, there were not many books people could consult to satisfy their yearning for knowledge. Because education was a rare privilege granted only to those with a religious vocation or those from the aristocracy, the vast majority of people couldn't inform themselves on matters that enticed them. However, one of the defining features of the world we live in today is how easily we can acquire information concerning themes and issues that interest us. There are public libraries in any given community that store books with a wealth of information. Computers are also an invaluable tool for accessing information about any imaginable topic. Any fact or data is at our disposal by switching on the computer and searching sites that store what we want to learn. TV is another source that can aid learning. Though there are programs that trivialize learning and fail to raise our awareness of important issues, there are many interesting documentaries that aim to educate their viewers. Those who frown upon learning that is centered on knowledge often argue that schools shouldn't spend precious time imparting knowledge when it can in no time be acquired by using a search engine or turning on the TV. Students, they argue, don't need to store knowledge in their long-term memory for future use if they can gain access to it easily.

Contrary to what critics of knowledge-centered learning argue, it is important that students' minds contain valuable knowledge for future use. The importance of retaining knowledge becomes apparent when students engage in reading which undoubtedly is one of the pillars of education. Students are assigned textbooks for each subject that are logically organized around chapters that address different themes. Textbooks on ancient history document historical events that changed the course of Greek civilization. Chemistry textbooks are filled with information regarding the nature and behavior of atoms and molecules. Novels and poems are set to help nourish the students' aesthetic sensibility. Articles from history and

philosophy journals are required reading to help challenge deeply entrenched preconceptions. Many students find reading challenging and the process of decoding meaning from texts can be arduous for different reasons. Some texts are difficult to understand because the author doesn't have the ability to express his or her ideas in a clear and cogent manner. Philosophical prose are often hard to decipher because some philosophers are notorious for using abstract, complex language to articulate their views. Others are difficult because the language used is both quaint and archaic. Works by Shakespeare and Milton seem abstruse primarily because students don't share the language they are written in. Students also grapple with texts that raise issues that are by nature abstract. Texts on ethics are bound to be difficult because concepts like "good," "virtue," and "meaning of life" cannot be easily defined in concrete terms. Another important reason why students fail to understand what they read is because they don't have the relevant background knowledge that aids comprehension. Writers for the most part presuppose that their readers are familiar with the issues they are addressing. They don't, therefore, explicate every concept and category they use, clarify every line of reasoning they make, or supply the background knowledge readers need to comprehend what they write. And readers don't approach any given text as a blank slate. Their mind consists of a systematic network of knowledge they have successfully stored through learning and readers attempt to construe texts in light of this schemata. Readers succeed in understanding what they read if they can relate what the text says to the knowledge that is stored in their mind. And if they experience problems when reading about a subject they are familiar with, they can use what they know to decode difficult passages or infer the meaning of what they say. Because knowledge is an important precondition for successful reading, those who lack it will experience difficulty understanding what they read. Students, therefore, often struggle with their readings because they don't know enough philosophy to appreciate the arguments Plato makes or they are not well-grounded in technical science to grasp the content delineated by articles on quantum mechanics or on the theory of relativity. Their lack of historical knowledge also accounts for why many fail to understand the arguments historians make to justify their interpretation of what took place in the past. And the groundbreaking, revolutionary thoughts of Luther and Calvin on matters relating to faith and religious dogma cannot be appreciated unless students have a thorough understanding of Catholic theology. Of course, students can surf the net or consult a book when they come across matters that defy their understanding, but this will significantly slow the process of reading, making it time-consuming and cumbersome. Knowledge eases the process of understanding when reading, while

lack of knowledge hampers the comprehension and retention of what one reads. The more one knows about a particular subject, the more one will understand materials related to it, thereby extending and further deepening what one already knows about the field. When knowledge is sidelined in the curriculum, an important factor that impedes reading - lack of knowledge - is being ignored, distancing more and more students from the joy of reading.

Besides reading, writing is another very important mode of learning students often engage in. Chapters in textbooks usually have a list of comprehension questions that test whether students have retained vital information and book reports are commonly assigned so that learners can reflect on the significance and the overall meaning of what they have read. Essay writing is another very common mode of writing students are required to do in their classes. When writing essays, students must defend a particular point of view by buttressing their thesis with arguments that are both cogent and convincing. Teachers of history set questions that demand their learners to support a particular way of construing the past by appealing to historical evidence and students taking classes on moral education write essays on complex ethical dilemmas where they support their stance with arguments and evidence. Essay writing is an extremely demanding undertaking. Writers have to follow very particular conventions - the introduction must contain a thesis; each paragraph should have a topic sentence; cohesive devices must be used to make paragraphs coherent, etc. - to successfully convey their thoughts and they have to know the basic rules of grammar in order to express ideas in a coherent, meaningful, and understandable way. The writing of essays is also challenging because they can become banal and repetitive unless writers have a rich vocabulary that enables them to communicate their thoughts eloquently and with precision. Another source of difficulty is that writers must simultaneously attend to all the mechanics of writing - spelling, grammar, punctuation, etc. - throughout the process of writing essays. Multitasking is cognitively very demanding unless what we have to do has been automatized through repeated practice. Now, if students are not well-informed about what they have to write about, their lack of knowledge will add another cognitive burden to what is already a very demanding process. Besides paying close attention to grammar, the use of cohesive device, punctuation, and the overall structure of their argument, they will have to relearn and familiarize themselves with the subject as they write, not leaving much cognitive space and room to think critically about what they are trying to expound. The writer won't be cognitively overburdened by multitasking, allowing more space to reflect and think about the content of what they are writing, if knowledge stored in his or her mind can be easily retrieved. By knowing the

subject intimately, writing becomes less demanding because we can focus our mind on other matters that need to be considered when presenting our ideas to an audience.

Students also engage in problem-solving of one kind or another. Math textbooks are chock-full of axioms, postulates, theorems, and laws students have to use to solve equations. The same can be said about physics where physical laws concerning heat, electricity, and motion are couched in complex yet concise mathematical symbols and they are usually accompanied by problems that can be solved in light of these mathematical formulas. The learning of a foreign language is also characterized by problem-solving. Grammatical rules and new vocabulary are taught so as to provide the means to translate passages into the target language. Problem-solving can be quite demanding for any number of reasons. There might be many steps involved in a geometrical proof, the sentence that needs to be translated may be grammatically complex, or the problem in physics may require the use of advanced mathematics. Finding an answer to such complex problems can be made more difficult if students don't have the relevant knowledge to help resolve their difficulty. The knowledge not being at their disposal, they will have to search the periodic table to find out the atomic number of sodium and magnesium or refer to their physics textbook to locate the equation for Boyle's law. But this not only slows down the problem-solving process considerably but the problem becomes more difficult to solve since the learner is not equipped with the rudimentary knowledge that will allow the mind to focus on some of the more difficult aspects of the problem. If the learner hasn't memorized the multiplication table, problems requiring division and more advanced mathematical operations become more challenging as the mind will not be able to devote its attention to more complex mathematics. Translating sentences with relative clauses and hypothetical conditionals will be made more difficult if one cannot immediately recall the past tense form of high frequency words. Knowledge frees the mind to more difficult tasks and operations, facilitating the problem-solving process. It is therefore vital "to help people develop automaticity in certain kinds of basic work to free up cognitive space for higher order cognitive tasks" (Lang, 2016, p. 123).

Furthermore, group discussion, where students convey their opinions in groups, is becoming a very prevalent mode of learning in many schools. Instead of listening to their teachers deliver content for an extended period of time, learners are given the opportunity to voice their ideas about what they are learning in class. Unfortunately, the discussions that take place are often shallow and unstimulating not because they have no opinions of their own but they fail to support their views with concrete evidence or with examples that help buttress their viewpoint. They

express their take on the changes brought by the Industrial Revolution, the philosophical views of Newton, or the moral dilemma Hamlet faced without supporting their interpretation with what they know about the topic in question. They typically make assertions that are bland and without much substance because they lack the relevant knowledge that will help support the claims they make while discussing. Group discussions, in order to be a rigorous exchange of ideas, require that students possess the knowledge the lends support to their views.

3

Education is a deliberate and conscious attempt by teachers to improve the quality of their students' minds. Students learn history so that they understand how the present socio-political state of affairs have their origin in the past and through studying science, they learn the importance of subjecting hypotheses to rigorous tests to help determine their truth. Foreign languages are taught in part because they enable students to enter into a rich and fascinating cultural tradition that is strikingly different to the mores and conventions they are familiar with. The arts can in principle cultivate a more refined and developed sense of perception that is more appreciative of the beauty of sunsets and clouds not to mention the sublimity that characterizes valleys and mountains. An education in philosophy introduces students to some of the most profound questions - the meaning of life, the existence of God, the possibility of life after death, etc. - that philosophers have always wrestled with, thereby extending their mental horizons beyond their mundane concerns and problems.

Despite goals to expand and deepen their students' minds, teachers often fail to discern the contributions they make to learning. Language teachers experience frustration because students fail to apply the skills they learn beyond and outside the context they are taught. Though English teachers repeatedly remind those under their charge of the many benefits that are brought by the reading of quality literature, they daily face students who are unwilling to read beyond the bare minimum. Teachers of science try to correct the deeply ingrained yet erroneous assumptions students have about motion and inertia. But what they teach often falls on deaf ears because the beliefs they have remain intact. As Gardner (2006) argues, "When it comes to the theories that one is expected to master in school, the mind proves remarkably refractory to alternation" (p. 61). Another problem faced by teachers of different subjects is that students fail to retain the knowledge they are taught. Students typically cram facts before an upcoming test or quiz and forget a large portion of what they learn a week or so after assessment. The very

little they remember is cast into oblivion when the class proceeds to a new topic. Those who are opposed to learning rooted in knowledge blame schools for spending too much time transmitting knowledge that is forgotten within a short span of time. They insist that teachers should sideline knowledge and focus their attention on other more productive ways of promoting student learning. Otherwise a significant part of the students' time at school is spent memorizing facts and information that will have very little enduring effect on their minds.

It cannot be denied that apart from a few keen and diligent students, most fail to recollect what they learned in the not too distant past. Because knowledge remains in the students' short-term memory, the content slowly disappears with the passage of time. It is, therefore, frustrating both for teachers and students, for the time and energy spent on teaching and learning knowledge leaves little trace. Students for the most part can at best vaguely recollect insignificant pieces of information that have little meaning. But one mustn't conclude that knowledge lacks educational value on the grounds that students fail to retain it. To do so is tantamount to saying that the reading of books is without meaning because students either don't read or find the act of reading unstimulating. Facing reluctant readers, teachers shouldn't stop encouraging them to read. Rather, they should seek ways to enhance their interest in books by pointing out the many benefits of reading or how it "is a way of acquiring knowledge, a vehicle for self-improvement, a source of enjoyment, and a medium for gaining meaning" (Furedi, 2012, p. 7). In a similar vein, teachers shouldn't jettison knowledge as unimportant when what they transmit is quickly forgotten. They have the responsibility of stressing the value of knowledge so as to spark their learners' interest to learn more about themselves and the world. What, then, are some of the more important reasons for becoming more knowledgeable? First of all, we need to know about the past because we can easily commit the same mistakes if we remain ignorant of what happened in history. Though the present doesn't mirror the past, it resembles what took place before in many ways. We can learn many valuable lessons from history and save ourselves from many unnecessary foibles if we have an in-depth understanding of the past. Secondly, knowledge can help rectify the problems we face in society. One reason why many socio-political ills - unemployment, crime, drug abuse, suicide - remain with us to this day is that we are not aware of their underlying causes. We cannot attempt to remedy problems that elude understanding. We need a firm grasp of the problem and its origin before we can take measures to help solve it. Moreover, knowledge is empowering because it enables us to predict the course of future events. In light of what we know, we can avoid what we don't want and help bring about ends we seek.

Medical knowledge, for instance, allows us to give a reasonable estimate of what will happen to our physical health given how much we exercise and what we daily eat. We can change our daily habits or our lifestyle now so as to help secure the future we want. Another reason why knowledge is preferable to ignorance is that we are, generally speaking, less inclined to follow the dubious mandates from self-acclaimed gurus, iconoclasts, and pundits if we have a firm understanding of what they are trying to promote. We won't easily succumb to what religious cult leaders profess as truth or to the quick and easy remedies promised by advocates of alternative medicine if we are cognizant of religious philosophy and human physiology. But aside from such instrumental reasons that make the pursuit of knowledge a meaningful and worthwhile endeavor, the possession of knowledge has intrinsic value. Even if what we know cannot be applied to solve social problems and help build new technologies, knowing something new about a theme that deeply concerns us or finally solving a problem or puzzle that defied previous attempts is intellectually satisfying and invigorating. Knowledge is its own reward, for it fills a gap in our understanding, quenching our thirst for learning. Teachers must not dispel the teaching of knowledge but justify its value to their learners and motivate them to work harder when they encounter problems internalizing new knowledge.

If knowledge doesn't successfully get transferred from teacher to student, teachers need to find ways that facilitate the learning process and learn about the impediments that thwart the intake of new information, instead of giving up on the idea of imparting knowledge. Teachers can help students acquire new information by introducing techniques or strategies they can readily use to help anchor knowledge in their working memory. Research in cognitive science has demonstrated that new information will be more securely and deeply stored in our mind if we regularly retrieve it. We have a tendency to store more and more knowledge without forcing ourselves to retrieve what in the meantime we have been learning. As new items enter the mind, materials that were learned in the past get pushed outside our working memory. To help prevent this problem from occurring, we need to revisit old materials by practicing extracting them from our mind. The more we recollect a given piece of information, the more deeply it sticks in our mind. Another strategy that aids memory is connecting what we want to remember to things we already know. We often fail to memorize new facts and figures because they exist as isolated, disjointed pieces of information in our mental filing cabinet, not rooted in and being connected to the knowledge we already possess. Retention is helped whenever we can situate the knowledge we newly acquire to a systematic network of beliefs we already have about it. Thus, it

becomes easier for us to recollect what we learn about Picasso if it can be connected to the systematic knowledge we already have about cubism and 20th century art. Or learning about the philosophical doctrines that were prevalent during the Age of the Enlightenment will be greatly facilitated if students are familiar with the kind of philosophy Voltaire and Locke were campaigning against. Students are therefore well advised to try to relate what they learn to what they already know. Besides introducing strategies that help students retain what they learn, they need to become aware of study skills that actually impede the process of remembering new knowledge. One counterproductive approach to learning that many adopt is that of rereading the textbook numerous times so that the material will somehow stick in their minds. The mere act of rereading the text countless times doesn't ensure that the mind will absorb what is written. What is crucial is for the reader to understand what he or she reads, not the number of hours spent reading the same passage.

Besides introducing effective learning strategies, teachers need to adopt instructional strategies that aid memorization. One very useful pedagogical practice that findings in cognitive science support is for teachers to regularly revisit the content they covered in the past so that students will be exposed to the same material on different occasions. Teachers, regardless of the subject they teach, often cover a particular topic in depth and rarely reexamine it once they proceed to a different theme. What the class learned in botany is rarely referred to when students are learning about zoology and the content they became acquainted with when studying the Middle Ages is left to the side when learning about the Napoleonic wars. Without constantly revisiting previous materials, what students learned in the past is easily forgotten. If revisiting the same content in different contexts is important for retaining knowledge, then cross-disciplinary teaching becomes an effective means of promoting learning. Teachers are often unaware of what their colleagues teach and how they conduct their lessons in class. Teachers of math are oblivious to the kinds of experiments students do in labs and foreign language instructors have very little knowledge of what takes place in classes on moral education. Anyone involved in education will have to acknowledge that "most school curricula are highly fragmented, that their parts do not fit well together, that subjects have an independent existence" (Eisner, 2002, p. 156). Yet the quality of teaching can be improved if teachers of different subjects come together, agree on what is important for students to know, and teach the same content through the distinct theoretical lens or prism afforded by their subject. Teachers of social studies can cover what was studied in history from a sociological perspective and in art students can revisit some of the theological

themes explored in their religious education classes when studying religious icons, sculptures, and paintings. Foreign language teachers can assign the same texts studied in English and explore the themes in the target language. Academic disciplines shouldn't be segregated into separate compartments. There are many common grounds that should be jointly explored by teachers of different subjects. By meeting the same material in different contexts, students are less likely to forget what they acquire.

4

Those who rail against knowledge-centered teaching are never tired of referring to what they believe to be more interesting and meaningful tasks that can replace rote learning and memorization that typify classrooms that value the transmission of knowledge. Critics commonly propound the importance of critical thinking and argue that it should topple knowledge and become the new cornerstone of education. Critical thinking is multifaceted for it encompasses many skills and abilities. But one aspect that is fundamental to critical thinking is analyzing arguments or reasons that are put forward to support or refute a point of view. From politicians and TV personalities to scientists and priests, people hold beliefs on a wide range of issues and defend them with arguments and argue against views they don't share. Politicians defend their policies and political commitments by marshaling evidence from the marketplace or by referring to the latest polls and theologians demonstrate the truth of the articles of faith by invoking philosophical arguments and reciting passages from sacred scripture. Whether we like it or not, we are immersed in a culture that endorses argumentation as a proper and important way of persuading people. The ubiquity of arguments is not the only reason why the ability to think critically is valuable. We are, unfortunately, exposed daily to claims that are dubious and arguments that are unsound. Many appear in the media making pseudoscientific claims like being able to see the future in great detail or move objects without physical contact. Political and social commentators voice views that lack evidence and gurus steadfastly prophesize about the end of the world despite compelling counterevidence. So critics of knowledge-centered education are undoubtedly right when they stress the importance of critical thought. The problem with their pedagogical view is that they think subject matter knowledge is not an important prerequisite or an essential condition for thinking critically in any given field of inquiry. Critics argue that students can engage in critical reflection in history or science without knowing much about these subjects provided they become

familiar with useful logical rules of thumb that can be used across the disciplines. Is this view plausible?

To be sure, there are common fallacious strategies in reasoning researchers make in any domain of inquiry that can be readily detected without much prior knowledge. At times both scientists and theologians, for example, criticize what their opponents maintain by attacking their character or motive instead of scrutinizing their arguments. Without much knowledge of politics, students can discern such ad hominem forms of argumentation whenever politicians rebuke the views their opponents espouse by questioning their personal integrity or revealing their family secrets. Similarly, one doesn't need to know much about science or history to identify the error of drawing universal generalizations from limited cases or samples. Without recourse to knowledge, one can spot overambitious deductions about human nature, the true nature of society, or the overarching goal of history when the evidence they draw upon doesn't warrant such grandiose claims. These and other forms of erroneous forms of thinking can be taught and students can detect them without a firm grounding in knowledge. Yet, as we shall see, a more substantial and rigorous critique of arguments made in any domain presupposes a deep, wide-ranging disciplinary knowledge. As Barrow (1990) articulates the same view, "One cannot be a critical thinker in an area or on a topic where one lacks information or knowledge" (p. 82).

First of all, knowledge is indispensable because arguments often appeal to facts and figures to help bolster their claims. In order to critically evaluate what such arguments seek to establish or disprove, we need access to these facts to help determine their viability. Many sociologists, for example, who uphold the death penalty argue that this system acts as a deterrent, preventing people from committing crimes. Those who oppose capital punishment as immoral or barbaric can strengthen their position if they can show how data collected by sociologists don't show any correlation between crime and the death penalty. An important means of refuting the argument in favor of the death penalty, therefore, hinges on whether opponents have access to valuable sociological data. Or consider the debates that surround abortion. Again, one of the standard arguments against abortion is that women undergo severe depression and experience lasting guilt after they terminate their pregnancy. Those who view abortion as a morally viable option can undermine what their opponents assert by adducing evidence that questions whether women actually experience trauma. Knowledge gathered from psychological studies is, therefore, vital for supporting their case. Moreover, historians who are sympathetic to atheism typically argue that organized religion has been the cause of much unnecessary violence in the world and further claim

that societies that have freed themselves from the shackles of religious bigotry and dogmatism have experienced more social harmony and less conflict and strife. This is in essence an empirical claim that identifies religion as the source of conflict. Those who find this thesis unacceptable can cast doubt on what they propound by uncovering historical documents and records that show how regimes that have embraced atheism - Stalinist Russia, Maoist China, Nazi Germany, etc. - have also been responsible for heinous crimes against humanity. Knowledge of history is an invaluable tool for raising questions.

In order to argue effectively in any field, one must be well-versed in its history, otherwise the arguments put forth will be shallow, unconvincing, and incomplete. Though some subjects like philosophy and theology can boast of their long history, others like psychology and economics are relatively new, appearing on the academic scene in recent years. Despite the difference in years, the present way in which research is pursued is largely dependent on the discoveries made by and the arguments enunciated by previous researchers and scholars. The young and aspiring scholar entering the unfamiliar terrains of his or her subject is immersing him or herself in a tradition formed and bequeathed by the past. That being the case, anyone who is ignorant of the subject's past is bound to assert claims that won't hold up to scrutiny. Not knowing the dialogues and debates that took place before, one can offer an argument that has already been reiterated countless times, thereby failing to make an original contribution to the field, and fellow travelers in search of knowledge won't pay close attention to ideas that have been stated before. Moreover, without knowing the history of a subject, one can take a stand on an issue - defending animal rights, learner-centered teaching, mind-body dualism, etc. - while being oblivious to the problems inherent in the position. In academic debates, any theoretical standpoint entails shortcomings and conversely there are no positions that are devoid of anomalies. These problems have often been brought to light by penetrating criticisms made by critics and defenders of particular theories in the past. Being blind to history, one can be committed to a theory without being cognizant of the many faults it has. This unawareness can hamper theoretical advancement because theories are improved by showing how the problems they entail are not as serious as they were once thought to be. The third problem facing those who are ignorant of history is that they can easily underestimate the complexity of academic problems. It is often the case that some of the more profound and nagging academic problems that occupy the attention of contemporary researchers have a long and complex history. The problems the ancient Greek philosophers and the early church fathers wrestled with are the topic of concern today. Problems with a long history can usually be

stated or formulated in a myriad of ways and there are many approaches one can take when attempting to solve them. And those who are unmindful of this history can not only fail to appreciate how difficult these problems actually are, but can be misled into thinking that their shallow arguments are effective. Finally those who are unfamiliar with history can argue passionately about a problem which subsequent research has shown to be insoluble or ill-defined. Not every problem that has been the subject of intense debate has been susceptible to cut-and-dried answers. Many have been discarded as pseudo-questions disguised as genuine questions and others have been reformulated more precisely in the hope that they can generate more promising answers. One can very well be pursuing answers to questions that are impossible to attain or asking questions that are poorly formulated. These blind alleys in intellectual explorations can be avoided with historical knowledge.

The third and final reason why we cannot divorce critical thinking from knowledge is that effective critical thought in any field is not possible unless one is knowledgeable about its defining modes of thinking. One cannot, that is, think like a historian or a philosopher if one doesn't have a firm understanding of how its way and manner of thinking is set by rules and conventions particular to the subject. Those new to a field must internalize the acceptable modes of thinking by reading its canonical texts, learning from their teachers and mentors, and engaging in debates and dialogues with other students. Students embarking on a journey of mastering their subject become more competent as they learn how to argue persuasively and convincingly in their field of discourse. This knowledge of acceptable discourse is paramount since arguments that don't follow what the rules mandate will not be taken seriously by members of the research community. One such rule concerns the use of reasons. When arguing, reasons are given to question or support a particular point of view but the kind of reason that is permitted differs from subject to subject. And it is this viable use of reasons that must be learned. In philosophy, one can in principle question the truth of a theory in metaphysics or epistemology for not comporting to commonsense or for being counter-intuitive. So relativism, or the epistemological view that knowledge is never absolute and objective but always true relative to a particular group of people or period in history, has been criticized for failing to take into account what we all consider to be intuitively sound beliefs - triangles consist of three angles, an external world exists, the sun will rise tomorrow, etc. - that are beyond doubt. One, however, cannot appeal to our sense of intuition when arguing in science. A theory in science is tentatively accepted if it is confirmed by experience, however much it goes against what we feel to be intuitively right. The world of subatomic particles

is not consistent with our everyday experiences of tables and chairs but this failure to meet our expectations of how things should behave doesn't constitute a valid criticism in science. Reasons are also given to justify the theoretical position we are committed to and the types of reasons allowed are often specific to a given subject. In theology, it is common for theologians to appeal to scripture, the creeds outlining the fundamentals of faith, or canonical texts written by the early church fathers to justify their point of view. There is nothing wrong in theological debates to refer to passages in the New Testament or to the works of Augustine to defend a particular doctrine of atonement or creation. Appealing to core teachings bestowed by tradition, however, is not commended in educational research. Because it is a relatively young subject still in its infancy, there lacks an undisputed body of knowledge that researchers can invoke to justify what they maintain. And because there are many conflicting schools of thought in education, each accepting different modes of inquiry and prioritizing different theoretical problems, any appeal to past educational research will be contested. Critical thinking in the way of offering reasons to critique or support a view must be rooted in a sound knowledge and understanding of how one can legitimately argue in any given discipline, otherwise the arguments will be dismissed as irrelevant and unimportant.

5

Any approach to teaching can be criticized for different reasons. One can, for example, argue that the goal it seeks to attain is dubious. In language teaching, the grammar-translation method has been faulted for aiming to educate learners who can be competent readers in the target language without building their ability to communicate effectively in various communicative contexts. Pedagogies are also scrutinized for the content they choose to impart. Marxist pedagogies of different types are often rebuked for upholding and imparting nontraditional values such as gay marriage, abortion, euthanasia, and atheism. Alongside content, one can critically examine the ways in which knowledge is taught or the method teachers use. Those who are skeptical of cooperative learning argue that learners tend to engage in off-task behavior when they are not monitored closely by their teachers and that it is difficult to set cooperative tasks that preclude some students from dominating the discussion or doing most of the work. Teaching based on behavioral psychology relies heavily on rewards and punishment to reinforce positive learning and discourage errors. Though this type of teaching discourages errors, students need to take risks and shouldn't be scared of making mistakes if

they want to grow intellectually. Critics of educational philosophies that avow the primacy of knowledge argue that the knowledge-transmission model of learning should be displaced because the approach to teaching it is founded upon is pedagogically flawed. Teachers who work in schools that value content typically give lectures, writing important content on the board for students to copy. It is this mode of instruction that is said to be deeply problematic and four problems have repeatedly been pointed out, namely lectures (1) are tedious and uninspiring (2) demand extended listening (3) are teacher-centered and (4) are negligent of students' individual differences. Each point will be addressed below.

During the course of any given lecture, the teacher with a chalk in hand usually spends the vast portion of classroom time talking while occasionally writing important points on the board. Students in turn are expected to be seated quietly, filling their notebooks with information. This method of instruction is said to be outdated and ineffective because it fails to stimulate interest. Though critics think that lectures are inherently uninspiring, this is not the case. It all depends on how teachers deliver knowledge. Good teachers are adept at arousing their students' curiosity in any number of ways. People often become curious when what they are taught doesn't accord with the inbuilt expectations they have or when "new information is incompatible with existing knowledge or biases" (Livio, 2017, p. 63). Put differently, their interest won't be sparked if there is no cognitive conflict or dissonance between what they know and the knowledge that gets delivered. Good lectures are intellectually stimulating by creating these cognitive dissonances that make the students more attentive and interested. Interest is also aroused when learners become aware of a gap in their understanding which needs to be filled if they are to successfully complete a task. Many seek to acquire more knowledge or deepen their understanding when they realize that their gap prevents them from solving a problem or understanding the meaning of a text. Good lectures capitalize on this fact about learning by showing what they lack, not what they already know or possess. Lectures can also be intellectually rewarding if they are aimed at the right level or if they are neither too difficult nor too easy for the students. Students can easily lose concentration if teachers talk about matters they are entirely familiar with or lecture on issues way beyond their level of understanding. Lectures that provide the optimal challenge can and often do cultivate the willingness to learn. As Cavanagh (2016) writes, "If the complexity/challenge is too low, you can become bored; if it's too high, confusion, frustration, and anxiety are more likely to be elicited" (p. 128). Another characteristic shared by effective lectures is that they are coherently organized, whereby the introduction logically proceeds to the main points of the talk and the concluding

remarks logically flow from what was mentioned before. On the other hand, lectures that raise interesting issues and pose profound questions can fail to enhance interest if they don't follow a coherent pattern. Another important factor that ignites interest and one that many effective teachers make use of is mystery or what still eludes understanding. Our attention, generally speaking, is tuned in when we come across areas that are shrouded in mystery. Our sense of wonder is provoked when we learn about questions - the origin of life, the mystery of consciousness, the smile of the Mona Lisa, the disappearance of the crew of the Mary Celeste, etc. - that are unsolved. Lectures, therefore, are not necessarily mind-numbing. To conclude that lecturing as a mode of teaching is problematic from samples of bad teaching is premature. Like many other areas in teaching, lecturing can be done effectively or ineffectively, depending on the teacher's experience, knowledge, and commitment.

Critics also want lectures to be replaced with better approaches to teaching because students, they argue, cannot bear listening to someone talk for an extended period of time. Contrary to what they contend, however, students are capable of giving their full and undivided attention when listening to their favorite celebrity give a talk on fashion or watching a comedian regale stories filled with jokes on TV. They can also be seen listening to their favorite artists singing and dancing on stage for long periods of time. The very act of listening is not necessarily the problem but what they have to attend to when they are studying. And even if it is true that students cannot stay focused for long while listening, schools should not thereby meet their demands by discarding lectures. This is because schools are responsible for improving the quality of the students' minds and it seems highly unlikely that much progress in learning can be made without sustained concentration which is what lectures after all demand. One cannot read the works of great literature without being fully absorbed in their narratives because the language is dense, the themes they raise are both challenging and profound, and the plot is not always easy to follow. The same can be said about writing. Because the writing of essays requires writers to pay attention to many issues all at once - the choice of words, the logical flow of ideas, grammar, etc. - one cannot write effective prose without careful reflection and deep concentration. And schools aim to cultivate dispositions that are crucial once students enter society. It is important that they learn how to concentrate now so that they will be able to work effectively in the future. Students will encounter countless situations - discussing business plans with superiors, talking with potential clients, writing and filing reports, etc. - that demand concentration. Unable to stay focused, they will incur problems that will make work both tiresome and unfruitful. Listening to

lectures, therefore, is an invaluable form of intellectual training that can aid school learning and work.

Lectures have also been criticized for being too teacher-centered. Instead of treating students as empty containers that need to be filled with knowledge, students should be engaged in more hands-on learning, where they conduct scientific experiments in labs, visit nearby lakes and ponds to learn about fish and algae, and conduct surveys and polls to collate sociological data. Learning, critics argue, will be more lasting and meaningful if students become more actively involved in learning, taking charge of how and what they learn. There is little denying that such activities are important, for they enable students to actually do scientific or sociological research instead of learning a lot of facts about the sciences. Though hands-on experiences have a legitimate place in learning, they cannot thereby replace lectures as a way of accruing knowledge. If what they ultimately acquire at schools is restricted to what they can discover through experiments and other similar tasks, the amount of knowledge they acquire will be meager and limited. The basic, foundational knowledge found in such subjects like history and physics required many hours of painstaking research even by first-rate researchers. It is questionable whether students can acquire this knowledge through hands-on learning alone given the limited time available in class. Learning to identify the structures of plants in the field takes many hours of practice let alone understanding their botanical functions. Also, students simply do not have the intellectual competence to discover the basic yet crucial knowledge that every discipline is built on. Although it is relatively easy to comprehend when they appear in textbooks, one cannot even attempt to discover the laws governing planetary motion without an advanced knowledge of mathematics and astronomy. It is also doubtful whether students can reconstruct advanced geometrical theorems from axioms by playing with triangles and squares made of wood. More learner-centered types of teaching are to be welcomed for training students to think like scientists or historians. They can be used to complement or reinforce what students learn through lectures. However, they cannot replace lectures and become the dominant mode of teaching if we want to introduce students to rudimentary disciplinary knowledge.

Another alleged shortcoming with lectures is that students must all learn the same material despite the variation in what interests them. Though a lecture on the Middle Ages might be responded to favorably by those interested in history, others who don't share the enthusiasm will be glancing at the clock every ten minutes, desperately wanting it all to end. Lectures cannot cater to the academic interests of each and every student. The criticism assumes that teaching, in order to be

effective, must meet the students' proclivities. But this assumption is problematic because many students do have interests - drugs, gambling, pornography, etc. - that schools should not encourage. And rather than teaching materials that many find enticing, schools should attempt to broaden their world by instilling new interests they don't currently have. Students otherwise will forever be living in a narrow and insular world. Whether students find it riveting or not, they need to learn about how the political system works and the political philosophy that different parties embrace if they are to become responsible citizens that contribute to the overall welfare of society by who they vote for. This criticism also assumes that individualized learning whereby students learn on their own by pursuing their personal interests is preferable to lectures which demand that all students learn the same content. There is nothing wrong with students engaging in personal projects that they are genuinely interested in, but their education would be incomplete and skewed if individualized learning were to become the norm. It seems doubtful whether they will become acquainted with what every educated person should know by following where their interests lead them. Geometry and trigonometry will probably remain unexplored if a student's interest revolves around music and a student who is obsessed with cars will learn a lot about mechanics and engines but very little about ancient history. Lectures are the best available means for instilling knowledge that is paramount.

6

Unfortunately in the world we live in, "privileged groups use their power and influence to shape culture itself in their own interests, including the protection of their privilege" (Johnson, 1997, p. 60). Political power is monopolized by a small number of politicians and business tycoons who are determined to secure the privilege they enjoy. They try to achieve this end through controlling knowledge. The information the general public receives about current affairs from the media is not neutral and objective but biased, lending support to the wealthy and the powerful. This mechanism of control is apparent in schools. Pedagogies that valorize the teaching of knowledge are criticized for disseminating knowledge that is often biased or for supporting a particular philosophical or political ideology. Those who have the power to make important curricular decisions - politicians, public servants, administrators, etc. - are keen to preserve the status quo because they have very little to gain and a lot to lose if the present socio-political order collapses or undergoes radical change. They therefore employ various means to help maintain their authority such as by weakening the power of the union or

mandating a standardized curriculum that every school must blindly follow. Besides such tactics, those who wield power attempt to serve their self-centered goals of suppression and domination by controlling the content that both is and isn't taught at schools. Sociology textbooks that portray the present in a favorable light are chosen and those which highlight the plight suffered by marginalized groups are not selected. More school time is devoted to the teaching of science, sidelining subjects like art and music, because scientific knowledge can often be applied to create new technologies, bolstering the economy and bringing more wealth to the powerful. What students learn in history is also skewed, for they are taught mainly about their nation's past accomplishments and feats while the atrocities and crimes committed in the name of justice and emancipation are rarely touched upon. As Noddings (2017) argues, "Historians elucidate past thought and action through their inquiry of the past, but historians and great people alike can also suppress history and erase people and their acts from memory" (p. 49). This biased transmission of knowledge is also said to be apparent in such subjects like literature and philosophy. Despite there being many works of literature produced by gays, lesbians, and people of color, the novels and poems students are required to read are for the most part written by white males from the upper class. Critics of traditional curriculums seek to discard a lot of what is regularly been taught at school because the content favors a particular philosophical view and class of people. Is this view tenable? To give more focus to an immensely complex topic that raises many issues, we will limit ourselves to a specific problem that one often encounters in debates concerning biases in education, namely whether canonical texts in philosophy still have a legitimate place in schools.

Critics rightly point out that the majority of works in philosophy that are assigned in schools have been written by white males. But these texts are not chosen because of the writers' gender and race. The pioneering geniuses that wrote treatises that merit close reading and reflection just happened to share the same sexual and racial background. The criteria used to adjudicate the philosophical worth and value of texts examine their content or what has actually been written. They don't, contrary to what critics sometimes say, serve a hidden political agenda. Works by Plato or Descartes are required reading because they were the first philosophers to pose some of the most profound questions on the subject. They were able to transcend the standard way of philosophizing at the time by raising questions that were not entertained by their contemporaries. When Plato asked his fellow philosophers whether there was any such thing as innate knowledge, the question dumbfounded everyone because it was a theme that had never crossed their minds. Descartes too is remembered for his groundbreaking philosophical

queries. When the philosophical climate was dominated by abstract metaphysical speculations about the nature of existence and time, he shocked both theologians and metaphysicians alike when he asked what the limits of knowledge were and how we could gain absolute, indubitable knowledge. Another criterion that is used to identify works worthy of careful study is the impact they had on subsequent generations of philosophers. Most works in philosophy are not remembered because their influence is ephemeral and limited. They merely reflect the cultural and philosophical biases of the day, unable to touch the hearts and minds of people from a different historical or cultural milieu. Some works, however, have extended a huge effect on the course of philosophy, where philosophers with different views and interests have gained invaluable insight, meaning, and solace from perusing their pages. To this day, philosophers consult the works of Plato and Descartes not merely out of historical interest but from their longing for truth and understanding. Many are convinced that a scrupulous reading of their works will lead to philosophical enlightenment. Besides influence, another justification that is often given for the canonical status of certain books is that they contain some of the most convincing, interesting, and cogent answers to questions that have always baffled philosophers. Descartes is read because his ontological argument for God's existence is startlingly simple yet very persuasive and Plato's dialogues are read by contemporary students of philosophy because his famous allegory of the cave is a very memorable illustration of how we are blind to reality, misconstruing what is fleeting and passing as ultimate and absolute. None of the standard criteria used to help determine works of classical status make any reference to the writer's sexual orientation or ethnicity. These factors are irrelevant because one's sexual preference doesn't mark one as an outstanding thinker in philosophy.

Those critical of the traditional canon of philosophical literature argue that more writers from groups with a long history of oppression and subjugation should be read. They insist that their hitherto suppressed voices should be heard, for they question and cast doubt upon what many mainstream philosophers included in the canon take for granted as irrevocable truth. Representing many women whose freedom was crushed by patriarchy, many feminist philosophers argue that past philosophers have wrongly identified the ability to engage in rational thought and reflection as the true essence of our humanity. This characterization, they argue, is one-sided because it doesn't incorporate the affective qualities - compassion, care, empathy, etc. - that are typically associated with women. And, as Brosio (2000) argues "the alleged dichotomy between male reason and female has helped make possible the exclusion of women for participating in public life" (p. 294). Women for many years were not granted the

right to vote or earn an education because they were conceived as overly emotional, lacking critical acumen. And philosophers from indigenous cultures voice their concern over how traditional philosophers have viewed the natural environment as something that can be subject to our control to serve human purposes. This philosophy of dominating nature and uncontrolled use of precious resources has inflicted much harm on our habitat, ranging from deforestation and global warming to the extinction of numerous species. These criticisms advanced by those representing oppressed groups are made in response to traditional philosophizing. They are arguments against what past philosophers thought and their line of reasoning that led to it. In order to truly understand their philosophical standpoint and appreciate the points they raise, students need to first learn about the tradition they are vehemently opposed to. Their critique of Plato and Descartes won't make much sense unless they have a firm understanding of their underlying philosophy. Of course, students can learn a little about Plato as they read through the feminist literature but the firsthand experience of actually reading his works is vital since critiques can misunderstand and misinterpret the ideas they are arguing against. Hence, the canon does not need to be radically altered because it consists of works that need to be understood before examining the literature that is critical of them.

Another reason why critics are wary of canonical texts is that some writers expressed distorted views on gender, race, or class that are not morally acceptable. Plato, for instance, believed that nations should be governed by an elite core of philosophers who underwent rigorous philosophical training. He was dismissive of democratic forms of government because he was convinced that ordinary citizens lacked the intelligence to make informed judgments about politics. Descartes too held many questionable beliefs. For instance, he argued at length that animals were mere machines that lacked any form of consciousness. His philosophy had no room for a more compassionate and more caring attitude towards animals. Nietzsche, to mention another example, put forth misogynistic views on women who he thought were driven more by instincts rather than rational reflection. He is also known for his scathing criticisms of some of the more enshrined values many hold dear such as compassion for the poor and the importance of forgiveness. He sought a new moral code that was free from Christian teachings. Christianity, for Nietzsche, was a despicable philosophy of life that only served the downtrodden in society. It cannot be denied that first-rate philosophers voiced and defended at length views which we find intolerable. If, however, being unbiased is the yardstick for determining the worth of a text, any known piece of writing will fall short of the ideal. In which case, students will have nothing to read and reflect on.

Even works counseled by critics of knowledge-based learning have their shortcomings and flaws. Feminist thinkers tend to overemphasize the affective domain of human experience and supporters of indigenous culture are inclined to devalue the technological advancements made possible by modern science. They are after all written by people of flesh and blood, embodying and reflecting the mores, values, and beliefs that define and characterize the age they live in. No one has a God's eye view that transcends the limitations that characterize human thinking. As Berger (1963) points out, "We are in society, located in specific sectors of the social system. This location predetermines and predefines almost everything we do" (p. 91). In addition, texts that express biases can serve an important aim of reading. Any great work of philosophy has its strengths and weaknesses. There is no holy and sacred text in philosophy that must be venerated for being infallible. That being so, students must learn how to separate the wheat from the chaff as they read, and the philosophical biases need to be separated from what is of enduring value. And this ability to read fairly by balancing and weighing the pros and cons of any work is what a critical and competent reader should be able to do.

Critics worry that though education must empower students by providing the competence and knowledge to fight social injustice and promote fairness and equality, the canonical works support the status quo by ignoring the social ills that must be corrected or proliferating ideas that favor how society operates. To be sure, Platonic dialogues and Cartesian meditations don't philosophically reflect on unemployment or poverty and they sometimes articulate patriarchal views or defend political oligarchy. Critics repeatedly point out that social transformation will forever be an unattainable goal insofar as students are set texts that don't challenge the way in which society is organized and managed. Notwithstanding the biases that are inherent in these texts, the masterpieces in philosophy have been venerated for long partly because students can in fact learn to question the status quo by studying their ideas. Canonical works in philosophy teach their readers to think autonomously by eschewing blind and dogmatic adherence to any form of religious or secular authority. They also stress the importance of exercising skepticism by questioning the beliefs and values that are uncritically assumed to be irrevocably true. Besides skepticism, they underscore the value of logical thinking, where readers are advised to follow logically valid rules of reasoning and avoid muddled forms of thinking. And it is precisely the ability to think creatively and critically that can oust corrupt regimes and topple despots. Social change becomes more possible if citizens don't kowtow to authority and if they have the courage to doubt what they are told to believe. They also won't

easily be misled by irrational propaganda and seductive rhetoric if they can rationally identify the dubious arguments they typically resort to. The reading of philosophical classics, unlike what critics contend, is a form of education that can seriously transform the way things are to the way things ought to be.

Another related concern that is sometimes raised is that students might uncritically absorb these sexist and elitist views held by Plato and Nietzsche. Texts with distorted views should not be taught but censored. Schools, many argue, should protect students from materials that can have an insidious effect on their minds. Part of any meaningful education, however, is to respect the students' autonomy by giving them the freedom to choose which beliefs and values they want to adopt. To help achieve this end, they should be presented with a wide range of beliefs from which to choose. When teaching social science, schools should present students with the ensemble of socio-political systems - anarchism, communism, capitalism, etc. - that has a significant following. Besides introducing learners to the different world religions, any meaningful religious education must expose learners to the wide array of religious belief systems - atheism, pantheism, agnosticism, etc. - that inspires and guides the lives of many people. Limiting the range of beliefs would severely restrict their range of options. Of course there is a limit to the kind of beliefs schools can expose their students to. The curriculum shouldn't mandate books that favor Nazism or suicide bombings. But works that appear in the canon, despite their shortcomings and errors, have inspired many students to seek knowledge and eschew ignorance. They have not been instrumental for nurturing hatred and violence but rather they have cultivated among many readers spanning many generations, open-mindedness, tolerance, and a deep yearning for truth. The pioneers of philosophical thought also espoused the power of logic and reason to discern what is true from what is erroneous. They both encouraged and welcomed their readers to subject their own writings to critical scrutiny instead of absorbing their doctrines in blind faith. The fear of indoctrination is unfounded given how every page of their works testifies to the importance of critical reflection.

Conclusion

One of many contested areas in education is the place of knowledge in education. Although the importance of acquiring knowledge was unquestioned in the past, many critics of traditional curriculums are nowadays expressing their skepticism, wanting knowledge to be sidelined in education. The present study examined some of the more important arguments that are often made to defend

this view. We have seen that despite what critics contend, knowledge is not entirely provisional, for each discipline has through years of research established a core body of knowledge that is beyond reasonable doubt. It was also argued that though knowledge can be accessed quite easily by surfing the net, it is vital for students to have knowledge stored in their mind when reading, writing, and solving problems. Furthermore, critics devalue the transmission of knowledge on the ground that students often fail to retain what they are taught. Instead of dispelling the teaching of knowledge, however, teachers should adopt techniques that will help students remember more of what they learn. Critics of knowledge-based teaching typically espouse the value of critical thinking, and think that it should replace the teaching of dated, inert facts. But one cannot neatly separate critical thought from knowledge because one needs to be well-versed in knowledge in order to think critically. Critics are also keen to point out how transferring knowledge is educationally dubious since it rests on an approach to teaching that is problematic. But their criticisms don't seriously undermine the value of lectures. They can be an effective and useful mode of educating students. Finally, those opposed to knowledge-centered education fault the teaching of canonical texts. Despite their concern, texts of enduring value have a legitimate place in education because of the profound questions they raise and the answers they propose. The criticisms commonly made against knowledge-centered teaching don't seriously question the value of teaching knowledge. This, however, doesn't mean that knowledge has a permanent place in education. More powerful and convincing arguments that truly question its status may be forthcoming.

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