A Study of School Knowledge

Alan P. Williams

Abstract

One of the many overriding goals of a liberal arts education is to help cultivate students who are knowledgeable about themselves and the world. Schools, that is, rightly seek to instill knowledge that helps deepen the students' awareness of the historical past, their natural surroundings, and cultural heritage. The transmission of knowledge obviously raises a number of enduring problems that elicit different responses from those involved in education. Teachers must determine the content their students need to know and the pedagogical rationale for learning what they seek to impart. They also need to think deeply and carefully about how to deliver the content to their students. The curricular content to teach, the goals of learning, and the instructional strategies to use all raise profound questions that must be examined by those interested in promoting learning. There is, however, another issue the acquisition of knowledge within the school context can raise and be pondered by teachers, namely the view on knowledge students tacitly or consciously acquire from years spent in the classroom. Spending vast amounts of time listening to teachers deliver content in very set ways, schooling can and does engender deeply entrenched beliefs about the nature of knowledge within students. This present study will identify some of the views students can mistakenly inherit about knowledge given how and what they are usually taught at school and why it is important for them to become cognizant of these misconceptions.

Keywords: knowledge, known, incorrigible, uncontroversial, unbiased, nonhierarchical, self-contained

Introduction

Schools attempt to realize multiple cognitive goals that seek to deepen the learners' mind in some shape or form. Teachers, for example, are held responsible for cultivating students who can think critically or question the

truth-claims they are exposed to both inside and outside class. The ability to think critically is extremely valuable given that we are all surrounded daily by assertions that are not supported by evidence and sound logic. To help nurture critical reflection, teachers often refer to common logical fallacies people commit when reasoning. In light of this knowledge, students can in principle discern arguments that are logically compelling from those that are fallacious. And this competence is vital since "the best chance we have to maintain a functioning democracy is a citizenry that can tell the difference between demagoguery and responsible arguments" (Delbanco, 2012, p. 29). Another common cognitive goal that is enshrined in many curricular guidelines is to expand the students' imaginative competence or the ability to think outside the box. Creative thinking is paramount since we often confront problems and anomalies that cannot be solved by standardized procedures and strategies. We need to set aside our routinized methods of solving problems and approach them in hitherto untried, unexplored ways. Art is an immensely valuable means for fostering creativity because groundbreaking paintings and sculptures challenge the way we ordinarily perceive the world, thereby revealing a new mode of interpreting our experiences. Literature is also an invaluable resource for expanding our mental horizons because we learn that the world we experience is not an unalterable, static given when we immerse ourselves in imaginary worlds that differ significantly from the world we are daily accustomed to. Clarity of thought is another common educational goal teachers seek to promote. Students must become capable of expressing their thoughts clearly when writing or communicating orally. Thinking that is muddled results in confusion and misunderstanding. To overcome barriers in communication, teachers write critical comments on essays students write, asking them to use expressions that are clearer and grammar that is less convoluted. When students present their ideas and opinions in class, teachers commonly rephrase ideas that lack clarity or pose questions that demand students to rearticulate the meaning they want to express in a less ambiguous manner. Furthermore, teachers set texts that exhibit clarity so that the experience of reading clearly written prose will help students articulate their thoughts more cogently and precisely.

Another cognitive goal espoused by many schools is for students to acquire a broad understanding of each of the disciplines that constitute a liberal arts curriculum. From literature and music to physics and biology,

students are exposed to the fundamental principles, concepts, and ideas that can be found in each discipline so that their limited and superficial understanding of the world deepens and expands and they become aware of their prejudices and ignorance. Otherwise their awareness will forever remain limited to their parochial interests that don't extend much further beyond their quotidian existence. The aim of transmitting knowledge raises a number of vexing issues in the field of education. First of all, teachers need to decide the content they want their students to learn. This is not altogether an easy problem to solve because there is a vast amount of knowledge uncovered by researchers and scholars in any given field. Teachers have no choice but to select what they consider to be worthwhile knowledge from an infinite range of facts and information. What any given teacher decides to omit on pedagogical grounds might be contested by others who uphold a different educational philosophy. Another enduring concern is how to deliver content to students. Teachers want their students to retain the content they impart. They need to think of ways that will facilitate the process of remembering what they are taught. They cannot resort to longwinded didactic lectures, hoping that what they deliver will not be cast into oblivion. In order for the material to stick, they need to think of instructional strategies that will make it more retainable. Moreover, educators need to ask themselves why they want students to learn what they teach. It is crucial that teachers can offer a clear and convincing rationale as to why students need to acquire what they are taught. This is in part because learners are inclined to devalue the content they are supposed to learn if they cannot fathom the reason for doing so. Conversely, students will be more willing to learn if there is an unambiguous reason for spending countless hours trying to master what they are taught. Nothing can be more demotivating for learners than cramming knowledge for the sake of passing an upcoming test or quiz.

Teachers mainly preoccupy themselves with the problems raised by what they should teach, the teaching method to be used, and the rationale for imparting knowledge. There are obviously countless other questions teachers can ask themselves about the materials they teach. They can, for instance, ask whether the content they teach serves the interests of very particular religious or political groups that seek to influence what goes on inside classroom doors. Unbeknown to both students and teachers, the content teachers impart may very well be promoting the values fundamentalist groups and multinational corporations are committed to.

Teachers can also deliberate about the fairness of imposing a one-size-fit-all curriculum where every student, regardless of his or her interest and background, is required to master the same content. This query might lead some to eschew standardized curricula and see the value behind more individualized learning. Another important question that teachers can ask is the view on knowledge students acquire through spending innumerable hours in the classroom. Students are akin to sponges that consciously or unconsciously soak up many things about teaching and learning as they proceed through school. The process of schooling can condition students to adopt many views and beliefs about knowledge, some of which are beneficial. Many, for example, come away believing that knowledge is a source of power since it enables the knower to predict the future or make sense of what previously was an enigma. Others needs to be challenged because they are misleading. This paper will examine some misconceptions students can easily absorb about knowledge given how and what they are ordinarily taught at schools.

1. Knowledge of the Known as All-Important

Students are taught about what is known in each discipline. Thanks to their tireless efforts and their strong zeal to explore the unknown, researchers and scholars have helped uncover what previously defied human understanding. Physicists have helped uncover the lifecycles of galaxies and stars and the nature and behavior of subatomic particles that form atoms. Physics has also discovered the physical forces that govern the universe and has successfully formulated mathematical equations that describe how they work. Historians and anthropologists have also revealed the customs, mores, and belief systems of ancient civilizations by scrupulously analyzing ancient texts and archeologists have shed light on the past by extracting remains of tools and buildings. These studies have uncovered the extent to which the structure of contemporary societies is molded by the past and how our values and beliefs are rooted in what our forebears took for granted. Mathematicians and logicians, to mention another example, have discovered exceedingly complex equations and theorems that scientists can fruitfully use to formulate quantitatively precise measurements and theories. Geologists have identified the causes of earthquakes and volcanoes, the processes involved in the formation of clouds and glaciers, and the impact of global warming on species. Literary

scholars have also helped establish the troves of human knowledge. Their meticulous analysis of literary texts has documented the views on life and death novelists and poets have sought to convey through their art. Literary studies have also shown the strong correlation that exists between the metaphysical views that imbue their creative works and the socio-historical context they have inhabited. From the behavior of the outermost galaxies to the philosophical views on human nature embraced by Shakespeare and Eliot, students are acquainted with an amazing and rich array of well-established knowledge that is the result of painstaking scholarly research.

Despite all the historical and scientific research, however, there is a lot that is not known in each field of inquiry. Irrespective of the academic discipline, what is unknown far outweighs what we do know. The known is nothing more than a minuscule drop of water in the vast ocean of the unknown. Ignorance typifies every domain of knowledge. It is certainly the case that modern physicists know more about the sun and the planets than Ptolemy and Copernicus and Darwin's understanding of evolution and natural selection pales in comparison to what is known by contemporary biologists. Yet researchers, regardless of the discipline, will reluctantly concede that their understanding is still premature and limited and a lot of more work has to be done to address questions that are steeped in mystery. Because schools focus primarily on imparting what we know about ourselves and the world, students remain oblivious and blind to what researchers in any discipline don't know. Students are not exposed to the countless unanswered questions and problems that researchers seek to solve and unravel. In biology, students learn how all existing species trace their origins to unicellular microorganisms but they are unaware of the fact that biologists still do not know how life emerged from inanimate matter. In history, they are taught how Islamic culture contributed greatly to the advancement of such diverse fields like astronomy, biology, and medicine during the Middle Ages. But they never learn about a puzzle which contemporary historians to this day cannot fully explain, namely why science stagnated in Islamic countries after the Middle Ages and flourished in the West. When studying about the brain in courses on human anatomy, students learn about the different parts of the brain and what their respective roles or functions are. They are, however, not introduced to problems neuroscientists cannot fully understand such as how inanimate matter gives rise to consciousness, whether consciousness survives the

death of the brain, and whether mental phenomena – the taste of food, the perception of color, the feeling of pain, etc. – are nothing more than neurons firing in the brain. In physics, scientists have identified and explained the workings of stars and galaxies but the possibility of extraterrestrial life forms inhabiting distant planets remains an intractable mystery, a problem therefore not explored at school. From Da Vinci to Picasso, students learn about the original masterpieces that have withstood the test of time but they don't deliberate about some of the more philosophical and unsolved questions that aesthetics raises such as why we are all drawn to beautiful works of art and whether beauty is merely subjective, conveying the viewers' tastes and preferences, or if it is an objective property profound pieces of artwork possess independent of human sensibility. Issues, themes, and questions that lie outside the terrain of what is known remain largely unexplored at schools.

Needless to say, students must acquire what is basic and fundamental in each discipline before they can explore the unknown. They need to know the basics of astronomy before they can understand the questions that baffle astronomers and students of sociology must have a rudimentary grasp of what communism is if they want to appreciate the complexity surrounding some of the socio-economic problems studied by Marxists. That said, schools need to spend more time covering what is not known in each discipline. The first rationale for doing so is that it introduces students to what truly motivates researchers to engage in academic pursuits. Scientists, historians, and sociologists are inspired to conduct experiments, read ancient texts, and conduct surveys so that they can find solutions to questions without settled answers. Their intellectual curiosity is not ordinarily awakened by what is already known to be true by members of their research community. They don't embark on journeys that seek to corroborate what is beyond doubt. Medical researchers, for example, don't spend countless hours in their labs trying to find a cure for colds because well-established treatments are readily available. Rather, researchers' interest is aroused and their will to learn and investigate is prompted by unanswered questions or puzzles that are not solved. It is the realm of the unknown that draws their attention and whets their appetite to understand and explore. Medical scientists are spurred to find a cure for cancer and AIDS because an effective treatment has not yet been found. Schools should familiarize students with what is not known and the power is has to stimulate and maintain interest in learning. Moreover, learning

about the unknown is a gateway to understand why we know so little. For instance, there exist many gaps in our understanding in part because researchers have only explored an extremely small part of our planet and the universe. There are many more new empirical discoveries that await us in the future. Biologists confess that there are innumerable species living on the seabed alone that they are unaware of and their discovery will undoubtedly shed new light on zoology and botany. New archeological findings of cultural and artistic artefacts that have remained hidden to this day can offer invaluable knowledge of the lives people led in the past. Images and photos of unknown stars and galaxies will certainly help us gain a better picture of what the universe is like. An additional factor that accounts for our ignorance is the difficulty disciplines investigating human behavior encounter when trying to establish reliable and objective knowledge in their respective fields. It is hard to generalize about human beings because, unlike cats and pigeons, our experiences, personalities, beliefs, and values are subtly different. While some find solace in religious faith, others are convinced that God is nothing other than a figment of the human imagination. And though some dedicate their lives to help alleviate the plight of the downtrodden, others lead a life of hedonistic pleasure. Given such individual variations, inductive generalizations that seek to capture and encompass what humans are all like are bound to be partial and incomplete. As R. H. and C.R. Thouless (2011) point out, "Human beings are too variable for it to be likely that, in the sciences dealing with them, one will find many true statements in the form 'all Xs are Y'" (p. 53). And what we learn from studying a particular society or period in history cannot be uncritically applied to understand a different social system or time in history. What research tells us about human behavior under communist rule in Russia might not illuminate what people do in a liberal democratic society in Japan. The third rationale for reflecting on human ignorance is that it is a valuable means for learning how intellectual progress is made in different fields of inquiry. As researchers help advance knowledge by making new discoveries and acquiring new insights, many new theoretical problems that they were unaware of emerge. As we extend the boundary of what we know, many new anomalies arise, revealing vast new areas that need to be investigated. The more we know, the more we become aware of how much we don't know. The discovery of the remains of dinosaurs advanced our understanding of the past but scientists then had to determine what caused their extinction. Researchers

of ecology had to examine the effects of deforestation once they learned how trees change carbon dioxide, sunlight, and water into oxygen and glucose. And astrophysicists have the problem of determining what initially triggered the massive explosion after learning that the universe came into existence when an infinitely dense ball of matter and energy exploded billions of years ago. As researchers help advance what is known, the area of the unknown deepens and widens considerably, revealing how much more work needs to be done. New questions are to be welcomed because academic disciplines would atrophy if there were no further queries that drove them forward.

2. Knowledge as Incorrigible

The knowledge students learn at school is presented as indubitable, immune from doubt and error. They are required to commit what their teachers teach to memory without questioning its truth. Raising doubt about its veracity is without much meaning because its truth is considered to be beyond doubt. It is assumed that historians have corroborated the time and place of events that have transformed the course of history and their painstaking research has established the names of kings and emperors who wielded power and exerted influence on their subjects. The explanatory theories, facts, and data that fill many science textbooks are presented as incorrigible truths that students need to learn by rote if they want to learn about gravity, atoms, and the solar system. The nucleus of the carbon atom will always consist of six protons and neutrons and water is forever made from hydrogen and oxygen. As Newton explained, the gravitational attraction any object exerts always depends on its mass and species without advantageous traits that enable them to secure scarce resources will, as Darwin argued, face death and extinction. In addition, the pristine truths of mathematics and geometry are eternal, untouched by and never made redundant by new mathematical discoveries. The equations for determining the area of a square, a triangle, or a parabola will never undergo change. In language learning, the rules of grammar, the meaning and spelling of words and phrases, and the various conventions of writing writers of the target language must follow are not taught as prescriptions that are susceptible to change but as irrevocable. Learners have no choice but to follow what the rules that govern the target language mandate and teachers are held accountable for improving their

competence by correcting language use that violates the established norms. Irrespective of the subject, the content is transmitted as unquestionable truths that should be faithfully retained for future use.

For each subject we find in a liberal arts curriculum, there is undoubtedly a repository of truths that will most likely remain unquestioned in the future. Most probably researchers will investigate their area of interest and advance both knowledge and understanding by presupposing the truths of many principles, explanatory schemes, facts, and data uncovered by their discipline. New knowledge will be built upon the edifice of well-established foundational knowledge we find today. But this does not imply that the knowledge taught at schools is impervious to doubt. The content that appears in textbooks used today is not an infallible storehouse of knowledge. Though the methods used for verifying or falsifying truth-claims may stay constant, facts thought to be true today will be revised tomorrow and data accepted by many practicing researchers as self-evident will be abandoned. As Bok (2006) contends, "Information will become outdated and new facts come to light, but the principal methods of intellectual inquiry are likely to remain pretty much the same" (p. 268). Explanatory theories that are currently used to make sense of phenomena will be replaced by others that are more precise and coherent and standardized ways of interpreting literary texts and music compositions and paintings will be questioned and substituted by different modes of analysis. Deeply entrenched moral values and norms we rarely question might be expunged as biased and dangerous during the upcoming years. What is disseminated at schools is not carved in stone, forever resistant to change.

It is safe to assume that the content taught at schools is not all incorrigible because many truth-claims found in textbooks are not based on solid, reliable evidence. Some are founded on a small number of case studies or empirical experiments. And as researchers amass more reliable evidence to verify their conjectures, some will be drastically revised or jettisoned altogether. Another reason why what students are taught at schools is not indubitable is that texts consulted by historians, literary critics, and social scientists to help advance understanding are themselves not infallible sources of knowledge. For example, the canonical texts historians study to determine what happened in the past were all written by authors with distinct biases and prejudices that shaped their outlook and values. This being so, their account of the past is bound to be

subjective and parochial, not a neutral description of history acceptable to every practicing historian. Whether it be a work on art during the Renaissance or a study of the French economy during the Napoleonic wars, any historical reflection is shaped by the philosophical beliefs, moral values, historical understandings, and political commitments of the historian, and there can be no God's eye-view of the past that transcends these factors. Another reason for being skeptical of the incorrigible status of present knowledge is this: what was thought to be indubitable truths in the past were subsequently revised or abandoned giving us very good grounds to think that what we accept as true today will be challenged in the future. Theories scholars embraced as incontrovertible truths were later found to be erroneous and facts that were conceived as bedrock truths were also discarded as ill-founded. The science of Aristotle, which had an almost spellbinding effect on centuries of scientific research, is largely discredited since we now know that the universe is not eternal, that planets and stars beyond the moon are not composed of ether, and that the rate at which any physical object falls is not dependent on its weight. The fixity of species, an underlying assumption once shared by most biologists, is nothing other than an amusing piece of intellectual relic from the past since we now know that every sentient being that fills our forests and seas evolved from more primitive life forms. Unlike what Ptolemy and countless other scientists accepted as incontestable truth for centuries, the earth doesn't orbit the sun in circles. Since the truths that were taken for granted in the past were later seen wanting, it is reasonable to assume that what receives the accolade of knowledge today will face the same fate in the future. It is the height of human hubris to assume that what we know today is beyond falsification. It is salutary to remember that "what we think we know comes out of what we once thought we knew; and that what we will know in the future may make hash of what we now believe" (Postman, 1992, p.132).

Despite there being good reasons for thinking that school knowledge is not incorrigible, students are not taught that knowledge is provisional and tentative. This is a mistake. It is important for teachers to make their learners realize that the content they teach is not indubitable. Students will be more inclined to question what they learn once they learn that knowledge is fallible. They must accept everything with a grain of salt and learn the importance of becoming skeptical. Doubt is vital because students are daily exposed to ideas and beliefs that are intellectually

vacuous and misleading. TV advertisements or posters on billboards try to seduce them into thinking that genuine and lasting happiness can be achieved by purchasing an expensive car or the latest computer. Capitalist consumerism is everywhere, encouraging people to work hard so they can empty their wallets, spending money on commercial goods commercials and ads condition them to value. As Gutting (2015) explains, "Capitalist enterprises seek to maximize profit above all, a goal that typically requires us to do work we aren't interested in so we can buy things we've been conditioned to want" (p.153). Yet the pleasure that arises from consumption is not only ephemeral, but it also is addictive. As soon as the desire to purchase is satisfied, a new and different craving emerges, creating an endless and viscous cycle of satisfaction and desire. Musicians and actors revered by students often voice views that should not be blindly accepted. It is, for example, not uncommon for celebrities to preach nihilism or the meaninglessness of life through their lyrics and trumpet political cynicism or the unimportance and inefficacy of political participation through interviews and speeches. But because of their status as role models, these ideas often go unquestioned, filling students' minds with dubious beliefs and values. Furthermore, students are under the constant influence of their peers who can mouth the value of sexual promiscuity and the appeal of drugs and alcohol as a safe and viable way of evading the stings of life. It is very tempting for students to succumb to what their peers believe as they want to gain their respect and acceptance. Though the internet can be a valuable tool for promoting knowledge and critical awareness, it too has its dangers and pitfalls which students must be wary of. There are sites that present pseudoscience as legitimate science, ideology as fact, and unfounded conjectures as verified knowledge. Many seek to promulgate hatred, violence, and distrust by spreading distorted views about race, gender, and religion. Adolescence is an extremely volatile and vulnerable period in life, where the students' minds can easily come under the influence of questionable beliefs and dubious values. They desperately need to adopt a skeptical frame of mind that questions the truth of what they hear and read so that they can separate truth from fiction, good from evil, knowledge from opinion, and the important from the trivial. As Edmundson (2004) writes, "Students are now living in a bubbling chaos of ... culture. They need a way to navigate it. They need to know what's worth taking seriously, and what's a noisy diversion" (p.134). Otherwise their minds will be shaped by all the ill-founded rhetoric and skewed prejudices

that imbue society. Teachers can help foster intellectual skepticism by, among other things, underlining the tentative nature of knowledge, showing how knowledge is never certain, that it always remains open to criticism and refutation.

3. Knowledge as Uncontroversial

Whether we like it or not, we live in a society that is saturated with various types of controversies. In the entertainment sector, movies and books can trigger acrimonious disputes because of their portrayal of violence or sexual content. While some advocate the censoring of sexually offensive materials, others are more lenient, arguing that people should have the freedom and right to choose what to watch and read. Politics is another source of endless clashes of opinions, where new laws and regulations divide people into different factions, depending on their political views. Though some support their government's decision to accept immigrants from developing countries on humanitarian grounds, others are more hesitant, fearing that an influx of foreigners might raise the unemployment rate and cause social disharmony or turmoil. The world of medicine also raises problems and issues that breed disagreements. Many support abortion, claiming that it is within every woman's right to choose to end her pregnancy. Vociferous opponents of abortion, on the other hand, contend that it is tantamount to murder and should be made illegal to save the lives of many innocent infants. It is also extremely hard and rare for people to reach a consensus regarding some of the vexed issues that surround the area of science and technology. Many support the government allocating vast sums of money to research programs in particle physics, for cutting-edge studies in this field may help expand our understanding of the origin of the universe and how and when our solar system will end. Others, however, argue vehemently that the tax payers' money should be used to serve more pressing and useful goals like building more hospitals, rest homes, and quality schools.

Education is another area that is the center of many heated discussions. For example, there is a wide range of views concerning what aim schools should serve. While conservatives seek a curriculum that underscores the importance of imparting knowledge deemed central within the core curricular subjects, champions of progressive education view such teaching as outdated and yearn for a curriculum that caters for

the interests students have. The method teachers should adopt to instruct their learners is also the subject of much dispute. Contrary to teacher-centered didactic lectures favored by traditionalists, those who uphold the principles of progressive education argue that teachers should play a less central role and base their teaching on group work where students engage in collaborative tasks, using practical skills. The content or what students should learn is another issue in education that is embroiled in controversy. To make content more relevant to the needs and interests of students, critics of the traditional liberal arts education oppose the teaching of ancient history, advanced mathematics, or classical literature. Those who are more favorably inclined to traditional education bemoan the loss of academic rigor and the fall of high standards brought about by the dumbing down of learning.

The truth behind what students learn at school is also contested. Though teachers are responsible for delivering content that is thought to be true, many contest its verisimilitude, arguing that students are passively absorbing a lot of knowledge that is in fact wrong or deeply problematic. Controversies concerning the truth behind what is taught at schools occur at different levels. Researchers can and often do disagree on matters of basic facts. Historians debate whether a particular genocide or massacre took place, and even when they agree on its historicity, they disagree over other issues such as the number of victims involved, who was responsible for the killing, and when the atrocities were committed. Students, furthermore, learn about Jesus Christ in religious education and ancient history. The account of his life and death that can be found in the synoptic gospels is the subject of endless disputes among theologians and biblical scholars. While some are convinced that they give us a reliable and accurate account of what he actually said and did, others are more skeptical, arguing that stories about the miracles he performed were later embellishments to help establish and promote his divine status. Besides facts, the values schools impart are also mooted. In civics education, students commonly learn the importance of patriotism or the virtue of contributing to their country's prosperity, respecting its cultural heritage, and following the traditional norms and values of society. Patriotism as a virtue doesn't remain unchallenged. Many argue against the teaching of patriotism on the grounds that students can become intolerant and dismissive of foreign values and beliefs. Critics seek schools to instill the importance of having a global awareness, where people of different race

and nationality are all perceived as being members of one family. Or consider religious education. One of the central virtues of the religious life is unconditional obedience to God, where the follower is expected to have ultimate trust and faith in God's saving grace to lead a self-less life devoted to the poor and marginalized and follow without question what God morally mandates. Yet critics of religion argue that instead of indoctrinating the virtue of obedience, schools should teach the importance of self-reliance and independence, whereby students learn the value of making choices, solving problems, and making plans without depending on the advice and thought of others. As Bailey (1984) asserts, "The whole conception of a liberal education being liberating rests on the assumption that the child is to be helped to become autonomous, self-governing, a free chooser of what to believe and to do" (p.131). The different theories students learn are also the source of disagreement among researchers. The theory of evolution taught at school is not an uncontentious account of biological phenomena. Biologists disagree over whether the process of evolution has been a slow process of small changes brought by mutation and competition or whether the process has been punctuated by sudden, dramatic changes in how species evolved. In addition, although some biologists are convinced that the theory of evolution can be used to give a theoretically simple and satisfying account of mental phenomena, others are more skeptical. Skeptics, for example, contend that it is hard to believe that our ability to engage in abstract thought was selected because it was a biologically advantageous trait when competing against other hominids for buffaloes or impalas in the wilderness. As O'Hear (2001) writes, "We have the ability to find out about all sorts of things beyond what would have helped our ancestors to survive on the savannahs of Africa" (p.139). Alongside theories, there is considerable debate among scholars concerning the correct and viable interpretation of literary texts. Besides reading plays, short stories, novels, and poems, students learn the meaning or message the authors wanted to express about friendship or love or death through their art. Though students are often told what the true interpretation of a play or poem is, literary exegesis is a complex subject where scholars contest the interpretations offered by others. There is a Marxist, a feminist, a Freudian, a postmodern and countless other ways of interpreting the meaning of literary texts. Adherents and disciples of each school of thought are convinced that the theoretical lens they wear helps unveil the true meaning of Orwell and Chaucer. Researchers also disagree

over how some of the central words and concepts are defined in their field. When studying the natural sciences, students often learn that the scientific method of generating hypotheses and adducing evidence to confirm what they predict is what defines science and what demarcates scientific disciplines from pseudoscience. The attempt to define science in terms of the method scientists use is not without its critics. Many argue that there is no clear-cut method scientists conscientiously use when doing science. In biology, it is not unusual for textbook writers to give a wholly materialistic definition of humans whereby our essential nature is defined in terms of our physical makeup alone. Researchers both within and outside biology object to such definitions, arguing that we are more than a complex collection of atoms and molecules, that we have a spiritual dimension that cannot be encapsulated by crude materialistic characterizations.

Though the content schools impart can be contentious at different levels, the materials are presented as if they are not. That is, facts, values, theories, and interpretations are taught as if no one knowledgeable about the subject in question would question the veracity or accuracy of what students study. It is to a certain extent understandable why schools present knowledge as being uncontroversial. Students might question the value of acquiring knowledge if they learn that experts can and do contest the truth of what they are taught. Yet it is important for schools to underline the contentious nature of school knowledge because it gives students a more accurate and reliable account of academic inquiry in general. When content is delivered as a corpus of uncontentious facts and theories uncovered by researchers, students can be misled into thinking that experts don't disagree over what is true and what is not, that it is perfectly normal for experts to reach a consensus after exploring the same problem or question. But in actual fact, researchers often question the truth of what others hypothesize, doubt the factual veracity of what others claim to have found, and scrutinize the arguments others give to defend a particular viewpoint. Debate and disagreement is the norm, not unanimity and consensus. The second reason why it is important to underscore the controversial nature of knowledge is that it will help students become a little more skeptical of what experts claim. Students are inclined to unquestioningly accept what experts assert as true. The alleged empirically verified exercise programs for losing weight or the five scientifically proven ways of becoming rich that appear on TV are enthusiastically greeted by a gullible audience that has unconditional trust

in research done in the name of science. But this blind faith in authority, this deference to power, is troubling since experts do make innumerable blunders and mistakes and what they claim is not infallible and definite. Students will be more willing to question what the experts pronounce as true or valuable or certain if they learn that they often disagree amongst themselves over many issues. Finally, students uncritically accept that one shouldn't judge negatively the opinions and values others have or that people are entitled to their opinions regardless of how bizarre or illogical they may seem to those who don't accept them. As Furedi (2017) writes, "Not judging is now perceived as a positive virtue that enhance the learning experience of students" (p.76). But intellectual dialogue wouldn't proceed if those engaged in debates were to suspend judgement and refrain from critiquing views they are opposed to. Intellectual exchanges over contested issues can only take place if the participants are willing to subject views to critical scrutiny and offer reasons to support their negative estimation. Learning how the clash of opinions among researchers helps advance knowledge and understanding, students can be led to question their acceptance of nonjudgmentalism as a virtue in intellectual inquiry.

4. Knowledge as Unbiased

People have many expectations towards schools. They expect schools to be a safe and peaceful environment where students can thrive and bloom under the care of teachers. This is a perfectly legitimate concern since "if schools were more inviting places then truancy, under-enrolment and push outs would not be such problematic issues" (Harber, 2004, p.22). Many rightly expect schools to inculcate morally praiseworthy values − forgiveness, gratitude, diligence, etc. − so that students can become compassionate and empathetic individuals who can contribute to the happiness and well-being of others. Many also share the view that schools are responsible for imparting skills students can readily use when they enter society and are critical of the time spent on teaching what is impractical, devoid of utilitarian value. The public also believes that students − regardless of their level of intelligence, race, or sex −must all be respected as unique individuals and is opposed to discriminatory practices that degrade the humanity of students in any way. People also expect teachers to be dedicated professionals who are willing to improve the

quality of their teaching by engaging in professional development and are dismissive of those who lack the motivation and commitment to become better educators.

Another common expectation shared by many is that the content schools impart must be free of biases, immune from prejudices of any kind. And at first glance, it does seem that schools by and large meet this expectation. After all, students are not assigned texts that advocate anti-Semitism or books that express misogynistic views towards women. The articles they study are not riddled with sexist or racist comments and the films they watch in class don't contain pornographic material or scenes of rape and murder. The science textbooks introduce concepts like mass, energy, and velocity and expound their relationships in a detached, objective manner. Arguably, textbooks used in history classes give a fair and impartial account of the past and they show no hint of the writers' underlining political or philosophical views. Math textbooks are filled with equations and formulas that do not seem to be tainted by partisan views on race or gender. And books used in foreign language classes for the most part are divided into unprovocative, harmless units such as hobbies, sports, and music, thereby steering clear of themes that might raise questions about race, gender, religion, or politics. In English and other classes, teachers introduce students to new concepts and words so as to expand their vocabulary and to nurture their ability to write with more precision. The meanings of these words are not steeped in sexist or racist bigotry, reflecting the hidden biases of male patriarchy or white supremacy. In fact, most schools will adamantly deny that the knowledge they disseminate is slanted and will claim that what they pass on to students is devoid of biases of any conceivable kind.

Yet a more careful and nuanced study of the textbooks students use reveal various forms of biases. To understand why, it is important to realize that textbooks are written by authors who present the materials from a particular frame of reference, a theoretical perspective that shapes and defines the outlook they have on what they write about. Authors are bound to view and understand their subject from a distinct conceptual scheme and the theoretical prism shapes their outlook in very particular ways. Writers, in other words, cannot adopt a totally neutral and impartial perspective that is impervious to biases. How then does the writer's frame of reference affect the content that appears in textbooks? First of all, it is worth bearing in mind that writers have no choice but to be extremely

selective when choosing what content to present because there is a wealth of information that can be found in each discipline. Writers must leave out materials they think are not valuable or important and what they choose to omit is often shaped by the perspective they come to bear on the subject. To state the matter differently, the criteria writers appeal to when choosing what to include and exclude are shaped by their tacit frame of reference they endorse. Historians who view the study of the past as a means for fostering nationalism will most likely exclude events and episodes that will fail to achieve this end from their narrative. As Hinchey and Konkol (2018) rightly claim, "If students are to have only admiration for their country, then telling them about past missteps would undermine the goal" (p.93). Those who don't share the aim of cultivating national pride won't think twice about documenting the past crimes and atrocities committed by their country. And writers of science who view science as the paragon of rationality and the bastion of objective truth will be less inclined to document the many ill-founded theories − phlogiston theory or the theory of spontaneous generation, for example − that scientists wholeheartedly embraced in the past. Nor would they detail how brilliant scientists immersed themselves in morally dubious fields like eugenics and others who devoted their entire lives constructing weapons of mass destruction. A devout Catholic writing a textbook on saints and sages will scrupulously detail how Mother Teresa dedicated her life to the sick and poor in Calcutta but will not mention her genial relationship with dictators and fraudulent tycoons, not to mention how she and her followers forced baptism on dying patients. The theoretical paradigm writers accept also influence the language they use when writing. Although it is tempting to assume that the language found in textbooks is a neutral medium for conveying ideas and thoughts, it in fact reveals the hidden biases writers bring to their subject. Historians who favorably view the colonization of Third World countries by the West often use words like 'liberate' and 'emancipate' to underscore how Western science and technology helped improve the living standards of the downtrodden and poor. Those critical of Western expansionism, on the other hand, claim that Western imperialism 'subjugated' the indigenous population and 'vanquished' their cultural heritage on the grounds that it was 'primitive' and 'barbaric'. Feminist scholars argue how even the language of biology is sexist in nature. The process of human fertilization, for example, is said to occur when the male sperm seeks and penetrates the female egg. Stereotypical

views on gender roles are reinforced since the sperm is described as the active agent responsible for initiating the reproductive process while the egg is viewed as both passive and submissive. Thus, "suspicions that social stereotypes were being projected into reproductive biology are hard to resist" (Brown, 2001, p.203). Besides language, writers' theoretical framework influences how they evaluate the content they expound. Historians critical of organized religion are more disposed to assess the Age of the Enlightenment as a positive milestone in history, where the repressive and authoritative power of religious superstition was replaced by science and reason. Those who hold strong religious beliefs tend to be more critical of this time in history, arguing that it embodied humanity's all-too-human error of thinking that it can save itself through reason alone without recourse to divine grace. Writers of textbooks on moral education who endorse traditional, religious values while critical of the legalization of gay marriage, abortion, and euthanasia support filial piety, the abolition of pornography, and a tighter restriction on immigration. There is also what one might call explanatory biases. In addition to the facts and data authors of textbooks enumerate, they try to make sense of these facts in light of an explanatory framework they take for granted. The high suicide rate in many developed countries is a problem many sociologists attempt to explain. Depending on their explanatory framework, sociologists differ markedly in how they make sense of this issue. Some argue that many decide to kill themselves because they fail to find any lasting meaning in their lives. Many are critical of such modes of explanation, arguing that sociological explanations must refer to publicly observable societal structures and conventions that can be verified empirically, not to people's inner emotional lives. Moreover, sociologists concerned with education differ widely in how they account for the poor academic performance of students from low-income families. Some attribute the low performance to the students' lack of effort and motivation. Others who contest this view argue that student failure is largely caused by their family upbringing. They are often reared in families that lack stimulating books and their parents lack the time and energy to attend to their educational needs because of their immense, backbreaking workload. Finally, textbooks commonly refer to reasons that have been put forward by people to help support or refute a particular point of view. Authors' theoretical convictions impact how they present the arguments that support views they don't personally advocate. Sociologists who oppose communism won't

be inclined to present this political philosophy in a favorable way by offering compelling reasons − its critique of the competitive ethos of modern culture, its critique of distorted forms of institutionalized religion, its advocacy of egalitarianism, etc. − why it is a viable theory of society and history that many today find convincing. And on the whole, advocates of multiculturalism in literary studies will refrain from providing cogent reasons for reading canonical texts written mainly by white male writers from the upper-class. Through reading the canons of literature, students will only view the world seen through the skewed and biased lens worn by those with power and privilege, not the world experienced by the oppressed and the marginalized. As Kumashiro (2004) articulates the multiculturalist position, "When students read literature by only certain groups of people, they learn about only certain experiences and perspectives, especially those of groups that have traditionally been privileged in society (such as White, middle-class men)" (p.61).

It is important for students to learn that textbooks are imbued with biases that affect the content they study in multiple ways. Students mistakenly assume that school textbooks, unlike propaganda materials and works written to promote a political or ideological agenda, are neutral, unbiased, and objective. They need to correct this preconception and acquire a less misleading understanding of the true nature of textbooks. That is, because writers are all finite human beings, whose views and beliefs are shaped by their limited and very particular personal experiences and the historical and cultural context they happen to be situated in, what they write will reflect the biases that characterize their outlook. Nobody, including writers of textbooks, "can claim to live in total independence and autonomy from the norms of the culture" (Barone, 2001, p.129) in which they are born. Awareness of biases is also vital because once students realize that texts in general reflect the prejudices writers inevitably have, they will be more disposed to search for them when reading both in and out of class. Such a close and critical reading of texts is certainly to be preferred to an uncritical acceptance of everything that appears on the page. When the tacitly held assumptions and preconceptions writers have are identified, readers can often uncover the motive they had for writing, why they present and handle the topic in the way they do, and why they draw particular conclusions and inferences. The understanding of biases enables a deeper and more probing understanding of texts. An additional reason why students need to be

aware of how prevalent biases are in school textbooks is that this awareness can correct a commonly held misunderstanding many have about biases in intellectual inquiry. That is, there is a tendency for learners to think that biases have no legitimate place in intellectual dialogues. It is often thought that fruitful dialogue can only take place if the participants don't have strong preconceptions that influence their way of thinking or that they must be dispassionate and neutral when engaging in discussions. To be sure, because of their strong theoretical commitments, researchers cannot be neutral when arguing with their opponents. They are bound to be biased towards views they accept and critical of standpoints they disagree with. But having strong convictions or intellectual biases doesn't preclude the possibility of genuine dialogue. What is paramount in any intellectual debate is not neutrality but fairness. Participants must be fair in the sense of stating the opponent's view in a way they will accept or assessing the arguments or evidence they provide in a fair manner. Theoretical convictions have a place in intellectual exchanges because they don't necessarily undermine our ability to be fair.

5. Knowledge as Nonhierarchical

Schools seek to instill many messages about teaching and learning to students. Underlying the meaning they seek to impart is the concealed and often the true message they actually stand for. For example, though curricular guidelines and textbooks espouse the importance of thinking critically, many students doubt the value of being skeptical because it is a competence they rarely need to demonstrate when taking a test. Instead of requiring students to question what they were taught, tests ordinarily ask them to recite what they learned by rote. Though schools on the surface uphold the value of cooperative learning, most teachers engage in didactic lectures, delivering content for students to memorize. Some might go against the grain and introduce more learner-centered group work to break the monotony but they immediately resort to traditional tests and quizzes where students have to work on their own. And despite teachers and administrators seeking to nurture students who are happy and content, the competitive ethos that pervades schools, coupled with the relentless amount of homework and tests they get inundated with daily, not only demotivates students, but many experience depression and anxiety and some even decide to end their lives.

Schools also convey a paradoxical and mixed message concerning the knowledge they impart. Students, on the one hand, are led to believe that what they learn at school is all equally valuable or that there is no difference in value between science and English and studying Shakespeare is just as important as writing original poetry. The subjects, and what is taught within each subject, are not ranked according to their importance. It is not difficult for students to come to believe this nonhierarchical view of knowledge. Curricular guidelines for biology don't belittle the significance of learning a foreign language and they don't rank botany as more important than zoology. Teachers of math don't denigrate students who find art and music enticing and history teachers don't encourage students who prefer ancient to medieval history to change their academic interest. Students who excel in a particular subject are not for that very reason singled out and given special attention and those who are not competent in a particular area of study are not thereby ostracized. Furthermore, because writers of textbooks used in class often outline the reasons for studying their subject and do not question the value of pursuing other disciplines, students do come away believing in the equal weight and importance of what schools expect them to learn. Displays that fill corridors and classrooms convey the school's balanced appreciation of the different subjects. Any visitor to schools is greeted by trophies students won at sport competitions, sculptures and paintings created during art classes, and awards given to students who entered speech contests. And teachers who teach particular subjects are not for that reason given preferential treatment by being paid substantially more or by being given more power and authority.

Notwithstanding what schools want students to believe, they do discriminate between what is important and what is less important for students to learn. In other words, the value behind what they learn is not of equal importance. And one can discern the respective weight and worth schools bestow to what they teach by examining the amount of time they allocate to each subject or area. Students quite naturally are required to spend more time learning a subject (or a topic within the subject) that is deemed important. Subjects and topics that are thought to be of less value receive less time. The school curricula, which are often controlled by the state, are skewed towards subjects like math and science in part because the advancement of technology and economic improvement depends on a workforce that is scientifically literate. Breakthroughs in computers and

nanotechnologies won't be forthcoming unless students are graduating from schools with a passion for and a general competence in science and math. On the contrary, subjects like music, art, and literature have a marginal place in most school curricula, where students spend significantly fewer hours playing musical instruments, painting outdoors, and reciting poetry. These subjects are sidelined because they don't seem to have an immediate and practical bearing on economic prosperity. The ability to paint beautiful still-life or play the oboe with grace is not conducive to technological innovation and growth and will not help the country compete against its rival in terms of economic prosperity. We can also identify the subjects schools prioritize in terms of importance by examining the content of the high-stakes tests students have to take. These tests are not analogous to weekly quizzes teachers occasionally set to ascertain whether their students' can retrieve specific pieces of information. The scores they get on these tests are much more consequential, affecting their future lives since they determine whether they can graduate or which school they can enter upon graduation. The subjects, therefore, that appear in high-stakes tests are considered more important than those that don't. Students' understanding of subjects like art, music, and physical education are not assessed by these tests because their importance is not a par with science, history and math, which are tested. The tests separate the learning that truly matters from what is more or less inconsequential. The tracking system also reflects the types of knowledge schools conceive as vital. Tracking is the system in education where students are separated into different courses of study depending on their overall academic performance. Students who are academically competent are streamed to courses that place a premium on the core curricular subjects like science and history so that they have the rudimentary background knowledge necessary for university education and beyond. Those who perform poorly at school are encouraged to take vocational subjects like mechanics, typing, and computer studies in the hope that they can acquire skills that will make them more employable in the future. The education for those who excel academically centers around subjects that are considered rigorous, demanding, and important. Those who are not academically inclined engage in more hands-on learning that is thought to lack the rigor and importance that characterize subjects like science and history. The vast array of extracurricular activities – track and field, swimming, dancing, visual arts, etc. – schools provide is also revealing because they intimate

the kind of knowledge that is and isn't valued in education. Most of these activities require either physical exercise or the use of the creative imagination. They don't demand the use of analytic skills or require students to think through logical problems. Dance and swimming are subjects that don't appear in the core curriculum because they don't force students to use skills that are typically associated with subjects valued in education.

Learning that knowledge is hierarchical is crucial for students. Many are convinced that they lack intelligence and don't have the aptitude for learning because they struggle when studying the subjects valued highly at schools. Students who can sew and paint and fix radios are labelled slow and academically challenged because they have problems solving linear equations and retaining vast amounts of historical facts. Those who are not gifted musicians or artists are thought to be intelligent if they excel in math, have a rich vocabulary, and read fast. If students learn that schools are skewed towards certain subjects over others, then they need not question their intelligence just because their gifts and talents don't comport with what schools tacitly value. The narrow and restricted definition of intelligence one finds at schools simply doesn't reflect how intelligence is actually more varied and subtle, how it cannot be reduced to the ability to solve logical puzzles and analyze complex texts. It is also paramount that students learn how the message schools seek to impart about learning often contradicts or is at odds with how education actually proceeds. This difference between what institutions preach and practice is ubiquitously present in society. Students can probe beneath the façade and outward pretense in light of this crucial difference between the overt and the covert, the manifest and the hidden. For example, though religious institutions publicly acclaim the importance of thinking critically about social and cultural issues, they clamp down on followers and accuse them of heresy if they turn a critical gaze on their faith, questioning the central tenets and teachings of the church. Pharmaceutical industries also fail to live up to the standards and philosophies they publicly uphold. Outwardly most companies claim that the people's physical and mental health is their first priority. But it is not uncommon for companies to succumb to greed and the lure of profitmaking by selling and prescribing drugs that were not tested thoroughly by double-blind experiments, thereby jeopardizing the lives of many. And in the world of politics, though politicians pronounce the importance of justice and equality, it is not uncommon for them to accept

bribes and usurp power to promote their personal ends. Finally, it may come as a surprise to many students that schools don't necessarily have the students' best interests in mind when they design curricular goals, syllabuses, and courses. Often knowledge obtained in certain disciplines is valued highly because it can be used to update military warfare or help revamp the economy and not because it will enable students to lead better, more fulfilling lives. Students should be made aware of the fact that the state has a vested interest in what is taught at schools and will exert its power in subtle ways to control what they learn. Education, that is, is not untouched by those who wield political and financial power. Because those who hold power want to preserve the socio-political status quo, they will try to restrict or even forbid the teaching of materials that are overly critical of the present state of affairs. As McIntyre (2018) observes, "If we look back throughout history, we realize that the rich and the powerful have always had an interest (and usually a means) for getting the "little people" to think what they wanted" (p.103). Those with authority seek a citizenry that is compliant, not one that raises awkward questions.

6. Knowledge as Self-Contained

The school curriculum can be organized in many different ways. The curriculum can be organized around themes that can explored from different theoretical angles. The nature of love, for example, can be approached from multiple perspectives, each offering unique insights into its depth and mystery. Students can read novels and poems that have love as their theme and study paintings that depict romantic love. They can learn about the various chemicals and hormones that are released when people fall in love and study how people's understanding of love has historically evolved. A project-based curriculum is another possible mode of structuring student learning. Students can be assigned projects − researching the history of their neighborhood, for example − which require them to read the relevant literature, conduct surveys and interviews, and present their findings to an audience.

In most schools today the curriculum is divided into discrete subjects and this way of organizing the curriculum suggests another view about knowledge, namely that it is self-contained. That is, what students learn in one subject has very little bearing on what they pursue in other disciplines. Their knowledge of what happened in the Greco-Roman world is left

behind when studying the problems facing contemporary society in sociology and their understanding of the solar system is not relevant when studying the behavior of mollusks in biology. Because the subjects are often compartmentalized into discrete, unrelated fields of knowledge, students don't need to know much about one subject when studying another. Students can learn about literature in the Victorian Period without much understanding of British history and their smattering of grammar will not affect their understanding of the natural sciences. Not only is knowledge grouped into separate, unrelated subjects, but academic content is also separated into distinct, unrelated units and issues within each discipline. Though there are exceptions such as when algebra is founded on basic arithmetic or competence in a foreign language presupposes an understanding of basic grammar, learning is not cumulative and incremental because what students learn today is not built on what they learned in the past. The issues and problems being disconnected, students don't need to transfer the knowledge they previously acquired to help understand what they are studying at present. Thus, students can understand and appreciate the poems by Yeats and Eliot without referring to their knowledge of Elizabethan drama. Nor do students need to be acquainted with the works of Monet in order to explore the paintings of Picasso and Dali. Moreover, the knowledge students acquire at school is unrelated to their life experiences. When we learn outside the school context, we don't have problems applying the knowledge we acquire. At driving school, for example, learners learn about different traffic conventions and regulations and they drive in light of the rules they are taught. And those who join cooking classes have no problems applying their newly acquired skills and knowledge when making a new stew or cake. The themes and problems covered at school, however, don't touch upon the everyday concerns students have. The tragedies suffered by kings and queens in ancient history are far removed from the travails they go through and it is questionable whether their knowledge of the periodic table and the DNA molecule will enable them to overcome the difficulties and challenges they face in life. What is taught at school remains inert, not impacting the way students value or conceive the world.

It is to an extent understandable why schools present knowledge as being self-contained. Because teachers of different subjects don't regularly meet to talk about classroom teaching, they are often unaware of what

students learn in other classes. This being the case, they cannot relate what they teach to what their learners are studying elsewhere. Teachers also have to rigidly adhere to what curriculums mandate. Because they are required to cover a lot of materials within a short period of time, they simply do not have the room and space to reexamine materials covered in class or examine the same content from a different disciplinary perspective. Notwithstanding how the culture of schooling makes it difficult for teachers to present knowledge in a way that isn't self-contained, it is important for teachers to correct the misunderstanding that knowledge is subdivided into discrete components.

Schools separate knowledge into separate unconnected domains, thereby implying that these boundaries are rarely crossed in academic inquiry. Yet contrary to what schooling implies, interdisciplinary inquiry is prevalent and is a perfectly acceptable mode of conducting research in any field. Researchers consult the findings and discoveries made by those working in other fields to improve and expand their understanding. Those involved in the field of education often study psychological works on motivation to help design learning materials that are stimulating and researchers interested in the lives of our distant hominid ancestors delve into anthropological studies of primitive tribes found throughout the world today to gain insight into how our forebears lived. Because any given phenomenon can be analyzed from multiple theoretical perspectives, each offering insights made possible by their unique disciplinary vantage point, researchers can always enrich their understanding by examining work done outside their domain. Researchers from different disciplines can also be seen working together to help solve problems of collateral concern. Philosophers and theologians share their expertise to help understand why an omnipotent and loving God allows so much suffering and pain in this world and cognitive psychologists and evolutionary biologists interested in human behavior collaborate together to help explain why, contrary to the theory of evolution, we engage in acts of altruism that may jeopardize our chances of passing our genes to future generations. Scholars working in the same discipline often refer to studies done in other branches to aid understanding. Philosophers of science who want to build logically watertight arguments to defend scientific realism appeal to studies undertaken by philosophers working in logic and set theory and educational psychologists interested in how learners retain new materials examine studies done on this very topic by cognitive psychologists.

Another misconception that naturally arises when schools compartmentalize knowledge is that what is learned at school has very little bearing on life outside classroom doors. That is, it is natural to assume that there is a clear unbridgeable line that demarcates academic knowledge students acquire at school and the experiences students have outside school. Academic knowledge cannot be taken out of the school context and be applied to the lives students lead. But this gulf is only apparent and is not a fact that has to be accepted, despite academic knowledge often being dry, abstract, and arcane. It is a line that can be crossed. Everything students learn at school can leave its trace and imprint. The plays by Shakespeare and the novels by Tolstoy can teach students about who they really are because of their enduring insights into the limitations, frailties, and possibilities that characterize human nature. Abstract discussions on social determinism that fill the pages of many sociology textbooks challenge students to consider whether they are indeed free from the influence of or molded significantly by the socio-cultural milieu. Studying a foreign language that is rarely used outside the language lab may seem largely irrelevant. Yet one sees a different world when well-versed in a foreign language. Every language entails a distinct set of values and philosophies that shape and color how the language user perceives the world. Exploring the time of Cleopatra and Napoleon may seem like an utter waste of time, but we learn about the similarities that join us and the differences that separate us by immersing ourselves in the tragedies and joys experienced by people living in the distant past. The joy and challenge of learning is to discern the relevance of what schools teach in the course of our lives and make better sense of what we experience in light of what we learn. From the most counterintuitive theories about nature to the most mundane understanding of our surroundings, students can make use of what they are taught and what appeared problematic and unclear can be illuminated by what they learn at school.

Conclusion

Besides the standard questions about knowledge that occupy the thought and attention of teachers, there are other equally worthwhile epistemological issues they can reflect on. One such question concerns the views on knowledge schools impart to students. This present study argues that the customary ways in which content is taught at schools can

engender misleading thoughts about knowledge. Because schools place a premium on what is known over what is not known, students are oblivious to the ways in which the realm of the unknown spurs the quest and thirst for knowledge. Moreover, facts and data are presented as if they are infallibly etched in stone for eternity. Yet given how well-established theories in science and history have been overthrown, it is rash to assume that what we know today will never undergo the same fate. In addition, though the truth-claims taught at school can be contested by researchers, their controversial status is rarely touched upon, misleading students to think that experts all agree on the truth of what appears in school curricula. And the content that appears in textbooks is not free of biases because authors all approach their subject from a particular theoretical perspective that influences how they interpret and make sense of what they write about. The disciplinary subjects, moreover, are taught as if they are all equally valuable, though a closer look at high-stakes tests and the amount of time allocated to different subjects reveal that schools prioritize certain subjects over others. We have also seen that though cross-disciplinary studies are the norm in research, schools present knowledge as self-contained, where what is known in one subject doesn't have much effect on research undertaken in other disciplines. Schools can convey many erroneous views about knowledge. It is incumbent on teachers to correct these misunderstandings so that those under their care have a more nuanced and accurate understanding of the nature of knowledge.

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