

Cultivating Positive Intellectual Habits

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Introduction

Virtually all students know the importance of getting a good education. However, most students misunderstand what a good education truly means. Many times, students think that a good education means procuring a piece of paper with their name on it: a certificate. To earn a certificate, students must pass examinations. By this logic, a “good education” means memorizing lecture notes in order to pass examinations in order to earn a certificate. However, this begs a very important question: how is memorizing lecture notes important or beneficial for the student?

A good education is much richer – and more complex – than simply memorizing notes to pass examinations to earn a certificate. A good education has two goals. The first goal for a good education is to enable students to develop the knowledge, skills, and abilities that will enable them to be more successful, productive, and efficient in their vocation.¹ The second goal is to help students develop intellectual habits, or regular patterns of thinking, which will help them be successful in all aspects of their education, vocation, and life.

Though the second goal of developing positive intellectual habits draws less attention than the first goal of developing knowledge, it is arguably the more important goal. A student with positive intellectual habits will be able to develop knowledge, skills, and abilities more successfully and efficiently than a student with poor intellectual habits. However, the reverse is not necessarily true: acquiring a vast amount of knowledge does not necessarily lead to

¹ The term *vocation* is used holistically to include all aspects of one’s life, including career, community involvement, family life, and spiritual development (see Garber, 2014)

developing positive intellectual habits. Therefore, the goal of developing positive intellectual habits needs more attention from both educators and students than it currently receives.

A habit is a settled or regular tendency or practice (Oxford University Press, 2015). Intellectual tends to refer to thinking. Therefore, an intellectual habit is one's regular practice of thinking. To illustrate the impact of intellectual habits, consider the difference between two brothers: Taiwo and Kehinde. Both brothers receive an SMS text that says that he has won an all-expense trip to the UK. He only has to send ₦10,000 as a processing fee to claim his prize. Taiwo has the intellectual habits of passion for truth and intellectual carefulness. Therefore, he carefully considers this SMS to determine whether it is truthful by asking the following questions: how could he win a prize that he did not apply or register for? Who is the person or company who awarded the prize? If the person/company that awarded the prize is able to pay for all of his expenses to the UK, why would he need to pay a processing fee that is insignificant compared to the other costs required to travel to the UK? All of these questions that Taiwo has raised in his pursuit of truth make him question the legitimacy of the SMS, so he deletes the text and keeps his ₦10,000.

On the other hand, Kehinde does not have the same intellectual habits of passion for truth nor intellectual carefulness. Therefore, when he receives the SMS, he is overjoyed at the prospect of going to the UK. He immediately deposits the ₦10,000 processing fee into the given bank account. A few hours later, he receives another SMS saying that the processing fee has been received, and that an additional ₦25,000 is needed for insurance on the plane tickets. Six months and over ₦150,000 wasted, Kehinde realizes that the SMS was a fraud.

Intellectual habits are developed over time, and affect every decision that is made both inside and outside of the classroom (Dow, 2013). Individuals who work hard to train their minds to think with positive habits typically make good choices, and making good choices leads to a better quality of life. As demonstrated above, Taiwo developed the

intellectual habit of passion for truth, so he is able to carefully evaluate all information to determine its truthfulness. That positive intellectual habit saved him from the time and expenses that Kehinde wasted due to a fraudulent SMS. Furthermore, while intellectual habits are often developed through education, they have a direct impact on choices made outside of the classroom. For example, the habit of intellectual honesty impacts relationships because people who are honest with the truth have more trusting relationships. Likewise, developing the habit of intellectual carefulness can impact one's standard of living because people who are more careful with their resources tend to have more money to spend.

In conclusion, a good education can and does improve the quality of life of the student. However, it is not a certificate that leads to a higher quality of life, but the intellectual habits that are developed through education. As students are developing the knowledge, skills, and abilities that they need to be successful in their vocation, they need to be equally as focused on developing positive intellectual habits that will enable them to be successful in their academic pursuits, as well as successful in their vocation and life.

Intellectual Habits

Passion for Truth

The most fundamental intellectual habit is a passion for truth (Sire, 2000). Individuals with a passion for truth believe that truth exists and can be discovered through conscientious study. Truth refers to that which is true and in accordance with fact or reality (Oxford University Press, 2015). Individuals with a passion for truth desire to know more, and to seek to truly understand, not just memorize (Dow, 2013). Pursuit of truth requires seeking out new information in order to find useful and interesting insights, as well as asking questions.

While similar, the passion for truth is different from a passion for knowledge. An individual who is thirsty for knowledge may or may not care whether the knowledge is true. Passion for truth is not limited to the acquisition of knowledge. Passion for truth requires a

critical examination of knowledge to determine whether it is true, or in accordance with reality. Knowledge is true if it has compelling evidence to support it. Some “facts” and theories that are disseminated in the University are not true. The intellectual habit of passion for truth requires a scholar to critically examine facts, ideas, and theories to determine whether they are in accordance with reality. Therefore, whenever a scholar is presented with a new idea or theory, he or she should ask questions to determine its truthfulness.

- What evidence is there to support this theory?
- What evidence may contradict this theory?
- How does this theory relate to other things I know to be true?

If a theory has strong evidence to support it, little or no evidence to contradict it, and is consistent with other things known to be true, then the theory is more likely to be true.

Intellectual Honesty

Intellectual honesty concerns how knowledge is used or presented (Dow, 2013). The intellectual habit of honesty means communicating knowledge with integrity, without taking information out of context, without distorting the truth with loaded language, or misleading through manipulation of evidence (such as manipulated statistics). For example, in the violent conflicts throughout Nigeria, each side tends to only communicate the grievances by their own side. While this information is indeed accurate, it is not completely honest unless the injuries sustained by the other side are also communicated.

Intellectual dishonesty typically results from the desire to get something else more than truth. For example, students engage in intellectual dishonesty because they desire a grade or a certificate more than they desire truth and learning. “Acts of intellectual dishonesty are not simply isolated events but can become a fundamental part of who we are, and when this happens, the consequences to our lives, and to the society we live in, are devastating” (Dow, 2013, p. 64). In other words, dishonesty in one area of life, such as postgraduate

studies, will rarely be limited to just dishonesty in that area. An individual who cheats or plagiarizes in school will likely engage in dishonest practices in other areas of their life, such as in business transactions.

Furthermore, intellectual dishonesty is also dangerous to society at large as well as the worldwide body of knowledge. When a scholar chooses to manipulate information, a false foundation of knowledge has been built that future scholars and practitioners will try to build upon. Consider a pharmacist who falsifies data that claims that a new drug can effectively treat malaria at a lower cost. Any person who now tries to use that drug to treat malaria will then suffer with malaria that is not treated. Likewise, other pharmacists will waste their time, energy, and resources conducting further research on that drug. The intellectual habit of honesty is absolutely vital to build trust between people and is the basis of healthy personal relationships, flourishing communities, and thriving societies (Dow, 2013).

Another implication of the habit of intellectual honesty that is particularly important for postgraduate students is not taking credit for evidence or ideas that are not one's own (Dow, 2013). When students and academics communicate information in a paper or presentation, the assumption is that all ideas and words within that paper are original to the author of the paper or presentation unless the information has been cited and/or quoted. For example, this paragraph is introducing plagiarism as an implication of intellectual honesty. If I did not cite another source, then it is assumed that I am the first person who made the connection between intellectual honesty and plagiarism. However, I did not identify the link myself; I read it in Dow (2013). Because I have cited Dow as the source of this idea, I am communicating in an intellectually honest fashion. However, if I did not cite Dow as the source of this idea, then I would have engaged in plagiarism.

The word plagiarism comes from the Latin word *plagiarius*, which means kidnapper (Kostenberger, 2011). Plagiarism means presenting another person's ideas or words as your

own (What is plagiarism? n.d.). Plagiarism is dishonest because it is stealing ideas from another source, otherwise called intellectual theft. When postgraduate students complete a paper or presentation, they must consult, refer to, and build upon other scholarly work because that enables the students to learn from experts in the field. However, these scholars' works must be properly paraphrased and cited, summarized and cited, or directly quoted when necessary. Paraphrasing means rephrasing a passage into your own words, and summarizing means writing only the main ideas of an entire work in your own words (Purdue Online Writing Lab, 2014). Copying words from another source requires no thought or understanding, as any person who can read and write can copy words. On the other hand, both paraphrasing and summarizing require the student to truly think about and understand what the scholar has said. This enables the student to more fully understand the scholars' position and integrate it into their own body of knowledge, and thus reflects true learning.

Plagiarism is dishonest because it misrepresents the student's understanding of the topic under study. Simply copying another's words or ideas does not represent the knowledge or skills that students should be developing in postgraduate studies. Instead, postgraduate students must be able to understand the ideas of others, analyse and evaluate the ideas, then summarize the ideas in original language and cite the original source. Therefore, plagiarism is entirely unacceptable as it is both counterproductive to learning and intellectually dishonest. The following acts are all plagiarism (What is plagiarism? n.d.).

- Turning in someone else's work as your own. This may consist of having another person complete your assignment (impersonation), submitting an old paper or presentation that you wrote for a different assignment, or submitting someone else's assignment as your own in part or in whole.
- Copying words or ideas from another author else without giving credit.
- Failing to put a quotation in quotation marks (or indent for longer quotes).

- Giving incorrect information about the source of a quotation. In other words, if you did not read the original source, you must indicate “as cited in” and reference the secondary source.
- Copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not. In other words, plagiarism has occurred if an entire section of a paper comes from only one source.

Intellectual Fair-mindedness

The intellectual habit of fair-mindedness consists of the ability to treat all viewpoints alike, regardless of one’s beliefs or interests (Hansen, 2011). This requires the desire to seek truth, even if it is contrary to one's expectations or previous ideas. The intellectually fair-minded scholar has the humility to realize that his or her own understanding may be flawed or incomplete, and thus in pursuit of truth is able to listen to differing ideas, opinions, and beliefs. Therefore, one implication of intellectual fair-mindedness is the need to listen to others' ideas, beliefs, and opinions in an even-handed manner, even if it differs from one's own beliefs. Judgment should not be made about an idea until after the evidence for the idea has had a fair chance to be thoroughly presented.

Sometimes students have already developed their own ideas based on their past experiences, and they are unwilling to consider ideas or theories that are different from their own ideas. To illustrate, many students in the field of education are convinced that the best strategy for student discipline is to beat erring students because of the proverb, “Spare the rod, spoil the child.” Based on this belief, they are unwilling to listen to other theories of discipline. The act of rejecting an idea or theory simply because it is different from what you previously thought is unfair. The intellectually fair-minded scholar will impartially consider the evidence for or against all theories, despite what he or she previously thought. Thus, unbiased listening is a key practice for the intellectually fair-minded scholar.

In addition to listening to different ideas, a second implication of intellectual fair-mindedness is the need to be open to feedback and constructive criticism. In postgraduate studies, students make presentations and write papers. Supervisors, lecturers, and students then provide feedback in order to help the student learn and grow. Students must be willing to listen to this constructive criticism. Della Mirandola (as cited in Dow, 2013) believed that the realization that your original idea is wrong based on constructive criticism should actually be a cause for celebration because that enables you to be a more knowledgeable and truthful person. In other words, scholars who are passionate about seeking truth and fair-minded would find that identifying flaws in their thinking enables them to grow further in their understanding of truth, and thus will rejoice when their ideas are proven to be inaccurate.

Note that intellectual fair-mindedness is not the same as relativism, which is the belief that all ideas are equally valued and acceptable (Dow, 2013). Relativism actually undermines the belief in truth because every idea is considered equally valid, even ideas that are contradictory to each other. An intellectually fair-minded person can still believe that truth exists. The intellectual habit of fair-mindedness is complementary to the passion for truth. First, a scholar must be fair-minded to listen to new ideas or theories and give them a reasonable opportunity to be proven true by listening to and seeking out the evidence that supports or contradicts the idea. However, the intellectual habit of passion for truth requires the scholar to critically examine the idea or theory to determine whether it is actually true or not. Simply listening to and accepting new ideas degenerates into relativism.

Intellectual Humility

In each postgraduate course that I teach, there is typically at least one student who seems to think that he or she has already achieved a comprehensive understanding of the course. This attitude is completely contrary to the purpose of education, which is to develop more knowledge and a more accurate understanding. This intellectual pride is the opposite of

the intellectual habit of humility. Intellectual humility is perhaps easiest understood as the opposite of intellectual pride, which is the quality of having an excessively high opinion of one's intelligence and/or knowledge (Oxford University Press, 2015).

However, intellectual humility does not mean that an educated or intelligent person must adopt the false belief that they have low intelligence or little knowledge. Instead, intellectual humility requires an honest appraisal of one's knowledge and thinking abilities compared to the standard of the all-knowing and infinitely intelligent God (Dow, 2013). The aim of intellectual humility is a self-forgetfulness of the degree of one's own knowledge and ability (Lewis, 1942). In other words, the intellectually humble person puts no thought towards whether he or she is intelligent or educated, but focuses on the pursuit of truth. The intellectual habit of humility enables a scholar to see themselves not as owners of truth but as stewards of truth (Dow, 2013). They value truth over their own ego and the need to be right. Individuals with intellectual humility are teachable, and thus are able to grow intellectually because they are continually learning more and refining their ideas.

Intellectual Carefulness

“It is more from careless about truth than intentionally lying that there is so much falsehood in the world” (Johnson, as cited in Dow, 1993, p. 32). There is a considerable amount of untruth in the world today. Johnson made a bold claim that there is more untruth because individuals are careless with the truth than because of deliberate lying. The implication is that both carelessness and intentionally lying leads to the same result: untruth.

Carelessness means not giving sufficient attention or thought to avoiding errors (Oxford University Press, 2015). Consider a student who is careless with the data collected for her research. She distributed questionnaires to 100 participants, and then has to enter the responses into the computer for analysis. A few careless typographical errors when recording the data in the computer can entirely change the statistical results, which can then lead to the

student drawing a wrong conclusion about the outcome of her study. Passion for truth requires a carefulness and attention to detail in all scholarly pursuits.

Intellectual carefulness requires attentiveness to details, thoroughness in seeking and evaluating evidence, and careful observation (Baehr, 2011). The intellectually careful scholar checks and double checks his or her work at every stage to ensure it is accurate. Intellectual carefulness also requires patience in waiting for all of the evidence in order to make an evaluation of an idea instead of making a rash judgment (Dow, 2013). To be intellectually careful, a scholar consistently and actively chooses to examine evidence closely and carefully, and refuses to draw hasty conclusions, even in situations that seem unimportant.

The opposite of intellectual carefulness is carelessness, which is most often caused by hastiness or laziness. Instead of taking the time or hard work required for intellectual carefulness, a careless person makes a decision based on limited evidence, or does not take the time needed to ensure that the work is accurate. An intellectually careless judge will make an unfair ruling because he is in a rush to finish the case, and an intellectually careless architect or engineer will design a structurally faulty building in an attempt to finish faster. An intellectually careless staff can draw inaccurate conclusions about a new co-worker based on one piece of mistaken gossip. The consequences of intellectual carelessness can be catastrophic to both the careless person and to those around him or her.

Intellectual Courage

Courage is the ability to do something that is frightening (Oxford University Press, 2015). Therefore, the intellectual habit of courage requires pursuing truth, even when the pursuit of that truth, or the potential truth itself, is frightening. Baehr (2011) explains intellectual courage as pursuing truth despite the fact that doing so could involve a threat or potential harm to oneself (Baehr, 2011). The implication is that the pursuit and promotion of truth involves risks (Dow, 2013).

There are a number of risks associated with the pursuit of truth. First, intellectual fair-mindedness can require a person to reconsider their own foundational beliefs. It can be frightening to think that an idea you have believed in and based your behavior on, may be incorrect. Perhaps you might not have sincerely thought about the purpose of education before, and the prospect that memorization of notes does not constitute a good education may be frightening because changing that belief will require you to change your behavior. It takes intellectual courage to reconsider deeply held beliefs.

However, once you are convinced by the supportive evidence that your theories and beliefs are correct, then it can require intellectual courage to stick by your beliefs if your colleagues or society holds opposing beliefs. To illustrate, Galileo became convinced based on his observations of the stars that the earth rotated around the sun. However, society and the Catholic Church doctrine at the time believed that the sun rotated around the earth. The Church Inquisition declared Galileo to be a heretic and ordered him not to hold, teach, or defend the theory that the earth revolved around the sun (Bio, n.d.). It took a considerable amount of intellectual courage for Galileo to hold to the belief that the earth rotated around the sun despite the considerable pressure he received from authorities to abandon the theory. Eventually, Galileo was found to be correct in this belief that was first alleged to be heretical.

The pursuit of truth may also put you in harm's way, so intellectual courage can be required in undertaking a certain course of study. For example, studying the factors that led to the development of Boko Haram may put a scholar in danger from both Boko Haram and other powerful individuals who may be implicated by the findings. Industries or other powerful parties may put pressure on scholars to only publish certain findings in order to support their own interests. Pursuing truth in an unbiased manner, despite threats or pressure, can require a considerable amount of intellectual courage.

The process of learning can also require intellectual courage. Asking a question in class about a topic that is not understood can be frightening due to pressure by other students or the fear of a bad response by the lecturer. Proposing an alternate explanation to a theory that a lecturer or other colleagues clearly support is also frightening. Intellectual honesty also requires intellectual courage. For example, when many other coursemates are preparing to cheat in an examination, it can take a considerable amount of intellectual courage to apply oneself to studying in order to truly learn the material and demonstrate one's own knowledge.

Intellectual Tenacity

Last, but certainly not least, is the intellectual habit of tenacity. Tenacity means the quality of being very determined, and the quality of persistence (Oxford University Press, 2015). Therefore, intellectual tenacity is the quality of working hard and persisting in the thinking process. Knowledge and skills take time and hard work to develop. The inventor and entrepreneur Thomas Edison, who developed the electric light bulb, alkaline storage battery, phonograph, and a camera for motion pictures (Bio, n.d.), is famously quoted as saying, "Genius is one percent inspiration, ninety-nine percent perspiration." He believed that intelligent behavior required considerably more hard work and perseverance than raw intellectual talent.

Hard work and perseverance are essential in the development of positive intellectual habits as well as the knowledge and skills necessary to be successful in one's vocation. Learning can oftentimes be tedious and frustrating (Hansen, 2011). Consider a young child trying to learn her multiplication table. If the child does not apply hard work and perseverance, then she will be doomed to forever use a calculator for the most basic calculations. However, if she has developed intellectual tenacity, then she will work hard to memorize her multiplication table, a skill that will enable her to complete calculations quickly and accurately both in her responsibilities in the workplace and in the market.

Intellectual tenacity is imperative for postgraduate students. Learning requires more than just memorizing information, as noted in the introduction. Educational research has shown that simply memorizing information does not enable students to apply what they have learned into different contexts (Mayer, 2002). In other words, just because a home economics student has memorized the procedure for making pounded yam does not mean that he can actually make pounded yam. Likewise, just because a student has memorized a theory of motivation does not mean that the student will be able to effectively motivate her employees. Intellectual tenacity is necessary for the student to expend the hard work and energy required for truly understanding the knowledge that is gained in education. The lazy habit of simply memorizing notes will not enable the scholar to apply what has been learned outside of the classroom to their vocation. If the knowledge, skills, or abilities that a person has developed through the course of formal education does not enable them to be more successful, efficient, and productive in their vocation, then the time spent in education has been wasted. Therefore, the hard work and perseverance required for intellectual tenacity is vital for a student to acquire the knowledge and skills that will be useful to them outside of the classroom.

Conclusion

Not all students who complete school receive a good education. Remarkably, the quality of an education depends largely on the student. Hattie (2003) reported that 50% of the variance in student achievement is due to student factors, as compared to 5-10% from the home, 5-10% from the school infrastructure, 5-10% from the peers, and 30% from the teachers. In other words, the student's intelligence, attitudes toward education, study skills, intellectual habits, and other characteristics contribute just as much to their educational success as the home, school infrastructure, peers, and teachers combined. Therefore, a student plays a powerful role in determining whether they receive a good education or not.

Positive intellectual habits are vital both as inputs and outputs of a good education, particularly at the postgraduate level. The intellectual habits discussed in this paper are necessary for students to maximize their academic performance. Students who have not developed these positive intellectual habits will not excel in their studies because their bias, carelessness, and laziness will prevent them from learning and growing as much as if they were fair-minded, careful, and tenacious. Furthermore, students who are intellectually proud and timid as well as have no passion for truth will not be able to apply what they have learned in their studies to becoming more successful, efficient, and productive in their vocation.

Therefore, postgraduate students should be diligent both in their efforts to acquire knowledge and understanding in their field, as well as in their efforts to develop positive intellectual habits. Intellectual habits are not developed in the major choices of life, but are developed in the minor, seemingly unnoticed, choices made every day (Dow, 2013). A student does not develop their intellectual honesty in the middle of an examination when there is a temptation to engage in malpractice, but when they are honest about whether they actually did the small reading assignment that did not receive a grade. A passion for truth is not developed when completing the final dissertation, but is developed when a student is intrigued by an idea in class, and takes the extra effort to read more outside of class, even if that topic will not be covered on the examination. Therefore, scholars should be conscious of the little choices made, even from the start of the semester, because those small choices influence one's habits and behavior when the major life choices come.

In conclusion, the value of an education lies in the positive intellectual habits that are developed in education. When imagining the prototypical "educated" person, that person typically demonstrates the intellectual habits as outlined in this chapter: passion for truth, intellectual honesty, intellectual fair-mindedness, intellectual humility, intellectual carefulness, intellectual courage, and intellectual tenacity. Success does not happen

haphazardly, and is not influenced by possessing a certificate. Instead, the development of positive intellectual habits improves the quality of one's thinking, and good thinking produces good choices, which leads to success (Dow, 2013).

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