Imagination and Teaching

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The Centre for the Study of
English Language Teaching
JOURNAL
Fukuoka Jo Gakuin University

Vol. 12, 2024

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2024, Vol 12 PP. 1-26

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Abstract

In the field of education, teachers are commonly advised to think critically so that they don't unquestioningly embrace ideas and practices that are not founded on solid evidence. Teachers are also encouraged to think objectively in order not to resort to their deeply entrenched biases and prejudices when making important decisions and formulating ideas. It is, however, rare to come across arguments and claims that support the value of, and the need for, thinking imaginatively in education. Many exhort the promises inherent in critical reflection but are silent on the power of imagination. It is unfortunate that imagination is thought to play only a marginal role in teaching. Our ability to conceive realities contrary to what actually is the case needs to gain more attention in pedagogy given its potential to promote lasting learning. After characterizing the salient characteristics of imaginative teaching and outlining the reasons why it has been sidelined in education, this paper will discuss why teaching imaginatively is important, what the impediments and preconditions to imaginative teaching are, and how this overall approach can be put into practice.

Keywords: Imagination; marginalization; impediments; benefits; preconditions; heuristics

Introduction

As Elbaz (2019) maintains, how teachers think can have an important bearing on student learning. The lesson plans and curricular aims can reflect the ways in which teachers reason. If their thoughts are molded by strong political biases, they can deliver politically skewed classes. Teachers who approach pedagogy scientifically experiment with different instructional strategies, collect data to determine their effectiveness, and incorporate those that yield positive results. Because teacher thinking has an impact on classroom instruction, education as a discipline is abound with different prescriptions, enjoining different modes of thinking that are thought to lead to good teaching practice. Works on professional development, for example, often expound the importance of critical

reflection or the value of questioning the truth-claims one finds in education. It is not hard to understand the rationale for scrutinizing the ideas that get circulated and exchanged in education. Unfortunately, teaching is an area where political ideologues propound educational claims supportive of their political vision without buttressing what they maintain with reliable evidence. Conservatives can champion the teaching of nationalism and liberals the value of multiculturalism by only cherry-picking corroborating facts and ignoring countervailing evidence that undermines what they politically espouse. Teachers can easily be swayed by the political opinions of zealots unless they can discern claims rooted in empirical evidence from those that aren't. Another reason why critical thinking is paramount in the teaching profession is that schools can become strongholds of educational fads of dubious value, exerting a wide-ranging effect on teaching. To mention one example, the main tenets of behavioral psychology had a spellbinding influence on education, where teachers awarded commendable behaviors with medals, stickers, and brownie points to positively reinforce them again in the future. Unbeknownst to teachers at the time, however, subsequent studies show that students' interest in the activities they engage in significantly dampen once they are accompanied with rewards. Teachers too can become the victim of groupthink, whereby they unthinkingly adopt fads on the grounds that they are commonly accepted by others in the field. Alongside critical thinking, many argue in favor of thinking objectively. An important aspect of objective thinking is to consider and examine issues and problems from a perspective we don't hold. The grounds for upholding the importance of this form of thinking are not hard to find. Often by adopting a framework contrary to our own, we can become more aware of the strengths inherent in views we are opposed to. Teachers, for instance, critical of teacher-centered didactic lectures can become more appreciative of this style of teaching if they temporarily suspend their frame of reference, study works that justify this view, and scrutinize what takes place in education from a vantage point that values the transmission of knowledge. A deeper understanding and appreciation of alternative viewpoints often result in teachers becoming more embracive and tolerant of differences. And this is a disposition that is much needed in education, given how teachers with different beliefs, values, and philosophies have to work together. Viewing things objectively is also of value because it allows teachers to learn how their students respond to classroom teaching. For the most part, teachers' understanding of their teaching practice remains subjective and partial as long as it is based solely on how

they make sense of what they experience in class. But students can struggle with what teachers regard as rudimentary and they can quickly master something teachers assume to be challenging. If teachers want to acquire a different frame of reference that allows a wider and more balanced vision of the classroom experience, they need to see things from their students' perspective. Teachers can conduct surveys, distribute questionnaires, and have personal interviews with students in order to learn more about the difficulties they are facing and the fun they are having in class. And once teachers learn what students find challenging and interesting, they can make the necessary changes that help build a more optimal environment for learning.

Thinking imaginatively might seem as another invaluable source for teaching that is innovative and inspiring. After all, imagination plays a central role in the arts and humanities, and recent studies in science and philosophy have unveiled how it contributes to original and groundbreaking works in abstract theorizing. Yet strange as it may seem, the educational literature only makes passing references imagination, implying that it has little relevance to teaching. But contrary to what we might be led to think, imagination can and should have a more central place in teaching. This paper attempts to fill this gap in the literature. It will do so by: (1) examining the nature of imagination itself and why it has been neglected in teaching; (2) discussing its value and why it is often difficult for teachers to use their imagination when teaching; (3) analyzing how teachers can cultivate their imaginative competence; and (4) offering a simple and practical way of making teaching more imaginative.

1. Marginalizing Imagination

What does it mean to think imaginatively? Essentially, people engage in imaginative thinking when they conjure up realities that don't correspond to the way things actually are. We muse about imaginary worlds throughout the day when working, relaxing, or eating. A father daydreams about a relaxing vacation swimming and surfing in Hawaii instead of facing the computer screen at his office typing reports. A mother vacuuming the floor while keeping a careful eye on her toddler crawling near the fireplace, pictures herself chatting with her close friends at a nearby café, leading a carefree life. A girl struggling with her reading homework imagines how reading would be more pleasurable if she were assigned books written by her favorite writers. The act of imagining or entertaining

possible worlds is a common undertaking we engage in during the course of our everyday lives.

Imaginative thinking is prevalent in artistic pursuits as well. Creative writers use their imagination to portray imaginary worlds very different to the world we inhabit. Novelists of the macabre populate their stories with unreal, diabolical beings that defy the laws of physics by walking through walls and hovering in the sky. Painters also make use of the faculty of imagination when they depict melting watches and distorted faces. Movies also bear witness to the power of imagination. There are countless films that transcend the realm of what is real and possible, drawing the audience to a counterfactual world where humans are ruled by intelligent apes or extraterrestrial beings.

The effective use of the imagination is not restricted to the arts. Many groundbreaking philosophers are famous for contemplating ingenious thought experiments to prove their metaphysical view of the world. Descartes, for example, tried to demonstrate how we cannot trust our five senses since the world we live in can in principle be governed by an evil demon that wants to deceive us into thinking that the senses give us an accurate representation of reality. In the natural sciences, bold and imaginative scientists also imagine counterfactual scenarios to help establish scientific truths. When Newtonian physics was the paradigm for doing science, scientists explored the reality of space and time by imagining what the world would look like from a flashing beam of light. And as Al-Khalili (2022) writes, others sought to unravel the mystery of time by examining what the speed of a ball thrown inside a moving train would be if measured by someone in the train and someone witnessing the ball from a stationery position outside the train.

Though imagination is an important means for advancing knowledge in the arts and sciences, its value is underappreciated in teaching. Why is this the case? One underlying reason is the deeply entrenched model of teaching teachers are required to adhere to. As Barth (2001) expounds this model, teaching consists of the teacher transmitting his or her knowledge of dates, equations, names, and definitions to the students who, in turn, passively store the facts in their minds. The analogy that is often used to represent this teacher-student relationship is that of the all-knowing teacher pouring his or her jug overflowing with knowledge into the students' minds which are likened to empty receptacles. Because of this model's prevalence in many educational settings, teachers can often be seen in classrooms ceaselessly talking and filling the blackboard with facts and

figures, while students seated quietly at their desks scribble notes into their notebooks. The students' faithful and accurate retention of knowledge is later assessed with multiple-choice and fill-in-the-blank type tests, which are also used to rank students from top to bottom. In many educational contexts, teachers are expected to follow this model and their work is valued and praised if what they do in class comports to this approach to teaching. Their teaching is criticized and devalued, on the other hand, if it deviates from lecture-style classes. Teacher-centered lectures are the norm, prescribing how teachers should deliver their lessons. There is little need for teachers to conceive of alternative teaching approaches since the knowledge-transmission model is thought to be the most effective means of educating students. Teachers would be more encouraged to imagine and search for alternative teaching approaches if the transmission model didn't have such a dominant presence, monopolizing the domain of education. In the field of education, imagining teaching practices contrary to standard instructional routines would be much more ubiquitous if more and more people involved in education espoused the possibility of there being multiple ways of delivering the same content to students.

Another reason why imagination is sidelined in education is that effective teaching is thought to consist of mechanical skills that can be mastered once and for all. Teachers who motivate and entice their learners are regarded as skilled technicians. Competent instructors are those who are, among other things, skilled at writing sentences clearly on the board, remembering the names of their students quickly, orchestrating drills effectively, talking loudly and with authority, and posing unambiguous questions that have no more than one definite answer. Good teachers are analogous to skilled typists who through repeated, overt practice master the separate skills of teaching, and once a particular skill is mastered, there is no room nor need for improvement. For example, teachers become adept at board work by spending weeks and months writing on the board. And once they become good at writing, they turn their attention to other pedagogical skills because using chalk is not an endless undertaking that can be improved continuously. Understanding teaching in terms of skills doesn't encourage the use of imagination because rudimentary skills can be acquired without imagining alternate ways of writing on the board or talking clearly. Just as someone can become a skilled typist without contemplating different ways of typing on the keyboard, teachers can become skilled technicians through overt practice, not through realizing alternate means of mastering

skills.

There is yet another factor that is responsible for marginalizing the role of imagination in education. Teaching is often conceived to be a passive and uncreative endeavor, where the primary role of the teacher is thought to be that of faithfully delivering the content that appears in textbooks. According to this view, the teachers' primary role is to reiterate the content deemed important by the writers of textbooks. In order to achieve this end, they can from time to time provide examples to illustrate a point, use analogies and metaphors to facilitate retention, simplify content by translating jargon into colloquial language, and other such activities. But because the job of the teacher is merely to transfer the textbook's content to his or her students, there is little need to teach imaginatively. The teacher, for the most part, simply has to repeat orally the facts written in a book such as restating the year a war broke out, the chemical composition of an acid, or the importance of Cubism in modern art. Very little creativity and imagination are involved when orally transmitting the written word to a given audience. Imagination would not be associated with teaching in so far as teaching is conceived as a passive undertaking of disseminating knowledge deemed important by writers of textbooks.

Finally, the standardization of education is another factor responsible for devaluing imagination. In recent years, many commentators on education have pointed out how those in power – politicians, CEOs, superintendents, policy makers, bureaucrats, etc. – are trying to create and maintain a learning environment where students not only learn the same subjects using similar textbooks, but they are assessed by similar tests and quizzes after spending the same amount of time studying the same issue or topic. Teachers have no choice but to comply to what the authorities mandate, regardless of how they view the aims and content imposed from above. Because learning is rigidly structured in this top-down fashion, authorities have the power to determine and control exactly what takes place inside the classroom. They want to have everything under control and feel uneasy if what teachers do cannot be subject to their influence. It is not hard to see why those in power devalue imagination. If teachers were encouraged to use their imagination and devise original and unconventional tasks, curricular aims, and assessment protocols, teaching would become destabilized. Students won't be following a path predetermined and monitored by the authorities. They would be reading different texts, writing different essays, and playing different games. In order to prevent the birth of what they consider to

be educational anarchy, those seeking control would do what it takes to standardize education.

To conclude, the role of imagination is not a central concern in education because teaching is erroneously thought to be a mechanical craft, imparting and mediating what is thought to be important by writers of textbooks and designers of curriculums. Moreover, because authorities with vested interests in education want to micromanage teachers, they standardize education and curtail and limit their freedom to express their creativity in class.

2. Impediments to Imagination

Education is often driven by goals. Students choose to study a foreign language so that they can communicate fluently in the target language while others immerse themselves in literature in order to learn more about human nature and the meaning of life. Teachers also have goals they wish to attain. Some aim to create tests that can more accurately determine what students can and cannot do and others aspire to be more caring when relating with students. When learning and teaching, there are obstacles that must be overcome in order to attain the goals we have. Students wishing to become a fluent speaker of French struggle with pronunciation and accent but they must overcome this barrier if they want to communicate effectively. Teachers who want to be more caring must become a good listener, a trait that is challenging for those who like to be the center of attention.

Broadly, the hurdles that impede the attainment of goals are of two kinds. Some originate from within ourselves and others reside outside of us. Students of French who get easily distracted must learn how to concentrate. They must face and control their psychological weakness if they are serious about mastering a foreign language. Their road to acquiring a new language can be made more difficult by external factors such as poor textbooks and incompetent teachers. Teachers who want to devise more reliable and valid tests must develop more grit if they lack perseverance because they will have to read a lot of challenging books on assessment. Their aim can be made more challenging if their school library doesn't have books on the subject.

Teachers who seek to teach imaginatively also confront both internal and external obstacles. In what follows, we will examine the psychological factors that can make

imaginative teaching more challenging.

Imaginative teaching involves teaching in ways that depart from the customary, routinized modes of instruction. Teachers, for example, used to whole-class teaching are not being imaginative if they simply adopt a didactic approach when teaching content. The same teachers are teaching imaginatively if they imagine and then devise collaborative tasks where students work together to solve puzzles. Teachers working at a school that expects them to unilaterally decide the content to be taught are being unimaginative if they distribute a syllabus outlining the topics to be covered in each class. Their teaching is more imaginative if they decide to negotiate and create a curriculum with the students, incorporating what and how they want to learn. Imaginative teaching is risky because teachers must come out of their comfort zone and teach in ways they are not used to. When teaching in innovative ways, it is often difficult to predict what will happen in class. Students can struggle with tasks that were thought to be simple and straightforward by the teacher. And conversely, they can spend a long time working on a problem which their teacher thought would take only a few minutes. Teachers can devise an entirely new game or task they think would pique their learners' interest only to realize early into the lesson that they find it boring and time-consuming. Teachers who choose to run more unconventional classes by sharing their authority and power with students can experience resistance in class. Used to having everything decided by their teachers, students can and do misuse the power they are given or continue deferring to their teachers for help. Teaching becomes unpredictable when experimenting with innovative methods. It is therefore much easier psychologically to resort to the tried-and-tested approaches to teaching, where teachers know, or at least can guess beforehand, how students will respond and what they will gain from the tasks they set. Teachers who seek certainty and assured outcomes and results have an aversion to risks. But without facing risk, it is extremely difficult to teach imaginatively.

Another impediment is the tendency among some teachers to regard the status quo or the way things are actually done as right and not in need of change. When teachers respond to what they experience at school by conceiving alternative ways of teaching, they usually do so because they discern something problematic with standard, conventional teaching. Teachers wouldn't envision different ways of teaching content, assessing student learning, or managing classroom misbehavior if they didn't sense that anything was wrong

with how things are usually done at school. And it is difficult for teachers to question standard teaching practice because familiarity with the deeply entrenched routines and conventions found in schools engenders a sense that they are exactly how teachers should instruct and manage learning. In other words, once teachers become used to the conventions, mores, norms, and traditions that typify school, they unquestioningly accept them as irrevocable truths that must be preserved. There is no need to change the familiar because the familiar is right. Standard routines of giving lectures, punishing misbehaving students, and evaluating students with multiple-choice tests are how teachers should continue educating learners because they characterize or even define classroom reality. Teachers would be more disposed to entertain alternative ways of teaching and learning if they don't embrace the familiar educational landscape as an irrevocable reality without inherent problems.

Teacher demotivation is another factor. Imaginative teaching is often more challenging than conventional teaching. Teachers have to interrogate standard teaching routines and imagine how things can be done differently. Once they figure out how teaching can be improved, they have to put their idea into practice by creating new reading materials or devising new curricular aims. All of this takes time and effort. It is much easier to reuse the same worksheet or quiz they have been using for the last ten years. Teachers must be motivated to stimulate their students with interesting and challenging tasks and materials if they seek instruction that is more imaginative. But the willingness to imagine and innovate is hard to sustain if teachers don't experience the need and importance of ensuring a meaningful and thought-provoking environment for their learners. Their reluctance to follow the path of creativity and change can arise from innumerable causes. Their daily drive to perform their best might weaken when students don't reciprocate the enthusiasm and interest teachers have for the subject. It is hard for teachers to maintain their enthusiasm when students are slouching at their desks, yawning, and checking their smartphones every five minutes. Moreover, cynicism is a natural reaction to top-down decisions made by those who wield power without any background in education. The decisions concocted in offices staffed with people who have never taught a single lesson, often curtail teachers' freedom and deny their expertise by imposing countless teacher-proof exercises and materials that must be slavishly followed without raising questions. Teacher's workload can also be the source of demotivation. Those who

conceive their work as a calling and vocation, entered the teaching profession because they wanted to help make a lasting and deep impact on student learning. But this is becoming more and more difficult as their days are filled with responsibilities and commitments that are not related to teaching: patrolling hallways, handling helicopter parents, coaching extra -curricular activities, and so on. Teachers' enthusiasm for pedagogy can attenuate as more of their time must be devoted to issues unrelated to education. Thus, because unconventional teaching demands effort and commitment, factors that breed cynicism and disinterest can have an adverse effect on imaginative teaching.

Another psychological obstacle teachers encounter when adopting an imaginative approach to teaching is fear. Every school has its own unique culture that embodies a distinct set of values, beliefs, and philosophies. Some, for example, are built on strong religious values while others are founded on more liberal, progressive beliefs. Despite these subtle differences, schools are relatively conservative and stable places, where entrenched and long-standing traditions mandate how teachers and students should function within the system. Schools on the whole discourage teachers to make radical changes to the traditions they uphold. They want teachers to comply with their ways of doing things. It is difficult for teachers to teach imaginatively in many schools because imaginative teaching often involves departing from conventional and standardized pedagogies. They have to overcome their fear of being ostracized by their colleagues for introducing change or being criticized for failing to fit in by their superiors. Unable to face the consequences for not adapting themselves to the accepted ways of doings things, many choose to comply with what the school wants, making their lives as teachers more manageable and less complex.

To summarize, teachers need to embrace unpredictability, question the status quo, maintain a high level of motivation, and face fear if they want to make their classes more imaginative. Though there is no blueprint that assures teaching that is imaginative, the path can be made less challenging if teachers are willing to face and overcome the psychological barriers that they are bound to face.

3. The Benefits of Imaginative Teaching

Education is the deliberate attempt on the part of teachers to aid student learning. Teachers create worksheets that help students review the important points covered in class and set tasks that help develop important cognitive skills. The attempts to promote

learning can benefit teachers too. Giving extended lectures can demonstrate teachers' authority and expertise, and thereby win their students' respect. Regularly administered quizzes can help teachers discern whether or not their students were able to retain what they taught. In a similar vein, imaginative instruction can aid student learning and benefit teachers. In what follows, we will examine how pedagogy that has imagination as its source can be of value to teachers.

Imaginative teaching has the potential to dispel the monotony that can arise when teachers become set in their ways of teaching. Through years of first-hand experience instructing their learners in the classroom, teachers slowly but gradually build their distinct and personal approach to teaching. Their pedagogy usually entails tasks they regularly set, tests they use to check student learning, homework that is assigned to review key points, and handouts that clarify and supplement points raised in the textbook. Experience is certainly an invaluable source for effective teaching. The art of teaching becomes more and more automatic with experience, enabling teachers to function effectively without thinking too deeply about what happens in class. With experience, teachers don't have to mentally rehearse the steps for explaining a grammar point or how to do an activity. And because large aspects of teaching become automatized, teachers can focus their attention on other pressing issues. However, the downside of repetitive classroom practice is monotony. Teaching becomes a series of routines, repeating the same procedures and practices over and over again: reusing the same worksheets, explaining the same concepts, and posing the same questions. Teaching, however, doesn't need to be dreary and dull. Imaginative teaching can help break the monotonous cycle because teachers are expected to envision what is not ordinarily done and realize this vision by bringing changes to the routines. Teaching acquires newness and becomes exciting and emotionally rewarding because the overly familiar reality of classroom life becomes less familiar once teachers follow different curricular goals, adopt new roles as an educator, create and implement new learning tasks, and teach a totally new topic or issue in class. When pursuing the road of the unfamiliar, teachers are bound to face new challenges because they cannot appeal to and implement automatized routines. But it is precisely these challenges that transform teaching into something less monotonous.

Another benefit behind imaginative teaching is that it helps instill within teachers a sense that what they do has a positive influence on people. Unfortunately, it is not easy for

teachers to discern their contribution to learning. This is partly because a large part of classroom instruction is devoted to the textbook, whereby students read, analyze, and memorize the content deemed important by its author, not necessarily the teacher. In fact, it is not uncommon for teachers to be forced to use textbooks that don't reflect their overall philosophy of education. Teachers can and do disagree with what writers of textbooks believe are important cognitive skills and academic content students need to acquire. By devoting a lot of classroom time using a textbook that doesn't share their values and beliefs, teachers can experience frustration and disillusionment as they cannot discern the positive effect they are exerting in class. Another source of frustration is that teachers often have to closely and slavishly follow a predetermined curricular guideline that meticulously outlines everything they have to cover in class. Because everything is decided beforehand without incorporating what teachers think are valuable and indispensable for learning, teachers fail to detect the impact they have. Imaginative teaching can help address this problem. When teachers contemplate how learning can become more novel and innovative and realize their thoughts concretely with new tasks and instructional strategies, their teaching is informed by and reflects what they value and believe. And when students successfully meet the learning goals by doing the tasks teachers created and acquiring knowledge teachers chose to impart, they become aware of their influence. And becoming aware of how what we do has a positive effect on others is extremely important. As Ben-Shahar (2008) contends, we experience happiness, well-being, contentment, and a sense of accomplishment when we witness people grow and expand because of what we do. Teachers are no exception. They too would experience more well-being if education incorporated the practices and values they think are conducive to learning.

Teaching imaginatively also empowers teachers and this sense of empowerment is valuable for multiple reasons. Teachers who exercise their imagination and teach against the grain are in effect shaping a new reality that is not compatible with how teaching is actually done. By turning their back on conventional teaching and fashioning a learning environment that departs from the normal and the usual, teachers realize that they have within themselves the power to bring change, that they are capable of molding something new. This sense of being an agent for change is important because without it, teachers can easily succumb to a state of despondency, accepting fatalistically the status quo in education as forever immutable and etched in stone. From time-consuming and trivial

conventions to counter-productive norms, teachers would have to grind their teeth and passively and reluctantly accept the many givens in education. Furthermore, empowered teachers are less inclined to depend on and appeal to authority to help bring change in education. Because of their first-hand experience of bringing change, they will be more willing to take the initiative to structure a different educational reality. Conversely, depending on authority far removed from classroom teaching to instigate educational reform invites problems because the proposals are for the most part unrealistic, not taking the day-to-day reality of the classroom into serious consideration.

One also cannot deny how imaginative teaching can lead to professional growth. Teachers don't automatically grow as educators by simply spending time teaching in the classroom. Teachers can fail to develop their personal pedagogy by simply repeating the same classroom practices: using the same textbook, setting the same activities, and providing the same explanations and feedback. Though it is tempting to tread the familiar path, following the conventional route doesn't prompt much growth. An important source of growth is to experiment with new and unconventional modes of instruction and see what works and doesn't work in class. Teachers' repertoire of teaching expands when new tasks promote learning and draw interest. Teachers can add variety into their lessons when invoking different approaches to teaching. When what teachers do in class fails to foster learning, they still learn a valuable lesson of what not to do in the future. Teachers can gain invaluable insight into effective teaching by reflecting on and learning from the many mistakes they make in class.

To conclude, imagination can introduce more variation to teaching, help nurture a deep sense of accomplishment, empower teachers, and promote professional development. Given this wide array of possible benefits, it is rather odd that imagination is often seen as irrelevant to effective teaching.

4. Preconditions for Imaginative Teaching

The power and ability to imagine how teaching can be different to the way it is ordinarily practiced is challenging. It is not a competence teachers naturally acquire by simply going to class and talking in front of their students. It is a mode of thinking that needs to be consciously and deliberately cultivated. How, then, can teachers nurture their imagination? Our subsequent discussion will focus on two important means for aiding our

ability to imagine what is contrary to reality.

a. *Awareness*: A very foundational way of becoming capable of thinking imaginatively in any domain is to become acquainted with cases or situations that differ from reality. Because we often have deeply ingrained beliefs that infuse our outlook on specific matters, it is extremely difficult to imagine how things can be different. But the hold our beliefs have on us can weaken, making it possible for us to entertain counterfactual possibilities, when we become cognizant of realities that don't mesh with what is actually the case. Our eyes open to alternate ways of cooking, dressing, speaking, and dancing when we enter an unfamiliar world that follows and accepts different traditions. Teachers' sense of imagination can also be stimulated when unfamiliar educational customs and traditions are brought to their awareness. Witnessing atypical schooling systems and conventions, teachers can realize that teaching is not tied and restricted to the familiar, and that there are multiple ways of doing anything in education. How can teachers familiarize themselves with education that doesn't conform to what is typical?

First, history is a rich source that reveals how the past is different from the present. Viewing the past through the lens of history gives us a fascinating picture of how everything from language, aesthetic taste, and ethical values have been in a state of flux. Our educational system has been the subject of change and the study of history can unveil the extent to which the familiar educational landscape was not present in the past. The first institutionalized school was born during the Greco-Roman times when Plato founded the Academy, a school primarily designed to educate the talented so that they could become future rulers of city-states. As Power (1996) explains, for Plato "talented, highly educated persons with knowledge in their possession should hold the reins of government" (p. 5). The curriculum the gifted followed bears very little resemblance to what guides learning in many schools today. One noticeable difference is that under Plato's aegis and guidance, students with exceptional abilities engaged in intense logical and mathematical studies, leaving little room for studying the empirical sciences. This peculiar philosophy of education was largely due to Plato's skeptical attitude towards the value of empirical inquiry in general. Empirical science, according to Plato, can only establish knowledge that is tentative and provisional, not certain and absolute, and any education worthy of its name must be about pursuing, analyzing, and applying truths that are not subject to change. Contemporary education, on the other hand, places great emphasis on science, requiring

students to explore the nature of gravity, electricity, chemical compounds, and ecosystems. In fact, many involved in education are concerned that the present idolization of the methods and findings of science is marginalizing the arts, giving students less time to express their creativity and cultivate their aesthetic sensibility. By studying such differences between the past and present, teachers can in principle realize that the status quo is not an immutable reality and that there can be alternatives to how education is currently practiced.

In order to cultivate their imaginative competence, teachers can study present educational practices that don't conform to the system of schooling they are used to. Schools don't exist in a socio-cultural vacuum but reflect and embody the values and norms that define the context in which they are situated. Both similarities and differences exist between schools in cultural contexts that vary. Studying foreign systems of education is often a revealing experience because they are not in sync with the routines and standards that seem self-evident at home. Unlike many liberal democratic countries found in the West, there are many totalitarian countries scattered throughout the world where the government uses schools to indoctrinate students to blindly accept its political ideology and leadership, not to rear self-directed learners who can think critically and creatively. And unlike schools that follow a secular philosophy of education untouched by religious creeds, there are educational systems found in many religious countries that impose religious dogmas and forbid any questioning of their veracity. Learning about such educational systems can be an eye-opening experience for many teachers, for they demonstrate that what is regarded as self-evident, obvious, and natural differs from culture to culture, providing the space to imagine what is not rooted in reality.

b. *Dispositions*: Another way to cultivate the imaginative competence is to nurture particular cognitive dispositions or ways of cognitively approaching or responding to what we experience. What cognitive dispositions can help teachers teach imaginatively? First, having a critical mindset is an important precondition for teaching in unconventional ways. A defining feature of a critical approach to education is to question what is ordinarily taken for granted in teaching. A simple yet effective way of questioning the many conventions that typify classroom teaching is to seek empirical evidence that supports these regular practices. It is not unusual for educators to adopt conventions and routines that are not supported by evidence. They might embrace conventions simply because they were

personally taught by teachers who adopted them or because they generally conceive traditional ways of doing things as being immune from criticism. But just because conventions are prevalent with a long history of being followed by many doesn't mean that teachers should accept them. After all, corporal punishment was common for an extended period of time but many teachers now rightly view it as a barbaric and immoral way of controlling their students. When teachers engage in evidence-based inquiry, scrutinizing standardized routines, they are bound to come across teaching practices that are not supported by evidence. And when they do so, teachers can imagine ways of teaching and learning that differ from these practices. For example, many teachers set homework, thinking that it is part of their responsibility to keep their students busy at their desks at home. There is considerable pressure for teachers to demand homework because those who don't assign extra work are viewed as lax and soft by their colleagues and students' parents. Yet there is very little evidence showing a causal link between homework and a more robust and deeper understanding of what is taught at school. In fact, the vast literature on homework shows that it brings a lot of stress to students, as they have to worry about writing book reports, solving endless math problems, and meeting countless deadlines. As Kohn (2006) documents, there are teachers who don't give homework, convinced that students should spend their time at home pursuing their interests and having fun with their family, instead of filling worksheets with equations. Teachers, therefore, can imagine alternatives to teaching practices that a critical mindset shows to be lacking in evidence.

Curiosity is another disposition that can help teachers teach imaginatively. Curiosity, in general, consists of wondering why something is the case. This sense of bemusement usually leads people to seek reasons behind the way things are in order to satisfy their desire to know and understand. Teachers can and do wonder about different aspects of their work. Some wonder why students have to be grouped according to age or why everyone has to study the same subjects, regardless of aptitude or interest. Sometimes teachers' queries can result in satisfying and compelling reasons for why teaching takes the particular form it does. But sometimes teachers cannot find any reasonable rationale for continuing what they do other than convenience or tradition. And if compelling reasons are absent or few and far between, teachers can be prompted to imagine alternative ways of instructing their students. For example, many teachers wonder why students are not

allowed to cooperate and work together in pairs or in groups when they are tested, despite regularly setting collaborative tasks that cannot be completed without participants sharing their thoughts and supporting one another. Teachers who are convinced that there is no legitimate reason for administering tests which students must complete alone have sought alternative ways of evaluating their learning. Some require the students to give group presentations and ask their classmates to assess the work while others allow students to coauthor an essay about an issue they find interesting. Moreover, many teachers ponder on the educational value of giving letter grades to what students do. Evaluation serves no useful purpose if it doesn't tell students what they lack or what they need to work on. Letter grades themselves are not informative, for they don't specify the students' academic weaknesses. Getting a "B" on an essay doesn't say anything about how students can improve their craft of writing. As Kohn (2006) points out, teachers who cannot fathom the reasons for continuing the tradition of offering letter grades are implementing other means of assessing learning such as peer evaluation where students assess each other or portfolios where students submit a range of work they complete throughout a course of study. Teachers with a curious outlook can often break the mold and try something original and new if what is ordinarily done in class cannot be supported by convincing reasons.

Empathy is another cognitive disposition that is conducive to teaching that departs from the ordinary and mundane. Empathetic teachers are capable of entering into and experiencing the subjective world of other people. By sharing their feelings, thoughts, and experiences, they not only learn about the plight of others, but they can also vicariously conceive the world from their point of view. Teachers who are empathetic daily face students who are unmotivated, bored, and lethargic. Like any other classroom teacher, they also have to deal with students who submit late assignments, disrupt lessons with rude remarks, and come to class late. Those lacking in empathy can compare the youth of today to an idealized and imaginary past where schools were packed with keen, docile, and diligent students. Others pity themselves and accuse their ignorant, silly, and morally depraved students for making their work demanding and stressful. Teachers who empathize, on the other hand, are more inclined to identify themselves with the students, trying to understand what they are going through, to experience the feelings of frustration and boredom they undergo, and conceive ways that can make learning more fun and

challenging. Instead of pointing their fingers at pop culture, overprotective parents, or the students' short attention span for the quiet and unresponsive classes they face, they blame their own teaching for failing to elicit interest and imagine how they can improve their lessons to inspire learning. They believe that their students' willingness to learn can be nurtured if they build a radically different classroom reality: replacing irrelevant tasks with meaningful activities; adopting more engaging group work instead of resorting to whole-class teaching; giving students more power in deciding what and how they want to learn instead of unilaterally deciding everything they have to study, and so forth. Empathy is a powerful source for imaginative teaching, for teachers can be moved to seek alternative approaches to teaching after identifying themselves with their students who struggle in class.

Finally, open-mindedness is another invaluable frame of mind that can contribute to more unconventional, unorthodox ways of delivering lessons. One of the defining features of someone with an open-minded disposition is the willingness to revise beliefs and practices in the face of countervailing evidence or compelling arguments. Teachers who are open-minded don't become defensive and protective of their assumptions, convictions, and activities when facing criticism. In fact, they are disposed to learn more about views they don't share and make necessary changes in what they believe when discerning problems in light of what they learn. It is not out of the ordinary for teachers to come across ideas that question their pedagogical views. They might read the latest scientific studies done on pedagogy that contradict how they teach or have conversations with experienced and knowledgeable colleagues who gently question the effectiveness of their approach to teaching. Teachers also might engage in action research that demonstrates serious problems inherent in their teaching practices. Teachers who are dogmatic and set in their views can simply ignore such problems and continue teaching the way they do. In contrast, those who are open-minded do not shun countervailing evidence and constructive criticism. They reflect on the challenges, imagine ways to improve their teaching, and put their thoughts into practice. In other words, the problems they face become an important source for professional development, as they try to imagine how their teaching can be without these anomalies.

The imaginative mindset in teaching is not an inbuilt competence that teachers can draw upon. Nor is it a competence one naturally acquires through experience. In order to

nurture their imagination, teachers need to expose themselves to alternative educational systems and cultivate cognitive dispositions that are conducive to conceiving alternate realities.

5. Imagination and Heuristics

Heuristics are concrete, practical techniques for solving problems and making discoveries. Every discipline has its own heuristics which researchers and practitioners commonly use. In the field of mathematics, for example, a common strategy when solving extremely abstract problems would be to make drawings and sketches to help visualize and concretize the question. In philosophy, a commonly used heuristics when debating opponents is to show that the consequences that can be deduced from what they maintain are absurd or counterintuitive. Education is another discipline where there is no shortage of practical and effective teaching strategies that can be used to promote learning. When giving a lecture, for example, important rules of thumb often commended would be to capture the audience's attention with facts and data that contradict what they believe, give plenty of examples to illustrate points that are abstract, and make use of visuals and films to add variety to the talk. Or before setting a reading task, teachers are often advised to elicit student interest by orally posing personal questions about the theme the text covers and asking students to make predictions about the content from the title and by skimming the text.

Is there a simple and practical heuristic that can help teaching become more imaginative? One valuable strategy is for teachers to do exactly the opposite of what they normally do in the classroom. Teaching can become radically different to the accustomed and accepted ways of delivering lessons when teachers reverse what they do. In what follows, we will examine some of the ways this heuristic can be realized.

(a) *Roles*: Both teachers and students fulfill markedly different roles in the classroom. On the whole, it is the teacher's responsibility to first decide what is important for students to learn. Once the decision is made, teachers have to impart this knowledge in a way that facilitates their students' retention of what they teach. The knowledge they disseminate consists usually of facts that are thought to be objectively and irrevocably true. Once the teaching is completed, teachers must devise tests that assess whether the students can regurgitate the facts they delivered. The students' role is limited to that of listening

attentively and filling their minds with facts which they must later retrieve during exams. The student, being ignorant and inexperienced, must be subservient to the all-knowing teacher and absorb everything he or she teaches without raising awkward questions.

But teachers can transform traditional classrooms to more innovative spaces for learning by reversing roles and getting students to become teachers. Students can be given the responsibility to share their expertise in areas that truly interest them in class. They can share the extensive knowledge they have about animals, sports, or music with their peers and teachers and organize lessons around the topics they teach. Students, after all, have a deep understanding of, and an insatiable desire to learn, what ignites their curiosity. Or teachers can assign them themes to explore outside classroom hours and ask them to share what they learned in class. Also, students can become mentors or tutors and help those in lower grades, helping them with their homework and going over the materials covered in class. Because the age gap isn't great, older students can become good role models, offering constructive advice and psychological support. Teachers can become more ambitious and organize classroom projects where students leave the classroom and enter the community to teach people at rest homes, kindergartens, museums, and hospitals. The distance between schools and the community can be reduced whenever students apply what they learn behind classroom doors to help make the community a better place. As a matter of fact, Bain (2021) describes a popular university class offered in the United States where students visit a nearby prison to teach literature to inmates, exploring and discussing profound philosophical and literary themes together.

Regardless of the actual approach teachers take, students can learn many valuable lessons by adopting the teaching role. First, their experience of giving presentations and talking in public offers valuable training and prepares them for the future. When giving a talk during a business meeting or making a presentation in front of clients, the skills – talking clearly and loudly and making eye contact with the audience – they acquire in class can make them more proficient workers. Also, we deepen our understanding of a subject by teaching it. This is because in order to teach effectively to those new to the subject, we have to first make sure we truly understand what we teach. Often times, we realize that our understanding is fuzzy and superficial after reflecting carefully on the content we have to teach, forcing us to restudy the material again. As Gilbert (2013) observes, "One of the best ways of learning anything is to teach it to others" (p. 59). Furthermore, when students

are in charge, managing what takes place in the classroom, they learn the value of preparation, a vital precondition for successful teaching. Teachers need to plan activities, anticipate difficulties, and rehearse how to explain and give instructions. Students who through teaching internalize the importance of preparation will be well-prepared for the workplace, where they may have to prepare and plan meetings and business trips.

(b) *Skills*: One of the skills students acquire very early on in their education is the ability to answer questions. From day one, teachers orally pose questions in class to test student understanding and assign worksheets and readings chockful of comprehension questions. Students also sweat over tests and quizzes which consist of questions ranging from easy to difficult. The questions students grapple with are usually clear and straightforward, allowing only one definite answer known by the teacher in advance. Teachers rarely use questions to elicit open-ended discussions about issues with no definite answers.

A more imaginative and unconventional approach to learning would reverse the standard classroom setup by creating lessons that center on students learning the value of, and gaining practice in, posing questions. When studying a subject, students don't just learn a long list of facts to commit to their memory, but explore in depth the kinds of questions researchers ask – what is the evidence supporting this claim, what would happen if we did this, what is the cause behind this phenomena, etc. – when seeking answers to their questions. Students thereby not only learn about science and history but learn how to think like scientists and historians. Moreover, instead of reading texts and answering questions that are both prepared by their teachers, students can choose their own texts and write their own questions for their classmates to answer. Also, students learn about the academic controversies surrounding questions themselves such as whether there are questions science cannot answer or whether religious or political questions are susceptible to objective, unbiased answers. Any approach to teaching that foregrounds the importance of questions must also give students the opportunity to pursue answers to questions they find interesting and meaningful. Students can engage in personal projects to explore the mysteries of the natural world or unlock the secrets about what happened in the historical past.

An education that revolves around students asking questions is valuable for a number of reasons. First, students learn firsthand how academic inquiry actually proceeds.

Scientists, artists, and philosophers don't have epiphanies and make breakthroughs after passively observing their surroundings and soaking up what happens in a detached manner. As Irvine (2014) argues, their intellectual revelations come after long hours of relentlessly pursuing questions that fascinate them. Second, some of the core questions researchers ask cross disciplinary boundaries. Both historians and scientists ask for evidence and seek causes responsible for things that happen. By becoming adept at asking these questions, students acquire the fundamental principles of thinking that can be found in more than one discipline. Third, learning the art of formulating good questions that are clear and precise is vital because oftentimes intellectual explorations don't lead anywhere because the questions that are supposed to guide research are vague and not properly formulated. Coming up with solutions to problems becomes less challenging when the questions are made less unambiguous.

(c) *Content*: Another commonality shared by curricular guidelines is that teachers are mandated to teach what is known to be true in their field. Teachers of history impart well-corroborated facts about dates and the names of treaties and wars. Students of the natural sciences study the laws and principles governing planets and electricity that have been uncovered and subsequently verified by scientists. Even in such subjects like art and music where subjective appreciation and interpretation are more prevalent, students learn a great deal of facts about the lives of great artists, the masterpieces they created, the techniques they invented, and the people that were influenced by their art. Education is to a large extent initiating novices to the world of what is known to be true beyond reasonable doubt.

Teachers can do the exact opposite and teach what is not known in their field of expertise. In any field, there are innumerable questions that defy answers despite the researchers' strenuous effort and commitment to solve them. Natural scientists, for example, still don't know what actually triggered the massive explosion that brought the universe into being and why the laws of nature can be mathematically expressed, let alone understood by the human mind at all. As many practicing scientists bemuse, the most incomprehensible fact about the universe is that it is comprehensible. In the visual arts, critics of art and artists themselves cannot give a definitive definition of beauty or explain why people are not all drawn to the same masterpiece. In the biological sciences, biologists agree that species have evolved through the process of natural selection, whereby those

with traits conducive to survival win the harsh struggle for existence. But biologists concede that evolutionary theory runs into serious problems because existing species like ourselves have traits – wisdom teeth, male nipples, appendices, etc. – that lack survival value. These mysteries have inspired much thought over the centuries without researchers converging on definite solutions. Teachers can structure lessons around these puzzles, instead of imparting immutable facts that have withstood the test of time.

But what benefits can teachers expect from teaching the unsolved mysteries in their respective fields? First, mysteries have the inherent power to provoke awe and curiosity. While names of chemicals, dates of historical events, and rules for solving equations can often be dry and matter of fact, unsolved mysteries can stir the imagination and make us ponder about what lies beyond what we know. Second, unsolved mysteries tend to preserve our interest and concentration for longer periods of time compared to the drier, more commonplace pieces of information students often have to learn. Though the definitions of new words or the rules of grammar and punctuation don't whet our thirst for knowledge, puzzles grab and sustain our attention because they cause within us an intellectual itch, confusion, or discord which is hard to discard until the mysteries are solved. This in part explains why we cannot put down a detective novel by Agatha Christie or change channels when a Hitchcock movie is aired until the mystery is solved at the end. Third, it can be motivating and inspiring for students entering a new field to know that there is a vast unknown terrain that awaits discovery. The mind isn't stirred to wonder and explore if there is nothing further to understand, if everything important and worthy of knowing has been established once and for all.

(d) *Relationship*: There is a very thick, almost impenetrable, wall that separates schools from the surrounding community. There are hardly any ties and links that connect what happens inside the classroom with the outside world. The teaching that takes place in class is off limits to the general public and students are largely ignorant of the problems and challenges their community faces. The occasional events sponsored by the school for the public are not enough to ensure a meaningful bond between school and society.

Instead of locking the doors from the inside, teachers can open the classroom doors and break this barrier. Teachers can achieve the aim of creating a more reciprocal, lasting relationship between the school and community in a number of ways. First, students can conduct research in the community by interviewing people, distributing surveys and

questionnaires, and do experiments at nearby lakes and rivers. The data they gather and analyze can help students gain insight into their community. Second, students can complete projects which are displayed outside school for the public. Engaging in schoolwork can be demotivating for many because their work is only assessed by their teacher. Learning can be made more meaningful if it leads to a product that is viewed and read by an audience. Students' artwork can be displayed in museums and art galleries and their poems and short stories can appear in the local newspaper. They can even create their own journals and send copies to other schools. Third, schools can also collaborate with corporations, research institutes, and the local councils on joint projects. And as Barell (2012) points out, students can join forces with firms to help start a new product, initiate a new service, or build a new facility. Moreover, students can contribute to the community by doing volunteer work. They can clean the local park, visit and talk to the elderly people living at rest homes, babysit toddlers, clean the graffiti off walls, and feed the homeless. Through volunteer work, students can learn many valuable lessons that cannot be acquired by reading an academic textbook or writing essays.

As Bentley (1998) stresses, bridging the gap between schools and the surrounding community is important. Learning becomes more meaningful and relevant for students because when the gap is closed they soon realize that school learning isn't just restricted to the classroom but can be applied and used outside the school context. Students use their knowledge of math to analyze and draw inferences from the data they collected from the community. And they must follow the rules of grammar and the conventions of academic writing when writing essays for the public. Students' ability to communicate orally is tested when they have to make themselves understood during the interviews they conduct. Learning is more than cramming trivial facts to earn a passing grade. The skills and understanding acquired at school can be put to effective use outside the ivory tower. Another reason why teachers should create ties with the community is because the many studies and projects students do help serve the community by identifying a cause behind a communal problem or cleaning the litter from the river or sidewalks. This sense of serving a greater purpose is important, as more and more students these days view studying as a means of earning higher grades and beating rivals to get a higher paying job. A self-centered rationale for studying which many students tacitly accept is unfortunate, because there is a different outlook on the purpose of studying which is more satisfying, namely

using what one knows and understands to help make a positive contribution, however small, to those around us.

Thus, teachers can free themselves from the grip of conventional teaching by doing the opposite of what they normally do, introducing variation and creativity into their lessons.

Conclusion

Our ability to imagine is underrated in education because the craft of teaching is often understood as being a mechanical and passive endeavor. However, the power to imagine and the ways to cultivate its potential should become a more central concern in education. This is easier said than done. Teachers have to overcome a number of psychological impediments if they want to adopt an imaginative approach to teaching. But if they do, it can empower teachers and help dispel the monotonous cycle of delivering lessons. Teaching that is imaginative doesn't come naturally to teachers. To become more imaginative, they must become aware of modes of teaching and learning that don't comport to how they teach. Also, teachers need to adopt a critical and open-minded stance to teaching in general if they wish to become more imaginative. A practical means of building more imaginative classes is for teachers to do the exact opposite to what they ordinarily do. From curricular aims to assessment, this strategy can be applied widely, creating lessons that are innovative and unconventional. If the points raised in this paper have any value, then teachers can enrich and enliven their classes with their power to imagine realities that cannot be found in the classes they actually teach.

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