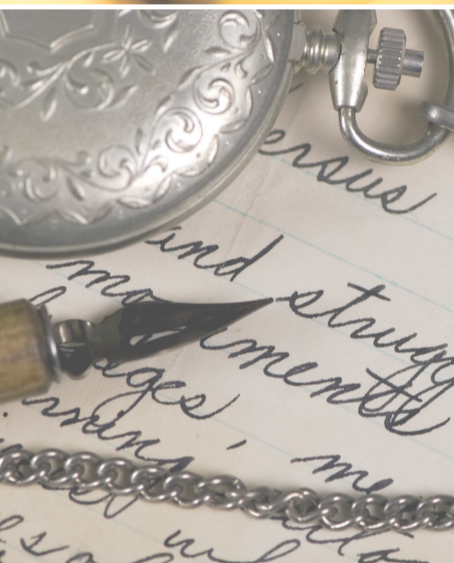


In Other Words

The research behind teaching and learning through images

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“The soul does not think without a picture.”

-Aristotle

We live in a culture rich with images. We grew up with photographs, TV, movies, video, VH1, DVDs, Facebook and Instagram. We can't escape the power of the visual image—and most of us don't want to. We've grown accustomed to watching, not merely listening to, our music; radio gave way to TV, which gave birth to MTV. Even our music is inseparable from images. Our grandparents grew up listening to the radio for entertainment; kids today grow up watching YouTube. And the pace of this visual expansion accelerates. As a child, I was among the first to mature with the television set—the “one-eyed babysitter”. Today's adolescents can aptly be called “screenagers”, as their screen time is not limited to a television but has expanded to laptops, video games, tablets and smart phones. Within the next seven years, 90 percent of the content we'll receive on our cell phones will be visual not verbal.

I wonder, however, if most people recognize the history behind the use of images to communicate, pass on values, and teach the younger generation. How important have images been to mankind's communication? What role have they played as cultures talk to one another? And just how central will they be to our future, as information becomes ubiquitous yet ideas become more complex?

Consider this: As we make progress, there seems to be a regress to this simple, original pedagogy of pictures. The new isn't new at all; it is a return to something old. As we progress further into the 21st century we seem to be magnetically drawn to return to pictures in order to translate and transmit ideas to others. Our international road signs communicate to oncoming traffic with simple pictures. The pictures are, indeed, a universal language. As NCAA sports become more complex, a growing number of athletic coaches use visual systems to call plays, snap counts and formations on the sidelines. Pictures are, indeed, a multi-generational language. Our human population, in many ways, is becoming iconic: information is passed along via a simple icon. Again, pictures are a timeless language, and effective leaders understand this. Best-selling author Tom Peters said, “The best

“The best leaders, almost without exception and at every level, are master users of stories and symbols.”

-Tom Peters

leaders, almost without exception and at every level, are master users of stories and symbols.” As you read further, I’d like to challenge you to reflect on the research and learn from our rapid migration back to this instrument—images—for relaying thoughts. It is safe to say, the visual is going viral.

The Art of Human History

Humans have a robust history of using icons, diagrams, symbols and pictures to communicate. Centuries ago, Mesopotamia and Egypt used them on cave walls to educate new generations about their past. Throughout time, images have been used in political, spiritual, cultural and military arenas to affect the schemas of that particular population. Spanning from pre-historic to modern times, images have impacted the way we think, process information, and engage the culture. So let’s investigate a few specific examples of how they’ve been used historically, as well as their impact on the memory process, the learning process, and the level of personal engagement they inspired during each time period. I believe we have something to learn from the past.

As one of the rare female pharaohs, Hatshepsut used images in Egypt from 1479-1458 B.C. As was common in Egyptian history, the buildings, statues, obelisks, and temples carried the images of that day. Hatshepsut initiated both building projects and images of those buildings in greater number than many of her predecessors and successors. It was a political move on her part, as the images served to represent not only her power but how she’d be remembered in the afterlife. Her approach reflected a deep desire to impact the **memory** of her people. Like other pharaohs, she used images to seal her identity and god-like status. They influenced her culture because they aligned with the **learning process** of the day. After her death, succeeding pharaohs went to great lengths to destroy all of the images she had created of herself. However, many survive today. The time and expense it must have taken to systematically destroy Hatshepsut’s buildings and imagery shows her successors’ concern for the impact she had on Egypt’s worldview and the **engagement** she inspired. Some historians believe her effectiveness was due, at least in part, to her strategic use of images.

The primary purpose of using images, however, was to tell the story of a culture. Some common themes arise during the early pre-historic periods based on the images facilitated on pottery and cave drawings. The types of images





used were very pragmatic and reflect the type of hunting, living, and values of the day. It's almost as if the people were recording their story to engrain in the memory of future generations and to improve their culture's chances of survival. Their images served as ritualistic attempts to impact daily life. While the early images were simplistic, incremental changes over time can be seen as cultures advanced and developed. Some archeologists have hypothesized the use of symbolism and abstract thinking in the images rather than just a pragmatic reflection of day-to-day living. This may reflect how pre-historic peoples became more **engaged** in new ideas and higher levels of learning. In summary, over the centuries, the artwork progressed as civilization did.

At the turn of the last century, anthropologists deepened their understanding of the use of images in history. In 1903, historian of religions Salomon Reinach argued that imagery in aboriginal Australia and Upper Palaeolithic art were designed to improve the spoils of a hunt. French priest and paleontologist Henri Breuil expanded Reinach's ideas, promoting them vigorously during his long career. For almost 60 years, he recorded, mapped, copied, and counted images in the caves throughout Europe. He also developed a chronology for the evolution of art during the Upper Palaeolithic. During this time, it became clear to Breuil and the majority of the archaeological establishment that imagery was vital to telling the story of human history.

In the ancient Hebrew culture, parables and metaphors were employed to remind common people of important truths. This has been seen not only in archeological discoveries but in the evolution of language in their ancient writings. By this time, pictures were still used to teach, but they took on the form of stories and symbols. Instead of listing rules of conduct in a left-brained style of pedagogy (e.g. the Ten Commandments), Christ was known to have told parables as pictures of truth, enabling hearers to reflect on life lessons they could relate to through the characters in the story or the objects in the scenario. These visuals were a right-brained approach to learning.

"History is communicating that the message that gets through is usually one that contains imagery."

In the Renaissance period, an array of communicative channels utilized images to enhance memory, helping people retain information longer than in the past. Books used visual metaphors, paintings and sculptures of the day were central to education, and the stained-glass windows of the cathedrals contained pictures reminding people of what was most important. This has carried on for centuries, as teachers today find symbols and visuals to be very effective in helping student retain information. Despite our Western preference for didactic teaching methods, educators in health and science are utilizing images to educate more effectively.

During the 18th century, as the United States of America was born, images played a central role in galvanizing patriots to the cause of freedom and revolution. We remember Benjamin Franklin's use of symbols and illustrations, especially the snake warning the British "Don't Tread on Me", as a sobering reminder even to those who couldn't read that revolution was immanent. Through the course of the Revolution, pictures of branches, eagles, trees and nooses, and the Liberty Bell were tools to call people to the cause. When Franklin was chairman of the flag committee, they chose stars and stripes in symbolic colors to remind Americans of their roots. Each of these took on special significance in the American story.

The fact is, history is communicating that the message that gets through is usually one that contains imagery. And today, we recognize this timeless truth again.

Picture Perfect Training

Since the turn of the 21st century, significant progress has been made in our understanding of the human brain. Neuroscientists' research helps us now recognize the role of the right and left hemisphere, how males develop more slowly than females in adolescence, the importance of the pre-frontal cortex, and what causes us to both remember and forget ideas. Some of the most profound discoveries inform us of the importance of imagery within our thoughts and actions. These insights we now possess should stimulate leaders and educators toward the use of images and metaphors in their communication.

Why is Teaching with Images so Effective?

1. The majority of people are visual learners.

According to Mind Tools, 65% of the human population is visual learners. That's two out of every three people you will communicate with today. An even greater percentage thinks using pictures. If I were to say the word "elephant" to a crowd of listeners, most would picture a big gray animal, not the letters "E-L-E-P-H-A-N-T." Approximately nine out of ten brains work this way. This is a simple reminder that people think using imagery. So if our message is to penetrate, this is how we *must* communicate. Teaching this way is organic. Aristotle said it best: "The soul does not think without a picture."

2. Pictures stick.

3M reports that visual aids in the classroom improve learning by 400%. We like to see a picture, not just hear a word. We remember pictures long after words have left us. We retain the stories in speeches more than the words. We remember scenarios. Faces. Colors. Why? They paint a picture in a crowded world of content. Post-modern society is a world saturated with data. People process approximately 1,000 messages a day, digitally and personally. The only hope we have of our message sticking is to insure it contains pictures.

3. Metaphors can provide a language for people.

When an image represents a truth or a principle, it can furnish a taxonomy for understanding a topic or even how to approach a project, or a situation. The pictures make concepts memorable and employable. When someone views the image, they rapidly associate it with the principle. This enables imagery to play a primary role in creating culture in an organization because every culture speaks a language. A set of images can quite literally represent an entire value system or set of behaviors an organization desires team members to embrace.

4. Pictures can accelerate understanding.

As I've said before, when an instructor uses an image to represent a timeless





principle, comprehension deepens and accelerates. There is significant impact in the learner when a visual aid is connected to a verbal explanation. It actually speeds up the learning process. According to the 3M corporation, the brain processes visual information 60,000 times faster than text. People get the point in their head faster when they form a picture in their heart. The entire brain is engaged. This means images can accelerate both learning important concepts and applying them readily to life.

5. Images engage our right brain and our emotions.

In his book "A Whole New Mind", bestselling author Daniel Pink reminds us of our need for more right-brained communication. The left hemisphere is didactic: it's about numbers, equations and facts. It's calculated and definitive. The right-hemisphere is about creativity. It's innovative and dynamic. It gravitates toward images, which grip and educate the other portions of our mind. Certainly both hemispheres are necessary and work best in tandem with each other, but more and more, our world is driven by right-brain thought. This is a big concern considering what's happening today in public schools. With a poor economy, budget cuts have occurred nationwide and the first courses that tend to be eliminated are right-brain ones like art, music, and drama. We as educators and mentors of the next generation must find creative ways to engage the right-brain if we really want to connect with them.



6. Pictures make us want to express and respond.

It's been said so often, it has become a cliché: a picture is worth a thousand words. But the fact is, the statement is true. Images engage people and elicit response. It's why art galleries foster conversation as viewers gaze at the pictures. Visual literacy is the ability to encode (create a visual language) and decode (understand a visual language). Unwittingly, this begins to happen when people invest time with imagery. Jensen reveals that our eyes can register and process 36,000 visual messages per hour. Visuals are so engaging they make people want to talk. Call me the master of the obvious, but in a classroom, I believe this equals student engagement.



7. Visuals tell stories in our imagination.

A simple picture can spark a new thought each time you look at it. Why? Pictures tell stories. The philosophers of our day are musicians and filmmakers, who paint pictures in our minds and inspire imaginations. They both use a screen. What's more, since 40% of all nerve fibers connected to our brain are linked to the retina, it's clear that what we see is intricately connected to how we think, feel, and learn. Film director Martin Scorsese said, "If one wants to reach younger people at an earlier age to shape their minds in a critical way, you really need to know how ideas and emotions are expressed visually."



8. Pictures enable us to store huge volumes of information in our memories.

I know undergraduate students who memorize for their final examinations using images and diagrams. A single picture can contain vast amounts of data, which enables long-term memory. Visuals actually help us file information. In 2000, Hyerle informed us that 90% of the information that is retained in the



brain is visual. It appears obvious that images and visual aids should be the standard format for memorization and learning.

9. Images are the oldest form of curriculum and the preferred method for learning today.

Research by Peter Houts, PhD, states that people in contemporary society prefer pictographs to words for instruction. This is likely true for every generation young or old but certainly for today's emerging generation. Furthermore, his research showed that students who are twice as exceptional as others ("2e") are usually visual learners. So from the cave walls and pyramids of the ancient world, to the classrooms of today, young people prefer to learn from images. Some of the best communicators in history taught using the power of the metaphor and image—from Jesus and his parables, to Dr. Martin Luther King Jr. and his famous speech about dreams during the Civil Rights movement. The cycle of history seems complete.

What Do Students Say?

I decided to take this hypothesis to the college campus. Over the course of two years, we asked more than 3,000 undergraduate students on 32 university campuses what enables them to learn and to remember. I recognized that effective educators and communicators use a handful of instruments to help listeners remember information. I wanted, however, to test their work, and see if their "end user" agreed. After assessing the results, three instruments emerged as most popular:

1. Music

The use of song and lyric to connect and remember information.

2. Experiences

The use of hands-on activity and participation for learning purposes.

3. Images

The use of visuals and metaphors to engage and retain content.

I was then faced with a paramount question: why is it that so many faculty members refrain from using music or images? If it's true that students retain information and test better when instructors include one or more of the instruments above in their pedagogy, it would make sense that educators would employ them. So why don't professors use a learning process that actually works?

My primary conclusion is simple: The use of images (or the other items on the list) simply seems anecdotal. They don't feel scholarly. Over time, as higher education has become more sophisticated and rigorous, we have felt that anything which simplifies learning lacks rigor or depth. Images, for instance, don't appear academic. They're far too elementary. So many shun them.

But I would argue that images are not elementary at all. In fact, they prompt both thought and emotion. And they certainly don't lack rigor—in fact, they stimulate an entirely different hemisphere of the brain, often left untouched

by educators. If the purpose of education is to help students learn, remember and apply truth, then it seems we have left out a very useful tool in the process. Images have been proven to stimulate creativity, retention and passion, all of which employers who receive graduates are begging for. I do not know of any employer who still asks about the GPA of a young prospect, but I do know they are asking about creativity, soft skills, and executive functioning.

And I believe images can help foster those needed skill sets.

Our Dilemma: Right-brained Students Must Attend Left-brained Schools

The columns below summarize how education has primarily taken place and why it fails to be effective. I recognize many schools have made an important shift from this traditional model, and perhaps this is over-simplified. But I believe these columns summarize why many students drop out of the educational process too soon:

STUDENTS TODAY

- 1. Right-brained thinkers*
- 2. Learn by uploading,
expressing themselves*
- 3. Experiential in nature*
- 4. Music and art enables
them to retain information*
- 5. Desire to learn what is
relevant to life*
- 6. Creativity drives them*

SCHOOLS TODAY

- 1. Left-brained delivery*
- 2. Teach by downloading
lectures*
- 3. Passive in nature*
- 4. Music and art classes are
the first ones cut*
- 5. Teach for the next test and
to simply raise scores*
- 6. Curriculum drives them*

Maya Angelou wrote, "We are all creative, but by the time we are three or four years old, someone has knocked the creativity out of us. Some people shut up the kids who start to tell stories. Kids dance in their cribs, but someone will insist they sit still. By the time the creative people are ten or twelve, they want to be like everyone else."

A team of social scientists at the University of Arkansas has drawn the same conclusion. In 2013, they attempted to demonstrate the benefits of students' exposure to art. Their findings, published in the journals *Education Next* and *Educational Researcher*, are that students who are exposed to cultural institutions, like museums and performing arts centers, not only have higher levels of engagement through art but display greater tolerance toward others, historical empathy as well as better educational memory and critical thinking skills. "The changes were measurable and significant," reported Jay P. Greene, professor of education reform and a researcher on the study. Just one museum tour was found to make "a definite impression on students." According to Greene, students on this tour retained what they'd learned "even without an



external reason for doing so, like a grade on a test.”

Green’s team was surprised by how much “academic” information the test group had learned and remembered through the art, when compared to a control group. Students were able to recall that one painting dealt with price supports during the Great Depression and another depicted abolitionists boycotting sugar. “These historical details were not standard in the curator’s introduction,” Greene explains. Which means the discussion-based format compelled the students to ask both important and relevant questions about the art. But something about the museum also enabled students to remember this information nearly a month later. That’s remarkable, considering how quickly most kids forget knowledge learned for tests. Further, when it came to analyzing a new, unfamiliar painting, Greene reports there’s “a big increase in how observant students were if they went to an art museum, as opposed to students in a control group who did not attend. They were much better at seeing details in new paintings than those who did not go.” They were also better at relating the painting to their own experience, identifying subtext in the art and allowing multiple interpretations of the art. Finally, they were able to empathize with the people and scenes in a way the control group did not. This clearly suggests that experiencing art (images) engages students better.

Today’s EPIC Generation

In our work with more than 7,000 schools, universities and organizations, we have confirmed what futurist Dr. Leonard Sweet identified as an “EPIC” generation of students. Having grown up in a technology-abundant world, he believes this emerging generation requires focused activity and visual stimulation. I believe his insights are truer now more than ever. Check out the chart below to see how Dr. Sweet breaks down this “EPIC” generation:

E – Experiential

I want more than a lecture. I want an experience that provokes and incentivizes me.

P – Participatory

I want to participate in the outcomes of the program. I want to upload my thoughts.

I – Image-rich

I want a picture to engage me, help me explore new perspectives and remember ideas).

C – Connected

I want to interact with others socially on the issue in person and through technology).

Because our organization Growing Leaders has observed this to be true, I knew we had to act. We didn’t see schools or companies utilizing imagery, conversations or experiences to their full potential. In response, we were prompted to create the **Habitudes®** resources. (Habitudes are images that form leadership habits and attitudes.) After years of work in student development, we designed an instrument based upon images and social connection. Each chapter of these books provides a unique, memorable image that’s coupled with stories, questions, a self-assessment and an exercise in which students can

participate. We've put the training on ICE, meaning we use Images to spark Conversations, which lead to Experiences that can change lives. We believe we've found a "sticky" way to inform this next generation on their leadership journey.

The role of images in vision is paramount. You cannot discover what you cannot imagine or see.

Putting Ideas into Action

The next time you're communicating to an audience, especially those of the next generation, try some simple actionable items:

- 1. Select a metaphor to anchor your big idea, building out various layers of comparison.*
- 2. Identify a picture that depicts the metaphor, and place the image on a slide, with little or no text.*
- 3. Add supporting material, utilizing both statistics and stories that illustrate your big idea.*

My challenge for every employer, educator, parent, coach or youth worker is to re-think traditional methods for communicating. It's time we progressed from living merely in the Gutenberg world (text on a page) to the Google world (images on a screen). We must shift the focus from merely informing the left-hemisphere of their brains to livening the right-hemisphere, which opens up an entirely new world of growth. In doing so, you will invite imagination, engagement and passion in your listeners.



Images are the language of the twenty-first century, not words.

-Leonard Sweet

Taking the Next Step

If you are interested in exploring the use of images to develop the young leaders around you, here are four ways for us to partner together:

EVENT

Growing Leaders offers on-site training to help administrators, teachers, and staff better understand and engage with the emerging generation. We also provide programming for student leadership retreats, academies, and other special gatherings. Each event is interactive and built on an EPIC model of delivery: Experiential, Participatory, Image-Rich, and Connected.

PILOT

Some of our partners, including universities, schools and businesses, take an initial step by piloting the Habitudes program with a segment of the students or young adults in their organization. This innovative curriculum, created specifically for the emerging generation, teaches values-based leadership principles and soft skills in an EPIC way. You can pilot the program with a group of students, a specific department of your organization, or even members of your administrative team.

IMPLEMENT

Growing Leaders offers a comprehensive implementation plan for those who want to use the Habitudes curriculum on a wider scale. This includes student and staff training resources, on-site facilitator training, online pre- and post-assessments, a parent resource, and consulting on best practices. In addition, Growing Leaders offers ongoing leadership training for staff and administrators through a web-based platform that equips them to mentor and lead effectively.

CONTRIBUTE

A portion of all of the revenue earned by Growing Leaders is allocated to *The Growing Leaders Foundation*. The Foundation provides financial assistance to schools and non-profit organizations that want to invest in students but have little to no funds. So by partnering with Growing Leaders, you help bring leadership development to students in at-risk schools and developing nations.

Matt Ward, our Partner Relations Coordinator, is available to answer questions and provide more information. He can be reached at 678-367-4189 or by email at matt@growingleaders.com.



*“No one teaches leadership better than Tim Elmore. [**Habitudes**] is a must read.”*

-John C. Maxwell,
New York Times Bestselling Author of
The 21 Irrefutable Laws of Leadership

“Tim Elmore is the most effective communicator I have ever known. Using compelling images and stories, Elmore offers simple yet profound wisdom for all of us with messages that we need to convey to others.”

-Mary Gerardy,
Dean, Wake Forest University

About Tim Elmore



Dr. Tim Elmore is the Founder and President of Growing Leaders, a non-profit organization, created to develop emerging leaders. He and his team are equipping students and recent college graduates across the US and overseas to think and act like authentic, servant leaders.

Since founding Growing Leaders, Elmore has spoken to more than a quarter of a million students, faculty, and business leaders on hundreds of campuses across the country.

Additionally, Tim's expertise on the emerging generation and generational diversity in the workplace has led to media coverage in *The Huffington Post*, *The Wall Street Journal*, *Forbes.com*, and *The Washington Post*. He has also appeared on CNN's *Headline News*, as well as *Fox and Friends*, to discuss *Generation iY*.

Dr. Elmore has written more than 25 books, including the best-selling *Habitudes®: Images that Form Leadership Habits and Attitudes*, *Generation iY: Our Last Chance to Save Their Future*, and his latest book *Artificial Maturity: Helping Kids Meet the Challenge of Becoming Authentic Adults*.