INFORMAL LEARNING EXPERIENCES:
A Differentiated Instructional Approach to a Well-Rounded Education in the United States

BACKGROUND
There is a crisis in America. Students are not receiving the type of education that will prepare them for the global economy. Fortunately, the reauthorization of the elementary and secondary education act has given school districts the opportunity to directly address this crisis and to join with other organizations to provide students with a well-rounded education. The Every Student Succeeds Act (ESSA) highlights the importance of equal opportunity for all students, including education in the Arts, Humanities, Sciences, Social Sciences, English and Mathematics. Added to the ESSA’s well-rounded education definition were writing, engineering, music, health, technology, computer sciences, career and technical education and physical education. Title 1 of ESSA includes a requirement that all districts provide “well-rounded education activities,” such as those offered by Destination Imagination.

The U.S. Department of Education (2016) highlights that it is in America’s interest to advance access to higher education for low-income students and to harness the potential of every person so they may thrive in today’s global economy. The report further stated, “To enable more low-income students to enroll in and complete college with high-quality degrees, everyone will need to do their part: students, institutions, school districts and communities and organizations, alongside states, accrediting agencies, and the federal government.” In a 2015 compendium report by the U.S. Department of Education, the agency put this situation into perspective:

In October 2012, approximately 2.6 million 16-through 24-year-olds were not enrolled in high school and had not earned a high school diploma or alternative credential...In a comparison of those who drop out of high school and those who complete high school, the average high school dropout costs the economy approximately $250,000 over his or her lifetime in terms of lower tax contributions, higher reliance on Medicaid and Medicare, higher rates of criminal activity, and higher reliance on welfare.
Dr. John B. King, Jr., Acting U.S. Secretary of Education, recently stated, “If you look at the achievement gaps of African-American and Latino students, they are 30 to 40 points depending on the subject and grade. Unfortunately, we are not where we need to be in terms of providing excellent educational opportunities for all students regardless of race and income.”

This information undeniably casts a bright light on the importance of providing underserved students an opportunity to excel; however, we also need to take into account that today’s students are our new digital generation. Generation Z—children born during 1995 and after—are very different from their predecessor Millennials. They are being raised in a digital fabric that is hyper-connected to objects, things and people. Their lives have been impacted by terrorism, economic recession, and technology. These students are learning to be self-reliant and a large percentage of them would like to become entrepreneurs turning their hobbies into businesses. Access to streaming education is preferred over traditional education, as these students are online as much as ten hours a day (Stark, Noel & McFarland, 2015).

Therefore, to provide students with the 21st century skills and authentic STEAM (science, technology, engineering, arts and mathematics) engagements they will need to succeed, informal learning experiences must be relevant and cater to Gen Z behaviors. Destination Imagination (DI) is a K-20 organization that has been using differentiated instruction to provide a well-rounded education since its inception. To date, more than two million students from across the U.S. and 40 countries have participated.

A SOLUTION TO THE CRISIS: USE INFORMAL LEARNING EXPERIENCES TO INSPIRE AND ENGAGE STUDENTS

The critical work of Destination Imagination to advance student outcomes is based upon learning theory and years of research from around the world. Writing, presenting, science, applied mathematics, engineering, music, health, technology, computer science, career and technical education and physical education are all educational attributes that our children need to compete and thrive in our current and future workforce. DI fosters these learning opportunities in each informal learning experience. These experiences are meant to engage and inspire students to become life-long learners and to connect them with disruptive trends that are forever changing the current status quo. These experiences expand students’ curiosity, courage and creativity, and prepare them for higher education, technical schools, and entrepreneurial ventures. Each learning experience gives students the opportunity to learn and practice the creative process from imagination to innovation.

The Partnership for 21st Century Learning has a framework that lists six skills students will need to be successful in our emerging global economy:

- Information and communication skills
- Creative thinking, complex problem solving, and critical thinking skills
- Interpersonal and self-direction skills
- Global awareness and cross-cultural collaboration skills
- Financial, economic and business literacy
- Civic literacy

Not mentioned in the skills above is a creative imagination. Creative imagination is a thought process which involves divergent and convergent thinking relating to a problem, need, motive, or desire, and a person’s creative imagination can be enhanced by context, thinking tools, and experience. A creative imagination is reflective and attentive, and manifested by taking action toward the realization of a creative idea. Lev Vygotsky referred to imagination as an “extremely complex process.” Neuroscience research has found that the strength of neural impulses actively transforms thinking and focus. These stronger impulses can lead students to persevere and to take educated risks. An example of this type of behavior would be Arthur Fry and Spencer Silver. Fry, an engineer with 3M, participated in his church’s choir where he would routinely place pieces of paper in his hymnal to provide easy access to selected hymns. As you might imagine, he was frustrated when these place holders would routinely fall out of his hymn book. Fry happened to attend a seminar led by Silver, another colleague with 3M. Silver had been working with various types of adhesives and had developed a version that could be used to temporarily bond substances together but had not found a market strategy for his invention. Fry’s imagination put his hymnal place holders and this new adhesive together to develop Post-It® notes and the rest is history.

Like Fry and Silver, giving students the informal learning experience that invokes the use of imagination to learn and apply the creative process from imagination to innovation is necessary to gain a well-rounded education. For students
to become creative “imagineers,” educators should use experience learning to engage students to become more imaginative, mindful, empathetic, and efficacious. If students practice problem finding, possibility thinking, and proper habits of mind, they will become more open to thinking creatively. Vygotsky surmised that creation is “always” based on lack of adaptation, which gives rise to needs, motives, and desires. The presence of needs and desires (John Dewey referred to this as disruption) thus triggers the working of the creative imagination. The outcome of creative imagination is a thought process which guides actions and activities toward resolution.

A creative imagination couples the environment, previous experience, and possibility thinking together in a connectionist or information processing strategy. John Dewey suggested that enhanced cognitive ability was gained through an inquiry process beginning with disruption and uncertainty and continuing with problem thinking, development of a working hypothesis, reasoning, testing the hypothesis in action, concept formation, and ending with problem resolution and action. Without the type of training that DI provides, students are not challenged to remain creative and lose their ability to think divergently and to look for novelty. For example, when you ask people for uses of a brick, their typical first responses are practical responses. It is only when you develop a person’s capacity for creative thinking that you receive imaginative or novel responses. It is this type of thinking that leads to new combinations and ways of looking at a problem or opportunity. The DI learning experiences enable students to maintain and expand their creative imaginations. As students experienced this creative process more and more, they begin to develop creative intuition.

If our goal as educators is to develop a creatively skilled child, then differentiated instruction that fosters imagination, emotional intensity, courage and curiosity should be added to the curriculum. Our world is becoming increasingly complex, and therefore, the need to teach students how to think and how to use their creative juices to address change must be a priority for our society. Teaching creative imagination should be a key component of 21st century learning.

Can the United States afford not to prepare our future workforce with the skills needed to innovate and to face change? As VanGundy (1987) noted in Organizational Creativity and Innovation, “organizational growth and survival can be tied directly to an organization’s ability to produce (or adopt) and implement new services, products, and processes.” We are at a crossroad and we must recognize that the actions society takes next will impact productivity and innovation for generations to come. We need to immediately refocus our attention toward developing a well-rounded education to see innovation in the 21st century. Unfortunately, innovation cannot be wished into existence; therefore, informal learning experiences need to become a key component of ESSA implementation.

Classroom instruction generally focuses on content transference and not on using metacognitive strategies to teach students how they process information and learn. Accordingly, we have a huge strategic hole in meeting the needs of our future workforce. This is a hole that informal learning experiences can fill. The thinking skills needed to analyze, classify, organize, summarize and discern media are not being taught as an integral component of core curriculum. Imagine students experiencing Socratic understanding and the ability to apply the creative process from imagination to innovation.
For this reason, DI is seeking to partner with schools and school districts to pursue ESSA initiatives and to differentiate their curriculum with informal learning experiences. DI annually produces new challenge-based learning experiences that teach students to face challenges with optimism, confidence, and a sustained commitment to find the best solution. Each experience is about the process that leads to higher-order thinking. These experiences build emotional intelligence and enable students to have a positive self-concept. Referred to as the New Basics of Education in the early 80s and now as 21st century skills, the DI educational experience has enabled nearly two million students globally to value their imaginative capabilities, learn the complex and collaborative problem solving process, work productively in teams, and to understand the value of sustained commitment to a solution. Our curriculum is organized around real experiences, teamwork, and divergent and convergent thought processes. We focus on instruction that promotes complex thinking and the “growth” of the brain. Success stories abound from alumni who have attributed their life successes to their DI experience.

A recent IBM survey found that chief executives viewed creativity as the key ingredient for future success. Catmull (2014) stated, “Here’s what we all know, deep down, even though we might wish it weren’t true: Change is going to happen, whether we like it or not. Some people see random, unforeseen events as something to fear. I am not one of those people. To my mind, randomness is not just inevitable; it is part of the beauty of life. Acknowledging it and appreciating it helps us respond constructively when we are surprised. Fear makes people reach for certainty and stability, neither of which guarantee the safety they imply. I take a different approach. Rather than fear randomness, I believe we can make choices to see it for what it is and to let it work for us. The unpredictable is the ground on which creativity occurs.” Therefore, distress tolerance, a creative imagination, curiosity, courage and knowledge of the creative process should be included in providing students with a well-rounded education.

Our current and future workforce needs employees who are constantly looking for the better way, innovative problem solvers, and who have the experience of working on creative projects. If ESSA is to make an impact on underserved students and on enabling all Gen Z students to be prepared for the global economy, then DI’s informal learning experiences should be a key component in each child’s education.

ADDITIONAL RESEARCH SOURCES AND REFERENCES:


