

February 2014

## STEAM Inspired by Insight

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### Recommended Citation

Vizcarra, Diana (2014) "STEAM Inspired by Insight," *The STEAM Journal*: Vol. 1: Iss. 2, Article 26. DOI: 10.5642/steam.20140102.26

Available at: <https://scholarship.claremont.edu/steam/vol1/iss2/26>

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STEAM is a bi-annual journal published by the Claremont Colleges Library | ISSN 2327-2074 | <http://scholarship.claremont.edu/steam>

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## STEAM Inspired by Insight

### Abstract

Innovators of the 21st century might come from unexpected places. Visual impairment is no barrier when technology and creativity intersect. The world needs blind innovators! The blind input data without visual association and download blueprints of their surroundings to format a mental database. They categorize patterns, textures, and conditions to perceive their location in space. They are able to capture the beauty of the world through poetry and predict future trends through past experience – all without visual access to the physical world they inhabit.

This writing was possible because of collaboration with Angie Menjivar.

### Keywords

visual impairment, blindness, ZoomText, innovation

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## **STEAM Inspired by Insight**

*Diana Vizcarra*

Who are the innovators of the new era? Coexistence today is tomorrow's creative promise. Most of my epiphanies come to me in mental filmstrips – insights of what is to come – am I crazy? No, I am the future. Systematic studying of the physical realm requires the counterpart of ideas born from introspection. The world needs blind innovators!

Blind innovators bring the unseen into existence, transforming ideas into practical application. Much understanding is found when using other senses – much of STEAM is intuitive. The blind input data without visual association and download blueprints of their surroundings to format a mental database. They categorize patterns, textures, and conditions to perceive their location in space. They are able to capture the beauty of the world through poetry and predict future trends through past experience – all without visual access to the physical world they inhabit. Have you ever had a blind person navigate you around town? You would be mesmerized.

It can be dangerous if intangibilities like insight go unappreciated; the greatest of minds could easily go undiscovered. I admire the blind simply for persevering. Chris Downey, a blind man who merges art and science as an architect, says it best: “The city needs us...the blind should be taken as the prototypical city dwellers when imagining the wonderful cities... If you design a city with the blind in mind, sidewalks would be predictable and generous...cars? Who needs them! ...If you design a city with the blind in mind, you design a city with a robust, accessible, well-connected mass transit system...In designing a city for the blind, I hope you realize it would be a more inclusive, more equitable, more just city for all...it sounds like a pretty cool city, whether your blind, sighted or you just haven't found yours yet.”

Me? I'm legally blind, once sighted. Visualize with me as you step into my dark world of bright moving pictures.

### **21st Century**

Technology and its increasing evolution have made life a bit easier for me. I have acquired a variety of assistive tools to work and write freely without needing human aid. Working on my

own brings enormous satisfaction - it's these tastes of independence which fulfill me. Magnifying devices and software like ZoomText enlarge letters and read text so I can organize my emails and calendar, catch up on the latest news, even post Facebook updates! There is no reason why the visually impaired should be left out. We are part of this technological revolution, helping to pave the road for

future developments. My needs inspire innovation. I find myself teaching my parents about technology and its uses: an example of the unsighted teaching the sighted. There are over 30 million visually impaired



Photo by Paul Rodriguez, the Orange County Register

people in the world and those of us born in developed countries are setting new standards.

### **The Art of Language**

What is more fascinating than an inspired mind creatively expressing itself? My days are filled with enlarged letters and blurry visuals. My external reality is an abstract painting. I connect the dots to bring to life what it is my eyes see. Fact: the visual cortex reassigns other senses like touch and sound to depict a representation of external environments. For me, no color is of one shade, no human is of one type, no sight is of one dimension. There is an overabundance of beauty in thoughts and language arts – I create additional letters, colors and feelings to fully express myself. I am the artist and my life is my working masterpiece. The medium of words is my communion with society. I follow William Shakespeare in his poetic footsteps: “To be, or not to be, that is the question...” I choose to be and engineer my future with my given talents!

## **Tactile Mathematics: I Count!**

It surprises me how many times people underestimate my capabilities – I lost my sight, not my brain! Mathematics is one of the most difficult subjects across the board, visually impaired or not. Its complexity and multidimensional configurations are easier understood when seen. Mathematic influence is in everything we do; if I touch one side of an object it changes the opposite side, dualistic cycle I am way too familiar with. I am able to mentally perceive layouts of floor plans by counting my steps, sliding my fingers across the walls, and asking questions about the area. With enough practice, I can calculate geometric shapes and their properties. Blind people survive on meticulous calculations of surrounding objects. I do not use recipes or measuring cups when cooking, it is intuitive sensing and timing. I envision and create through my sense of touch. Next time you find yourself in the dark, count your steps, touch your surroundings, and experience tactile perception.

In darkness, I'm closer to my thoughts so I guard them as they become my experiences. I am living to become who I desire to be and along the way, I want to create change in society's perception of blindness. We all count!

## **Never Say “No, I Can’t”**

Since I lost my vision five years ago at the age of 23, I have been told “no” more times than "yes." I'm no stranger to challenge or competition; even if I bleed along the way, at least I tried. No one believed when I said I would sell real estate and in five years, I have sold over 100 homes. I said I wanted to rollerblade and I hit the streets.

The mind is full of potential; brilliance is found through repetition, practice, and belief in oneself. Anything is possible when you set your mind to it and open your all-seeing mind's eye. Today, the science of my life as a blind woman generously fuels my creative passion as an artist. I see more clearly now than ever before.