



“Kids don’t vote, and parents often don’t have the educations they deserve and don’t know how to change things, so the caretaking of our future is left to the teachers and administrators.” – USA

Dawn Fregosa

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Dawn Fregosa’s journey to becoming an educator 11 years ago started non-traditionally, with stints in not-for-profit management, as an entrepreneur and as a database manager, but she always knew that technology was going to be central to her career. When she ultimately became a teacher through [Teach for America](#), Fregosa quickly realized that not every classroom is optimal for learning. “When we were placed at our first assignments, we were lucky to even have one computer in the classrooms of the urban schools we were placed in,” says Fregosa. “I was shocked by the human indignity we expect our students to learn in, the bathrooms, the facilities, the class sizes, kids going hungry, the lack of current and relevant technology.” That experience helped to shape Fregosa’s approach to education, and her views on creating equity for students in a decidedly inequitable world.

Can you describe how your professional achievements have advanced innovation in education?

What I experienced in Teach for America became my battle cry because it was something I could change. As I evolved as an instructor, I was passionate about getting access in my classroom to high-quality technology to enhance what I teach. I nagged and begged professional and personal

contacts until I was able to secure laptops, printers with color toner, and a projector. I give kids a haven where they can be successful with no excuses. I took my love of adventure and hands-on play to teaching, and I do about 36 hands-on labs and simulations in my biology classes and over 20 in my business and entrepreneurship class. I also lead a group of students annually to explore marine biology along the coast of Florida for spring break each year, a trip which has changed attitudes and molded lives.

What has changed as a result of your efforts?

My students are competent to compete in college and they believe they can. They are taught to try new things in a safe environment where failure is just an obstacle, not a judgment. They believe in themselves, and are able to share their educational highlights with students from schools and communities that offered greater privileges. I have inspired students to start their own businesses, and our school has more students who are going into biological sciences after graduation than any other science content.

Through the help of my husband, parents, friends, my administration and other amazing donors, I have created a cave of relevance in my classroom, with state-of-the-art laptops, pocket technology like iPods and iPads, digital microscopes and digital probe equipment. Using that type of technology makes science 'real' and business relevant and modern. I have taught kids that being computer literate opens new worlds in both content areas. I have changed, too. I run my classes like a small business, with test scores and content mastery being measurements of profit. I have routines and automation and I am inspired to continue my own learning and implementation of new curriculum enhancements, new inquiry experiments, new ideas and new technology. My students inspire me to also stay state-of-the-art! _

How can others facing similar challenges implement what you've learned through your work?

Teachers face many obstacles, the foremost of which is exhaustion. Utilizing and not being afraid of technology makes us more effective and keeps kids engaged, meaning fewer discipline issues, and more focus on the content you are trying to coach kids to understand and claim. I use Google sites to share content, for extra credit opportunities, and even for my business students to have a place to accept orders for their products. I learned that a little bit of time dedicated to making your own knowledge greater, and not being afraid to try new technologies, will pay off majorly when implementing in the classroom.

Allow yourself to be human — the students respect that and are more likely to connect with you. Don't be afraid to ask for help, for what you need, and if someone says no, find another person to ask. Find balance with building new things for your content, and perfecting what you do well.

How have you applied technology in innovative ways to support your work?

I utilize [Discovery Education](#) to accent my classroom content; their video database for educators is worth the membership fee hands-down. I have an LCD projector, a document camera and a digital microscope that I have had donated to my classroom. [Donors Choose](#) has been

instrumental in helping me acquire 12 laptops with full Microsoft Office suites for my students. Every class I teach has a PowerPoint slide show that accompanies the content, with embedded videos, photos and student feedback, so even when a student is absent, they have access to the direct instruction they missed. I have an iPad that I can use to do grading as I circulate through my classroom, as well as putting small groups of students at learning stations where they can use the variety of technology in my classroom to access content.

I worked hard, and know my room and resources are an anomaly in urban Oakland, but my students deserve equity and I want them to have all the opportunities that students of privilege have. Overall I look at new technology when it is released as “how can I make that work for my students and make my job easier — and who do I know that can help me acquire it?” I show no fear. I also believe in getting involved in beta testing of software and educational surveys around technology because I use it and if I can help make it better for my use, even better.

What is the biggest obstacle you have had to overcome to ensure students are receiving a quality education?

Time, resources and self-esteem. Kids who have gone to other inner-city schools in Oakland prior to coming to Lighthouse have been beaten down. They are used to tagging (graffiti) and profanities on their walls, horrid food, no access to computers. And if they do have access to computers, the technology doesn't work, or is archaic. No soap or toilet paper, and in some schools, no stalls on the bathroom doors. The class sizes are huge: 30-40 kids per class, and the teachers have no budgets for resources and no motivation to make it better. The students come to me hating school, and thinking they are worthless because their skills aren't there due to lack of exposure to a better life. Teaching kids that, when treated with mutual respect and dignity, all can be healed, and having the resources and support of an administration, along with curriculum programs like [NFTE](#) (Network for Teaching Entrepreneurship) that know the reality of our needs, allows me to work my magic and allows my students to breach that socio-economic discrepancy. In regards to time, I have none, and so many ideas and dreams. I have laughingly said if I ever win the lottery, I will keep teaching, but have a full-time administrative assistant and a full-time lab assistant/teaching assistant, and then I might be able to keep up with my to-do list.

What is your region doing right to support education?

Charter schools such as mine are showing that education can be changed in urban areas, and that going back to small school models is more successful. Allowing charters in the San Francisco Bay Area has shown huge differences in academic growth and how we maintain human dignity in K-12 education — serving the whole child. The Bay Area is blessed with Biotech and Silicon Valley, and donors who know that we are in the trenches and that there is a huge gap between the students with money and without. We continue to toot our horn to make those movers and shakers and money-makers pay attention.

Being innovative and going into the businesses to network, especially to expose my business/entrepreneurship students, allows those community members to show off their success, and talk to the business owners and innovators of tomorrow — my students. Finding and asking for

discounts for educators at our local museums, as well as grants for transportation so I can take my kids out of their community and expose them to the greater world around them through fieldwork and internships and longer trips is invaluable, and changes them. That there are so many people in our region who still support our local needs, instead of focusing just on charitable groups outside of the community, is a blessing.

What conditions must change to better support education?

Public schools must be fully funded, period. Continued cuts to education take away services that support success within the classroom. It leaves teachers to deal with counseling issues without the dignity of confidentiality, especially when situations blow up in the classroom. It makes for class sizes above 30, so no time for teachers to connect and really coach and guide kids who need it. Teachers are overwhelmed with work, so their time to create and inspire is non-existent.

Without basic budget needs, we have kids using archaic 15-year old computers that take 30 minutes to boot up during a 52-minute class. It prevents having fresh fruit available to all kids who are hungry regardless of their free/reduced cost lunch status. It disallows experiments and simulations in science labs, and negates all fieldwork. There is no money for soap in the bathrooms at most schools, and no funding for janitorial services to keep the schools maintained like a workplace where adults would choose to go to work.

Kids don't vote, and parents often don't have the educations they deserve and don't know how to change these things, so the caretaking of our future is left to the teachers and administrators. We need to make sure we are allotting resources to enable our future generations' success. Teachers need help. They need teaching assistants, they need time to think and create, and they need to not work 50 hours at school with 20 hours of grading. We need time to collaborate and be professionals so when we are with students, we are at the top of our game.

What is the best opportunity for innovation in education?

Pocket technology, laptops getting less expensive and social networking. Kids are so smart and into using technology, not finding ways to tap their knowledge in the classroom is making our education passé and out of date. I would love to see Microsoft connect with teachers to use the Xbox technology of Kinect to make learning interactive, and write correlated 'games' to our education standards that would not only engage kids and excite them but let them out of their seats to compete for interacting with the curriculum.

What advice would you give a new teacher (or to anyone wanting to make a difference in education)?

Keep learning, find the technology you love and use it with your students. Never give up and never surrender but be present and real with your students. Remember what made you happy in your learning and double it in your classroom. Trust your students; show them human dignity and respect, and persistence in your own teaching will transfer to them. Laugh often in the class (not at them but with them), and they, too, will think learning is fun. Let your students teach you — their music, their movies, their current trends — and they will allow you to teach them.

What educational “trend” do you think is helping students?

Kids bringing pocket technology (their smart phones), and building enough respect in the classroom to use them for good — not texting or distractions like games and videos. Being able to issue standardized tests online, so that our time is spent less on grading and more on planning and instruction. Teacher incentives for above-and-beyond work, as well as more than just cost-of-living raises, with merit pay for measureable success. Giving teachers help from teachers in training with administrative tasks, grading and assessment, to free up their time to work with the students who need extra help, or the gifted students who deserve and are ready for more challenges.

Is there a trend that is getting in the way of learning?

Large classes due to budget cuts, cutting electives like my NFTE class because money has to be dedicated to content courses. Tenure of teachers not performing.

If you could give one educational tool to every child in the world, what would it be? Why?

A durable, waterproof laptop with Microsoft Office and consistent Internet access. If all kids had access to each other, to collaborating and communication with the world community, our global perspectives, our innovations, and our intelligence as a species would grow exponentially. Giving kids equity through technology would allow ideas to become reality. We could work towards equity and peaceful change for all humankind.



About Dawn Whitney Fregosa

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Dawn Fregosa is a high school science teacher at [Lighthouse Community Charter School](#), and has 20 years of experience working with high school students. Before joining the faculty at Lighthouse, Dawn taught high school English as well as ESL (English as a Second Language). She also instructs the National Foundation for Teaching Entrepreneurship Class during her spare time and was named a [2012 Global Enterprising Educator of the Year](#) by the NFTE. Prior to becoming an educator, Fregosa pursued a career as a marketing and management consultant for small businesses. She became a teacher through Teach for America's Tech-2-Teachers program.

Birthplace: Lafayette, Indiana

Current residence: San Leandro, California

Education: University of Dayton, Dayton, Ohio (undergraduate); Credentials in English and Biology through Teach for America, San Jose State, San Jose, California

Websites I check every day: Donors Choose, Discovery Education, YouTube(constantly looking for fun and educational videos that accent my curriculum in both classes),Facebook, Spotify (have a classroom play list)

Person who inspires me most: My Mom and Dad, who always worked full-time and volunteered with every team, organization and activity my brother and I participated in. And my son, who I work hard to try to mold as well as make the world a little better for him to grow up into.

Favorite childhood memory: I grew up in rural Indiana, with corn fields on all three sides of our home, and I remember being told to go outside and play till it got dark. It was wonderful to go to the patches in the corn field and have pretend businesses, fantasy mansions and forts. We played school and hide and seek. We drank out of the garden hose, got dirty, and brought home bugs we had caught as well as tadpoles and frogs and other little critters. I always seemed to come home with a pocket of pretty rocks or odd-shaped natural objects as well as bruises and scrapes that mom would clean and kiss and tell us to "deal with it." I remember catching fireflies and my parents allowing all sorts of "outdoor pets" as long as we took care of them, so there was a pet duck that explored with me, rabbits, guinea pigs and of course dogs, usually barking beagles, who accompanied my outdoor adventures with my brother. The allowance to play and be self-entertained in nature, as well as always being there – not to entertain or enable – but to dust me off, and send me back on my way, is one of the things that has made me a strong and self-sufficient teacher and educational community collaborator.

Next travel destination (work or pleasure): Will head to my "happy place" Key West, Florida this summer, so I can unplug my brain from work; and hoping to go to Italy with my husband in the next few years... however Oakland Zoo is my 20-month-old son's "happy place" and we have a date to head there next weekend!

When was the last time you laughed? Why? I laugh all the time. My husband and I are best friends and constantly entertain each other. I also truly love teaching, especially my high school students, in part, because I do laugh through the day. My most recent adventure of being a mom to a 20-month-old, crazy-head boy not only keeps me on my toes, but also has me doubled with peals of laughter at his antics. Laughter keeps me young, so I wake up laughing and go to sleep laughing.

Favorite book: [A Tree Grows In Brooklyn](#) by Betty Smith, [The Hobbit](#) by J.R.R. Tolkien

Favorite music: Love reggae, hip hop and was a rock medic for the Grateful Dead in college

Your favorite quotes or motto: You can do it; "Never Give Up, Never Surrender" – *Galaxy Quest*; "It is not the strongest of the species that survives, nor the most intelligent that survives.

It is the one that is the most adaptable to change.”- *Charles Darwin*; “I’m blown away by your ability to show up through everything that’s gone on.”- *Keanu Reeves in Hardball*

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