

The Alpine High School Update for March 2010

By Bill Weaver, AHSCC Chairman

In today's world we understand that all individuals usually need a career to be self-sufficient and productive citizens. It's now a high school's mandate to both train and teach all students through programs that pair technical training with higher-order thinking skills, and/or college preparation.

Students in auto mechanics classes once learned how to fix a car. My dad was a mechanic who could fix anything. Modern mechanics must have far more technical know-how than was needed by my Dad. Today's mechanics must be computer literate, software literate, and be highly trained in the non-mechanical operations of our modern hi-tech equipment and automobiles. In mechanical technology classes of today, practical skills must be taught alongside complex and critical thought processes, with the application of complex math concepts. The use of computers for analysis of mechanical systems control center malfunctions, or electrical breakdown are examples.

Drafting and design courses have now become learning about CAD (computer-assisted design) hardware and software applications, with skill sets requiring geometry, physics, and strength of materials, each a career or college prep science or higher math related discipline. These are a few of many examples of how high schools today need drastic change, and reform.

Further complicating secondary education; high schools now are bigger and more impersonal than ever. In the Grossmont Union High School District (GUHSD) the vast majority of comprehensive high schools have enrollments exceeding 2,000 and growing as new immigrants are choosing to live here. Several GUHSD high schools are now approaching 3,000 students. Adequately educating our teenagers of today is an increasingly daunting task.

This is a more demanding and technical world, and our area's high schools are dominated by large and impersonal institutions which deter learning. We ask, "Why are kids dropping out, and not succeeding?" The reason is that we aren't giving them what they need to succeed. We now know of many differing learning styles and learning modalities. Modalities refer to how students use their senses in the learning process. We commonly consider four modalities in learning: visual (seeing), auditory (hearing), kinesthetic (moving), and tactile (touching). As you might guess, the more senses or modalities we can activate, the more learning will take place.

The great majority of students learn using all four modalities, but we all have preferences that should be capitalized on, as well as weaker leanings that can be enhanced. Our classrooms should provide an environment that is conducive to all four. Traditional classrooms rely heavily on primarily auditory stimulation with lecture and discussions. Considering the developmental characteristics of young students, we know that visual, kinesthetic, and tactile modalities play strong roles in learning. We have all but ignored these multiple modalities in HS classrooms to date.

Another problem existing today in most of our schools is that students and teachers are isolated, mostly because of the sheer size of the learning community at each high school. At GUHSD smaller learning communities do not exist, large institutional learning is what we have. Also, per the many conversations I've shared with students and teachers, there is a widespread apathy, and feelings of

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alienation and isolation from peers. There is very little effective learning community teacher collaboration, and mentor-assisted learning is negligible.

Our school districts, our schools, student learning, our communities, and businesses are all hurt because of this. The fallout for students is that they learn in isolation, sometimes with feelings of desperation, or depression, and this translates into a lack of achievement. This is not a swipe at the GUHSD. It is a reality, a fact that many at the GUHSD recognize. They recognize a need for smaller learning communities (SLCs) at every GUHSD high school.

Reforming these education pitfalls is essential. Our high schools should be divided into several smaller instructional houses, pods, or communities. They still must accommodate the existing student populations (averages well over 2,000 at GUHSD high schools). Alpine HS is being planned to provide SLCs in the name of learning academies, in units of 400 students each.

Indeed, research confirms that SLCs create better learning environments for students that are more personal in nature, more focused on their futures, allowing higher achievement, and academic success! How do we go about instituting changes in schools, and designing a new high school to handle modern educational, and technological needs?

“What should 21st century, state-of-the-art, schools look like?” How do we best create small school atmospheres, which instill pride, and emphasize excitement about learning and attending?

Along with SLCs, Project based learning (PBL) is an important needed element that will engage more learning modalities. Project Based Learning is an instructional approach to learning. It creates activities that engage student interest and motivation. Activities are designed to answer a question, or solve a problem, and reflect the types of learning and work people do outside the classroom. Project Based Learning is synonymous with learning in depth. A well-designed project provokes students to encounter (and struggle with) the central concepts and principles of each learning discipline.

Combining project based learning (PBL) and small learning communities (SLC's) will help create an environment for achievement, learning, and bolster a student's self-motivation. A rigorous curriculum is necessary as well. Alpine is the perfect place for instilling this new standard in school reform success. A project based small learning community high school with a science, technology, engineering, math (STEM) and also a strong liberal arts curriculum.

To enact this kind of school reform within the GUHSD, and at the new Alpine HS, our vision must remain strong. We should plan, and critically think, very far into the future. We cannot shortchange long term goals and needs, for short term reasons. The new Alpine High School should be a remarkable accomplishment. A 21st century ready, state-of-the-art, and exemplary new school. More info can be found at www.AHSCC.com.

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The information in the table below is available in Encyclopedia Britannica under learning modalities, and in Wikipedia and at PBS.Org under learning styles and modalities.

Characteristics of auditory, visual, kinesthetic, and tactile learners

(The four common modalities of learning, and learner characteristics)

Auditory learners tend to...	<ul style="list-style-type: none">✓ Enjoy reading and being read to.✓ Be able to verbally explain concepts and scenarios.✓ Like to listen to music, and hum to themselves.✓ Enjoy both talking and listening,
Visual learners tend to...	<ul style="list-style-type: none">✓ Have good spelling, note taking, and organizational skills.✓ Notice details and prefer neatness.✓ Learn more if illustrations/charts accompany reading.✓ Prefer quiet, serene surroundings.
Kinesthetic learners tend to...	<ul style="list-style-type: none">✓ Be demonstrative, animated, and outgoing.✓ Enjoy physical movement and *manipulatives.✓ Be willing to try new things.✓ Be messy in habits and surroundings.
Tactile learners tend to...	<ul style="list-style-type: none">✓ Prefer *manipulatives when being introduced to a topic.✓ Literally translate events and phenomena.✓ Tolerate clutter.✓ Be artistic in nature.

*Any of various objects designed to be moved or arranged by hand as a means of developing motor skills or understanding abstractions, especially in mathematics. Further info on learning modalities, and multiple intelligences is obtainable at; <http://www.ldpride.net/learningstyles.MI.htm>

This table of learning modality characteristics was compiled by Bill Weaver

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