

LASER Supports Administrator’s Workshop Focuses on Science Instruction That Will Also Significantly Increase Reading and Writing Scores

By Jewel Brumley

Approximately 30 administrators from across the state attended one day training at the WSTA conference. Mike Klentschy was the speaker; the topic was Scaffolded-Guided Instruction in Science. The El Centro School District has dramatically increased student achievement in science, reading and writing by focusing on a systematic approach to the relationship between high quality materials and teacher professional development.

How El Centro School District is Like Washington Schools.

A little background on:

El Centro School District

- Poorest County in California
- Mean income of \$16, 322
- 30% unemployment
- 6,800 students
- 77% Free and reduced lunch
- 61% ELL
- 10% Migrant
- 81% Hispanic, 12% Caucasian
- 4% African-American, 3% Asian

Yakima School District

- Mean income in State \$49, 262
- Mean income \$29, 428
- 12 % unemployment
- 14,247 students
- 75% Free & reduced lunch
- 27% Transitional Bilingual
- 22% Migrant
- 61 % Hispanic, 32 % Caucasian
- 3 % African American, 3 % Native American

El Centro School District is located on the border between the United States and Mexico. One of the elementary schools has the playground fence right next to “The Fence” between the United States and Mexico. As an administrator from Yakima School District Mike’s comment that his district has a highly migrant population hit home. Then he further commented that he has exchanged students with Yakima School District. El Centro school district is like many districts in our state. Poverty, a migrant population and English language learners impact not only Eastern Washington school districts, but many Western Washington school districts also. The demographics of El Centro School District showed that concentrating on quality science materials and professional development can raise achievement scores in all areas with all students.

How Dr. Klentschy Focused Teachers on Science

Focus, focus, focus is the key to making increased student achievement possible. Mike Klentschy stated “Stay with things long enough to work...a minimum of two years with fidelity to make a difference...” is the key. El Centro School District focused the STC kits into one format. Four phases to each lesson:

- Focus question
- Prediction
- Claims and evidence
- Conclusion

Sounds simple and it is, but once again the key is that fidelity to the format and program are essential to having the intended curriculum, implemented curriculum and achieved curriculum align.

Research on why Klentschy was successful shows the importance of scaffolding, writing and speaking are important to learning content and making the connections to long term memory. Connecting writing has many benefits for all students especially students that are English Language Learners and are from poverty. Teachers need to reinforce academic language that may be lacking in disadvantaged students.

- It is important for teachers to build Academic Content Language and science and math conceptual knowledge at the same time they provide instruction in the skills of word recognition (relational/contextual)
- Expository genre is reinforced
- Use of precise language
- Language is connected to students' immediate experiences
- Enhancing writing conventions

Science notebooks connect the students' "strange new ideas with familiar old ideas." Notebooks are the best record of what was taught and what was learned. The effect of students talking and writing science is highlighted in the Nov/Dec issues of Science and Children in both 2004 and 2005 editions.

Critical components and criteria for lesson planning for scaffolded-guided instruction include:

- Question/Problem/Purpose
- Prediction/Hypothesis
- Planning
- Data/ Observations
- Claims and Evidence
- What have you learned/ Reflection
- Next step/New questions

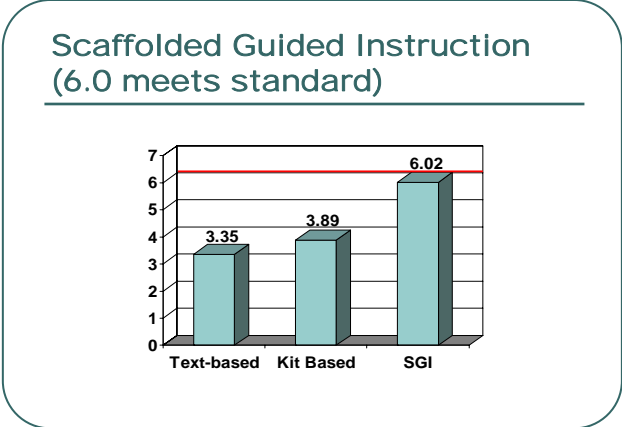
Dr. Klentschy did warn that you can not simply reduce teaching and learning to a check list, and that not all seven steps can be implemented in one 50 minute class time.

El Centro School District also faces some of the same challenges that we do in our Yakima School District elementary schools. Time is always an issue. Reading and math time are highly valued as un-interrupted teaching time. Science is often put on the back burner. By incorporating writing into science very intentionally teachers are given latitude to incorporate science writing to the writing time scheduled in the students' day. Claims and evidence are often written in T-chart or data tables. Teachers are given latitude to use writing time have students write complete well thought out paragraphs using their science data.

El Centro Results

Dr. Klentschy presented his districts science, reading and writing scores on their achievement tests. In every case when scaffolded-guided instruction was used achievement in all three areas

went up. By year two of the intense focus on science student achievement on these tests had gone from below standard to meeting standard. By year four, student achievement was well above standard.



Evidence from EI Centro

- Stanford Achievement Test Reading (4th)

CUM = 33

Years	LEP	EO
0	21	30
1	22	39
2	39	51
3	34	57
4	49	64

Evidence from EI Centro

- Stanford Achievement Test Reading (6th)

CUM = 40

Years	LEP	EO
0	23	38
1	28	42
2	34	46
3	35	56
4	51	69

Evidence from El Centro

- **District Writing Test (6th)**

CUM = 64%

● Years	% Pass	n
● 0	23	174
● 1	68	119
● 2	71	132
● 3	90	107
● 4	89	104

Administrators' reaction to the day long training was inspiring. On the ride home, Yakima administrators were talking about how to bring this back to their schools. Teaching science with scaffolded-guided instruction would not only raise science scores, but increase reading and writing scores was all of a sudden a reality that could be accomplished in any school. Challenging demographics was not a issue. Mike Klentschy had shown results in El Centro and also had show that these results would also be accomplished in South Carolina, Florida, and Wisconsin. Yes, Washington can also increase student achievement in science, reading and writing with our science kits and focused professional development.

The information from this training was presented to Yakima School District's P-12 administrator team and was well received. Yakima School District is moving forward on this and is going to use scaffolded-guided instruction as training for lesson planning in science. A training video is currently being produced that shows how the lesson plan and writing is occurring in our own schools with our own students and teachers. The film will feature a 2nd grader class writing a focus question and a prediction, a 5th grader class writing plans and data collection, and a 8th grader class writing claims and evidence to write conclusions in our WASL format.

Many thanks go to LASER for sponsoring this event and ESD 105 for providing transportation to the event from Yakima.