New center at Valley City State dedicated to STEM teaching
Goal is to increase number of students who seek careers related to science, technology, engineering and mathematics

By: Amy Dalrymple, INFORUM

VALLEY CITY, N.D. – Fifth- and sixth-graders here recently submitted their top job choices for a career fair.

The top 25 responses ranged from actor to hairdresser to snowboarder.

Very few involved science and math.

Don Mugan, director of a new center at Valley City State University, uses that list to show why schools need to change how they teach science, technology, engineering and math, also known as STEM.

Many students eliminate careers in those fields by the time they finish elementary school, Mugan said.

“Kids are thoroughly turned off by the abstract way math and science are presented,” he said. “Because America is slipping so badly in a lot of areas, we need to change the way we deliver those subjects.”

VCSU has established the Great Plains STEM Education Center to train K-12 teachers how to integrate science, technology, engineering and math and make it relevant to students.

The center’s goal is to increase the number of North Dakota students who pursue STEM-related careers.

Sen. Byron Dorgan, D-N.D., helped secure $1.13 million in federal funding for initiatives at the new VCSU center.

“This is a long-term strategy to increase North Dakota’s high-tech work force to support the growing employment opportunities in the Red River Valley Research Corridor,” Dorgan said in a statement.

Mugan is quick to point out that the Valley City students surveyed are not unique – they represent what happens at schools everywhere.
“It’s not Valley City; it’s America,” Mugan said.

Science and math have traditionally been taught as separate subjects, and engineering and technology have been electives, Mugan said.

The new way of teaching emphasizes hands-on learning and integrates the subjects around a practical theme, he said.

“If we want kids to get fired up, we have to connect with their lives, which our traditional model does not allow for,” Mugan said.

The center will offer workshops to teachers around the state, as well as serve future teachers and make connections with businesses.

“That’s the idea as we move forward, is to really become the center for the state and beyond,” said VCSU President Steve Shirley.

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