

RACTC Directors Report
November 4, 2015
Wayne Olson, Director

1. The first rotation of the high technology equipment took place. This equipment is rotated every six weeks and will again be rotated at the end of November. As a part of this I attended part of the Embroidery workshop held by GTI to better familiarize myself with the equipment. I also met with the instructors at these schools to get information about concerns and future direction. I met with the principals in these schools if they were available.
2. I attended a one day CTE Conference in Bismarck. This meeting is hosted by the CTE State Director and is a valuable opportunity to gather new information and to network with other Career Center Directors.
3. I attended the NDCEL Fall Conference in Bismarck. Hosted by the ND Council of Education Leaders, this conference is attended by all school administrators from across the state of ND and allows education leaders the opportunity to network and gather information about educational opportunities in ND and across the country.
4. The fall quarterly reimbursement payment has been received from NDCTE. Schools were issued their quarterly payments for Career and Tech Ed teachers that offer classes through the RACTC.
5. Member schools have been submitted bills for membership fees for RACTC Membership, Emerging Technologies Equipment Fee, and student usage for ITV classes.
6. The 2014-15 audit of the RACTC finances has been completed.
7. A meeting of the Health Careers Advisory Council has met to discuss the current Health Sciences program and also to discuss the future direction for this program.
8. Arrangements have been made with GTI to offer workshops to RACTC instructors for the following units: Bio-Chem, CNC Router and 3-D Printer.
9. Arrangements are being made for the Medical Explorers trip for Health Sciences students. This trip will include visits at NDSU and UND to explore their medical programs. This trip will take place November 12 – 14.

PHOTO BY NDAREC/LIZA KESSEL

Career and technical education (CTE) is increasingly accomplished by distance learning, over broadband Internet connections. **Lorie McCarthy**, lower right, registered nurse/Bismarck Career academy instructor, holds a medical careers class, with students (displayed on video monitor, clockwise beginning with largest panel), from Berthold, Garrison, Killdeer, and Stanley.

Connecting students with careers

BY MAXINE HERR

Schools offering career and technical education (CTE) programs are continually changing to meet the skill needs across the country. The programs combine core academics with practical applications and prepare students for college and careers.

Not every North Dakota school can afford to hire instructors to teach the long list of CTE options, so in lieu of a traditional classroom experience, many schools are tapping into modern technology. Online courses and the use of interactive cameras and monitors are allowing teachers and students to gather for classes even if they're miles apart.

"A lot of schools have been pretty creative in how they deliver some of these courses," says North Dakota's Department of Career and Technical Education Director Wayne Kutzer. "They can provide these opportunities to students that they wouldn't have had before."

About 1,200 students in North Dakota take a class from a neighboring school CTE course, according to Kutzer. Most schools have at least two rooms set up with interactive equipment to implement the program.

"Glen Ullin has an ag program that they put up on an ITV (interactive television) system. Then maybe Ashley students are taking it at the same time. They can see the teacher and interact," Kutzer said. "Online is different;

it is more on-demand and students can sit at a laptop in the library."

INTRODUCING A VIRTUAL REALITY

In the mid-1970s, the state opened five area career and technical centers (ACTC) which are still used today for students who can travel to the locations for classes. But as technology has advanced, another six ACTCs have emerged as "virtual centers" to share instruction over the Internet.

Currently, an instructor at Grafton High School, as part of the North Valley ACTC made up of six districts, teaches a welding course that is joined through ITV by students in Walhalla, Fordville-Lankin and Park River through interactive cameras and monitors. Through state grants, the remote schools obtained welding machines and additional tools to rotate among the schools.

Kutzer said the smaller schools cannot justify hiring a teacher for only a few students taking a course, so the virtual concept offers every student – regardless of school size – more opportunities. The boundaries are widening as well. Grafton's welding course has reached beyond its own region all the way to Crosby where



Left photo: **Wayne Kutzer**, Director, N.D. Department of Career and Technical Education, says distance/online classes have greatly expanded the availability of career-based classes typically offered in high schools. Right photo: Through distance learning/online links, Area Career and Technical Education directors **Wayne Olson**, left, and **Doug Vannurden** are linking knowledgeable professionals in a wide variety of disciplines with N.D. students.

school administration chose to use the interactive technology this year.

"It's a new venture that seems to be going well," Kutzer said. "Crosby's excited about having it for its five to six students there."

Kutzer explains that in most cases, particularly in courses like welding that pose dangers, the remote school would arrange for someone to monitor the class. However, he said all career and technical education courses go through three weeks of safety curriculum before they start any hands-on work.

STATE INCENTIVIZES PROGRAMS

The state offers several incentives for schools to implement CTE in an effort to provide all students equal access to courses. It reimburses a percentage of a teacher's salary for instructing a CTE course and the sending school receives additional reimbursement for each school that uses the course. As well, the state covers some costs at ACTCs. Schools do pay a tuition fee per student in addition to an annual membership fee to be a part of a regional ACTC, but the costs are minimal compared to paying teacher salaries and benefits.

"A lot of schools can't afford to have an ag teacher or a family and consumer sciences teacher, but we could offer those classes to a few students in a school and share that resource," says Hebron Superintendent Kevin Nelson. He started the first virtual health careers program eight years ago in southwestern North Dakota by hiring a nurse who taught a medical careers course while being recorded to benefit other area schools.

"To have these specialty classes and give students a more varied curriculum is huge," Nelson said.

In a similar strategy, Missouri River ACTC based in Mandan uses a Bismarck pilot as an aviation instructor.

"Yesterday, he flew a jet someplace, but while he's sitting there waiting for his people to come on their

return trip, he can be on the computer teaching his class, which is an awesome thing," Director Doug Vannurden said. "Students are sitting in Flasher in their library taking their class and going on their simulator program and flying."

The virtual program has also allowed rural schools to support full-time teachers for technical courses when they traditionally couldn't. Kutzer said a teacher may only teach four periods out of seven at his school, but can then teach over ITV during the remaining periods. Kutzer admits there are some timing issues since not all schools are on the same schedule, but they work to ensure the class still provides the necessary content to meet the course objectives.

ACQUIRING STATE-OF-THE-ART TECHNOLOGY

Statewide ACTCs share teaching staff, but sharing equipment also opens the door to more course offerings. Roughrider ACTC Director Wayne Olson instituted a high technology program where schools can pay a \$2,500 yearly membership and receive technical equipment and instructor training worth thousands more. Equipment includes such things as sophisticated hydraulics, biotechnology to conduct DNA experiments, and a laser engraver. The state provides funding to purchase the equipment and the membership fees pay for maintenance and transport.

"Instead of having to go out and buy a \$31,000 engraver, use it three to four weeks and then have it sit in the corner the rest of the year, the idea is we bought this cooperatively and it rotates to member schools for a six-week period of time," Olson explains. "It gives kids in these schools exposure to equipment that they never would have seen before and hopefully when they get on a job site, they have that experience to fall back upon." ■

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