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ABSTRACT

Randolph County Vocational Technical Center, Elkins, West Virginia, received a grant in 1997 for a project that was part of the High Schools That Work (HSTW) initiative to improve academic skills of career-bound students. The superintendent and faculty knew that improving achievement meant reaching out to the three home high schools to bring them on board with the improvement effort. Leaders at the vocational technical center faced the task of convincing these schools that the center was not a dumping ground for low-ability, low-achieving students and that these students could and should be taught to higher standards. School leaders and teachers decided to focus on raising students' expectations and preparing teachers to engage students in more challenging assignments. The strategies included eliminating the general track and raising graduation requirements; supporting teachers with staff development; designing a challenging vocational curriculum; improving guidance and advisement; providing extra help; and involving the community. As a result of HSTW workshops, the county has adopted block scheduling, an upgraded vocational curriculum, and the Zeros Aren't Permitted (ZAP) assignment completion program. Students gained in the areas of reading, mathematics, and science. (YLB)

# Case Study: Randolph County Vocational Technical Center, Elkins, W. Va.

# Case Study

## RANDOLPH COUNTY VOCATIONAL TECHNICAL CENTER
## Elkins, W.Va.

### A Decade of Committed Effort Results in Improved Student Achievement

*Randolph County Vocational Technical Center has made extraordinary progress in preparing students to advance in either work or further education. The center began working with its feeder high schools in 1987 to implement key practices aimed at raising achievement, reducing the dropout rate and increasing attendance. The journey has been methodical, deliberate and successful.*

## The Setting

Randolph County Vocational Technical Center is located in Elkins, W.Va., the county seat. This area in the eastern part of the state abounds with fresh air, clear streams, and "heart-stopping" downhill ski slopes. It is a place where Appalachian artists and musicians flourish.

Like many Appalachian communities, Randolph County has seen a rise in unemployment, an increase in the number of children in poverty, and a decrease in the median family income. The population has remained relatively stable at 28,800. Today, most jobs are in the trade and service industries. Despite the economic downturn, the county and the state have remained committed to education as evidenced by a more than 49 percent increase in per-pupil expenditures.

The vocational technical center was built as a "stand-alone" facility in 1976. In 1994, a new Elkins High School was built on the same campus. Ninety-five percent of the 800 students enrolled at the center are from Elkins High School; the other five percent are from other county high schools and attend classes at the center on a half-day basis. Ninety-nine percent of the students are non-minority. County-wide, the minority population is approximately two percent.

## The Principal and the Staff Initiate Change

Glen Karlen, who became superintendent of Randolph County Schools in 1997, was principal at the vocational technical center in 1987. Teachers at that time often complained about "kids who can't..." Yet, they lacked the knowledge of and direction in how to free students from a quagmire of low skills and low motivation. Karlen — a soft-spoken, highly-committed educator — has an abiding faith in the ability of Appalachian students. He never doubted that his students could achieve at a high level. Combining his belief in young people with the haunting complaint about "kids who can't," he searched for ways to address students' and teachers' needs.

Karlen's answer came in a West Virginia Department of Education request for proposals from schools desiring to improve the academic skills of career-bound students. The project was part of the Southern Regional Education Board's *High Schools That Work* initiative to raise student achievement. SREB was working with states in the region to identify pilot sites for this ground-breaking effort. Randolph County submitted a proposal that resulted in a $30,000 grant to launch the school on a journey toward educational excellence that continues today.

## Facing Challenges

Karlen and the faculty knew that improving achievement meant reaching out to the three home high schools to bring them on board with the improvement effort. Leaders at the vocational technical center faced the task of convincing these schools that the center was not a "dumping ground" for low-ability, low-achieving students and that these students could — and should — be taught to higher standards. This hurdle had to be overcome before Karlen and his staff could tackle a list of challenges that included:

- Students coming to the vocational center lacked basic reading, mathematics, science and problem-solving skills.
- Dropout rates were high, attendance was poor, and achievement was low.
- Employers complained that they were spending time and money to prepare high school graduates who were woefully ill-equipped to perform even menial tasks.
- The staff needed training and direction in bringing about change.
- The school's image was tarnished due to all of these factors.

## Defining Priorities

In the first year, school leaders and teachers attempted to address all of the *HSTW* key practices, but it simply wasn't possible. However, Karlen is glad they tried, because it gave them insight on how the key practices fit together.

Karlen describes one activity that opened the eyes of teachers at the center and the home high schools. Teachers and business leaders who were working on ways to integrate academic and vocational studies conducted a readability study of the books and technical manuals used in vocational classes. They were shocked to find that the readability level was 12th grade or higher. Students with weak reading skills would be unable to read materials in their career fields. Teachers had to face the fact that they needed to bring students up to speed in reading immediately. This realization was the first step in getting teachers from the home high schools and the vocational technical center to work together.

## Strategies for Making Changes

School leaders and teachers decided to focus on 1) raising students' expectations and 2) preparing teachers to engage students in more challenging assignments. The strategies included:

- **Eliminating the General Track and Raising Graduation Requirements**

To achieve at a higher level, Randolph County students needed to take more demanding academic courses. School leaders decided to eliminate low-level courses and raise graduation requirements to ensure that students would complete courses with high-level academic content. Their actions included:

- Dropping low-level mathematics courses.
- Eliminating "general" and "basic" English courses.
- Requiring all students to complete a program of study based on an upgraded academic core; career clusters and majors were developed later.
- Using applied instructional strategies throughout the curriculum.
- Adding a lab component to all science courses.
- Offering dual-credit courses with Fairmont State College.

Graduation requirements rose to 27 credits following enactment of West Virginia's Jobs Through Education legislation. (See Table 1.) Superintendent Karlen helped draft the legislation and credits it with adding "muscle" to what the county was doing to improve achievement.

Table 1
**Changes in Graduation Requirements in Randolph County Schools**

| Content Area | Graduation Requirements Prior to 1992 | | Academic Core Requirements for Entering Ninth-Graders in 1998-99 |
|---|---|---|---|
| | General/Vocational | College Preparatory | |
| Language Arts | General English, 9-12<br><br>Credits required: 4 | College Prep English, 9-12<br><br>Credits required: 4 | English 9-12<br>Composition, Speech, AP English, College English electives —<br>Credits required: 4 |
| Mathematics | General Mathematics<br>Business Mathematics<br><br>Credits required: 2 | Algebra I, II<br>Geometry<br><br>Credits required: 3 | Algebra I or Applied Math I, II<br>Algebra II<br>Geometry<br>Trigonometry<br>Pre-calculus, Calculus —<br>Credits required: 3 |
| Science | General Science<br>Biology<br><br>Credits required: 2 | Biology<br>Chemistry<br>Physics<br><br>Credits required: 3 | Science 9, 10 (Lab-based)<br>Advanced Science (Biology, Chemistry, Physics, Environmental Science)<br>AP Biology, Chemistry, Physics —<br>Credits required: 3 |
| Social Studies | U.S. History I, II<br>World History<br>Credits required: 3 | U.S. History I, II<br>World History<br>Credits required: 3 | U.S. History I, II<br>World History —<br>Credits required: 3 |
| Fine Arts | None | None | Credits required: 1 |
| Health, P.E. | None | None | Credits required: 1 Health, 1 P.E. |
| Technology | None | None | Credits required: 1 computer course and 1/2 work-based learning credit |
| Career Major | None | None | Credits required: 4 course credits (may be academic courses for an academic major) and 1/2 credit for a senior project |
| Other | | | Foreign language —<br>Credits required: 2 for an academic major<br>Mathematics —<br>Credits: 1 additional credit strongly recommended for all students |
| Electives | 10 credits | 8 credits | Academic major: 3 credits;<br>Tech prep or vocational major:<br>5 credits |
| Total credits required | 21 | 21 | 27 |

■ Supporting Teachers With Staff Development

New staff development initiatives got under way in the summer of 1988. Paula Heinke and Kenna Barger, former *HSTW* coordinators at the school, actively pursued and received numerous grants to sustain local staff development activities. The county also made a special effort to give all high school and vocational center teachers an opportunity to attend *HSTW*-related workshops and conferences sponsored by the SREB and the state.

One early staff development activity was crucial in getting academic and vocational teachers to work together. The approach was a basic-skills academy held each summer from 1988 to 1992. Teachers annually received three hours of graduate credit and a small stipend while acquiring skills and resources to use in helping students learn more challenging content. English, mathematics, science and vocational teachers attended the academy the first year. They were joined by counselors and special education teachers the next year. Almost every high school and vocational technical center teacher in the county attended one or more of the summer sessions.

The readability study on vocational materials prompted school leaders to conduct the summer academies. During the first summer, teachers focused on reading and writing across the curriculum; the next summer, they concentrated on higher-order thinking skills, cooperative learning and project-based learning. The academy will be offered again in 1999.

As various parts of the site action plan were implemented, the county arranged for consultants to provide staff development linked to the proposed changes. Some of the staff development topics included block scheduling, applied instructional strategies, teachers serving as advisers, and teachers spending time in business and industry.

■ Designing a Challenging Vocational Curriculum

Randolph County school leaders took a major step when they redesigned the vocational curriculum to make it more challenging and to align it with industry standards. The introduction of the Ford Academy of Manufacturing Sciences and other new vocational programs helped teachers see the need to strengthen courses to include high-level mathematics, science and communication skills. As career clusters and majors were added, vocational teachers began to set higher goals, make more project-based assignments and require students to be more active learners.

Following the summer academies, vocational teachers began to incorporate reading and writing skills into their classes. English teachers did their part by getting vocational students to work on vocabulary and written assignments from their career areas in English classes. Academic teachers participated in job-shadowing experiences to learn how reading, writing, mathematics, science, problem-solving and teamwork skills are used in business and industry.

An auto mechanics teacher said, "My students work on projects that require them to solve real mechanical problems. In certain situations, they may use Newton's Law, the Pythagorean Theorem and algebra skills. What they once considered abstract, useless information from mathematics and science becomes important in solving real-world problems."

Randolph County students have completed the following authentic projects and assignments:

- In keyboarding class, students behaved like employees. Everyone was expected to meet workplace standards, including arriving on time, producing quality work and meeting production quotas.

- Students in applied mathematics and business computer operations classes developed a credit card business. The cards are used by students for in-school purchases. Students who ran the "company" learned how to keep records, compile financial statements and collect debts. The project also involved English classes, the athletic department, the school food services program and local businesses.

- A teacher in a business entrepreneurship class asked students to do research, analyze data, make oral presentations and write for publication. Students selected a business of their own and one for a whole-class project. They learned every step of organizing and running a business — from market analysis to production and distribution. They estimated start-up costs, located funding sources, filled out loan applications and completed financial statements.

■ **Improving Guidance and Advisement**

To get students to take more challenging courses, the school stepped up the involvement of students and their parents in planning a high school program of study. Following a recommendation from a *HSTW* technical assistance team, Randolph County implemented an adviser-advisee system. Each incoming ninth-grader receives a faculty adviser who remains with him/her throughout high school. Staff development has helped teachers become more comfortable in the role of advisers.

A curriculum was developed to help teacher-advisers cover educational- and career-planning topics, and folders were created for students to record their grades and various milestone events. Advisers meet with students several times a month to discuss grades, attendance, course-taking patterns, career plans and problems students may be encountering.

The guidance process begins in grade 8. Toward the end of the school year, eighth-graders and their parents meet with a counselor and a teacher to select academic courses and a career cluster for grades 9 and 10. Students, parents and teachers meet at the end of grade 10 to update the students' programs of study for grades 11 and 12. Students and their advisers review the plans each year. If changes are needed, students make them with their parents' consent at the end of a semester.

■ **Providing Extra Help**

One of Randolph County's first moves was to offer skills improvement classes to students who were not ready for rigorous high school academic courses. Today, an extra-help and extra-time system is part of the school culture. From 25 to 45 students participate in an after-school tutoring program Monday through Friday at each home high school. The county provides busses to take the students home after the sessions.

The Zeros Aren't Permitted (ZAP) program ensures that every assignment in every class is completed correctly each day. Students are required to use their daily activity periods to seek tutoring and to complete assignments. When students are "ZAPPED" for low performance in a course, they return to the teacher to make up the work. In 1997-98, a total of 261 students in the first semester and 210 students in the second semester spent extra time with teachers to complete and correct assignments.

Second-chance testing helps students meet higher standards. A student does not have to fail to participate. Any student who wants to improve a test grade may participate in the teach/re-teach component, take an alternate test, and earn a higher score.

"The emphasis in Randolph County is not on student failure but on helping students meet higher standards," Karlen said. "Our teachers consider extra help a part of the job."

- **Involving the Community**

Community involvement began when the school received its initial grant in 1988. Business and industry representatives joined advisory committees to help school leaders set goals and revise the curriculum. They also began providing work-based learning experiences for some 150 students each semester.

These business leaders take seriously the job of changing the image of Appalachian students. One local business leader said, "Our young people can do whatever is asked of them. It is our duty to set high standards; it is their job to measure up — and they do."

The superintendent strengthens ties between the school system and the business community by serving on the Randolph County Development Authority and belonging to the local chamber of commerce. Business leaders have supported the school by helping purchase computers and lab equipment. The health-care company that operates the local hospital contributed $60,000 annually for three years to help the vocational center establish a program to prepare students to become licensed practical nurses.

## Benefits of Being in the *High Schools That Work* Network

Membership in *High Schools That Work* has provided a source of ideas and effective practices that have inspired school and classroom changes in Randolph County. Block scheduling, an upgraded vocational curriculum and the ZAP program as just three of the strategies that the county has adopted as a result of *HSTW* workshops. The annual *HSTW* staff development conference gives Randolph County teachers a "tremendous boost," Karlen said.

## The Consequences of Randolph County's Efforts to Improve

The results of the 1996 *High Schools That Work* Assessment prove that Randolph County students are no longer "students who can't." More than three-fourths of students met the reading goal, while two-thirds met the science goal and close to two-thirds met the mathematics goal. Students gained in all three areas between 1993 and 1996. (See Table 2.)

Table 2
Percentages of Randolph County Students Meeting *HSTW* Performance Goals

| Achievement Test | 1993 | 1996 |
|---|---|---|
| Reading | 62% | 77% |
| Mathematics | 57% | 63% |
| Science | 47% | 66% |

Source: The *HSTW* Assessment
Percentages are rounded to the nearest whole number.

More Randolph County students are taking college entrance tests, and the county's average scores on the ACT and the SAT have climbed. For example, the average SAT score rose from 906 in 1992-93 to 1001 in 1996-97.

Higher graduation requirements and a more challenging curriculum have not discouraged students, most of whom are attending school regularly and remaining until graduation. The average daily attendance rate in Randolph County has risen to 95 percent, an increase of four percentage points in the past decade. The dropout rate for grades 7 through 12 was 20 percent in 1987; it has declined to less than two percent for grades 9 through 12.

## Challenges for the Future

While proud of their accomplishments, school leaders and teachers acknowledge that they are not yet where they need to be. They want to see students advance as much in mathematics and science as in reading.

School leaders are convinced that intensive staff development linked to specific needs has been the key to changing teachers' attitudes and improving curriculum and instruction. The county intends to maintain its commitment to staff development: Teachers need fresh ideas to keep the momentum going.

Cooperation among the vocational center and the home high schools requires flexibility and good communication. Don Johnson, principal of the vocational center, sees an ongoing need to blend the cultures of the feeder high schools with that of the vocational center. "The bottom line must be what is best for students," he said.

Superintendent Karlen looks forward to the day when systemic change will be second nature, not something being tried. "School improvement is a process that requires patience and school-wide support," he said. "Our success is due largely to a methodical approach and a willingness to be patient."

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