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The COMSAT-Jefferson Alliance: A Progress Report

IN SEPTEMBER 1989, when COMSAT and Jefferson Junior High School announced their educational alliance, there were high hopes for success. Hopes that in the past two years have proved to be justified.

"When we began, it was clear we had the right ingredients for success," said Robert W. Hunter, director of Corporate Communications at COMSAT. "The melding of a school with an established reputation, with a corporation that wanted to make its presence felt in education has proved a winning combination."

"I can't say enough about what COMSAT's involvement at Jefferson has meant to the students and the faculty," said Jefferson's Principal, Vera White. "We've got a strong blueprint in place now, and we intend to follow it."

The blueprint White refers to is the Strategic Plan COMSAT and Jefferson agreed to implement last Fall. As with any corporate investment, COMSAT was determined to see money and time devoted to Jefferson yield positive results. Applying business disciplines to ▶

Jefferson students discuss their Science Fair projects with COMSAT CEO Irving Goldstein.

"COMSAT is doing some good things."

Lamar Alexander
U.S. Secretary of Education

the venture, COMSAT and Jefferson together developed a multi-year strategic plan.

The strategic plan has four specific goals: improved student performance; increased teacher training; encourage improved classroom techniques; and increase corporate and community involvment.

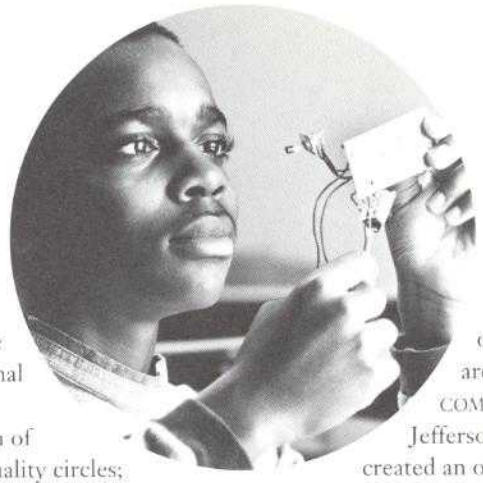
To increase student achievement, math and science learning is being closely integrated. Language and social study instruction is being built around a math-science core. A strong emphasis is being placed on linking school and future career choices.

The plan sets specific goals to improve student skill in math and science to a markedly higher level, and specific plans to aid students "at risk" of dropping out.

Jefferson students test electronic circuitry.

Teacher Training: The lack of adequate preparation of many math and science teachers, coupled with a shortage of teachers, is severely limiting student performance and contributing to America's technical illiteracy.

To combat this, Jefferson teachers are retraining in learning styles and motivation; alternative instructional strategies; facilitation of student quality circles; new techniques for teaching math and integrating high technology in the classroom.



Improved Classroom Techniques: Companies fail if they don't learn to be responsive to the demands of the marketplace. COMSAT believes schools must learn the same lesson.

COMSAT believes business needs to encourage school reform not only by talking about it, but by providing an incentive for change. This means rewarding teachers who take risks bringing reform to the classroom.

Corporate and Community Involvement: COMSAT employees from all levels of the organization are making an effort to improve the quality of education at Jefferson. Employees serve as tutors, help write grant proposals, and bring managerial techniques and assistance that can be applied at the school for its long-term benefit.

A crucial part of the plan is continued oversight and revision. The plan is a living document and changes will be made as warranted. As needs and issues change - and they will - the plan will be modified and priorities shifted. To ensure the goals of the plan are met, COMSAT and Jefferson have created an oversight committee to periodically review the progress of the plan. The committee is empowered to make changes if progess becomes unsatisfactory. Discussions are now under way to establish clear guidelines on how to track student achievement once they are promoted to high school. Current proposals favor appointing an independent observer to track the students.

In terms of action, and not just plans on paper, COMSAT resources and its employees are making a real impact on day-to-day learning at the school.

Engineers from COMSAT Systems Division submitted a successful proposal to D.C. Public Schools for $100,000 to rewire Jefferson and create a local area network connecting all of the school's computers. Teachers will use the network to conduct interdisciplinary instruction and better track student performance. In another project conducted by COMSAT Systems engineers, a new public address system has been installed in Jefferson's auditorium.

To maximize performance in the classroom, Jefferson teachers are being trained to integrate technology smoothly into the classroom. Teachers also received training in "learning styles" to help them better understand how students learn, and how to best cater to their strengths.

The 1990-91 school year also saw the successful introduction of the "school within a school" concept. Last summer over 100

COMSAT Reaches Out to District Schools Through Washington Parent Group Fund

One of the aims of the COMSAT -Jefferson alliance has been to serve as a catalyst for change in other schools. With the help of the Washington Parent Group Fund, COMSAT is doing just that.

Last May, COMSAT and Jefferson donated a wealth of educational materials to the Fund for use in the D.C. Public Schools. Included in the materials were:

***"The Future in Telecommunications" — an eight-part video aimed at 7th through 12th grade students that chronicles the rapid growth of telecommunications technology and its impact on lives. The faculty at Jefferson developed a study guide for use with the videos.**

The production of the video was a true team effort. The original video was produced in Holland for use in classrooms there. When COMSAT officials saw it at an education conference, they quickly secured the rights. Although the video was first an hour in length, COMSAT edited the video into eight, seven-minute segments and dubbed it into English using Jefferson students as narrators.

The video wasn't simply redubbed into English. Jefferson students taped a brief introduction to each segment designed to inspire students to shoot for careers in the industry. The real challenge, say the students, is to ensure more minorities enter the field of telecommunications.

The segments got such high praise from Jefferson faculty and students that District Cablevision decided to air the segments on their public access channel this past Spring.

Other materials donated include:

*** "The Satellite Factor", a teacher's resource kit, developed in association with the National Science Teachers Association. The kit uses satellite communications as a focus for teaching math, science, social studies and language arts to middle school students.**

*** "The Human Calculator", another instructional video, featuring Scott Flansburg, nationally known for his success in dispelling "math anxiety" among school kids and helping build their self-confidence.**

"We look forward to seeing these materials are put to good use in the classroom," said the Fund's Executive Director Joy Majied. "And we appreciate all that Jefferson and COMSAT are doing on behalf of the city's school children."

All three products will be used in D.C. Public Schools beginning in the Fall.

incoming seventh grade students attended the special SOAR (Stress On Analytical Reasoning) program with special emphasis on math, science, English and integrating all three subjects. These top students formed the core of Jefferson's special accelerated science and math program.

Summer programs at Jefferson weren't limited to the classroom either. The school offered a plethora of COMSAT-sponsored Summer activities to students, designed to keep them in the Jefferson atmosphere all year long. Planned for this Summer vacation are trips to the U.S. Space Academy for four Jefferson students, an accelerated math/science program for 11 students at Johns Hopkins University and a variety of computer, science, math and writing classes at area universities.

Besides installing both Apple Macintosh and IBM computers, COMSAT has made other strides in bringing technology to the classroom. COMSAT Labs donated a variety of used equipment, including an oscilloscope, for use in science classes. COMSAT funds also paid for the repair of a steerable Ku-band dish so faculty can receive educational programming.

One of the most popular classroom innovations of the past year has been the installation of the satellite-delivered, Channel One news broadcasts. COMSAT helped cut the red tape that might have prevented the free installation of a satellite dish, decoders, VCRs and video monitors for every classroom in the school.

Besides watching Channel One on those video monitors, students will see a news program written and produced by their fellow students. With the help of TV professionals at COMSAT Video Enterprises, the news ▶

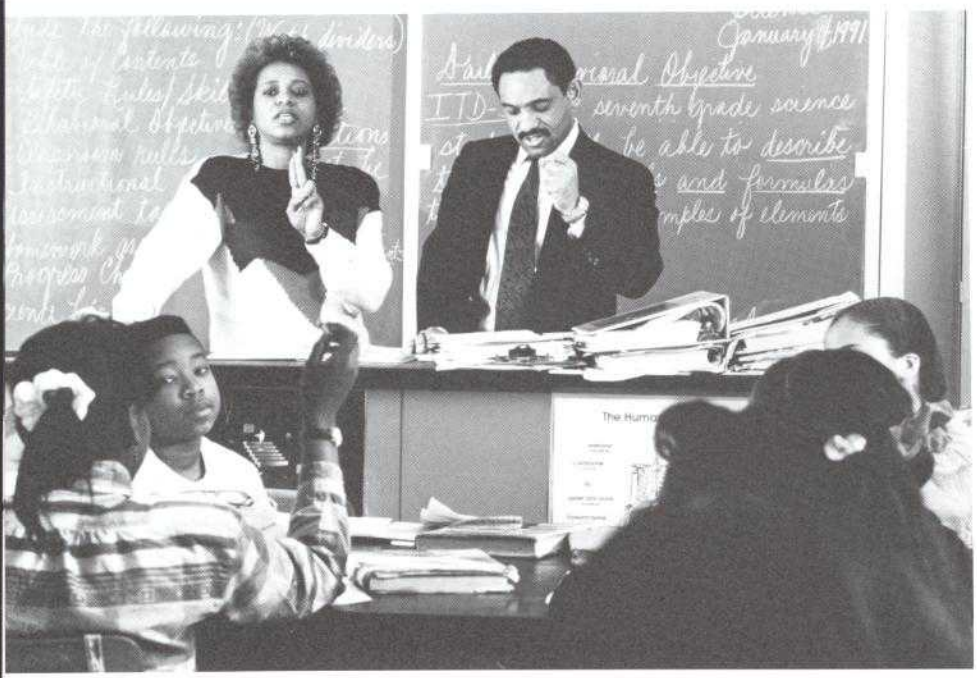
program expects to hit the air shortly following the opening of school next Fall.

To help improve communications between COMSAT and Jefferson, two phone lines connected to the COMSAT system will be connected in time for next Fall. Not only will this improve communication between COMSAT and Jefferson, it will also give Jefferson its first access to long distance lines and touch-tone phones.

In the next few pages are further details on these projects and others, as well as the view from the people at Jefferson and the local education community. The COMSAT-Jefferson alliance is more than just an attempt to better direct corporate philanthropy. It's also about spreading an idea how business and education can work together.

Business-Education Alliance Gains a Convert

FROM THE BEGINNING, one of the top goals of the COMSAT-Jefferson Alliance was to demonstrate how business and education could work together. Too many previous alliances all over the country had floundered despite good intentions and plenty of resources. Others were skeptical that business methods could be applied directly to education.



COMSAT engineer Ron Council assists Jefferson science teacher Diane Brown with class discussion.

For the first convert on the Jefferson side look no further than Social Studies teacher Winston Hall. Hall is one Jefferson teacher who knows how to take chances. Among them, he's one of the leaders in introducing audio-visual and interactive education to the classroom. Years before Channel One was even an idea (see separate article this issue), Hall was reading a daily news summary over Jefferson's public address system.

"The direction of public education in the future is to conduct the business of schools in the manner of a corporation," says Hall. "Before we were involved in the COMSAT-Jefferson Alliance I didn't think about that."

With local, state and federal budgets stretched to the breaking point, and taxpayers questioning what they are really getting for their tax dollars, there may be no other choice. The nation's businesses are the only major institutions with the resources to bring to bear on the problem.

Hall recognizes COMSAT and American business has a real stake in the business of education. "COMSAT is creating a pool of workers who can handle the job. The corporation is making a visible investment in its future."

"Corporate structure and methodology can be successfully merged with educators' methods," says Hall. The most important aspect of this is accountability. "It is easier for COMSAT to be involved with accountability - the school system deals with too many levels of bureaucracy to be effective."

In addition, the school also has an effective advocate in COMSAT. "If there is ever a problem we go right up the street. Our access is immediate and direct," said Hall.

But educating children isn't anything like bringing a product to market? Is he really comfortable with corporations taking a more active hand in education?

"Yes," Hall says. "As long as it is set up like we have it here at Jefferson."

Channel One Gains Converts, Viewers at Jefferson

It's 4 A.M. on a Monday morning. The empty halls of Jefferson Junior High School are a stark contrast to the frenetic activity that will fill the school in just a few short hours.

High above the earth, a satellite rebroadcasts a signal to dishes across the United States. That signal is pulled out of the sky by a dish atop the roof of Jefferson, and recorded automatically.

That signal carries the Whittle Communications news program Channel One. Before its national launch, Channel One was maligned by much of the educational establishment since it carries two minutes of commercials as well as ten minutes of news. The show has since developed a large following among Jefferson teachers.

The Channel One broadcasts are just the beginning of what the service has to offer. Whittle equipped the school with a Ku-Band antenna and two VCRs to tape the show automatically every morning.

Besides receiving Channel One, schools also receive the Classroom Channel and the Educators Channel. The Classroom Channel offers a wide array of dedicated instructional programming. Topics range from history, economics, grammar, math, science and foreign language instruction.

In exchange for the right to use these programs, schools must guarantee students watch Channel One in class at least nine out of every ten school days. Since the program is transmitted in the morning, the school principal has a chance to review it prior to airing in the classroom. The service is now received in about 6,000 schools nationwide.

"The first time I saw it I said yes!" Social Studies teacher Winston Hall exclaimed. "It's a godsend, it's great."

Hall tried producing his own on-air version of Channel One a few years ago at Jefferson when he summarized the morning's headlines over the school's public address system. He stopped when the task just became too much when combined with his other duties. If it weren't for Channel One says Hall "They (the students) wouldn't look at the news at all!"

"Kids get into a routine in junior high school, and Channel One has become part of that routine," Hall adds. "I'm really surprised the kids were still looking at it and accepting it at the end of the year," even after the initial novelty wore off.

Computer teacher Stan Johnson was "upset about the commercials," at first but was eventually won over when he began integrating the show's pop quiz into his classroom work. "I'd ask the students what they thought was going to be the top story of the day," said Johnson.

"It opens their eyes," said Dr. Rodery Webb, a math teacher. "It gives them a global view of the world. They wouldn't turn on the news at all if it wasn't for Channel One."

Teachers also find programs they tape from the other channels to be interesting as well. One series called "We The People" on the American Constitution, was so popular among students and teachers that a waiting list for the cassette formed.

Teachers rate the news coverage on the channel as good, but not perfect. "But neither is ABC, NBC or CBS," says Hall. He said that also works to the students' advantage since when a report may seem biased, the teacher can use it as an entree into a debate on the influence of the media.

The equipment that comes with the system opens other possibilities as well. Next Fall, Math Teacher William McEwan will train a group of students to produce their own television news program. This, combined with new capabilities emerging from computers, provides some intriguing new options for students.

As for the advertising, "Kids grow up with the commercials," says Hall. "I look at it as a positive. When we have commercials we can teach kids to separate the fact from the hype."

For Hall the bottom line is that Channel One is free. He estimates the shows he taped from the extra channels may have cost him $1,500-$2,000 if he bought them direct from their producers. Add that to the cost of the installed equipment, including the extra VCRs, and Channel One is "definitely worth it," said Science Teacher Sue Sprenke. ©

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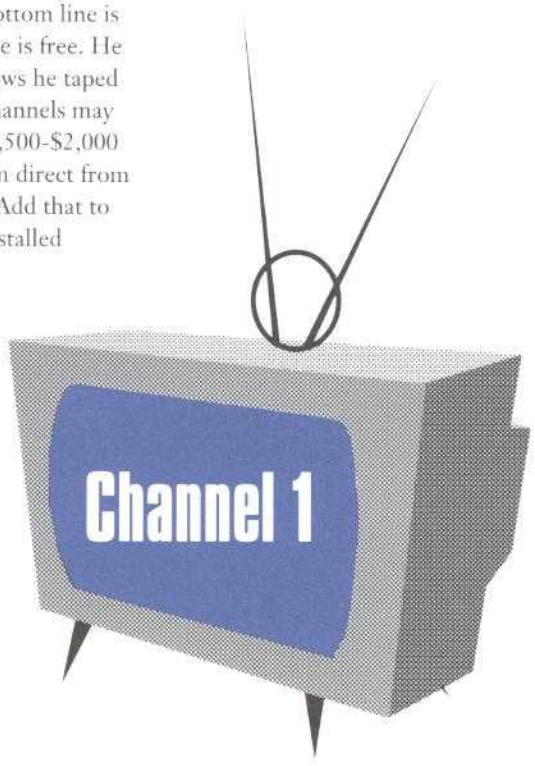

Freedom and Accountability Are Just The First Steps

Jefferson Principal Vera White on how the Alliance has changed her school.

IT'S 8:30 A.M. on a Friday morning. Jefferson, normally bustling with activity, is quiet. It has been two weeks since students have left the building for summer vacation.

But there is no summer vacation for Jefferson Principal Vera White. She's here bright and early as always, just like every day of the school year. White sits down at her desk in her office; her walls covered with awards and honors from the world of business, education and government. Over to the left of her desk is a shot of White with President Ronald Reagan, taken during one of his two trips to the school.

She smiles as she muses over how much things have changed since the start of the COMSAT-Jefferson Alliance less than two years ago.

"What I like most about school based management is that I have the freedom to try new and different things, while still being held accountable for my actions," said White. "That just didn't exist before COMSAT got involved."

That freedom has manifested itself in ways many might find surprising. Take the case of the van COMSAT purchased for the school. Before, when a teacher wanted to organize a field trip, reams of forms and requests had to be sent to the D.C. Public Schools to get permission for the trip. Now, "we just hop in the van and go," says the principal.

Accountability is vested in the strategic plan Jefferson and COMSAT signed onto last year. "The strategic plan forced us to think ahead. I appreciate having the opportunity to plan. It gave us a chance to focus and redefine what it is we want to do here," says White. "I've learned a lot about corporate culture. . . And how to make use of it. Business is results and goal oriented. We can apply that here at Jefferson." ©

Find Science and Math Puzzling? So Does Dick Arndt

"WHY DO I HAVE TO LEARN science and math. I'll never use it again anyway."

That is a familiar lament many parents and teachers have to face when frustrated students struggle with both subjects. Convincing students that math and science are relevant to their lives is a problem COMSAT Labs' Dick Arndt has decided to take on in a creative way.

Next Fall Arndt, with the help of Jefferson's math and science faculty, will hold a monthly problem solving contest. Over a six month period, students will win points based on how quickly they respond with a correct answer.

The thrust of the contest is twofold: Demonstrate math and science are applied in solving everyday problems, and making problem solving fun.

A running tally will be kept of the scores. When the contest ends the top three scores will win prizes. Here are four sample questions of the kind students can expect to see next Fall.

In the 'olden days' water was pumped from wells by hand using vacuum pumps. The barometric pressure at the surface of the earth normally is 14.7 pounds per square inch. If water weighs 62.4 pounds per cubic foot, what is the deepest well from which water can be pumped using these handpumps?

You have ten bowling pins. How would you arrange the pins to form five rows with four pins in each row?

You know that your refrigerator is used to keep food items cold. You also know that an air conditioner keeps the inside of your house cool in the summer. Can you use the refrigerator to keep your kitchen cool by opening the door? Explain why.

A man starts climbing a mountain and takes several hours to reach the top. Because he does not want to return during darkness, he camps at the top overnight and starts down at 8:00 a.m. the next morning. Can you demonstrate that he is at one point on the trail at the same time of day on each of the two trips?

Still puzzled? We'll have the answers in the next issue of COMSAT TODAY. ©