Kids Say the Darndest Things

Here's what three students think about the proposed school reforms.

BY KRISTI TURNQUIST

EVER SINCE the National Commission on Excellence in Education released its report, "A Nation at Risk," in April, the state of America's schools has been one of the hottest topics around. But amid the increasingly politicized discussion, some voices have been missing — namely, the voices of those most directly affected by education — the students.

With that in mind, we sat down with three Jefferson High School students last week to hear their thoughts on education. We met in social studies instructor Bill Bigelow's classroom. It was a fitting location, since all three had taken classes from Bigelow and often cited him as the kind of dedicated, creative teacher that, perhaps more than anything else, can make education an exciting experience for students.

Andrew Rohn, 17, is described by Bigelow as "one of the brightest students I've ever had." Unusually articulate, he is often sharply critical of school and is not shy about expressing his opinion. He is the kind of earnest, idealistic student who is likely to speak up to challenge his teachers if he finds inconsistencies or faults in a text. He's also interested in the arts, specifically in writing music.

Angela Braxton, 17, is a dedicated self-improver, well-adjusted, and working hard to get the most out of school. Her conversation is peppered with references to those who settled...
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not only in the way it treated its employees and developed its products, but different in its attitudes toward the local community and the political process. As a business it seemed almost to operate in opposition to Oregon's traditional economic growth of lumber, machinery, utilities, and agriculture. Tek's products were something to be extracted from the land or pumped out by an assembly line; its resources were the engineers and technicians who produced and refined complex and specialized instruments. Moreover, as a corporation, it saw its role differently from that of traditional business powerhouses. A collection of individuals, the company was content to leave politics to its employees. As real as the differences between Tek and established industries were, however, there was a similarity between them. As in other industries, it was charismat that made a company—and, more often than not, the character of a company's founders. In Vol- lum and Murdock, Tek possessed leaders with a force and vision equal to that of any who had preceded them in the State of Oregon. Tek was not alone in looking no further than these two men. "I shall probably make some inventions, which if put to use would be of great benefit to the people of the world," said Jack Murdock in his teenage diary.

In the Depression," recalls a mutual friend of Murdock and Vollum, "electronics was seen as black magic. Not very many people understood or had any awareness of its broad uses.

The forbidding face of radio—as electronics was then euphemistically dubbed—did not deter either Murdock or Vollum from exploring it. A graduate of Portland's Mt. Hood High in the mid-1930s, Murdock was given a choice by his father: he could attend college or receive a radio to start a business. Murdock chose the latter and opened a radio-and appliance store on Southeast Foster Road.

As someone who could tinker with radios but was not a radio engineer, Murdock got an only son, realized he needed a repairman, and soon hired Vollum, who had come into the Coast Guard who was later to work for Tektronix. According to James Castles, one of several men Murdock met in labs in New Jersey and Great Britain. As he noted in a rare interview with the Oregon Historical Society in 1980, he learned a great deal about designing oscilloscopes while in the service. "So I had an opportunity to work in an area of radar which was very important and very difficult," he told Linda Brody, the interviewer. "Of course, test equipment for this sort of thing was not readily available and we had to make our own in most cases. The sort of the radar that we dealt with was the indicator section. . .the thing that the operators look at. That's really a specialized form of oscilloscope and so the techniques that I learned, and the technology that was developed, was directly applicable to one and oscilloscopes, as it still is today, of course, of my interest."

Murdock, meanwhile, had joined the U.S. Coast Guard, and for most of his tour he was stationed in Portland. He corresponded regularly with Vollum and began planning their future business. According to James Castles, one of several men Murdock met in the Coast Guard who was later to work for Tek, Murdock "would talk quite a bit about his plans and would like to start, and when asked whether he could handle the technical side he would say, 'Wait until you've met Howard.'"

Castles notes that Murdock and Vollum shared a "thirsty recognition that they could make a fine team," and that Murdock was in no way overstepping Vollum's value. By the war's end, Vollum was perhaps the leading oscilloscope designer in the industrialized world. Tek's initial oscilloscope, which he both designed and manufactured, were greatly superior to instruments made by Du- mont and RCA, the two leading American firms in the business. "The older companies didn't know what hit them," says Jean De- lord, Tek's research director in the late 1940s and now chairman of the physics depart- ment at Reed College. "Their engineers were old, and they couldn't see beyond their outmoded designs."

Murdock was not alone in recognizing Vollum as an important electronics innova- tor. By chance, Bill Hewlett, who had found- ed Hewlett-Packard with David Packard in a California garage in 1938, met Vollum while he was in the Army. The Portlander made such a favorable impression on Hewlett, who was the engineering genius behind what was to become one of the nation's most successful pioneer high-tech firms, that he advised his partner, Packard, to hire Vollum. However, Packard declined.

Not that Vollum would have jumped at the offer. He was so anxious to start work on his own business, that Tektronix was founded a mere half dozen weeks after his discharge from the service in November 1945.

Despite Vollum's innovative oscilloscope design and the burgeoning postwar demand for instruments, Tektronix (the spelling of the words "technical" and "electronics" abbreviated together), had some rough going in its early years. The compa- ny's first oscilloscope, which probably used a cathode-ray tube built by RCA, was leased in 1947, but didn't begin to make a profit until 1948. By 1970, Vollum had topped $1 million and the close-knit staff included more than 100 people. The opening of sales offices throughout the United States in 1951 helped quicken sales, which quadrupled that year. Meanwhile, the government itself began its long history as a Tek customer, purchasing a number of oscil- loscopes to aid in measuring atomic and hydrogen bomb blasts.

A haven for engineers, Tek, recalls one researcher, "was better than being at a uni- versity" during the 1950s, and the company yielded a string of significant improvements in its oscilloscopes, as well as developing a cathode-ray tube (a basic element in both television and computers) for Internal use. By 1984, Tek had nearly 5,000 employees, annual revenues of about $871 million, a huge building complex in Beaverton, and an exten- sive sales network throughout the United States. Yet Vollum remained in operational control of the firm, while his partner turned to politics. In 1955, Vollum and Murdock (who then held 52 percent of the outstanding stock) provided a windfall of several million dollars for a group of 30 veteran employees.

Vollum was our man—Jean De lord.

In Tek's formative years during the 1950s, engineers were king, and founder Howard Vollum— the unassuming engineer who had the final say over all designs, product develop- ment and advertising—was nothing short of a controlling genius. By all accounts, he was a reluc- tant to criticize wayward employees: he found it difficult to falsify a person what was really his fault. "I know a lot of people mistrusted Howard many times," says William R. Webster, who served as Tek's vice-presi- dent for administration before retiring in the 1970s. Whatever his failings as a manager, Vollum was personallywarm. Generous with his time, he was easy to approach and quite assonable. He did not have a bad temper, and few had any. While he was respected for his education, he wouldn't hesitiate to give an engineer a job孵 college graduate. "He was a teacher, a college degree. Paper credentials didn't mean much to him," says one Tek employee.

Vollum was the classic entrepreneur who had seen his entire firm spring up around his major innovation (even today nearly half of Tek's revenues come from oscilloscope sales). It was inevitable that, among Tek employees and leaders, there would be some larger-than-life proportions. His intel- lect, for example, went almost unchallenged at Tek, and legends sprang up around it. One veteran Tek employee recalls how he once came to learn the risks of second-guessing a decision by Vollum. The employee had just finished preparing an ad for a new instru- ment and had brought it to Vollum for approval. Vollum, who was always nippin- g at the end, took a quick look, did some last calculations and then pronounced that the specifications for the instrument (dis- play, speed, volatility, ease of use) were wrong. The ad writer insisted that couldn't be, because it had that he had copied the specs right off the Tek manual. "Later I went back to the people who built the prototypes, and, sure enough, they had put the wrong specs on the product," the em- ployee recalls. "It was the last time I ever did that.

Then there was Vollum's intense pride in his West Coast background. "He pro- vided near evidence for Tek's long-standing slogan: "Committed to excellence."

Before leaving Tek, while working as a repairman,

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Some years later, the off-cafe-story went away. Vellum, who by then was well on his way to amassing more than $250 million in personal assets, received a call one day from a woman who informed him that her vacuum had once again gone on the blink and asked if he could come fix it. Vellum agreed, got into his car, and before long the job was done. When he came, she said, "This Vellum, she had told, would come fix it. Vellum agreed, got into his car, and before long the job was done. When he came, she said, "This Vellum, she had herself to forge and manipulate the symbols and rituals that would come to permeate the Tek workplace. Deeply struck by the properties of the work and the people involved, he then came to see the kind of work he had been doing as only an ancillary, a prelude to something more, something that he would call Tektronix.

In the late 1960s, Vellum had set his sights on making Tektronix a supplier of fine instruments but including the boxes in which it shipped its instruments; it made no sense to Vellum that his firm would be the subject of myth. He is credited with inventing the Vellum's drive for perfection, which has been described as a perfect combination of the company's desire to produce quality products and its need to compete in the marketplace. Murdock, who had no children, a single woman, and a strong sense of ethics and good business practices, is one of those factors that have kept them growing much larger.
Joint venture with Sony. Though neither
years abroad for
been "more overt [politically] than we've ev-
lobbyist, who works in Washington, D.C., as
sums to political races, Tek has its own staff
Wantland nor Tek donotes any significant
quickly gutting
foreign legislation on federal trade). In addi-
tion, Tek is
European
lobbyist last year in order to push a more
Electronics Association, which hired its first
member Oregon chapter of the American
Wantland isn't so sure: he thinks Tek may be
in Salem; "They pretty much stayed out of
more
recalls former Gov. Bob Straub, who spent
8
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add-on heat pump can cut your heating
bill about in half.
More than a substantial
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