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CLASSROOM EDITION

Chapter 1 What Is Economics?

This article from the September 1999 *Wall Street Journal Classroom Edition* demonstrates the basic principle of economics—how people make choices when faced with scarce resources. Teenagers face choices all the time about what to do with their resources of time and energy. “High-Tech Homework,” by *Wall Street Journal* Staff Reporter Quentin Hardy, describes how students at Palo Alto High School in California make decisions as well as how their choices affect their human capital: their skills and their knowledge.

Before reading the article below, you may want to look up the following terms: *acquisition, angst, cobbled, exudes, hierarchies, influx, mecca, revered, subsidized, and vintage.*

PALO ALTO, Calif.—When a group of students at Palo Alto High School built their robot, they had trouble running the design-animation program. So they built a supercomputer.

“The animation team had to pull a bunch of all-nighters,” says senior Sonia Sinton, admiring a stack of desktop machines cobbled into one big parallel-processing computer. Her pal, Tintin Yang, chimes in, “It’s really hard to do this and keep getting A’s in your courses.”

Such are the challenges of high school in the heart of Silicon Valley. Here, where world-changing industries are born and millionaires arise overnight, high expectations and high technology combine to produce a high school that isn’t quite like any other.

Paly, as Palo Alto High School is known, has a campus computer network with “digital lockers” where students keep their work and a T1 high-speed data

line linking the high school to the Internet. A typical workload for a Paly student includes sophisticated Web-page design. Fourteen video cameras serve 18 computers for student-made documentaries.

A recent front-page story in the school’s award-winning newspaper told of a sophomore who rerouted the school’s Web site traffic to an outside computer server and tried to sell its online domain address.

When they graduated in June, some members of the class of 1999 were still deciding where to spend their next few years. But if the class of 1998 is any guide, 98% will go on to college, with roughly 20% heading for the Ivy League or nearby Stanford University.

“The families here work in high tech and have expectations that their kids will be competitive not just nationally, but internationally,” says Scott Laurence, Paly’s assistant principal.

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The love for education comes from the top down. Despite their own busy schedules, parents last year volunteered some 20,000 hours to Paly, raising more than \$200,000, writing programs, and donating cast-off corporate computers.

So many parents signed up to help out in the college-information center—which makes sure that as many kids as possible get into the best possible schools—Palo Alto High has to hold a lottery to decide among them.

One of this year's winners was Maria-Cristina Page, a real-estate agent, who says she and her doctor husband sold their house and moved into a rental to send their daughter to the University of Pennsylvania.

More than 15 nationalities are represented among Paly's 1,400 students, thanks to the influx of immigrants to this area's high-technology mecca.

There are Mercedes sedans and Volvos in the student parking lot, cell phones in the hallway, and recent graduates with names such as Jobs and Hewlett, the daughter and grandson, respectively, of local computer legends who are as revered by Paly students as film stars are at Beverly Hills High.

Above all, Paly exudes a belief in success—perhaps even more so than other high-achieving schools, such as Greenwich High in Connecticut, or New Trier High School in Winnetka, Illinois. It comes, students say, not only from the parents, but also from hanging out in a place where the future is being born.

"You see the jobs people have, the high cost of living here, and you feel a lot of pressure to support this lifestyle," says junior Chris Powell, taking a break from his auto-shop class, where two sport-utility vehicles are up on lifts.

A former bike racer who started competing at age 11 and injured both knees at 15, he worries

that he doesn't have the grades to get into a good college and "be on track for a high-paying job." Still, he plans to go to college, like almost everyone else at Paly.

The outsized expectations here extend to the curriculum, too, which includes not just the usual advanced-placement classes but also college-level art history and music theory.

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"I've had seven different student projects that required PowerPoint presentations," says senior Phil Polansky, referring to a program typically used in business meetings. Jennifer Creason talks of pulling three all-nighters in a row to finish a Web page for a physics project.

These two students also work in robotics, an honors class divided into teams for tool acquisition, design, and even public relations to raise funds to support student competitions—in other words, an organization very much like a high-tech start-up company.

The anxieties are similar to a start-up company's, too. Palo Alto High, which in 1998 reported average combined SAT scores of 1222 (205 points above the national average), is "a hard place to go to school," says Marilyn Cook, Paly's principal. "There's pressure to achieve in everything—it can make the brightest kid in the world feel inadequate."

In recent years, the school eliminated the post of class valedictorian and stopped listing students' academic rank-

ings, to ease competition. And cheating is a constant source of angst. After a scandal erupted at nearby Saratoga High, Paly brought in ethics coaches to teach kids how to compete without losing their souls.

In some ways, Paly feels like any public school anywhere. The main buildings date from 1916 and some roofs leak rain onto 30-year-old carpets.

Students may have computer networks at home, but they use vintage 1973 math books.

Lunchtime cliques include the usual groups of jocks, actors, and nerds. As with most schools, the athletes are considered the coolest, but at Paly, the hierarchies are in flux.

"We're the nerdery, not with the cool kids," says Mr. Polansky, who is part of the robot crew. "But we're not the lowest. They need us to run the school, since lots of our teachers can't use the technology."

The robotics teacher, Douglas Bertain, nods at the idea.

Five years ago, his classroom held 22 drafting tables, and not a whiff of the digital explosion. "I'm an old wood-shop teacher who just started learning

this stuff," Mr. Bertain says. "I just take the smart students and have them teach the others—there's a snowball effect."

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Many on Paly's faculty worry about the pressure to excel. Much of it, they say, comes from the parents, many of whom are accustomed to being at the top of their field.

"A parent called me and said, 'Help me, my son loves history. . . . What good will that do him? Try to get him into math or sciences,'" sociology teacher Tom Rowland says.

"I told him, 'One, he was talking to the wrong guy; and

two, if I see a kid interested in anything, I tell him to push it.'"

QUESTIONS FOR DISCUSSION

1. What expectations do parents of Palo Alto High School students have about their children's futures? Why do they have these expectations?

2. Identifying Alternatives What is a likely opportunity cost of Jennifer Creason's decision to pull three all-nighters in a row to finish a Web page for a physics project? What is one alternative that could have helped her avoid pulling the all-nighters?

3. Drawing Conclusions What human capital are students acquiring when they take robotics, an honors class divided into teams for tool acquisition, design, and public relations?

4. Distinguishing Fact from Opinion Explain why you agree or disagree with the following statement: "Here, where world-changing industries are born and millionaires arise overnight, high expectations and high technology combine to produce a high school that isn't quite like any other."

Parking Lot Scarcity at Nirvana High School

Nirvana High School is in a middle class suburban community. It has an enrollment of 2,800 students. All available land is currently used for classrooms, athletic fields, and the existing parking lot of 700 spaces. The school is surrounded by single family homes.

The Facts:

- » There are only 700 parking spaces on campus and that number is fixed;
- » There are 150 faculty and staff members who want to park on campus each day;
- » There are 400 seniors who want to drive to school each day;
- » There are 100 seniors who want to drive 2 or 3 days per week;
- » There are 350 juniors who want to drive to school each day;
- » There are 50 juniors who want to drive 2 or 3 days per week;
- » There are 100 sophomores who want to drive to school each day;
- » There are 50 sophomores who want to drive 2 or 3 days per week;
- » There will be 100 additional sophomores who want to drive by the end of the year.

The Problem: There are 1200 drivers who want to park on campus now and a total of 1300 by the end of the year. *You are running for student council.* You must convince the student body to vote for you by creating a parking plan that utilizes the fixed number of 700 spaces in an *efficient* and *equitable* manner.

Points to Consider:

- » Should certain groups be given priority? If so, which ones?
- » Should "need" be a factor?
- » Should distance from school be a factor?
- » Should there be a fee? If so, what is the amount and how is it determined?
- » Should it be "first-come first-serve"?
- » Should parking permits be limited in any manner?

Directions: Outline a proposal that utilizes the 700 fixed parking spaces in an efficient and equitable manner. Then, answers the questions related to scarcity.

Step 1: Parking Lot Proposal

1.

2.

3.

4.

5.

Step 2: Trade-Offs & Opportunity Costs

1. Is your proposal equitable? Explain.

2. What are the trade-offs of your plan?

3. What are the opportunity costs of your plan?

