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## P.E. Classes Turn to Video Game That Works Legs

By [SETH SCHIESEL](#)

MORGANTOWN, W.Va. — Children don't often yell in excitement when they are let into class, but as the doors opened to the upper level of the gym at South Middle School here one recent Monday, the assembled students let out a chorus of shrieks.

In they rushed, past the Ping-Pong table, past the balance beams and the wrestling mats stacked unused. They sprinted past the ghosts of Gym Class Past toward two TV sets looming over square plastic mats on the floor. In less than a minute a dozen seventh graders were dancing in furiously kinetic union to the thumps of a techno song called "Speed Over [Beethoven](#)."

Bill Hines, a physical education teacher at the school for 27 years, shook his head a little, smiled and said, "I'll tell you one thing: they don't run in here like that for basketball."

It is a scene being repeated across the country as schools deploy the blood-pumping video game Dance Dance Revolution as the latest weapon in the nation's battle against the epidemic of childhood [obesity](#). While traditional video games are often criticized for contributing to the expanding waistlines of the nation's children, at least several hundred schools in at least 10 states are now using Dance Dance Revolution, or D.D.R., as a regular part of their physical education curriculum.

Based on current plans, more than 1,500 schools are expected to be using the game by the end of the decade. Born nine years ago in the arcades of Japan, D.D.R. has become a small craze among a generation of young Americans who appear less enamored of traditional team sports than their parents were and more amenable to the personal pursuits enabled by modern technology.

Incorporating D.D.R. into gym class is part of a general shift in physical education, with school districts de-emphasizing traditional sports in favor of less competitive activities.

"Traditionally, physical education was about team sports and was very skills oriented," said Chad Fenwick, who oversees physical education for the Los Angeles Unified School District, where about 40 schools now use Dance Dance Revolution. "What you're seeing is a move toward activities where you don't need to be so great at catching and throwing and things like that, so we can appeal to a wider range of kids."

A basic D.D.R. system, including a television and game console, can be had for less than \$500, but most schools that use the game choose to spend from \$70 to \$800 each for more robust mats, rather than rip apart the relatively flimsy versions meant for home use.

In a study last year, researchers from the [Mayo Clinic](#) in Rochester, Minn., found that children playing Dance Dance Revolution expended significantly more energy than children watching television and playing traditional video games. West Virginia, which ranks among the nation's leaders in obesity, [diabetes](#) and

[hypertension](#), has sponsored its own study and has taken the lead in deploying the game, which requires players to dance in ever more complicated and strenuous patterns in time with electronic dance music.

As a song plays, arrows pointing one of four directions — forward, back, left, right — scroll up the screen in various sequences and combinations, requiring the player to step on corresponding arrows on a mat on the floor. Players can dance by themselves, with a partner or in competition. (Though the game, which is made by Konami of Japan, began in arcades, it is now most commonly played on Sony's PlayStation 2 and Microsoft's Xbox game consoles.)

As a result of a partnership among West Virginia's Department of Education, its Public Employees Insurance Agency and [West Virginia University](#), the state has committed to installing the game in all 765 of its public schools by next year. Almost all of its 185 middle schools already use it.

The mastermind behind the project is Linda M. Carson, Ware distinguished professor at West Virginia University's School of Physical Education and director of the state's Motor Development Center.

"I was in a mall walking by the arcade and I saw these kids playing D.D.R., and I was just stunned," she said. "There were all these kids dancing and sweating and actually standing in line and paying money to be physically active. And they were drinking water, not soda. It was a physical educator's dream."

In February, Ms. Carson and her main collaborator, Emily Murphy, a doctoral candidate at the university's School of Medicine, announced results of a multiyear study. They found significant health benefits for overweight children who played the game regularly, including improved blood pressure, overall fitness scores and endothelial function, which reflects the arteries' ability to deliver oxygen.

None of that would come as a surprise to Maureen Byrne, mother of two boys in Chesterfield, Mo., who introduced the game to her local school district after seeing its impact on one of her sons.

"My oldest son, Sean, used to have love handles; he was kind of pudgy, and I'll be honest: we were worried about it," she said. "We had heard of D.D.R., and I got it for him for his birthday. We put limits on the other video games he plays, but we told him he could play D.D.R. as much as he wanted. And now it's like he's a different kid. He's playing sports and running, and we see D.D.R. as like his bridge to a more active lifestyle."

Ms. Byrne and her family demonstrated the game for the local parent-teacher organization in the hope of convincing it to underwrite a test at school.

"I remember going to the P.T.O. meeting and getting in front of all of them without my shoes on and doing the moves, and that was kind of funny," said Sean, now a 12-year-old sixth grader.

Today, eight schools in the Parkway School District, based in Chesterfield, have their own D.D.R. systems, and three other game systems circulate among various schools in the district, said Ron Ramspott, the district coordinator of health and physical education.

"Our teachers are really buying into D.D.R. as a way to promote both physical health and learning," he said. "When you're playing the game you really have to process the information and then also do the moves physically, so we think it can help with brain development as well."

As Leighton Nakamoto, a physical education teacher at Kalama Intermediate School in Makawao, Hawaii, put it: “The new physical education is moving away from competitive team sports and is more about encouraging lifetime fitness, and D.D.R. is a part of that. They can do it on their own, and they don’t have to compete with anyone else.”

Mr. Nakamoto said that he had used the game in class for four years and that his school had also installed the game in its “Active Lifestyle” room, where students are allowed and encouraged to play in their free time.

Dave Randall, the educational specialist for coordinated school health for the Hawaii Department of Education, said Hawaii was trying to put together a program like West Virginia’s to get the game into all of the state’s 265 public schools over the next three years.

Back in West Virginia, Anna Potter, 12, and Mikayla Leombruno, 13, were not concerned about all of the academic theories as they shimmied and bounced to the beat in Mr. Hines’s gym class.

“I like that you get to listen to music and you don’t have to be on a team or go anywhere special to play,” Anna said after their song. “If you do baseball or basketball, people get really competitive about it.”

Mikayla chimed in, “And you don’t have to be good at it to get a good workout.”

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