

Chapter 7

ExerLearning[®]: Movement, Fitness, Technology, and Learning

Judy Shasek
ExerLearning

ABSTRACT

ExerLearning[®] provides parents, educators and others with a solid background of the direct connection between regular, rhythmic aerobic activity, balance, eye-foot coordination and academic success. We can increase students' fitness while simultaneously increasing their academic success. Activity breaks have been shown to improve cognitive performance and promote on-task classroom behavior. Today's exergame and related computer technology can seamlessly deliver activity without over-burdening busy teachers in grades K-12. Activity isn't optional for humans, and our brain, along with its ability to learn and function at its best, isn't a separate "thing" perched in our heads. The wiring, the circulation, the connection between mind and body is very real. The brain is made up of one hundred billion neurons that chat with one another by way of hundreds of different chemicals. Physical activity can enhance the availability and delivery of those chemicals. Harnessing technology to that activity is the ExerLearning solution.

READING, WRITING AND EXERGAMES?

Our lifestyles have become ever more sedentary with screens – television, computer and video game – being used for leisure, entertainment, communication, information and a pervasive

social-networking culture. With only so much time in the school day it's tough to fit in physical activity, balance training and fitness to counter "screen" time. Research has been done by many independent and university researchers over the past decade. There is adequate evidence on the positive benefits of physical fitness on academic

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success and cognitive skills. We developed specific ExerLearning strategies that can tap into computer and game technology to easily become an integral part of the school environment.

What is ExerLearning? It is a technology-delivered intervention that interrupts the sedentary practice of learning and classroom procedure. ExerLearning challenges sitting, a desk and conventional computer input devices as the default—or the best—route to cognitive skill development and academic success. According to Dr. John Ratey, author of “Spark—The Revolutionary New Science of exercise and the Brain” says, “Darwin taught us that learning is the survival mechanism we use to adapt to constantly changing environments.” ExerLearning adds physical activity known to enhance the workings of the brain to learning.

- ExerLearning can be delivered by technology
- ExerLearning can be led and managed by students
- Technology delivered solutions like exergames and computer peripherals that require standing, balance and rhythmic movement improve students’ fitness while simultaneously increasing their academic success.
- ExerLearning meets the needs of the most challenged, challenging or diverse learners without requiring teachers to write additional lesson plans
- ExerLearning sessions should occur for approximately 10 minutes every few hours.

*Over-scheduled teachers and over-scheduled school days beg the question, “When will we have time to add 15-45 minutes of daily – or even weekly – physical activity? Preparing healthy, active children for life has taken a backseat to preparing the K-12 student for standardized tests. Educators have been mandated to address both the fitness **and** the test-score issues, but they need help.*

Key Concept: In order to add more activity to the learning environment we can tap into technology that can add exactly the sort of physical activity students need and deliver it simultaneously with core content. ExerLearning tackles fitness and academic goals simultaneously-while saving teachers’ time – and Districts’ money. ExerLearning engages the very students we target while harnessing computer technology to consistently deliver any time any where rhythmic, aerobic activity.

There is an endless list of factors that impact a student’s academic achievement. Among those, maybe the one least understood is the impact of regular physical activity. Throughout the development of ExerLearning concepts and practices, research on the benefits of regular rhythmic, aerobic and balance activity has been explored. Today’s brain-scanning tools and a sophisticated understanding of biochemistry have led researchers to realize that the mental effects of exercise are far more profound and complex than they once thought.

“Exercise optimizes the brain and the person for learning. It creates the right environment for all of our 100 billion nerve cells up there. Exercise promotes the growth of new brain cells more than anything else we know,” says Dr. Ratey. Ratey cites studies showing that exercise promotes the growth of new cells in the hippocampus, an area in the brain associated with memory and learning.

That’s just the beginning. This chapter will weave facts and findings from brain research, innovative PE programs, unique peripherals that tie technology to physical activity and solid academic research on learning and test success. Our goal is to provide a solid overview of ExerLearning’s potential in K-12 learning environments. Why did we coin the term, ExerLearning? As we work with educators, students, parents and wellness/learning advocates in dozens of states and hundreds of school Districts, we have found that having a vocabulary to explain this ground-breaking work is very important.

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