



An Introduction to IQRx

Purpose and Background

IQRx Brain Enhancement Center uses a proven methodology and a patented brain training program created by BrainRx. It was developed to train and enhance cognitive learning skills. It is what many affectionately refer to as a workout for the brain.

To train cognitive learning skills, BrainRx applies the most recent scientific research on learning. Too often, this type of information sits on universities' shelves and may not be applied until many years later. Plus, the information is often ignored because it would require a one-on-one training structure that most educational systems are not typically structured to provide. BrainRx is at the forefront of making sure the most up-to-date research is applied in practical ways to help people of all ages.

BrainRx was founded and is directed by a group of professionals from a variety of disciplines who have a common interest in helping individuals learn more easily and efficiently. Included are psychologists (in the areas of neuropsychology, cognitive psychology, and clinical psychology), specialists in vision and auditor y processing, and educators.

Prior to BrainRx, a number of its founders were involved in a pilot programs located in health care offices and tutoring centers across the United States and Canada. The results were outstanding! The training had a significant impact on the learning skills and lives of the thousands who participated in the program. However, the program providers typically operated independently and only worked with a few students each year, so many individuals had needs that were not being addressed.

Therefore, BrainRx was born. Our training incorporates techniques learned through the pilot program. Ongoing research and trials have expanded it in significant ways to help specifically with pre-school preparation, math excellence and higher level reasoning skills, enhanced processing speed and general cognitive skills, and enhanced reading proficiency.

The programs include modifications and additions that have enhanced the training considerably. In addition, people can choose from a variety of program formats that allow us to customize your program to fit your time availability and budget. This makes IQRx training affordable to virtually anyone who can benefit from the program and wants to enhance his or her learning skills.



Who Benefits From IQRx Training?

Information in this brochure will focus on the below-average performer, but because cognitive skills training strengthens skills used in all learning situations, individuals of all ages and ability levels work with IQRx trainers for a variety of reasons. Some examples are:

- o Preschool children
- o Elementary school children
- o Middle and high school students
- o College students
- o Adults wanting to improve their job performance
- o Senior citizens seeking to stay mentally sharp
- o Students in transition (i.e., moving from Junior high to high school)
- o Individuals simply seeking to enhance their skills
- o Gifted students wanting to get ahead
- o Individuals with learning difficulties, reading problems, or slow performance
- o Athletes wanting faster reaction time, processing speed, and memory
- o Businesses that want to develop the skills of their employees

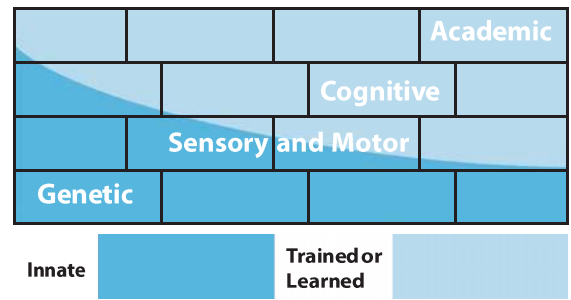
The BrainRx System

BrainRx takes a different approach to learning problems than most other systems. Most seek to manage the symptoms. We seek to eliminate them at their core. To understand the unique BrainRx approach, one must first understand what science reveals about the different stages of learning.

The first skill stage is **genetic**. This stage represents the genetically determined abilities and reflexes we have when we enter this world. These reflexes and processes are the result of inborn capabilities and early muscle development. They are part of all healthy development. Genetic abilities provide both the limits and potential for our learning. Mozart almost certainly had a greater genetic capacity to see, hear, and create music than an average musician. However, musicians can almost always improve their music-making ability with practice. Few people function near the top of the learning or performance limits established by their innate skills. Most of us have a significant untapped capacity to learn.



The **sensory and motor skills** are built upon and contained in these genetic capabilities. Sensory skills are skills such as seeing and hearing, which are responsible for receiving information. Motor skills are related to muscles and movement. They include moving, speaking, and writing. Both sensory and motor skills are partly determined by our genetic code (innate) and partly learned by interaction with our environment. They can be practiced, trained, and improved. These two skills express our responses to the information our senses receive.



Building further upon the genetic, sensory, and motor skills are **cognitive abilities**. These abilities allow us to process the sensory information we gather. Processing includes our abilities to attend to, discriminate, analyze, evaluate, and compare information, to recall experiences, and to determine a plan of action. These skills are almost completely learned and are developed by our interaction with our environment and other people. They can be specifically trained.

The upper level on the chart illustrates **academic learning**. These abilities grow as the result of instruction in areas such as algebra, reading, and typing. These abilities are not likely to develop on their own and require teaching. The ability to receive that teaching and acquire academic skills is dependent upon the strength of the underlying cognitive skills.

Causes and Symptoms of Learning Struggles

The cause for individuals who have difficulty learning could be any of the following: a problem seeing or hearing information, problems expressing themselves through speech or writing, a lack of motivation, a lack of proper instruction, or poor cognitive processing skills.

However, learning problems are seldom primarily caused by seeing, hearing, or speech disorders. It is not in gathering the information but rather in processing it that the problem usually rests. Ray Charles was blind, but he certainly could perform!

While lack of motivation is frequently related to the learning problem, it is often a result of the problem, not a cause. For example, you would tend to be frustrated and avoid a task if you consistently performed a task that was difficult for you, one in which you almost always failed.

There are only so many times that you will run into a brick wall before you quit trying to go that way. Many students experience the same pain with schoolwork. There are very few children who enter school expecting to fail. So when they don't succeed and continuously get hurt in their attempts, they start to avoid what is causing the pain. This avoidance is often interpreted as low motivation when simple inability at the cognitive skill level is more likely the reason.

IQRx may not be needed if a student's learning problem is merely a lack of academic instruction. In that case, some extra help or tutoring can enable him or her to catch up. In certain cases, that is all that is required. Changing schools and studying subjects the student has not had the prerequisite instruction for is an example of this situation.

Where Does IQRx Fit In?

IQRx training enhances skills necessary to learn at the cognitive level.

Schools, Learning Disabilities (LD) programs, remedial reading, and tutoring all work at the academic stage and rely upon a student's existing cognitive skills. Sensory and motor therapies such as auditory, vision, occupational, and physical therapies work on skills at the sensory and motor level.

IQRx concentrates on skills development at the cognitive level. These cognitive abilities process sensory information and are essential for easy, fast, academic learning. IQRx does NOT teach academic subjects, but we *will* help make learning easier and faster.

Tests and Symptoms

At IQRx we do not assume that all learning problems are the result of poor cognitive processing skills or that everyone needs cognitive training. Instead, we use skill tests that probe different areas of the individual's cognitive skills set to see if there are any deficiencies we can address. Some of the skills we look at include the following:

Attention The ability to stay on task even when distractions are present.

Simultaneous Processing The ability to handle more than one thing at a time (i.e., the ability to recognize a word without sounding it out, listen to the instructor while taking notes, or to drive a car while carrying on a conversation).

Sequential Processing The ability to link a series of input over time. This is a skill required for reading so that the beginner can blend a series of sounds to create words and the advanced reader can link a series of words in order to understand the story or idea.

Planning The ability to decide how you are going to solve a problem, make sure it gets done, check it for mistakes, and modify it if needed.

Processing Speed The ability to perform cognitive tasks quickly which is an important skill for complex tasks or tasks that have many steps (i.e., if you are dividing two numbers in your head but the processing is slow, you might have forgotten an earlier calculation before you are done and have to start all over again. You took longer to do the problem than your ability to remember).

Short-Term Memory The ability to store and recall small amounts of information about the current situation. Students with short-term memory problems may need to look several times at something before copying, have problems following instructions, or need to have information repeated often.

Long-Term Memory The ability to recall information when needed that was stored in the past. This is very important for spelling, recalling facts on tests, and comprehension.

Auditory Processing The ability to perceive, analyze, and conceptualize what is heard. This is critical in reading and spelling because it includes hearing, identifying and blending sounds, and sounding out words.

Visual Processing The ability to perceive, analyze, and think in visual images. This includes visualization, which is the ability to create a picture in your mind. Students who have problems with visual processing may reverse letters or have difficulty following instructions, reading maps, doing word math problems, and comprehension.

There are many students who struggle to learn even with adequate instruction. These are the ones who most likely have a cognitive processing problem. They tend to repeat the behaviors listed below. Because of cognitive processing problems and the resulting frustration, academic performance, self-esteem, and relationships with family and peers can suffer. If something is not done to correct these deficiencies, the effects will be drastic and could impact future education and vocational choices, as well as future earning power.

Common Signs of Learning Difficulties

- o Avoid work that seems complicated or hard
- o Have trouble paying attention/staying on task
- o Reverse letters and words
- o Forget instructions or what was read earlier
- o Take a long time to complete a task
- o Keep making the same careless errors without realizing it
- o Be disorganized and frustrated when studying
- o Have difficulties sounding out words and spelling
- o Have problems creating mental pictures from a word math problem
- o Struggle to understand or comprehend what was read
- o Do things that don't seem to make sense

Cognitive Skills are Trainable

The cognitive skills discussed previously are learned and therefore can be improved upon.

We know that cognitive skills can be enhanced not only because we can see the changes through observation and tests, but also because there is evidence derived from brain research as well.

Recent research suggests that stimulating the mind with mental exercise may cause brain cells, called neurons, to branch widely. This branching causes millions of additional connections, or synapses, between brain cells. Arnold Scheibel, the former director of UCLA's Brain Research Institute, once said that we can think of it as upgrading a computer with a bigger memory board that allows you "to do more things more quickly."



Other studies conclusively show that our brains develop throughout our lives and that they are constantly being modified. For example, Michael Merzenich trained a monkey to touch a rotating disk with the three middle fingers of its hand. After several thousand times, the monkey's brain expanded in the areas that are designated for the three middle fingers (at the expense of those areas designated to the other two fingers). This expansion proves that training and practice can stimulate brain development.

Dr. John Ratey, author of *A User's Guide to the Brain* states, "Like a set of muscles, [the brain] responds to use and disuse by either growing and remaining vital or decaying, and for the first time, we are learning to see mental weaknesses as physical systems in need of training and practice." Although scientists had long believed the brain's circuitry was hard-wired by adolescence and inflexible in adulthood, its newly discovered ability to change and adapt is apparently with us well into old age. Best of all, this research has opened up an exciting world of possibilities through training.

These studies show that by using proper training methods, one can target, modify, and develop the brain to improve function and strengthen deficiencies. The fastest and most efficient way to do this is through cognitive training exercises that specifically and directly target a deficient skill.

IQRx focuses on enhancing and improving those processing skills that will have the biggest impact on learning. The greatest impact can be realized by directly strengthening the deficient cognitive skills that relate to the learning problem. Individual testing allows training to be optimized for each student.

If, after testing someone, we discover that their problems are not caused by poor cognitive skills, IQRx may not be necessary. We will, however, do all we can to enable you to get the appropriate help elsewhere. Keep in mind, IQRx does not tutor or teach school subjects. Rather, we help develop the underlying skills that can make a significant impact on your student's ability to learn. If cognitive skill weakness is at the root of the learning struggles, IQRx can help.



IQRx Training Programs

IQRx uses the BrainRx training program which is a twelve- to twenty-four-week, intense, one-on-one, cognitive training program that corrects and enhances learning skills.

Condensed Length and Rapid Changes

Unlike programs that take 12 to 18 months or more and produce very gradual changes, the BrainRx program makes significant changes in only 12 to 24 weeks! This is extremely important because people need to see changes quickly. When someone sees changes in his or her performance, it will inevitably raise their confidence and self-esteem. This will make them want to work at improving the skills even more. Techniques develops memory and visualization strategies and improves the ability to create mental images.

Intense Sessions for Maximum Impact

One-on-one training is extremely important, especially when one considers that students in public education in the United States get only an average of six and a half hours of one-on-one instruction over a 13-year period. IQRx training provides 60 hours of one-on-one training in 12 weeks, and 120 hours in 24 weeks. There are two reasons for one-on-one training. The first is feedback. When students do something correctly, they are praised. When students make errors, they are made aware of it so that it can be corrected. Immediate feedback creates faster learning.



The second reason for one-on-one training is sequencing. Sequencing means the programs develop from the simple procedures to the more complex. Plus, IQRx programs are personalized to a student's deficiencies and needs. If a task is too difficult, they will become frustrated. If the task is too easy, they will be bored. So the trainer designs the tasks to begin at a challenging level and then slightly increases the demand of those tasks to force the deficient skills to improve.

It's very intense, but young people love intensity. Think about the hours spent playing video games. These games, like IQRx training, are based on sequencing and immediate feedback.



Parental Involvement

Parental involvement is a requirement for IQRx training. It helps reduce costs and ensures the maximum amount of change in the shortest time possible. This also allows more professional, one-on-one training to be devoted to the student's weakest skills without neglecting the enhancement of the entire skill set. Parents are trained in simple but powerful home exercises to share with their student, and a schedule of home training is established. This parental participation also helps build or rebuild family relationships strained by academic struggles.

How Does IQRx's BrainRx Program Work?

Efficient learning requires that many learning skills be subconscious or automatic. Without this automaticity, learning may become labored and slow.

For example, fluent readers do not need to pause to sound out words or think of their meaning. When a person has to work consciously at sounding out letters and blending those sounds, all his or her attention is used in the act of reading. This means that there isn't enough left over to comprehend the ideas that were read. Therefore, comprehension and recall suffer. BrainRx procedures help deficient, consciously executed skills become strong, automatic, subconscious skills. When this happens, the conscious mind can concentrate on remembering, comprehending, and understanding.

All habitual skills reside at a subconscious level. Before these skills can be improved or the habits broken, the skill must first be raised to a conscious level. Once this is done, the skill can be refined. When the training is complete, the skill is forced back to the subconscious level where it serves the student and produces better performance. BrainRx training is designed and administered to accomplish this. The result of successful training is a student who does not have to think about the act of reading. He or she reads efficiently, concentrating on content and meaning, just as a world-class piano player is free to concentrate on the music, not the chord positions and keys on the piano.

Normally, new skills are put into the subconscious by repeating them over and over. All traditional training works this way. Whether it's physical, speech, auditory, language, or occupational therapy, repetition is the key to establishing the new skill. Integrative BrainRx training works the same way to cause new skills to quickly and effectively become subconscious. BrainRx training requires each student to perform repetitive processing tasks with increasing intensity and distractions present.

What Choices Do You Have?

There are three basic options when trying to help a student with learning or reading struggles. You can accommodate the difficulties, compensate for them, or attack the weaknesses that cause the struggle.

Accommodate

This is the most common approach today. It seeks to create a special environment that lets the student progress at his own pace. The problem with this choice is that students simply don't progress. This approach leads to little more than the isolation of students with struggles. It cannot really prepare them for life in the larger world, and it does nothing to find and change the actual cause of the struggle.



Compensate

This is attempting to help the student by designing a structure or program that emphasizes his or her strengths and ignores or works around the weaknesses. This is better than the isolation of accommodation, but still leaves the student vulnerable to a lifetime of struggle and failure.



Attack and Correct

The choice to discover and correct weak underlying skills gives the student the best chance to live free from the liability a learning disability can become. Cognitive skill weaknesses are a common cause of a variety of learning struggles. The only answer that holds hope of completely overcoming those struggles is to attack those weaknesses with appropriate cognitive training. IQRx gives you this choice.



If he or she is able to do two tasks at the same time, a third is added. If he or she is able to do three tasks simultaneously, a fourth is added, and so on. Since the conscious mind only handles one task at a time, the others are forced to the subconscious level. This is exactly where you want most processing skills. The results are dramatic. Students no longer have to learn just to process information—they can now process information to learn. IQRx training improves concentration, memory, visualization, integration, and processing speed, and makes them all become more automatic. That makes learning easier, faster, and more enjoyable. What was once frustrating is now exciting and the student can feel and experience success.

Why is cognitive skills testing so important?

A cognitive skills weakness is internal and specific. One struggling student might be weak in visual processing skills and another weak in long-term memory, but both may seem to struggle in a similar way. You must measure each student's individual cognitive skills to confirm the cause of his or her particular learning problem and formulate the right training. Untested, cognitive weaknesses can remain undetected for years while hindering a student's ability to learn or read successfully. Guessing at the cause without testing can lead to frustration and wasted time and money. Your child's individual skills testing will create a personal Cognitive Skills Profile™. The profile will measure the strength or weakness of his or her individual cognitive skills by both age and percentile. It will also show you any gaps between current skill levels and the success you envision for your child. This knowledge will help you determine both the specific type and the amount of training required.

Parents Take Note!

IQRx is positive for parents as well. You get to enhance your own skills, build your relationship with your child, and see your child's skills flourish. Here is what parents report:

#3 The third most common comment that parents make at the end of training is that their child is able to stay on task.

#2 The second most common comment is that the child gets homework done faster or often doesn't need to bring homework home anymore. This is because the child's ability to concentrate, comprehend, understand, and get things done faster is greatly improved after training.

#1 During IQRx training, a student experiences one success after another. Trainees, many for the first time, actually see the improvement in their ability to learn. This often causes self-image to soar—and that is the number one comment made by parents. In fact, sixty percent of the parents we see at the end of training comment on the improvement in their child's self-image and attitude.

Fees

If IQRx can help your student, fees will be discussed during the consultation following testing. Be aware that training fees vary depending on a number of factors including the needs of your student and your level of involvement with the program.

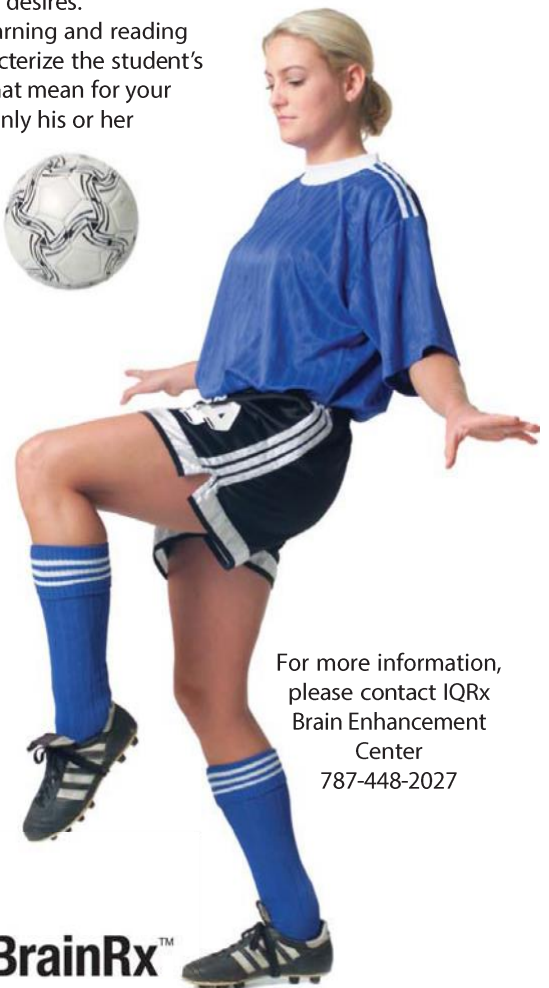
Commitment

The active and necessary role of parental involvement is one reason it is critical that both parents attend the consultation. If IQRx is to work with you to help your student, we need two commitments from you.

First, both parents need to understand the problems the student has and the consequences those problems could create in the child's life. Second, we need to confirm the parents' degree of involvement and the time they are willing to commit to help us help their student. Since we have multiple program options, we'll tailor a program to suit the time commitment you are able and willing to make. Unless we believe that you are committed and that your student can make significant improvement, we will not start him or her in the program.

The IQRx staff and trainers are dedicated to the improvement your child needs and desires.

Faster, easier learning and reading really can characterize the student's life. What will that mean for your child's future? Only his or her imagination, not a learning struggle, will be the limit.



For more information,
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BrainRx™