

When Choosing to Assist a Child's Learning

Children with low self-esteem usually give learning one try. If they don't succeed immediately, they tend to quit. They are anxious about learning for good reasons. Their history in learning is overwhelmingly unsuccessful.

In our society there is an assumption that if one tries hard they can do anything. Conversely, there is an assumption that if one doesn't succeed it is because one has not tried hard enough. Yet, in reality, there are many skills that cannot be learned even if one tries very hard. There are many of us who have tried very hard to learn how to play the piano and could not succeed. Others of us have tried very hard to learn higher math and met a level beyond which we could not go. Were we judged by someone as having failed because we "weren't willing to try harder?"

Another consideration, along with one's effort is that **people learn in different ways**. There are three basic learning paths: auditory learning, visual learning and experiential learning. While some people have the benefit of all three, there are many people who are predominantly one of the three. So learning may be impacted by the delivery system not matching up with the receiving or processing system of the individual.

Let's look at a high school history class. The material is primarily presented through lectures and reading assignments. One can imagine how difficult it is for an experiential learner to learn when the information is presented in a way that their minds cannot process. How would an auditory learner do? In the lecture section this type of learner would excel; however, when they attempted to process the reading assignments they would have considerable difficulty. Even though they read the material, they "wouldn't get it." Of course if the books were presented on tape, then the auditory learner could excel. What of the visual learner? They easily process the reading assignments, and by taking notes in the lecture section, they render the auditory signals into visual signals and thereby are able to process the auditory information. Given the system of information delivery, the visual learner has the easiest time, and out performs the other two learning styles. The visual learner gets the "A." The auditory learner gets the "C." The experiential learner gets the "F."

The moral question of fairness is raised. It's a moral question, because the system of educational presentation of information creates a loss of self-esteem in the experiential and auditory learners, and unfairly boosts the performance of the visual learner. If all three types of learners put in the same effort of attending class, taking notes, and doing the reading assignments, the results will not be the same. This is inequitable and discriminatory. The basis of education in a democracy is that if three people of the same intelligence put in the same effort the results must be the same. This is not the case for our three types of learners.

This awareness of these three basic types of learners is common knowledge in the fact that everyone reading this will acknowledge an awareness of these categories. Then why does the educational system not acknowledge this and provide children with a learning evaluation when they first start school, and based on the results, direct the children to three distinct tracks that provide the information in a way that they can process?

This can be answered by answering another question. Why is the educational system tailored for the visual learner?

School is essentially a training center for future employees. As the training center for future employees, the educational system and business/industry work in partnership with industry dictating the parameters of the ideal worker to the educational system, and the educational system responding by turning out “acceptable” workers. Industrial and educational psychologists have determined that visual learners make the best employees for the types of jobs that require a Masters level college degree: the middle and upper levels of management positions. The visual learner tends to believe what they read and what they are told. The visual learner, whose self-esteem is based upon their ability to achieve excellent grades, has no motivation to question the validity of the information that results in their “excellence.” They tend to need to believe in the authority and integrity of the instructor and the information, for to question could lead to an erosion of their feelings of excellence. In this perspective, the curriculum has been designed to assure the success of the visual learner who “needs” to be obedient and trusting. The visual learner is ideal for the white-collar positions of supervision, education, and control.

The “reality” of the economic situation must include that fact that there are not sufficient numbers of jobs for people with a Masters degree. Competition for those jobs is already intense, with more applicants than openings. What would be the consequence of even greater competition should learning paths be provided for auditory and experiential learners? It would lead to chaos, the disenchantment of the “educated”, and likely to social upheaval. So, solving the problem, providing each type of learner with prosecutable information, leads to even greater problems for a society that believes that “downsizing” is the pathway to economic success. Somehow the “wool” has to be pulled over society in general.

The system of education takes care of that by being designed to eliminate rather than to educate. It does this by first assuring the failure of a great number of children, the experiential and the auditory learners, and then to assure that they will tend to either blame themselves as being stupid, and/or to drive them into dropping out of school and into gangs. Unwarranted self-blame creates mental illness, and increased likelihood that the student will drop out of school and enter into a life of living on welfare and/or gang involvement. The benefit to our economic system is that mental illness and criminal behavior are the products of the some of the fastest growth industries in America: the prison system and health care industry. Mental illness creates many physical illnesses, which is great for the health care industry. A growing criminal population is great for the prison industry. In this way many of our children who “can’t make it” are reprocessed from a worthless commodity, to one that is very productive; to provide jobs for the visual learners in those industries. Once this population is created, they are also quite useful to the politicians who base their platform on law-and-order, and ridding the country of the Welfare System. One might wonder whether, in part, the educational system has been designed to benefit the prison and health industries, and to benefit the goals of certain politicians?

However, should the educational system, industry, and society in general answer the moral question and come to awareness of the damage it creates, then it would hopefully choose to

rehabilitate itself, and in gaining its own health, begin to develop pathways for success that can be traveled by the auditory and the experiential learner.

The first act of consciousness would be to let the children and their parents know that the system of education has been designed to the benefit of the visual learner. The experiential and auditory learners no longer need to blame themselves for their inability to compete with the visual learner, who through no blame to them, had been given an unfair advantage. The technical difficulty of providing an educational track for the auditory learner is fairly simple; provide the books on tape. The experiential learner's situation is more challenging, because it has an emotional component.

The experiential learner may do well in kindergarten and first grade, because many of the materials are multi-dimensional and practical. However as they progress through the grades the experiential learner has increasing difficulty as the materials presented become increasingly abstract. They develop emotional problems as a result of their lack of awareness, blaming themselves for their inability to learn. The result is a negative attitude toward learning which demonstrates itself through feelings of inadequacy and defeat. Whereas making "mistakes" is a normal function in the process of learning, children with self-esteem issues are not aware of this. They feel frustrated and stupid when an error is made and they quit.

Because children who are experiential learners are so sensitive to errors, and because they are generally "deficient of abstract learning skills", if one wants to provide a successful learning experience, then one, in the beginning, must present only that type of learning situation that can be immediately successful. This seems impossible, because all learning is beset with mistakes, but the following is a pathway that challenges the traditional approach of sequential learning through errors.

This new and healing pathway is called **Reverse Sequencing**. In this approach one starts with the goal and works backward through the steps. The sequence starts with the goal, which is described as step 10 and descends through 9, 8, 7, 6, 5, 4, 3, 2, and finally to 1. Upon arriving at step 1, the child can easily progress back up through the sequence to step 10. Building from success provides the foundation of security, which allows a child with poor experience in learning to gain confidence.

A good example of **Reverse Sequencing** is in a basic course of auto mechanics. When one starts out in a basic automotive class, one is first presented with a completely assembled engine, and through the following weeks one is taught to break the engine into its component parts, and then to reassemble them. However, it would be totally absurd, and overwhelming, should the instructor approach teaching auto mechanics by starting out with a completely disassembled engine, and then try to teach the students how to assemble the parts. This would be like trying to assemble a thousand piece jigsaw puzzle without the top of the box, which shows the picture of the completed puzzle. Interestingly, this is how academics are taught.

Academic puzzles are taught so that only upon taking the final exam does one finally discover the true contents of the course. And, it is only upon review of the final exam, that all the people

in the class at last get from the instructor what they needed on the first day of class, which is a clear picture of what the subject is.

Learning need not be presented like an absurd puzzle. **Reverse Sequencing** works to overcome the inhibitions of the damaged child through placing learning into the realm of that which is already known, and in doing this, it no longer is possible to get lost or to make a mistake. Not having to make mistakes means our learners do not quit on the way.

When working with children suffering from an imbalance in self-esteem, it is important to start in a non-academic/non-competitive realm. Academics/competition has too strong a negative connotation for these children. By starting in a non-academic/non-competitive realm the child enters into an environment that is fresh and untainted with negative impressions. With success in this unpolluted realm, the child can learn the structure and strategies of successful learning through **Reverse Sequencing**, and with this foundation, at a later date, academics/competitive environments can be successfully approached.

The following are a series of examples of **Reverse Sequencing** in which the child begins to establish a foundation of success upon which, eventually they may become successful in learning academics. In the first example the child is to learn how to shoot a pistol. In the second example the child is to learn how to make cookies. In the third example the child is to learn how to make a box out of wood. In the fourth example the child is to learn how to play soccer. In the final example, a child learns an academic subject. Of these examples, the easiest to demonstrate **Reverse Sequencing** through is shooting a pistol. **I AM NOT SUGGESTING THAT THE CHILD BE TAUGHT HOW TO SHOOT A GUN, ONLY THAT IT IS THE EASIEST EXAMPLE TO UNDERSTAND REVERSE SEQUENCING.** In these examples, the traditional approach will be explored first, and then learning through **Reverse Sequencing** will be explored.

LEARNING TO SHOOT A PISTOL

TRADITIONAL APPROACH:

In teaching a student how to shoot a pistol, the instructor first shows a safety video. It is then followed up by a technical video on how pistols are made in which a description is presented of the parts of the pistol, it's maintenance, and the proper posture in holding and shooting a pistol. Upon completion of these two videos the instructor then asks the student to bring out their pistol for examination. The student then practice cleaning the pistol, and safety features of the loading and unloading process is demonstrated and practiced. Next the class moves to the shooting range with a target set up at approximately 75 feet from the shooting position. The student, following the instructor's direction, begins firing at the target. As this is the first time the student has fired a pistol the student miss the target most of the time. Out of the first ten shots they have missed the target approximately 80% of the time.

What has the student just practiced? Most people would say they have been practicing shooting a gun. While this is so, what they really have been practicing is missing the target. As with any form of practice, **what is practiced is learned.** Missing, rather than hitting the target

inadvertently becomes the skill most shooters learn, and will spend the rest of their shooting careers trying to overcome. What a person initially learns becomes the primary program. Anything learned later forms a sub-routine, which is subservient to the primary program. That is why most people will not improve greatly with practice. The primary program of missing continuously undermines the secondary program developed through practice. Of course, there are exceptions to this rule, where an individual may improve greatly with practice.

REVERSE SEQUENCING:

In this style of instruction, the learner starts with the goal. The instructor asks the student, “What is the goal of shooting the pistol?” The bottom line answer is, “To hit the target.” Next the instructor poses a problem. The problem is in determining when to pull the trigger in the situation that follows. Your enemy is 75 feet away from you. You have a pistol with one remaining bullet. Your enemy is going to walk directly at you and should the enemy reach you will die. The decision to be made is when to pull the trigger. Should the trigger be pulled when the enemy is 75 feet away, 50 feet away, 25 feet away, 10 feet away, 5 feet away, or 1 foot away? The reasonable answer would be when the chance of hitting the enemy is the greatest. The decision would be to pull the trigger when the enemy was 1 foot away.

Having made that decision, one would feel confident that the target can be hit, and thus one’s life would be preserved. **The closer the target, the better the chance of hitting it.** Taking this premise of success, the instructor then follows the normal steps of teaching safety, shows the same videos as in the normal approach, but when the student approaches shooting, the target is not distant, but brought right up to the student so that when the student extends the pistol, the barrel touches the target. The instructor encourages the student to pull the trigger, and the first shot is a success. With the first shot, the first result is success. In this way, the student is practicing the goal of shooting, which is to hit the target.

The target is on a pulley, and after each shot the target is moved back along the cable 1 inch. The student is encouraged to aim and pull the trigger again and the shot results in a second hit, another success. Two shots, two hits, two successes, and the student is developing an immediate pattern of practicing the goal of shooting, which again is to hit the target. The target is moved back inch-by-inch and at 10 inches the student has had 10 shots hit the target and is definitely grooving into the experience successfully. The student’s level of confidence and comfort is soaring. The level of enjoyment is growing. The desire to continue with this learning experience is being reinforced by the succession of successful shots. The target is moved back to 11 inches and so forth to 24 inches and with 24 shots, 24 hits. In this way the target is moved back to 36 inches, an inch at a time and back progressively to 48 inches and so on until the target is back at 75 feet. Still the level of performance is perfect, and this student is an excellent shooter, and has not learned anything but what the goal of shooting is, which is to hit the target. **Reverse Sequencing** allows the student to achieve the goal with the first effort, and progressively to expand the range of the effort with the same successful results. In this effective approach, shooting successfully is not a matter of natural talent, but in experiencing success in the process from the first moment.

TEACHING A CHILD TO MAKE CHOCOLATE COOKIES

TRADITIONAL APPROACH:

Thinking it would be fun to make chocolate chip cookies a volunteer working with a child suffering from an emotional disability takes the child home to do this. Taking the ingredients out: flour, butter, baking soda, sugar, eggs, chocolate chip, etc., the volunteer then brings out measuring cups and spoons, a number of bowls and a cookie sheet or two and places everything onto the counter. Turning to the child, and handing the child a measuring cup, the volunteer asks the child to take a bowl and to measure out two cups of flour.

The child is excited, and reaches for the new bag of flour, and tries to open it. In tearing open the top, the child pulls too hard, and rips the bag. Flour billows up and goes all over. The child's eyes wide open, covered from head to foot in flour, cries and runs out of the room.

The volunteer goes after to console the child, but the child is too upset, and feels guilty, and embarrassed. No matter what the volunteer says, the child doesn't want to go back into the kitchen.

The volunteer, being compassionate, sets the child in front of the TV, and goes alone into the kitchen to make the cookies. The child sits in defeat, knowing that failure once again has destroyed the day. The child only made a "mistake", but in the child's mind it is not only a mistake, but also a window to all the mistakes and failures in life. It is too overwhelming and learning is again shut down.

REVERSE SEQUENCING:

Knowing that it is difficult for a child with a lack of success in learning to succeed, and knowing that such children tend to quit when a mistake is made, the volunteer introduces **Reverse Sequencing**. Planning is an essential element in being able to reverse sequence. All the steps, or major groups of steps need to be outlined. In this way, one can easily see the sequencing series, and by reversing the order a **Reverse Sequencing** design can be established.

In making cookies the basic groups of skills are: preparing the kitchen for cooking, following the recipe, cooking the cookies, and eating them. Preparing the kitchen requires knowing which ingredients to take out, as well as the implements necessary in preparing the cookies like the bowls, cookie sheets, measuring cups and spoons, cooling rack, a plate and utensils for mixing the ingredients. The skills of preparing the kitchen and cooking are now going to be taught without the possibility of failure through **Reverse Sequencing**.

Starting with the goal of making cookies, which is to eat them, the volunteer brings the child over to the house where a plate of cookies baked that morning are sitting on the table. Picking them up the volunteer and the child move them to the couch where they are going to watch a video they picked up on the way over. Together they watch the video and eat the cookies. The first lesson in cookie making has been a success, because in **Reverse Sequencing** the last step is the first step. In this way failure is not possible.

The second lesson is designed to get as close to the end of the normal sequencing as possible. This session is to provide transition. The volunteer is going to use the Pillsbury Cookie Dough Roll before attempting the actual making of the cookies from scratch. The advantage is that it provides a safe intermediary step from just eating cookies to the whole process of making cookies. Also, many of the basic skills of cooking are going to be safely taught.

To begin, the volunteer and the child go to the oven and the volunteer shows the child how to set the oven to 350 degrees, and explains the value of preheating the oven. Also, they set the timer to ten minutes, and the volunteer explains that is about how long it takes to preheat the oven. The volunteer then takes a knife, and begins to cut the dough to the right size, and the child places the dough onto the cookie sheet. By the time they are done with this, the timer goes off. The volunteer then demonstrates the correct way to open a hot oven by standing to the side to allow the hot air to escape without burning the cook. Then the child takes the gloves, and picks up the cookie sheet, and places it into the oven. After closing the door they set the timer for 11 minutes. In the meantime they take out milk and pour a couple of glasses, and then place the video in the VCR. A few minutes later, the timer goes off, and the child takes the gloves, standing to the side, opens the oven, and removes the finished cookies, placing the cookie sheet onto the cooling rack. A few minutes later the child using the spatula puts the cookies onto the plate and brings them over to the couch where they watch the video, eat the cookies and drink the milk. Success in lesson two and many skills are learned: Preheating the oven, using the timer, proper use of the oven, putting the dough on the cookie sheet, use of hot pads, the cooling rack and spatula. Afterwards, they cleanup and the child learns where everything goes.

The third lesson transitions from the Pillsbury Cookie Dough Roll to dough made from scratch. The dough has been prepared by the volunteer before going to pick up the child. The volunteer really hasn't told the child that they are learning how to make cookies; it's just what they're doing when they have been getting together for the last few weeks. The volunteer is just sliding into learning without any preamble. On their ride back to the house the volunteer lets the child know that this time the dough had been made from scratch, but that there wasn't enough time to finish the cookies. When they get back to the house there is a bowl of dough and the volunteer encourages the child to preheat the oven at 350 degrees and to set the timer for ten minutes, which the child is able to do. The volunteer then asks the child to get out the cookie sheet and to bring it over. The volunteer has a small bowl of water telling the kid that by wetting the hands the dough doesn't stick to the hand and the volunteer demonstrates how to take out the right amount of dough, roll it into a ball and to place it onto the cookie sheet. The child follows the example, some balls of dough are larger, and some smaller, but they are just fine. After filling up the cookie sheet the volunteer shows how to flatten the balls and the child emulates. The timer for the oven preheat goes off. The child takes the gloves, opens the oven from the side, places the cookie sheet into the oven, closes the oven, and sets the timer for 11 minutes. Next the child gets out the milk and pours out two cups, then get the video ready, and a few minutes later the timer goes off, and shortly thereafter they are watching the video and eating cookies. Success in lesson three and a new skill has been learned: the making of the dough ball, flattened out into a cookie shape. The child is moving back toward the beginning, learning the skills and having a good time in the process with reinforcement and practice of skills already learned. In

addition to the new skills, the child, by seeing the “mess” in the kitchen learns that a “mess” is a natural consequence of cooking and that it is not a “mistake.”

The fourth lesson involves mixing. On the way over to the house the volunteer lets the child know that the dough was in process of being made, but it had not been completed. When they get to the house, the dough is completed except for mixing in the chocolate chips. The volunteer encourages the child to dump the chips in and with a large spoon to mix them in. The child does this and then goes over to the oven and begins to preheat it, gets out the cookie sheet, the bowl of water and starts to place the cookie dough onto the cookie sheet. From here on the child with the volunteers encouragement completes the steps in making the cookies. During this lesson the child again sees the condition of the kitchen, with flour on the counter, eggshells in the sink, some milk spilled...in other words a kitchen in use. The child comes to accept that it’s just part of the process, that as ingredients are added, a “mess” is created. During this lesson, the volunteer begins to intellectualize **Reverse Sequencing** by discussing the difficulties of learning sequentially and how defeating it is for most people. In fact most people don’t cook “well” because of the negative reinforcement of “making mistakes” that not only “don’t taste right” but also can be embarrassing when served to others.

In the fifth lesson, the volunteer upon picking up the child, tells the child that while all the ingredients have been set out on the counter and measured, that there had been no time to mix them all together. Upon getting to the house the child begins to preheat the oven, and then goes over to the counter with the volunteer who encourages the child to begin the process of mixing. Since they have already had an initial experience in the previous lesson mixing in the chocolate chips, there is no real apprehension, and so the child begins the process. On the counter there are three bowls. One with the butter, sugar, and vanilla. One with the flour and the baking soda. One with the chocolate chips. The child mixes the ingredients in the first bowl, then pours in the contents of the second bowl and mixes, and then pours in the chocolate chips and completes the dough. With the completion of the dough, the child places the dough on the cookie sheet and before long there they are, eating the cookies with a glass of milk while watching a video. Success Again!

In the sixth lesson the volunteer lets the child know that there had been no time at all to start the cookies. When they get to the house the volunteer and the child get out all the ingredients, mixing bowls and measuring cups, cookie sheet, etc. The volunteer reads off to the child from the recipe the measurements of each of the ingredients while showing the child the recipe as this is done. The child follows the directions, spilling a bit here and there but no big deal as they are used to the kitchen being a mess as a result of cooking. Before long all the ingredients are measured, poured and mixed. The oven is preheated and a short time later the whole process is completed, and the child has learned how to make chocolate chip cookies from scratch. This is so exciting to the child and to the volunteer.

In the seventh lesson the volunteer lets the child know that they have to stop off at the market in order to buy the ingredients for the cookies. The volunteer hands the child the list when they get to the market, and together they move around the market picking up the various ingredients. The volunteer chooses the market where the child’s family usually shops so that the child can become familiar with the market in the child’s neighborhood. Becoming familiar with this market is

important, so that the child feels comfortable going there in the future should the child want to be independent.

Once **Reverse Sequencing** is learned in a set task it doesn't need to be necessarily repeated. The child has learned how to make cookies and has overcome the apprehension of making mistakes, which is the critical problem in learning for children who have an imbalance in their self-esteem. Making mistakes is no longer a learning barrier in the kitchen. Now the child can proceed to make other foods like cupcakes, cakes, sandwiches, etc. all without **Reverse Sequencing** because learning is no longer threatening in the kitchen.

In the process of **Reverse Sequencing** the child is actually working with math in the measuring of ingredients, setting the timer and the heat control of the oven. Reading is encouraged in reviewing the recipe. Planning is encouraged in that the child prepares the kitchen for cooking with getting out the ingredients and tools of cooking. The child is also encouraged to bag up some of the cookies, and to share them with the other children at school. Everyone loves chocolate chip cookies, and in this small way the child begins to establish a sense of self-worth with other children. The cookies are good and the children at school will want them, and as the child shares the cookies, the child's self-esteem will become more balanced.

TEACHING A CHILD TO MAKE A BOX

TRADITIONAL APPROACH:

Bringing the child into the wood shop, the volunteer has decided that the project will be making a box. The volunteer sets out the wood, the nails, screws, a saw and a T-square ruler. The volunteer instructs the child to take a six-foot piece of lumber, and to draw five lines one foot apart. The child is able to draw the lines. Then the child is asked to take the saw, and to cut along the lines. The child tries, but not being skilled in the use of a saw has not only a hard time starting the cut, but the cut goes off the line. The child gets discouraged. The volunteer starts to help out, but still the child has difficulty making a clean cut. Finally the volunteer takes over and makes the cuts himself.

With the six pieces of wood cut, the volunteer then tells the child to nail the pieces together in the shape of a box. The child tries but the nails go off center and come out the side of the wood or the nail bends. This too is discouraging to the child, and finally the volunteer has to step in again, and bangs the nails into the wood forming the five sides of the box.

The next step is to make the top, and the volunteer provides hinges and a latch. The volunteer makes available the screws, but again, the child being inexperienced has a difficult time starting the screws, and ends up stabbing a finger with the screwdriver. The volunteer seeing the problem tries to demonstrate the proper procedure for the use of the screwdriver, but the child still has trouble so the volunteer finishes the job.

The box is made but the child believes that it was actually made by the volunteer. The child is discouraged, and is not looking forward to any other projects. The child is overwhelmed by the difficulty of using the tools of the wood shop and feels inadequate.

REVERSE SEQUENCING:

Knowing that the child is inexperienced in the use of tools in the wood shop, the volunteer plans to assist the child to learn the basic skills of the use of a saw, a hammer, and a screwdriver. From experience, the volunteer knows that it is easy to be discouraged in the use of a saw in the area of starting the cut, and keeping the cut on line. In the use of the hammer, the difficulty is in driving the nail, and preventing it from going in at an angle or from bending. The use of the screwdriver is challenging because of the difficulty in starting the screw, and in keeping the screwdriver from slipping off the screw. Knowing that these skills can be difficult to learn, the volunteer decides to use the learning-model of **Reverse Sequencing**.

The volunteer visualizes the sequence of hammering and knows that if there were ten steps in hammering, the final step would be a nail flush with a piece of wood. So the volunteer takes one step back, and takes a piece of wood, and drives ten nails into the wood so that there is only one hit remaining before the nails are driven into the wood. The volunteer has the child watch how the nail is started, asks the child to pay attention to the stroke of the hammer while the ten nails are driven in. Then the volunteer hands the hammer to the child and asks the child to drive in the ten nails the rest of the way. Because only one stroke is required to complete the task, the ten nails are quickly driven into the wood. The child feels a sense of accomplishment and encouragement. The nails neither bent nor did they go in at an angle.

Next the volunteer drives in ten more nails so that there remains two strokes of the hammer to drive the nails flush with the wood. The child takes the hammer, and easily drives the ten nails flush with the wood. The child is feeling more confident and the stroke is becoming smoother. The success of driving in a nail is in the stroke, and by **Reverse Sequencing**, the child is encouraged, because there is no failure.

With this success, the volunteer continues to **Reverse Sequence** the use of the hammer and drives in ten nails so that three strokes remain for the nail to be flush with the wood. The child takes the hammer, and with three strokes per nail, completes the task. This process is continued until the child drives in the nails independent of the volunteer. Having the stroke established, the success in driving a nail in straight, without it bending, is assured. The skills level is brought up to a successful level before the project of making a box is commenced.

The same process is repeated for the use of the screwdriver. The volunteer uses a power drill with a bit slightly narrower than the screw to be used, to place a pilot-hole into the wood. The volunteer drills ten pilot-holes. Then with a screw placed in the starter-hole the volunteer quickly screws it in until there remains only one more turn of the screwdriver. The volunteer places nine more screws in the wood in the same way, then asks the child to take the screwdriver and to complete the task. The task is easy and in a moment the child has accomplished the task. The child feels comfortable with the task, having already experienced success in the use of the hammer, and understands the concept of **Reverse Sequencing**. The procedure is repeated with the volunteer screwing in another ten screws so that two turns are required, and so forth, until the child independently makes the pilot-hole and screws in the nails.

The remaining tool is the saw. The volunteer takes a piece of wood, and having the child observe the technique of starting a cut, makes ten cuts so that only one stroke of the saw is required to complete the cut. The child takes the saw and completes the cut, and then the volunteer **Reverse Sequences** by making ten more cuts, except now two strokes of the saw are required to complete the cut. The child has no difficulty with the saw, as the cuts are simple and in line. Soon the child is making three strokes, then four strokes and so forth until the child easily is able to start a cut and to complete the task of sawing a piece of wood on line. Again, as with many motor skills it is in the stroke that success is established, and with no chance for failure, and discouragement the child establishes a powerful and comfortable stroke in the use of the saw.

With the skills in the use of the hammer, saw and screwdriver in place the making of a box is an easy task. The child takes a six foot long piece of soft pine wood and with the use of the T-square quickly makes five lines one foot apart. With the accomplished skill in the use of the saw, the child is able to make the five cuts successfully. Taking the hammer, the child drives in the nails to attach the five sides of the box. Using a nail to make the pilot-hole the child is able to use the screwdriver to attach the hinges and the latch, thus proving the box with a top. The child has accomplished the task with a sense of confidence and comfort, which is encouraging to not only the child but to the volunteer. The child is anxious to start other projects in the wood shop, and feels a greater sense of self-esteem.

As the child completes the project, the child is encouraged to take the box to school to share with the teacher and the peers. Through this sharing, the skills of the child can be highlighted, and a sense of appreciation will be encouraged, as it was when the child brought cookies and other cooked goods to school to share with the other children.

With the completion of the third learning experience utilizing **Reverse Sequencing** the child is feeling more confident about stretching out into other areas of skills development, some of which are not only challenging, but threatening. With the completion of the third sequence the child is now aware of the strategies of **Reverse Sequencing**, and is involved with planning the learning experience. The volunteer and the child discuss the steps in the learning experience, sequencing the steps and then reversing them. So far, the learning sequences have taken place in settings, and in areas of learning that the child has few if any previous experience. With **Reverse Sequencing** being established as a successful model for the child, and with a greater sense of self worth, learning in areas that were previously negative can now be approached.

Sports, to a child with an imbalance in self-esteem, is often threatening, because of the negative ways peers and adults treated the child when the child was first exposed to the games. Because the child had not been able to develop skills in sports, the child was exposed to ridicule and teasing by peers, and very likely a great deal of frustration expressed by the adults. The experiences were so hurtful that the child is hesitant about approaching sports at all. However, the child with the help of the volunteer who has used **Reverse Sequencing** now understands that missing skills can indeed be learned. With a sense of apprehension, but also of excitement, the child and the volunteer decide it's time to approach learning how to play sports. The first sport chosen is soccer.

TEACHING SPORTS

TRADITIONAL APPROACH:

The child and the volunteer go out onto the soccer field. The volunteer kicks the ball to the child, and the child can't trap the ball so the ball goes off the foot and about ten yards behind the child. The child runs after the ball, and coming upon where it has stopped, turns and tries to kick the ball back to the volunteer. Not having the skill, the ball goes off on an angle, and not too far. The child chases the ball down, and tries another kick with the same results. The child is quickly frustrated, because of a history of failure in sports, and turns to the volunteer and says, "This is boring, let's go." The volunteer doesn't let the child off so quick, and encourages a few more attempts. The results are about the same and now the child is becoming discouraged and yells at the volunteer, "You're playing too hard!" The volunteer laughs and says, "No I'm not, I'm hardly trying. Don't quit. You'll get it soon enough." The child hears the volunteer saying that the level of play is extremely elementary, and of course the child feels terrible that even at this level the skills are deficient. Of course, the volunteer thinks that the words spoken are encouraging, but unfortunately that's not how the child receives the message. Not too long after, the situation has deteriorated and they leave the soccer field to do something else.

REVERSE SEQUENCING:

Before going out on the soccer field the child and the volunteer discuss the steps in learning how to play this game. The question that assists in the process is to ask what is the purpose of the game? In shooting a gun, it's to hit the target. In making cookies, it's to eat the cookies. In playing soccer, it's to score. A score is made when the ball passes within the goal. The child and the volunteer conclude then, that to **Reverse Sequence** scoring, it requires that they start with the ball within the goal, and step by step to move back out of the goal to a number of places on the field where a score attempt might be made. They also conclude that the player would be most flexible should the player be able to kick the ball with either foot. With this understanding, they take to the soccer field, placing themselves within the goal, which is covered with a net.

The volunteer takes the child into the goal and places the ball into the back of the goal in the right corner, and asks the child to kick the ball with the right foot. No matter what kind of kick, the ball hits the net, which is just inches away, and the kick is a score. Then the child is encouraged to kick it with the left foot. This is repeated fifty times with each foot. By the time the child has kicked the ball fifty times with each foot the kicks are getting quite strong, and the child is developing a smooth stroke with either leg, and the level of confidence and comfort is increasing. The volunteer then takes the child into the left rear corner, and the process is repeated. After fifty more kicks with both feet the child is asked to take one step back, and to repeat the process. With each step back from each corner the child is practicing 200 kicks, and by the time the child backs up to the goal line the child has kicked the ball 800 times, and has developed quite a powerful kick, which goes into the corner each time. The form of the child is excellent. The kicks are smooth and balanced. The ball travels at a good speed, but never forced. Success has bred an outstanding kicker. The child continues to back away from the goal line one step at a time, kicking the ball with both feet, and soon is back to the penalty kick line

which is 12 yards from the goal, and is able to sustain the success of the kicks by placing the ball with either foot into either corner.

The child, by **Reverse Sequencing**, has practiced success from the very beginning. The child has practiced success and so plays with success in the game. The other skills of soccer which include dribbling, passing, and throwing the ball into play can also be learned through **Reverse Sequencing**. Naturally, as the child learns the skills, they are going to be anxious to try them out at school with their peers. It would be best to counsel the child to be patient, until all the basic skills of the game are learned, before attempting to play with other kids. Once the skills are in place, the child will have a more complete success, and success is the critical element for this type of learner.

TEACHING AN ACADEMIC SUBJECT

There has been a strategy in approaching academic subjects last. As we have explored above, learning is extremely threatening to a child who has been taught by the system that they cannot succeed; the child being an experiential learner and trapped in a visual/auditory learning system. Having started with cooking, and initially presenting **Reverse Sequencing** experientially, we began the process of bringing the concepts of successful learning to the cognitive level. With success in the kitchen, the child and the volunteer were able to conceptualize the **Reverse Sequencing** in building a box. In the wood shop, the foundation of **Reverse Sequencing** was further developed, and by the time the child approached playing soccer, the volunteer and the child were able to plan together the overview and strategy that lead to a successful experience. With the foundations in place, and with the ability of the volunteer and the child to actively explore the sequencing process, it is time to approach academics.

TRADITIONAL APPROACH:

Of all the academic subjects, history is the easiest to teach in the traditional way for it is strictly sequential. With history, one starts with the beginning of time and progresses up to the current time. History is largely an exercise in memory. There are no calculations to be made. History requires the ability to obtain, retain and recall information. This is fairly straightforward presentation, and all the child has to do is memorize the information, and to recall it in a test situation. It is very difficult to understand how a child cannot succeed if only they put time into memorizing the names and dates. But it is much more complex than that.

The experiential learner is still being presented the course work abstractly, through visual and auditory delivery systems. For the experiential learner, it is quite difficult to process the presentation. In receiving the auditory/visual presentation, the experiential learner experiences anxiety, not only because it is difficult to process information delivered in this way, but also, it is critical to remember that academics is very much like solving puzzles. In history, what is learned in chapter one does not give any indication in what must be learned in chapter two, for the presentation moves from the past into the future. For a successful learner this is fun and challenging, yet for the experiential learner it is like being caught in quicksand, for no matter what it learned in the previous chapter, the next chapter confronts us with that which we don't know. It isn't until the child sees the final exam that at last, they find out what the course was

about. For the experiential learner, this is totally unsuccessful. The traditional sequencing presentation only reinforces the "reality" that learning is overwhelming and frustrating.

REVERSE SEQUENCING:

Utilizing the learning model of **Reverse Sequencing**, history can become relevant and experiential. Instead of teaching history from the past to the present, the process is reversed so that by starting with the current moment, and moving step-by-step back into the past, the experiential learner can understand the connections that make history relevant.

Relevancy allows an experiential learner to understand the information being presented. For an experiential learner to learn the historical information presented, it must be applicable to their life. One learns it because it benefits one's immediate functioning. It relates to the present. Before history can be taught to this type of learner, the child must see the connection between history and their immediate welfare. This connection provides the foundation to which the information is attached.

Before starting with world history, or U.S. history, or the state's history, one begins with one's own immediate reality, which starts with the individual. Until one knows who one is, how can one understand history?

The first section then focuses on the individual, and writing an autobiography, which begins the process of establishing one's location in the events of the world. Through coming to understand one's place in one's memory, one can begin to see how memories have been formed by their personal experiences. They come to understand that their own personal life is a history, a structure of events that commenced from a starting point, within a context of a family. They come to understand that they were brought into being by people who also have a personal history, which formed them. Going back to their grandparents allows them to see that there is a chain of events delineated by generations that leads back into the past. Through the development of the autobiography the child becomes aware of the relevancy of history, as it truly does affect them in the current moment, and influences their welfare in the future. With this foundation in place, with the child exploring their personal lives, the nucleus of learning history becomes experiential.

The second section focuses on the school within which the child attends. The exploration begins with the volunteer and the volunteer's "autobiography" and how the volunteer as an individual came into the child's life. What were the influences and motivation? What is the goal of the volunteer, personally, and how does the child fit into that picture? In this process, the volunteer leads the child to understand how they can satisfy the volunteer's personal needs in not only academic performance, but also socially/behaviorally. The volunteer also helps the child understand how the history course was developed, and why the specific instructional medium was chosen. The volunteer also begins to share the administrative structure of the school, as to how it is administered through a Board of Education, its members, the Superintendent, the Principal, etc. Knowing the people who govern the child's life is important to the child, for it allows the environment to become personal and thus experiential. How can one care about who

are the people of history if one is ignorant of knowing who are the people who actually govern one's own immediate world? Experiential Learners require relevancy in order to learn!

The third section in this history class is to follow this procedure through the city government, to the county, then to the state level. Beyond this level history and government becomes extremely distant and abstract. It is not the scope of a single course to encompass this orientation. The development through awareness of the relevancy of learning history is the critical goal. Once this is in place, and the connections from the personal experience to the community and social experience is made, then understanding the behavior of the community, be it family, school, city, county, state, etc. is the study of history. The study of history is seen as critical to one's welfare.

Now that the relevancy of history is in place we can now concentrate on delivering this study through **Reverse Sequencing** so that success can be assured. On the first day of class the final exam is presented with the answers. In this way the child immediately understands what the course is about. The final exam could be multiple choice, true/false and or essay in form. The essential element is that the child at the very beginning of learning, understands the goal of the course, and has a built in map in how to successfully navigate to that end.

Through **Reverse Sequencing**, the order of study is reversed. The last chapter of the book, the one closest to the current moment, becomes the first chapter studied. By reviewing what is happening in the current moment, and taking a step into yesterday, the child can immediately see the connection between today's events and yesterdays...how all the yesterdays created today. Step-by-step the child walks back into time, and with each step, the connection to the present is maintained, and understanding history becomes fun, meaningful and successful. Knowing the final exam and the answers at the beginning of the course makes good sense, for it allows the experiential learner to know what is to be learned. In the end, the "beginning" is reached, and with the connection from the present back through the past in place, the final exam truly becomes relevant. In history, the relevant question is, "How did we get into the present situation?" Our child will know the answer, and its immediate relevancy.

BENEFITS OF REVERSE SEQUENCING

Reverse Sequencing is a strategy that neutralizes the trauma of learning a new task and allows the experiential learner to succeed at the task from the first lesson. **Reverse Sequencing** requires the volunteer to sequence all the steps in a task, and deliver the steps in the reverse order starting with the final product, which in the case of making cookies is the eating of the cookies. In the case of learning history, it is receiving the final exam and the answers on the first day of class. **Reverse Sequencing** familiarizes the child with the subject to be learned without triggering habitual defenses that defeat the child. **Reverse Sequencing** emphasizes the relevancy of education, and makes leaning easy. **Reverse Sequencing** is respectful of the child, for it acknowledges and emphasizes their strengths. The **Reverse Sequencing Learning Model** develops cognition, as it encourages the child to arrive at an understanding of the process, and includes the child in the development of the strategies in the presentation of the information/experiences to be engaged. Through becoming involved in the development of their own education, the child becomes not just a recipient, but also a partner in the educational process. In leaning the dynamics of **Reverse Sequencing**, the experiential learner gains control

over the "mystery" of learning, and can translate the delivery of auditory/visual instruction into an experiential medium. It does require the cooperation of the volunteer and a tutor, to work with the child through the initial years of education. However, by the time the child is in Junior High School the child could have the basic skills in place to precede more independently.

Importantly, **Reverse Sequencing** leads the child into a successful learning experience, with not only the subject matter, but with the volunteer. **Reverse Sequencing** not only provides a successful learning experience for the child, but as importantly, it provides the volunteer with a successful teaching experience with the child. **Reverse Sequencing** guides the volunteer into a successful relationship with a frightened learner. **Reverse Sequencing** provides a connection between the child and the volunteer, which encourages the development of trust. Through learning that the volunteer can be trusted, the child learns indirectly to develop a trust in society and in the future. **Reverse Sequencing** thus takes the disenfranchised experiential learner, the child, and exposes the child to a volunteer who comforts and encourages through the greatest reinforcers in education: relevancy and success.