

Neuro Learning

for

golf™

Brain Compatible Learning

The Romance Stage of Learning and Developing

By Michael Hebron

Why do human beings want to take part in some activities and not others? Why do we improve at something's and not others?

Why do we have the skill to improve several activities, but tend to only make progress with a few and often only reach our potential with one?

By dividing learning into stages we can find some insights that address these questions. Benjamin Bloom called the stages of learning early, middle and late.

These stages parallel what the genius of Alfred North Whitehead referred to as the "romance stage", the "precision stage " and the "general stage " in 1929.

Studies into human development point to how what happens during the early or romance stages of learning and development of a skill will influence how long individuals will continue to stay involved with an activity. Also how often then will take part in it. (read those sentences again)

The early or romance stage must be recognize for what It is. It is the stage when the "possibilities " of creating a students continued engagement exists. This is the "get them hooked " stage not the tell them something needs fixing stage.

This is the stage when passion and a love of something needs to be nurtured and not suppressed by telling people golf is a hard game to learn and play .Not so, there are blind golfers, one armed and one leg golfers who not only enjoy golf , but some even having scores in the 70s .

The romantic stage is the awakening of interest stage and it must free of pointing out what is wrong, which causes intimidation and frustration. (An approach that should be used at every stage of learning) . If we want people to fall in love with an activity, they can't be told this or that needs fixing. Respected research shows that FIXING isn't learning, it's a negative approach to improving.

Studies show without passion there will be little interest in playing any game. Without interest the basic needs of human behavior and development are not being met. This reality is often side stepped when it comes to instruction, especially in sports instruction.

Studies show when the early or romance stage of development is filled with required structured training and lots of get it right instruction, the freedom and enjoyment that can foster interest and passion for an activity is being suppressed.

After people "fall in like " with an activity only then should the Whiteheads " precision stage " be entered into with instruction information moving beyond basics. This is then followed by the "general stage" of applying basics in a variety of contexts.

" I think I am going to like this game " may not be what students are saying after they have been told this or that needs fixing, or you must do it this way.

Athletic skill development is a by product of self motivated play. This is the kind of " I want to-play this game " thinking that is found in pick up games in parks, school yards and in golf environments free of judgment criticisms and any attempts to fix.

Unwanted outcomes should be seen as valuable feedback for future reference, not as results that need fixing. Unworkable outcomes of to far, to short, to fast , to slow , to high , or to low are actually used as insights for workable outcomes in learning developing environments . They are not seen as mistakes. They as valuable and required feedback for learning to do something different. The nature of learning finds Inconsistency as useable and valuable for learning.

Introducing or repeating unworkable outcomes during training is one of the most powerful way to support skill development and long term learning. Counterintuitive yes, but true . The unwanted outcome can be the teacher, while the instructor is the coach.

Over managed, required, structured instruction during the early or romance stage of development (or at any time) can cause individuals young and old to become frustrated and intimidated, thereby missing an opportunity to develop interest and passion for an activity and love of a game.

" That teacher sure sounds smart, I don't really know what he was trying to tell me, but he he sounded like they knew a lot . "

How many golfers have had that impression of instruction? Information is often intellectually interesting, but educationally vacant.

It is important to recognize that without a since of enjoyment , free of frustration during the early stages of development of any skill , there will be a lack of long-term interest. Without self confidence during the romantic stage, "i can do this" , "I want to do this ") there will be little opportunity to enjoy a game during a journey of development .

In learning developing environments no one is broken in need of fixing, they are on a journey of

development. A 30 handicapper isn't broken, or doing anything wrong that needs fixing. They are learning to playfully develop and grow new skills with SMART ! SAFE ! PLAYFUL! approaches to learning . On the other hand, it has been shown that "Teaching -fixing to get it right " approaches to learning do not support long term learning .

Smart - students minds are really talented.

Safe - students always first environment

Playful- powerful learning about yourself finds useful learning

We are never training the skill, we are always training the emotional self in all of us.

Suggestion: when students are allowed to, or learn to play for the pure sake of playing a game, they will develop a passion for that game, regardless of the score . Then they become willing to move on to the precision and general stages of developing, free of personal intimidation and frustrations.

Studies show: When it comes to sports, the reasons people of all ages stop participating, or play less frequently include:

- Drills are boring and studies show drills are of little value for new learning
- Emotional stress from excessive performance demands
- Negative coaching and feeling of failure
- Not enough free play without trying to get it right

In closing, it seems imperative for individuals to become frequent participants in any activity including golf, that they must experience the stress free introduction stage that Whitehead referred to as the romance stage.

Neuro Learning for Golf Presents Grow the Game Instruction™

Deliberate Structured Practice Model

vs.

Deliberate Play Model for Developing Sports Performance

By Michael Hebron

It is a given that enhancing sports performance requires a commitment to training and practice. But what should the nature of training and practice be during development?

The three stages of development are:

- Early or sampling
- Middle or specializing
- Late or investment

Alfred North Whitehead called the three stages, romance stage, precision stage and generalization stage.

Studies show any emphasis on structured, deliberate, effortful training and practice during early stages of development is now associated with great costs.

In most cases deliberate practice is not associated with great levels of sports proficiency when compared with diversified, enjoyable, playful training.

An athlete's cognitive system (brain) during training is being re-organized to meet the needs of the tasks at hand. Researchers have now assessed what they believe to be the optimal amount of structured, deliberate practice and the optimal amounts of deliberate play activities that best support the three stages of development.

At each of these stages there are different amounts of time devoted to deliberate practice and deliberate play. An athlete's involvement with other activities beyond their main sport will also influence their development.

In 2002, Cote and Hay researchers said,

1. During the sampling years there should be low frequency of structured deliberate practice and lots of play activity.
2. During the specializing years there should be equal amounts of deliberate practice and deliberate play activities.
3. During the investment years there can be more deliberate practice than deliberate play when training because the skills have already been learned.

Also during the sampling years it is important to sample several different kinds of sporting activities, instead of specializing in one sport.

This Developmental Model of Sports Performance (DMSP) is consistent with general theories of child development (Paget, 1962 Vigotsky, 1978) that support the building blocks for physical, cognitive and emotional development.

When it comes to sports participation there are three natural outcomes, people either become

1. recreational participants
2. elite participants, or
3. those who drop out

It has been shown that outcome an individual will experience is influenced heavily by the type of activities and contexts they experience during their three stages of development: sampling, specializing and investment (Cote et al, 2003 Cote & Hay, 2002)

This model (SMDP) has allowed researchers to assess what appears to be the optimal amount of deliberate practice and deliberate play at each stage of development. Simple repetition is insufficient, training activities must increase to a complexity that is just beyond current skill level, at each one of the developmental stage.

Negative Consequences of Early Specialization

Early specialization is associated with dropping out in sports, while staying involved is supported by early diversification.

When elite Russian swimmers were studied it was found that 9 and 10 year olds who began specialized training spent less time on their national team than the athlete who waited to begin specialized training until 13 or 14. These 9 and 10 year olds also ended their sports careers earlier than athletes who started to specialize later in life (Bompa 2000).

A single focus on tennis at an early age contributed to withdrawal from the sport (Lochr, 1996).

Parents of hockey players, both active players and ones that dropped out (ages 6-13), found the players who dropped out spent more time in deliberate, specialized practice and in “off ice” training (low enjoyment), than the expert athletes who experienced more play (Hodges and Deakin, 1998).

A lack of enjoyment was the most common reason for withdrawal from sports altogether (Ewing and Seefeldt, 1996).

The Value of “Play” During Early Development

Respected research has demonstrated that a significant component of the early sport experience of current elite athletes was their wide spread involvement in a range of both organized sports and deliberate play activities.

Researchers Cote and Hay defined deliberate play as an activity designed to maximize inherent personal enjoyment. Deliberate play activities are normally regulated by flexible rules, adapted from standardized sports rules, and they are normally set up by the participants involved in the activity.

John Bransford, editor of How People Learn pointed out that play activities should be designed to promote “interest” over focusing on trying to make play “fun”. When play is interesting, individuals stay interested during their unwanted outcomes.

When involved with deliberate play there is less concern with the outcome of behavior than with the enjoyment of the behavior.

Deliberate play behavior in sports can have immediate value in terms of motivation to stay involved and it also has benefits related to the ability to process information in various sporting situations.

Motivation based on self regulation (Ryan and Deci, 2000) supports the idea that early intrinsically motivating behaviors (deliberate play) have a positive effect on (1) staying motivated, (2) becoming more self determined and (3) being committed in future sport participation.

From a skill acquisition perspective, deliberate play serves as a way for athletes to explore their physical capacities in various contexts. This was found to be true for elite hockey players who spent more time in deliberate play than deliberate practice activities before the age of 20.

These findings also hold true for elite and recreational baseball players (Gilbert et al, 2002). The elite players were involved in more deliberate play than those who stayed recreational players from ages 6 to 12.

When investigating 17 elite Australian rules football players who were classified as expert decision makers and 15 elite players classified as non-expert decision makers, the results showed that the expert decision makers have invested a significant greater time in varied deliberate play activities playing basketball, football, hockey, all within a space of two years (Berry & Apernethy, 2003).

Deliberate play in various contexts will ultimately provide a broad foundation of skills that will help to overcome the physical and cognitive challenges of various sports as well as their main sport (DeKnop, Engstrom, Skistad, 1996).

Schmidt and Wrisberg (2000) suggested that transferable elements could be categorized into movement skills, perceptual skills and conceptual thinking skills.

- Movements – biomechanical and anatomical actions.
- Perceptual – environmental information that individuals are interpreting emotionally.
- Conceptual – strategies, guidelines, rules.

Sports skills demands include:

- Physical demands such as power.
- Movement demands such as precision and esthetics.
- Cognitive demands such as perception memory, or strategic capabilities.

Studies show that these demands are developed more efficiently through deliberate play, than structured deliberate practice.

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Soft and hard, informal and formal skills for coaching or performing.

By Michael Hebron

Motions in sports can have theoretical principles.

Studies show that a coaching approach aimed at facilitating just "practical insights " about that skill and its use , rather than having some kind of theoretical understanding, is more useful for supporting meaningful learning , development and performance .

This research is highly consistent with previous studies. At the heart of these studies is a desire to have practical not just theoretical understanding of motion through insights into a collaborative and seamless relationship of its components.

Regardless of an understanding of theory, or what could be called formal information, or hard skills , studies show there is a need for practical or informal insights into the application of a theory.

Lets call what the information we know a "hard skill" (formal) and how it is being transferred to a receiver a "soft skill" (informal). These two skills should have a collaborative relationship that supports meaningful learning, developing and performing.

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A MISSION STATEMENT for LEARNING, TEACHING and PERFORMING

- * Honor each individual and their choices
- * Promote self reliance
- * Strive for personal growth
- * Support self understanding and self worth
- * Encourage the use of curiosity and imagination
- * Enhance what is already known
- * Provide a positive emotional environment
- * Avoid negative judgements and corrections
- * Make students feel smart
- * Enhance observation skills
- * Promote seeing options
- * Work with broad concepts , the gist of things
- * Support the self found in self development, self organization, self assessment and self discovery
- * Uncover ordinary things that produce extraordinary results
- * Enhance what already works , no one is broken in need of fixing

"Teaching approaches are different from learning approaches " Malcolm Knowles , A Guide for Learners and Teachers.

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A short story about learning based on book titles!

By Michael Hebron

A Journey to Wisdom and Peak Learning with The Power of Play finds The Everyday Genius in all of us. The Talent Code found in The Naked Brain uses The Art of Awareness to Know What We Know. These Creative Powers avoid the Seven Senses of Memory with A Mind of its Own using the Emotional Brain.

The Bright Air and Brilliant Fire in The Origins of Intelligence uncovered by The Science Behind What Makes Us Unique, shows what it Means to be Well Educated. Science, the Brain and Our Future will Spark The Power of Ideas and The Engine of Reason from Neurons to Neighborhoods. A mind Wide Open guides The Playful Brain.

Between Parent and Child, Teacher and Child, Learning Together with Brain Friendly Strategies is Activating the Desire to Learn with Habits of the Mind that say I Want to Learn, Please Stop Teaching Me while Exchanging 20th Century Teaching for 21st Century Learning.

Places for Learning, Places for Joy all move in the direction of a Theory of Instruction filled with Fantasy and Feeling in Education that uncovers The Power of Ideas. The Smart Swarm of Peak Learning and The Edge of Possibility are the Anatomy of the Miracle found in the Situation and the Person.

Emotional Intelligence is the Heart of the Mind, Reframing a Spark that reveals Working knowledge and The Art of Being while using A Brain for All Seasons. The Celebration of Neurons opens The Tree of Knowledge with Multiple Intelligence leading to The Every Day Genius and Peak Learning.

The Power of Now creates Mindstorms that help How People Learn while Making Good Brains Better as The Art of Learning develops A Well Educated Mind while The Playful Brain is uncovering Cooperative Learning with A Mind Wide Open for Thinking Creatively.

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An Over Looked Dimension

By Michael Hebron

Golf swings happen in the three dimensions of space, sequence and time. Often the dimension of "time " is not seen as important as the dimensions of swing shape and sequence of motion.

Golfers normally evaluate themselves by the quality of their ball flight. All ball flights are linked to a time dimension that will influence the shape and sequence of swing motion.

Professional golfers Tiger Woods, Ernie Els or Stacy Lewis have the ability to create efficient swing shapes and sequencing of motion . I think it is fair to say that on their off days, the swing shape and sequence dimensions of touring professional have not broken down, but their timing dimension that has.

Suggestion: One of the most used concepts in golf is to swing the club with the feeling of a " one and two " tempo. I am suggesting that golfers should replaced that "one and two " timing concept, with the feeling of using the feeling of " one " tempo, from start to finish.

When swinging a hammer, or baseball bat the motion that is used is normally what I am calling a "one ". Normally its not a swing motion that was broken into a "one and two " with a sudden effort motion at impact

Traditionally there has been a strong preference for players and teachers to use mechanical evaluations of swing shape and sequence as a way to explain cause-and-effect of ball flight outcomes. This approach has often provided less progress then expected.

Perhaps golfers should look to the timing that exists in music to gain insights about the value of time. In music the timing of when notes are played is essential to creating the greater whole of a song. This can be the difference between good and awful sounding music.

The dimension of time can support or damage the greater whole of a golf swings shape and sequence and should be recognized for its value.

I have found many golfers that use the "one and two" tempo concept often have a sudden burst of over accelerating their hips or hands through impact. Studies show: during efficient swings when the club head is traveling 100mph, the hips are only rotating about 3 or 4 MPH, and the hands are being moved only about 15 MPH with no sudden bursts of effort.

My suggestion from putting to tee shots do not see golf swing as having separate parts. See golf swings as one whole motion that is using the tempo feel of "one", while avoiding the commonly used "one and two" tempo concept. See golf swings as have a start and a finish with no extra effort in the middle.

A good example of the tempo of one is a swinging door. The door knob, middle and inside parts of a door are all swinging together at the same rate of rotation (rpms), with the tempo of one. That tempo feel of "one" can be slow, medium or fast, but without any sudden efforts.

Golfers who have been training their golf swing mechanics and breaking the swing down into parts and are having less progress than they expected, SUGGESTION: start training a whole swing with the tempo feel of "one" and avoid using the idea the swing has parts or the feel of a swing with a "one and two" tempo.

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Birds fly, fish swim, golfers feel

By Michael Hebron

Playing golf and performing up to our potential can be an adventure filled with struggle confusion and many other intangibles thrown in. Intangibles are often never measured, but can have more bearing on the outcomes of golf swings than what can be measured by all the "new technology".

Keep in mind the same thoughts or emotions that are preparing to swing a golf club are happening in the same emotional brain that a golfer is using to make swings with and the same brain that has feelings about results.

Many successful tour professionals including Tiger Woods, when asked by reporters for their thoughts about a poor performance will answer with a non response, and they start giving just their thoughts and feelings about what they liked about their golf that day. I have found less successful golfers willing talk about unwanted outcomes.

When Dave's Love jr. was learning to play his dad would ask him for his thoughts and feelings about the shots that Davis liked that day, even if there were only a few at the start. That's was brilliant coaching. The words and thoughts that we and others use to talk about how we feel about our golf are the kind of intangibles that influence (positively or negatively) any players ability to performing up to their potential.

There is a natural emotional component to every thought and every action humans beings create, that, was passed on by evaluation. Birds fly, fish swim, human beings feel. Mary Helen Immordino Yang, Ed,D" We attach feels to things and things to feelings , that pushes us on , or away from what we are doing or learning "

The term "fitness" is normally associated with increased physical well being. Dr Bailey in his book "MIND CODE" points out that there is also something called "language fitness". This kind of fitness develops when we adjust the words we use in a way that helps us to increase workable outcomes and decrease our unwanted outcomes. Depending on the golf environment and stages of the round, some words and thoughts are more emotionally fit then others.

What is your personal perception of and how do you feel about different golf situations you have been in. Where are they safe, unsafe, good, bad, hard, easy? Other thoughts and feelings that could be attached to our golf experiences include, "I can do it," "I can't do it," "I like it," "I don't like it".

These statements about feelings release chemicals into our entire nervous system that influence positive or negatively how we perform on the golf course. This may be a counter-intuitive insight but, everything we do, mentally or physically in golf, as in life, is based on how we emotionally feel about something or the story we are telling ourself.

It turns out that words and thoughts are clearly the most powerful performance influencing drugs golfers can rely on. The use of words is often taken for granted, but they and all outcomes in golf are clearly interconnected. The kind of words players and teachers use when playing and training matter.

The language that golfers, professional and amateur use before, during and after they play a shot causes an emotion at every stage of playing. It is accurate to say the information that golfers are interpreting from the golf environment is not being transferred directly to individuals but it goes first to their emotional memory or how they feel about that situation. Warning: Negative words, thoughts and stories about the past and present release chemicals that cause outcomes below our potential.

. Everything starts with a thought. The implications are: when playing golf the words of Fear, Doubt and Criticism hurt your chances of being what Dr. Joseph Dispenza calls a "good accomplisher." When playing or training golf use positive words and thoughts aimed at keeping the internal emotional self safe. Our thoughts and words will either build or destroy confidence. They will make emotional sense and have a positive influence and meaning, or create mental and physical confusion.

Because our words and thoughts, or the story we are telling ourself about what is going on create emotions, they become the most powerful performance enhancing or suppressing drugs available to golfers. Golf is often referred to as both a physical and mental game. Perhaps we could say it's all mental, because before anything can happen physically, it had to happen in the emotional brain first.

Studies show how we feel emotionally will influence what we can do physically and this influences all outcomes, both wanted and unwanted when playing or training. Suggestion, Have positive thoughts about what you like, don't try to fix unwanted outcomes, and always return to the emotionally positive thoughts of what you want to accomplish, for example: "I just want to swing the weight of the club" without thinking about how to do it, or criticizing the outcome.

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GOAL

Improve Learning, Teaching and Performing

NOW

By Michael Hebron

Influenced by the brains connection
to the nature of learning

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Errors Are Useful.

By Michael Hebron

“A man of genius makes no mistakes; his errors are validation and are the portals of discovery.”
James Joyce

The brain-mind does many things well, but nothing perfectly. In their book, "Bozo Sapiens: Why to Err is Human," researchers Michael and Ellen Kaplan offer many valuable insights into the nature of assumptions; predictions; doubt; error; and learning.

What follows are some notes I made while reading their book with some of my own insights added.

The Kaplans pointed out that to err is human. Over time, humans had to adapt by testing assumptions and making predictions through trial and error. This process had the brain taking in information from workable and unworkable, wanted and unwanted outcomes, thereby re-wiring brain cell connections as an ongoing process.

Assumptions and predictions are more than important thinking tools; they are how a healthy brain functions. Human beings assume and predict our way through our daily lives. We are always harvesting information from our non-conscious minds, which is the underlying source of our learning, developing, and survival skills.

The same basic brain that we traveled out of caves with has been guiding the human race ever since. It was during the prehistoric times that our ancestors spent in caves, forests, and on savannas that the brain was being wired with many of our predestined assumptions which are found in the network of cell connections filled with prior knowledge.

We make assumptions all the time. We assume something will be good or bad. We assume and predict something will be interesting or not. We assume whether it is the right time to do something or not. We assume what will or will not work, etc.

Predictions and assumptions are the prisms through which we see life's choices and they come with errors that

will be encoded in brain cells from which learning will come.

A healthy brain is efficient. It is filled with general just-in-the-ball-park; detail-free concepts that provide short cuts and support learning. Studies show we actually could not function if we consciously knew all that was going on – hoping to avoid error.

Many useful ideas and thoughts resonate without detailed explanation. For example: the simple act of reaching out to open a door or a desk drawer was put into motion by a thought to do so (not an explanation). Now, if you were to write down or have to explain everything that took place when the door was being opened it would take a significant number of words to detail what occurred with the body, arm, hand, fingers, etc.

To know is to be allowed a choice. To choose includes choosing badly. Doubt and error are the start of wisdom in a world filled with false ideas. To use the Kaplan's words, "to find sense within non-sense, or meaning from meaningless, is the power of error."

There will always be more ways to err than to be valid, unwanted outcomes are more useful to learning than workable outcomes. So stay away from fixing them and using teaching aids that take away valuable acts of struggling found brain compatible approaches to learning.

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Fix vs learn

Fixing isn't learning or investigating, or inventing.

Fixing is acting on outcomes, rather than learning to understand the value of unwanted outcomes

To enjoy the process of learning is to enjoy hidden treasures that value acts of subtraction.

Meaningful learning is more about changing poor insights, then adding more information.

Brain comparable approaches to learning are "match makers", blending new with prior information found in our non conscious memory of both wanted and unwanted outcomes.

Self investigation, not fixing, can be a path to progress using some enhancements that may seem counterintuitive, which is always a worth while investment.

The natural tools or natural system of coding and decoding information that the brain uses, exist to inform self examination, there by revealing useful boundaries found in the non conscious mind, based on prior experiences.

Driving into a city for the first time and looking for your hotel without a GPS system, reveals the huge advantage of getting a little lost and seeing parts of the city a GPS system would have avoided.

Now later when walking around this city you have insights and information for finding your way around that a GPS system would not have offered.

Teaching fixing approaches are like GPS systems, self learning is being left out . On the other hand learning developing approaches know the value of getting a little lost and how that can develop future non conscious reference points that support meaningful learning.

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GIVE INCONSISTENCY IT'S DUE

By Michael Hebron

Inconsistency when seen as a negative that can prevent golfers from performing up to their potential.

Neuroscientists have demonstrated that inconsistency can be a useful element of playing golf.

When Pádraig Harrington said "consistency is highly overrated, people who are consistent are mediocre", he was spot on according to respected research into the brain's connection to learning and performing.

Outstanding performances in golf tournaments are never consistent. They all had the inconsistency of wanted and unwanted outcomes, along with recovery shots.

It is often said "this player is good, but to be great they need to be more consistent", not so. It seems that players become great when they learn to accept the value of inconsistency.

Striving for consistency and perfection has often done more harm than good.

Studies at Harvard (where I have taken classes) show that after individuals (ie. Tiger, Phil, Rory) have an outstanding performance, the brain is designed to have a natural fallback in performance outcomes, then restart from a more advanced place than in the past.

Unwanted outcomes are not in need of fixing, they are always a natural element of interacting with our environment.

The message: accept inconsistency.

Harvard's Dr. Fischer called them "desirable developmental difficulties" that we can learn from.

UCLA's Dr. Robert Bjork (who I have spent time with) and other scientists have shown that inconsistency is a

valuable and necessary requirement of reaching ones potential. It's not failure. (Unless your Irish catholic like me)

Trying to fix what was functional in the past is overlooking golf is a game of streaks and these unwanted outcomes should be accepted as part of playing a game

The natural ups and downs of playing a game provides valuable information for trial and error adjustments. Studies show unwanted outcomes are more useful for learning then wanted outcomes by a margin of 3or4 to one. Learning -developing studies recommends introducing unwanted outcomes during training, this helps individuals understand and learn what works and what does not for them.

The PGA and LPGA tours keep statistics on inconsistency. Tour players only hit 60% of the fairways, make only 15% of their 10 to 15 ft putts and hit just 60% of the greens on good days. Traditional thinking wants to fix unwanted outcomes which would not be a brain compatible approach to learning. It's been demonstrated that acts of fixing do not support meaningful learning, buy having a positive picture of what you want to do and staying away from fixing ideas does support improvement.

The real value of inconsistency is being overlooked in a golf culture that promotes perfection over the experience of playing a game.

PGA call letters should stand for "Pleasurable Game for All" and not Perfect Golf Alignments.

Inconsistency is one of the things that is consistent about business, and inconsistency is used as positive feedback for future use in the business world. Unfortunately sports coaching and schools often see inconsistency as a negative in need of fixing .No golfer, professional or amateur can predict what their score will be on the first tee, and the outcome of every swing they make will be a bit of a surprise.

Inconsistency and not consistency is found at every level of golf

I tell students "Golfs not hard, it's just inconsistent and your unwanted outcomes are a valuable component of your progress "

A golfer may say " That was easy ", after a game that went well, then after a game of unwanted outcomes the same golfer may say " I have to fix this or that ". But there really is nothing to work on, we are human beings, not perfect performing machines, which is why we have inconsistent outcomes.

Nothing is broken in need of fixing. We are not designed to miss putts or hit poor shots, but we do.

Suggestion: Let inconsistency be your friend, it is already your learning brains best friend. Perhaps this is a counterintuitive insight, but it is a useful one.

Go train in a proactive way that emphasizes the use of the golf club: where do you want the golf club shaft, head and face alined as they swing through impact for the shot you are playing. Then and this is critical - accept all outcomes, wanted and unwanted, and avoid what respected research has shown are negative acts of trying to fix body motions. Just picture what to do with the club and the body will follow.

I have learned players who are accepting the value of inconsistency are more likely to reach their potential.

Giving up the habit of thinking about what one believed went wrong may be a leap of faith, but studies show it is a step in the direction of brain compatible learning.

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Golf Made Learnable

By Michael Hebron

One would think that becoming aware of golfs fundamentals would lead golfers in the direction of improving their games. But this often has not been the case. Unfortunately what traditionally has been put forward as "the fundamentals of golf " has left behind many frustrated individuals who are not enjoying learning and playing golf .

Grip, alignment and stance have normally been referred to as the fundamentals of golf when it comes to instruction. But it seems that calling grip, stance and alignment golfs fundamentals turns out to be a stretch , making golf less learnable .

No accomplished golfer, including men and woman professionals , have the exact same way of holding the club , standing to the ball, or alining their bodies.

All these individuals golfers have developed a personal approach to these three elements , there by accommodating their individual body styles , physical strength , athletic ability and different backgrounds.

Topic of grip ,alignment and stance should not be the first components of playing and learning golf that individuals are told they must learn before they can enjoy playing golf if we want to grow the game .

This suggestion to rethink what has traditionally been referred to as golf fundamentals is founded on the brains connection to learning and the principal "do what comes natural" . Moving away from saying grip , stance and alignment are golfs basics and that they must be learned first , could be referred to as moving the the direction of " grow the game instruction "

Some would say the basic idea in golf is to get the ball the hole . Others may say the basic idea is to hit the ball , while others could say the basic idea is to get the ball in the hole in fewest strokes .All these impressions of the basic idea of golf are a description of a "result " or the outcome of the basic fundamental of golf , and when this is recognized can make golf learnable .

The basic fundamental of golf is simply swinging the weight of a club. That's it . Many different styles of grip,

alignment and stance have accomplished this basic fundamental of movement, making golf learnable and enjoyable.

The basic fundamental of basketball is to shoot up

The basic fundamental of tennis is to return the ball over the net

Golf basic fundamentals is a motion that swings the weight of the club

It's fair to say the aim of any journey of learning, developing, and growing golf skills is to one day have acceptable timing , tempo , rhythm and balance for the shot we are playing.

A basic fundamental of golf is to have the golf club moving through impact with the club shaft, head and face corresponding to the requirements of the shot at hand.

The golf course provides the swing model for golfers. The golf course tells the golfer what club to swing and what to do with the club to create a wanted outcome.

It can help to see the golf club not as just one element, but as having three components, a shaft, head, and face. I call them three employees, that are being told what to do through impact by golf course conditions, but not how to do it . . .

Note the golf course environments are not telling the golfer how to do things, It is suggesting what to do with the club. The how to is always negotiable and is up how the golfer to develop what would be most comfortable way of using the club for playing the shot.

That said, to gain wider insights into golfs fundamentals of motion, it will help to see golf clubs as tools. Like any other tool (hammer, saw, screw driver) a golf clubs design reveals how they can be used.

Note: each club shaft, head and face can be aligned in a variety of ways while it is swinging through impact to create different ball flight outcomes . . This is no different then the flexibility the exists when using any tool in our tool box at home.

GOLF TOOLS, CLUBS

For over 500 years golf club shafts have been design to angle up from the ground at address on an incline roof like, or hockey stick angle. This is referred to as LIE angle. The exception is the lie angle of a putter has is a more vertical, wall like lie angle.

A basic fundamental: Have the motion of club shaft moving and swinging through impact more or less parallel to the lie angle it occupied at address. Now depending on the shot a golfer wants to create, swinging and moving the club shaft under or over the original lie angle, would also be a basic fundamental of golf.

For over 500 years golf club shafts have ranged in length from about 34" up to 45" in a set of clubs.

A basic fundamental: Long shaft clubs can develop more clubhead speed and short shaft clubs.

For over 500 years the face on each golf club in a set of clubs (today that's 14 clubs) all have different loft angles, ranging from a high of about 60 degrees of loft , to having less than 9 degrees , with putters having even less .

A basic fundamental: Normally the greater the loft angle a club face has , the higher and shorter the ball will fly off those clubs .In general , the shorter a golf club shaft is , the greater the loft angle it will have, exception putters .

For over 500 years golf clubs have been designed and built with their shafts angled so they are leaning forward of the clubface at address. Short shafted clubs have a greater lean angle then long shaft clubs at address. Putters normally have the smallest Lean angle.

A basic fundamental: When the club shaft is moving and swinging through impact it should still be aligned forward of the club face for most shots in golf.

Allowing the club face and club head swing through impact "before the shaft " is also a basic fundamental of golf for creating shots that fly higher and shorter, with less force being applied to the ball through impact. In general when the club head is passing the shaft through impact, there is a loss of club head speed.

A basic fundamental of golf motion is that golf clubs have four "L" This reality was pointed out by respected instructor Susan Berdoy Meyers Shaft length, Shaft lie, Shaft lean, Face loft .

When golfers recognize their golf tools have four Ls, that can be put into motion in many different ways, creating many different ball flights, they have insights into golf basic fundamentals, or what I call "the golf club laws" .

The motion of golf balls flights (high, low, left, right) are a result or the outcome of a message the golf clubs motion gave to the ball through impact. See the ball as a computer, the swing as a program, and ball flight as the print out. Within this program is the swinging of the weight of the club and the desired alignment of the golf clubs shaft, head and face through impact.

Where was the club face looking as it was moving and swinging through impact?

Was the clubhead behind or in front of the golfers hands as it was moving and swinging through Impact?

Was the club shaft moving and swinging above, below, or parallel to the lie angle it occupied at address?

With insight into the golf club laws there are answer to these three questions, thereby revealing golfs basic fundamentals of motion and swing the weight of the club.

Golfers are individuals who come in many different sizes and with different backgrounds. History shows there are many ways to hold the golf club, stand to the ball and align one's body and still enjoy playing golf , making golf learnable , as you play to learn .

I have found that promoting the grip, alignment and stance as golfs basic fundamentals gives a lower return on the investment of time and resources then when golfers understand the value of swinging and moving the weight of club within the golf clubs laws for the shot at hand .

Golf has been called a "doing " game. I am suggesting that movement is the basic fundamental of doing the game of golf . This simplistic but useful insight is often put aside and taken over by the by the volume and complexity of details that are available, that I call, intellectually interesting but educationally vacant .

Let refer to how one thinks about their game and what they call golf fundamental basics as a system. The suggestion here is that the state of the system that some golfers currently use for improving their golf skills needs to be rethought. A grip alignment and stance are personal choices not fundamentals of playing and enjoying the game of golf.

Motion and what to do with the golf club through impact for the shot you want to play, has always been golfs basic fundamentals and when recognized for their value make golf learnable.

Again a golf course environment suggests what to do and does not tell a golfer how to do it. The golf course environment may reveal that the golfers motion should be swinging the shaft over the original lie angle, with the club face looking to the right, because that will create what is required.

Again the golf course it is not giving any how to directions. What the golf course does is provide information about what to do with the club, there by helping golfers learn the how to, which is an individual journey, making golf learnable.

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GOLF TOOLS and GOLF FUNDAMENTALS

By Michael Hebron

Golfers are individuals who come in, all sizes and from different backgrounds . History shows there are many ways a golfer could hold the golf club, stand to the ball and align one's body and still enjoy playing golf. .

I have found that promoting the grip , alignment and stance as golfs fundamentals gives a lower return on the investment of time and resources then when golfers understand the value of swinging the weight of a club within what I refer to as the "golf clubs laws " .

Note: Respected research has uncovered that training what to do with the golf club gives a greater return on investment of time and resources then training how to move the body.

The most useful swing model that any golfer can use is the golf course conditions. The golf course tells the golfer what club to use and what to do with the clubs shaft, head and face for the shot they are about to play.

It may help to see your golf bag as a tool box that is filled with 14 different tools. What follows are insights about those tools and what I view as golf fundamentals and swinging the clubs four "Ls".

For over 500 years the shafts of golf clubs have angle up from the ground at address on an incline roof like, or hockey stick angle. This is referred to as the LIE angle. The shafts lie angle for a putter is an exception, it is designed with a more vertical, wall like lie angle.

A Golf Fundamental: Have the motion of club shaft swinging through impact more or less parallel to the lie angle it occupied at address. Now depending on the shot a golfer wants to create, swinging the club shaft under or over the original lie angle, would also be a basic fundamental of golf .

For over 500 years golf club shafts have ranged in length from about 34" up to 45" in a set of clubs.

A Golf Fundamental: Long shaft clubs can develop more clubhead speed and short shaft clubs. Most long shots

use long clubs, short shots use short clubs.

For over 500 years the face on each golf club (or tool) in a set of clubs all have different Loft angles. These loft angles ranging from a high of about 60 degrees of loft, to having less than 9 degrees, with putters having even less loft angle.

A Golf Fundamental: Normally the greater the loft angle a club has, the higher and shorter the ball will fly after impact. In general, the shorter a golf club shaft is, the greater the loft angle it will have, exception putters.

For over 500 years golf clubs have been designed with their shafts angled or leaning forward of the clubface at address. Short shafted clubs have a greater lean angle than long shafted clubs at address. Putters normally have the smallest Lean angle.

A Golf Fundamental When the club shaft is swinging through impact it should still be angled forward of the clubface for most shots in golf. Shaft before club face through impact is a fundamental for most shots, not grip, stance and alignment, which are negotiable.

Allowing the club face and club head swing through impact "before the shaft " is also a basic fundamental of golf for creating shots that fly higher and shorter, with less force being applied to the ball through impact. In general when the club head is passing the shaft through impact, there is a loss of club head speed.

A golf fundamental is: golf clubs have four "L" This reality was pointed out by respected instructor Susan Berdoy Meyers. Shaft length, Shaft lie, Shaft lean, Face loft.

When golfers recognize their golf tools have four Ls , that they can put them into motion in many different ways , creating many different ball flights . They now have insights into golf fundamentals, or what I call "the golf club laws".

A Golf Fundamental: The flight of golf ball,(high , low, left, right) is a result or the outcome of a message the golf club gave to the ball through impact .

See the ball as a computer, the swing as the computers program and ball flight as the print out .The path of swinging club and alignment of the golf clubs shaft, head and face through impact are telling the ball what to do after it leaves the club face, Junk in, junk out.

Where was the club face looking as it was swinging through impact?

Was the clubhead behind or in front of the golfers hands as it was swinging through Impact?

Was the club shaft swinging above, below, or parallel to the lie angle it occupied at address?

Was the path the club was swing on through impact traveling from inside or outside the target line?

With insight into the golf club laws there are answer to these questions, and insights onto applying golfs fundamentals.

Golf has been called a "doing " game. I am suggesting that motion is the basic fundamental of doing the game of golf. This simplistic but useful insight is often put aside and taken over by the by the volume and complexity of details that are available, that I call, intellectually interesting but educationally vacant .

Lets refer to how one thinks about their game and what they call golf fundamental basics as a system. The suggestion here is that the state of the system that some golfers currently use for improving their golf skills needs to be rethought. A grip, alignment and stance are personal choices, not fundamentals of playing and enjoying the game of golf.

The golf club laws or what to do with the golf club through impact for the shot you want to play, have always been golfs basic fundamental and when recognized for their value makes golf becomes more learnable.

A Golf Fundamental: It is a golf course environment that is the swing model for what to do but does not tell a golfer how to do it. The golf course environment may reveal that the golfers motion should be swinging the shaft over the original lie angle, with the club face looking to the right, because that will create what is required.

The golf course it is not giving any how to directions. What the golf course does is provide information about what club to use and what to do with the club. The golf course environment is providing the most accurate swing model for the golfer application of the golf club laws.

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Grow the Game Insights. "The Spirit of The Game"

By Michael Hebron

Last year I was at Harvard University Graduate School of Education attending classes about "how we learn." These week long classes are held at their Connecting Mind-Brain to Education Institute, where I also took classes last year. It was another great week!

After hearing a lecture about how culture, customs and values have enormous implications on how we see things, our expectations and what we can learn, I began to think about how these elements can influence how golf is perceived and ultimately why people may be leaving the game today. Perhaps what follows is the other side of the story.

The Spirit of the Game Can "Grow the Game by Lowering Frustration"

Some have said golf is broken and in need of fixing; play is down and there is a lack of interest in taking up the game. On the other hand some do not agree the game needs fixing, but how the game is seen needs some rethinking.

Perhaps golf is not broken. The problem may be that today golf has become an accurate representation of the culture and values that are influencing the expectations and perceptions individuals now have of the game, there by causing golf's current business down turn. We are reaping what we have sown, frustrations and intimation.

Where do the perceptions and expectations individuals have about golf come from? Often from the golf industry.

When individuals are being told that "golf takes too long to play," and "golf is a hard game to learn and play" by those in the golf industry, it hurts the game. Will these kind of statements motivate individuals to play golf and stay in a game that offers opportunities to experience the mental, social, emotional and physical components found in the joy of playing a game? I think not!

Yes, there is less golf being played today than in the past. Yes, golf instruction often leaves behind a golf swing

that is like a closet filled with more items than it can hold. Less play and more things to think about during instruction are born out of a culture and values that are not found in a game of golf that is wrapped in the spirit of the game. This spirit is void of the kind frustrations that are hurting our ability to grow the game.

The insight that is being put forward here is:

the culture and "expectations " that are influencing the sport of golf today are clearly different from the culture, values and "experiences "that have always been found in the game of golf. (Expectations are different from experiences).

The sport of golf has a culture that brings out ego driven expectations about how far the ball must go, low scores, perfect swings, perfect clubs, fixing unwanted outcomes, and the latest gadgets. These types of expectations are clearly create the kind of frustration that are not growing the game.

Golf is a game (like all games) is meant to be a social experience; on the other hand the sport of golf is an exhibition of expectations that cause frustrations. Individuals should be educated that it is possible to look forward to enjoying golf while improving, without the kind of frustration that causes golfers to play less or leave the game.

The game of golf is a bridge or tunnel into the essence of ourselves and others. It is an experience which is not available when golf is an exhibition of desires to get something right.

The game of golf is meant promote experiences that always connect with us as people first, then as golfers. The social aspect of being a human is elevated during a game of golf. In these environments there is something more is going on than workable and unworkable outcomes. I suggest it is the spirit of the game.

Skiing and cooking have very different cultures than the sport of golf. People can ski, fall down a lot, have high handicap ski skills and can't wait to go skiing again. People can cook and barbecue with high handicap cooking skills, but love to cook. Skiing and cooking are seen as "experiences" with our fellow man, and not as an "exhibition "of skills, where individuals are told they have to get something just right to enjoy skiing and cooking.

The spirit of the game of golf travels back in time to when the game was called "COIF". This is a spirit that existed in Tom Morris' time, in Bobby Jones time, in Arnold Palmer's time. It began to erode during the mid 1970's, moving in the direction of values, customs, a culture and expectations that the sport of golf and the business of golf promote. It moved from being a wonderful pastime, into a day filled with culture caused frustration intimidation .

Playing a game of golf gives individuals the opportunity to experience spending time with others, while bonding on different levels. This is quality time in a culture that embraces the spirit of the game, which becomes a frustrating environment of trying to get something right, that exists in the culture of the sport of golf.

There are blind golfers, one armed golfers, one legged golfers who not only enjoy the spirit of the game while playing golf, some shoot scores in the 70's. Golf is not a hard game that takes too long to play when experienced in a culture that the spirit of the game represent.

Any well meaning suggestions for making the hole bigger, the ball bigger and making some changes to traditional playing conditions are not really needed to change the kind of expectations and frustrations that have caused individuals to avoid taking the game up.

Pete Dawson who heads up the R & A said, "I don't think we need to dumb golf down. I think that is an awful prospect."

By seeing golf as a game, the game will grow. The business of golf has tried to grow by seeing the sport of golf as a business. Individuals and companies that see themselves as being in the golf business are in trouble, individuals and companies that see themselves as being in the "golfer" business are doing okay.

The spirit of the game recognizes that unwanted outcomes are not failures in need of fixing. They are valuable feedback for future use. Golfers should be allowed to always see themselves as being on a journey of development from where they are at the moment. No one is broken in need of fixing when they are playing golf wrapped in the spirit of the game.

The PGA, LPGA tours are not social experiences (just watch). These tournaments are competitive exhibitions that are entertaining to see and to be appreciated. But these professional tours are not the best models of experiences the joy of spending time and interacting with new and past friends and family. What level of social experiences do we see tour players having?

When the game of golf is wrapped in the spirit of the game, it provides a safe supportive environment for learning and developing skills with a playful approach that has always grown the game.

When you lower frustration and intimidation you grow the game. The game of golf touches all aspects of what humans need; a physical, social, mental and spiritual experience.

Lower frustration by removing outcome expectations during instruction and playing the game. No one can control their score, but you can control how you see yourself and the game of golf. When this insight is recognized, any frustrations that the sport of golf can bring on are avoided.

Everyone in the golf industry should promote a culture that embraces the spirit of the game, accepting its ups and downs without frustration. PGA of America call letters could stand for Pleasurable Game for All (not perfect golf alignments). At times this insight gets lost in the culture of the sport and business of golf.

The game of golf is not broken. Some rethinking about today's culture, perceptions and expectations that many in our industry put forward will help grow the game that some see as "at risk."

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I HAVE NEVER SEEN

I have never seen a perfect golf swing but I often hear that is the aim;

In such surroundings wounded golfers are left behind fighting off ghosts of what may have been possible;

I have never seen a perfect golf swing stop visiting the haunted house of seeking perfection;

Yes at times there are thoughts of perfection but when they are gone, a functional game that champions use arrives

I have never seen a perfect golf swing, they do not exist, stop trying.



JUNIORS' STAGES OF DEVELOPMENT

To 4 ½ years of age: These children learn purely by watching and imitating and so need a worthy model. Learning occurs on a concrete level, through doing, tasting, smelling, and feeling. Give them a miniature golf club and let them imitate.

Ages 4 ½ to 7: Children now discriminate between self and others and so recognize that there is a ball and a target and that one is supposed to meet the other. They also become aware of how they are doing. The game is either friendly and inviting or threatening and repelling. Two essential factors are the opportunity to play and understanding that it's fun and safe. Continue to avoid adult abstractions; forget formal instruction. Keep it a fun, happy game. Do anything and everything to make it fun and exciting. Adult notions of a work ethic and mistakes in swing mechanics are disastrous.

Ages 7 to 9: Self-esteem and opportunity to play are still the only issues. Therefore, provide opportunity, proper equipment, appropriate models, very little formal instruction, and all the reinforcement you can.

Ages 9 to 11: Introduce instruction discretely. Children are in the middle of massive biological brain-growth, and adult abstractions are beginning to be understandable. Instruction should come from a caring, sensitive person and should be simple, precise, and loaded with reinforcement. The adult can discretely create challenge without creating anxiety. Development stops, and can even be reversed, as soon as the child finds that play is no longer safe. The instructor must motivate the child to imagine the good that can happen (and avoid images of what can go wrong).

Ages 12 and up: A wonderful cycle—Intelligence, self-motivation, and performance—has been set up. Continue providing opportunity, equipment, and reinforcement.

Physical Characteristics: It's difficult to characterize a single physical type, but junior golfers are smaller than adult players and have less developed muscles. So teachers need to be careful about placing too many physical demands on young golfers who are not capable or ready for it; equipment should be appropriate for the size of the player.

Psychological Characteristics: Depending on the age, youngsters are likely to have a short attention span, lack abstract reasoning, have less interest in detail, enjoy having fun and being praised, and need a safe environment in which to try to play the game. So when instruction is introduced, it needs to be simple and the teaching approach supportive and encouraging, particularly in the 9 to 11 year old age group.

Children are often more dependent on the teacher to establish objectives and decide for them what they need to know and do. On the other hand, many children are good mimics and eager to perform, especially if the learning is presented in the context of play and having fun.

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Learning and the Brain

by Michael Hebron

When compiling research about the brains connection to the nature of learning there were several overlapping audiences in mind including:

- 1 for any educator, employer, parent, coach, instructor or any other provider of information;
- 2 for anyone who has become frustrated or intimidated when learning;
- 3 for anyone who is not happy with their current pace of progress;
- 4 for anyone who feels that the way they are being asked to learn seems complicated;
- 5 for anyone who has become intimated and stopped trying to learn something and moved on.
- 6 for anyone who wants to approach learning, teaching and performing with the brain in mind.

Because there are, more individuals in schools and colleges, taking sports instruction, in business seminars , and in many other learning environments who are not reaching their potential then do.

In the 21st century it's unacceptable for students not to make progress at a reasonable rate when instructors and students could benefit from what science has uncovered about improving learning, teaching and performing.

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Learning Styles

Many long held views about learning are being un-thought in the 21st century. University of Virginia cognitive psychologist Daniel Willingham published research in 2005 that showed we should teach to the content of the subject, not to a learning style. Then seven years later a Wall Street Journal article by Professors Christopher Chabrs (Union College) and Daniel Semour (Univ. of Illinois) revisited the Learning Style Theory along with two other brain myths.

They began their article with three statements asking which one was false:

- 1) We only use 10% of our brain.
- 2) Overly stimulated environments will increase the intelligence of preschool children.
- 3) Individuals learn better when they receive information in their preferred learning style.

It turns out all three statements are false!

- The article pointed out that two hundred and forty-two teachers took part in a study by Sanne Dekker and colleagues at the Universities of Amsterdam and of Bristol. The findings report that the most popular brain myth was about learning styles. Ninety four percent (94%) of the teachers in the study believed they should teach to the student's learning style.
- Forty seven percent (47%) believed that we only use ten percent (10%) of our brain, while contemporary studies show that we use the entire brain.
- Seventy six percent (76%) believe that exposure to Baby Einstein type video enrichment and going beyond what is already a significant developmental environment would improve a child's cognitive development – which is not true.

The Association for Psychological Science found that there is essentially no evidence that customizing instruction to match a student's preferred learning style will lead to better achievement.

Daniel Willingham's research shows that teachers should teach to the content's modality, not the student's learning style. If you want students to see something; or hear something; or feel something, teach for that outcome, not to a preferred learning style. Kampwirth and Bates, 1980; Arter and Jenkins 1979; Kavale and Forness 1987, all found similar results.

“Why do people believe in a theory that has no research behind it? They believe because it fits a general assumption; or because others believe the theory; or because it is perceived to have become common knowledge? In 1979 researchers Arter and Jenkins reported that more than ninety percent (90%) of special education teachers believed in the Learning Styles theory.” David Willingham

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Learning Vs Performance.

By Michael Hebron

Approaches to golf training should be designed to support learning. Studies show that performing well during training is no indication of learning a skill. I have found being aware of this counterintuitive insight has helped professional and armature golfers. This is not a new finding, it was first demonstrated in 1929 by M Blodgett. More recently Nicholas C Soderstrom and Robert A. Bjork of UCLAs Learning and Forgetting Lab have shined a light on this meaningful difference.

Suggestions for improving long term learning follow.

BLOCK PRACTICE :

Doing something over and over may support progress during training, but its random training that supports retrieval of skills beyond short term performance. When randomness was increased, long term learning increased. When training your golf always be introducing random outcomes, high, low, left, right ball flights. Random training also improves inductive reasoning and thinking skills(Kornell and Bjork 2008)

Golfer say they want a consistent swing, but think again, we never have the same shot when playing. Suggestion: develop flexible, portable swings that can produce different ball flights . Avoid the popular block practice approach that does not prepare you for the ever changing conditions the game of golf presents.

UNWANTED OUTCOMES:

Introducing unwanted poor outcome during training can support meaningful learning. (Dr Bjork) They are feedback for future reference, not failure. The feel of a fast swing can help you learn something different. When training learn to do something different, not better, while never try to fix anything. Studies show that fixing isn't learning.

GIVING THE ANSWER :

Studies In 2012 by Hodges and Campagnaro noted that when helping someone learn a golf or tennis swing, often instructors (or parents) try to physically guide the learner through the desired motions . Physically guiding may reduce errors when training but when that guidance can no longer be relied upon, the reverse is true, and

meaningful learning suffers .

Self -defined movements are more resistant to forgetting than when movements are defined by others. This is one of the most robust and reliable effect in the motor learning literature. "Here is my money, tell me what is wrong, then tell me how to fix it " is not a research approach to learning.

How time is spent.

Badminton players, some under blocked and others under random practice schedules were learning three types of serves. Both groups trained for one hour. The blocked group trained each type of serve separately for 20 mins . The group under random conditions trained all three types of servers one after the other and showed better retention and transfer then the block training group.

Context:

When training anything changing the context of the environment every 5 or 10 min supports long term learning more efficiently then training in one environment for the entire time you are training. (Goode, Stephen, Magill 1986). Hundreds of experiments have demonstrated the value of this "spacing effect "as highly robust and reliables for learning to solving new problems. (Cepeda 2006)

Feedback

A common assumption is that frequent feedback from an external source during the acquisition stage foresters long term learning. But empirical evidence suggests that delaying, reducing and summarizing feedback is better for long term learning (Schmidt and Wulf 1997). Frequent feedback can be a crutch during training that is no longer present during a later retention requirement. Golfers taken note, having feedback after each swing hurts progress.

Distribution.

If you had one hour to train , its not as useful to train for that one hour straight, as it would to break the hour into four 15 min sessions with breaks in between. Also training something's different in each 15min session is more useful then training the same thing in each session.

UCLAs Dr. Bjork noted that "although the learning -performance distinction is overwhelming supported by empirical evidence, there appears to be lack of understanding on the part of instructors and learners that performing well when training at times does not support learning . "

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Meaningful Learning.

By Michael Hebron

Two descriptions of meaningful learning are 1) creating the skills that can create more skills and 2) creating the capacity to create more capacity. This is the kind of learning that supports more new learning. Just knowing a piece of information would be a very small measure of the quality of learning that has taken place.

Meaningful Learning improves learning potential, it is also:

Joyful and fulfilling	Open-ended and direct
Personal and satisfying	Flexible and portable
Adventurous and safe	Inventive and personal
Interesting and challenging	Internal and democratic
Autobiographical and stimulating	Plain spoken and tinkering
Unconscious and lasting	Wordless and seeing
Indirect and spontaneous	Visionary and felt

An example that meaningful-learning had been encoded would be that after an individual learns a skill or content, they can put it to use in a variety of environments that are different from the one in which the content was first learned.

Approaches to learning that support meaningful long-term improvement are less about avoiding, reacting to, or overcoming unwanted outcomes and more about being proactive about learning what needs to be accomplished. Proactive approaches aim at what to do , not following how-to directions from a perceived expert to fix unwanted outcomes .

Meaningful learning develops the tools to hear what is not being said; to see what is not being shown, to read between the lines and to have answers for questions yet to be asked.

Meaningful learning takes place when information develops into personal know-how knowledge for use in ever-changing environments. Often in an ever-changing environment, meaningful learning is being put to use unconsciously. New York University Professor Joseph E. LeDoux Ph.D states, "Conscious recognition of unconscious learning is meaningful learning."

Meaningful Learning:

- Prepares individuals for future learning (Weimer 2005)
- Creates the ability to use information after significant periods of disuse (Bjork 1994)

"The goal of education is better conceived as students develop the tools and strategies needed to acquire the knowledge necessary to think productively. The meaning of knowledge has shifted from being able to remember and repeat information, to being able to find and use it."

Nobel Laureate Herbert Simon (1996)

A meaningful approach to learning is focusing on changing insights that individuals currently have (not unwanted outcomes), so they can change unwanted outcomes on their own.

Meaningful learning often does not appear to be a composed result, but an outcome brought on by spontaneous interaction in ever-changing conditions.

Ever-changing environments require a fresh random application of basics that meaningful learning supports.

- Meaningful learning is accomplished by more than knowing accurate subject content, which is only one side of the story
- Meaningful learning is about what can be accomplished and not about overcoming an unwanted outcome
- Meaningful learning is a product of the brain's ability to filter new information through the lens of prior knowledge and prior experiences (both wanted and unwanted outcomes), giving personal meaning to information

To struggle is an imperative of meaningful learning. "Desirable Developmental Difficulties" is how Harvard's Graduate School of Education refers to struggles and unwanted outcomes. Unwanted outcomes are more valuable than wanted outcomes when learning, they can provide useful feedback for future reference.

Personal innovation is the engine of meaningful learning. When approaches to learning create an environment that fails to promote innovation on the part of a student, this would be like trying to make a car lighter by removing its engine.

Brain-compatible learning environments promote sitting back, relaxing and letting insights from the non-conscious mind handle most of it. You can have external peace of mind while the brain is actively engaged in non-consciously joining insights from past experiences with what is taking place in the present.

"The mind is a wonderful, sense making device that takes confusing information and unconsciously simplifies it according to the rule of thumb," states Arron M. Sackett, (Psychologist, University of St. Thomas, MN).

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MYTHS and FACTS

By Michael Hebron

What science has uncovered about the brain's connection to learning will be added to and adjusted by more research in the future. But what has already been put forward by leading scientists and educators about the topic of meaningful learning has made a huge positive impact in a variety of learning environments. Individuals are now learning faster and retaining information and skills longer than in the past.

Several myths about learning that have been discussed by Harvard's Ellen Langer and others include :

Myth: Basics should be learned so well that they become second nature

Fact: Over learning basics at the start can stifle creativity and individual expression

Myth: Delaying gratification is important

Fact: Keeping on going interest and joy in learning leads to more meaningful learning

Myth: There is a right and wrong way or answer

Fact: Correctness depends on context

Myth: Intelligence is knowing what is out there

Fact: Life long learners are not " know it alls "

Myth: Forgetting is a problem

Fact: Memory can prevent the formation of new or novel use and application beyond personal biases

Myth: Memorization is necessary

Fact: When possible, relating information to personal experiences is better than memorization

Myth: there is a limit on what can be learned

Fact: there appears to be no limit to storing information, unfortunately our ability to recall is limited. Therefore approaches to learning must take care that they support the recall of information.

Myth: Orderly, simple learning is the aim

Fact: " students need unpredictable environments in order to gain understanding, there by creating access to " it " for the long term. Order does not establish memories that last " Robert Bjork UCLA Learning and Forgetting Lab

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NON CONSCIOUS GUIDELINES

by Michael Hebron

When learning random, spontaneous and improvisational thoughts and actions can support a journey of progress. A counter intuitive insight, but true. While these kind of thoughts and actions may give the impression that they are not following any guidelines connected to meaningful learning, this is not the case.

Within human intelligence there are non-conscious guidelines that automatically monitor and organize the steps and stages of meaningful learning. (Learning is at least 95% non conscious) Some of these non-conscious guidelines were predisposed by evolution. Others were developed over time by the information gained during random, spontaneous, improvisational thoughts and actions brought on by and required for the ever-changing environments that our species lived in from day one. Learning is a survival skill that we all have at conception.

Our highly organized and efficient mind-body connection was formed from all the "trial and error adjustments " our species has made over time. This process provided information to the central nervous system to be used for learning, developing and surviving during our journey into the 21st century . Every interaction we have had with our environment over time was providing very valuable non-conscious reference point for future use.

Guided by playful "trial and error adjustments " ; " do and don't do thinking " ; " this is safe or unsafe " ; our thoughts and actions formed below our awareness , non consciously guiding individuals in the direction of meaningful learning . Learning that is interesting , playful, spontaneous and improvisational supports reaching one's personal potential.

Individuals often receive some form of systematic introduction to learning a topic or skill. These approaches normally are not compatible with nature of learning and the brains connection to this process of change. Something is missing.

Systematic approaches to learning can cause individuals to "fear " not meeting the needs of a system, there by causing emotional roadblocks to the kind of personal progress that have individuals inventing skills and knowledge that are clearly unique to them.

Yes there is an alphabet and there are the accepted rules of grammar, but these cannot tell you what or how to think and create what you personally want to accomplish or say. Systems have the limits when it comes to creativity. .(You can not film what makes a golf swing work)

It seems that at the heart and soul of reaching human potential there has always been the kind of improvisational "free play" that can unconsciously and automatically draw on all the raw material found in what has been previously encoded in our non conscious mind from prior experiences. PRIOR could stand for Providing Reliable Insights on results.

Acts of random free play may be the most natural and simplest approach learning we have available.

The play of creation and the play of re-creating both bring on the power and enjoyment of non-conscious learning, allowing for and supports breakthroughs from which meaningful learning emerges.

What could clearly be called a "homecoming " of our true self learning abilities is led by the disarming influence of childlike spontaneous, risk taking free play. When structure and spontaneity are balanced with freedom and discipline, in a safe non judgmental self-created improvisational environment, inspiration and creativity will be liberated and lead the way out of what may seem complex.

Ultimately the only techniques that help one to experience meaningful long-term learning are those invented personally. What does it look like to you? What does it feel like you? What do you think about it?

By letting go of self-imposed fears we can experience fulfillment by allowing positive self thoughts and actions to arrive the fear of not pleasing; the fear of not getting it right; the fear of doing it wrong; all suppress learning up to our potential.

There is no one ultimate breakthrough to meaningful learning. When a journey of learning is an random expression of the spontaneous individual self that exists within every individual, it will uncover the improvisational self that can be found within each individual. GENIUS could stand for " genes in us ". Within our genes is all the information that runs our life. What is encoded inside helps us interact with the external world. What is already inside of us can make us a genius.

Normally within meaningful learning there is an open ended series of playful breakthroughs and new insights that are filled with personal emotions that will influenced the process of learning.

Meaningful learning has its roots in emotions. For example, music causes us to listen, but it's much more than hearing. Music brings out who we are or can be emotionally. Learning is a biochemical, emotional process and this insight is often overlooked.

What is needed to experience long-term learning lies within each of us with the power to unblock self-imposed obstacles to progress. There is a natural flow of inventive energy that opens many paths to reaching ones personal potential found in the child like free play of risk taking when learning.

When it comes to learning, in someways the influence of the unseen raw material stored in an unconscious mine

is similar to an off-duty supervisor who still has influence over what is happening at work even though they are out of sight. There really is no new learning.

What we already know and is stored in our non conscious mind, we could say is unseen, but still has influence over what can be learned. This similar to the unseen supervisors power to influence.

The brain operates and learns by making predictions. These predictions are informed by information from all the differences that exist in prior outcomes found in the genius of what is encoded in the non conscious mind. Random, spontaneous, improvisational thoughts and actions share a common element, RESULTS . These results are all deferent, creating a variety of useful reference points that become the tools of predictions for future use. (If this then that) Unwanted outcomes are more valuable for learning then workable results.

These predictions that the brain is always making are mostly a non-conscious process, based on the large variety of information that exists in the thoughts and actions we have used in the past to interact in ever-changing environments.

Up, down; hot, cold; high, low; white, black ; fast, slow ; letters ,numbers . All different forms of information which creat the ongoing development of the prediction skills that the brain uses to guide our future interaction and support learning through the unseen non conscious guidelines that were formed over time. Yes, it's the genes in us that form our true genius.

Neuro Learning for golf™ Brain Compatible Learning

PRINCIPALS FOR IMPROVING LEARNING, TEACHING and Performing

by. Michael. Hebron

Pay attention to emotions,
the students past experiences,
and the use of language

"The most powerful drug known to making is language" Rudyard Kipling

What has been compiled here discusses research related to the brain as the gateway to learning. With a brain-compatible approach to learning, we can learn faster and retain information and skills longer, there by experiencing meaningful learning.

Learning becomes more difficult then it should be when information is delivered as a "subject matter experience " and not as a "talent management and development process ". No one is broken in need of fixing, we are all on a journey of development.

The brain is an information processing organ that has what some call a learning system that can be leveraged to improve learning, teaching and performing

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Questioning Golf Fundamentals

By Michael Hebron

Becoming aware of what many believe are golfs fundamentals should have lead golfers in the direction of enjoying their golf. Often this is not the case. Unfortunately trying to get the traditional "fundamentals of golf "right, has left behind many frustrated individuals who are not enjoying learning and playing golf.

Grip, Alignment, Stance or GAS, have been referred to as golfs fundamentals. It seems that calling these "non moving " elements of the game, golfs fundamentals turns out to be a stretch, making "golf motion" less learnable .No accomplished golfer, including men and woman touring professionals I have worked with have the same way of holding the club , standing to the ball , or alining their bodies when swinging .

These individuals golfers used personal choices for these three elements based their individual body styles, physical strength, athletic ability, their sports motion backgrounds and the kind of ball flight they want.

In my view the topic of the non moving elements of grip, alignment and stance should not be the first components that individuals are told they must get right before they will enjoy playing golf, which is a game of doing motion. As a youth golfer Tiger Woods used a home made grip for years that no one tried to change.

Some say the basic idea in golf is to get the ball the hole in the fewest swings. Others say the basic idea is to hit the ball. But these are only descriptions of a "result ", or the outcome of the basic fundamental idea of golf.

A fundamental of golf is "movement" or simply swinging the weight of a club. That's it. Many different styles of grip , alignment and stance were applying this fundamental of the game of golf while winning major championships .

A fundamental: moving the club with a swing that has acceptable. timing, tempo , rhythm and balance for the shot we are playing. Many different styles of grip, alignment , stance are doing this ever day on the PGA and LPGA

A fundamental: the swing model for any golf swing Is the golf course, (not a computer model). It's golf course

conditions that provides fundamental information to golfers for what golf club to use, the best way for them stand to the ball, and where to place the the ball in the stance.

A fundamental have the golf club "moving " through impact with the club shaft, head and face corresponding to the requirements of the shot at hand. Many different styles of grip, stance, alignment can do this

The swing molded is never someone else's golf swing. The golf course conditions are telling golfers what to do with their golf clubs . It can help to see the golf club as having three components, a shaft, head, and face. I call them three employees of a golf swing, that receive directions from the golf course conditions for how they should be alignments thought impact for the shot the course presents .

That said, to gain deeper insights into what I am calling golfs fundamentals, it will help to see golf clubs as tools. Like any tool (hammer, saw, screw driver) the design of the club reveals the many ways they can be.

A golf fundamental: every golf club shaft , head and face can be aligned in a variety of ways while it is moving and swinging through impact to create different ball flight outcomes (High , low , left , right, straight) I have call this The Golf Club Laws for years , which when they are applied creates different ball flights . The same flexibility the exists when learning to use the tools we have at home, is also available when playing golf.

How you want the clubs shaft, face, and head to be allied through impact is a fundamental, that out weighs GAP , when it comes to golf fundamentals

This suggestion here to rethink what has traditionally been referred to as golf fundamentals is founded on the brains connection to learning that suggests we learn general fundamentals that support growth and development. Moving away from saying a "non moving "elements of grip, stance and alignment are golfs fundamentals and that they must be learned first, could be referred to as moving the the direction of general information about motion that will " grow the game " .

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Slow to Learn

by Michael Hebron

During the first two decades I was teaching I was slow to learn that the student is the real educator, providing information for both themselves and their instructor. I was just giving out information – I was being influenced by a teaching culture that was not helping individuals find or invent their own knowledge base. Perhaps some readers will identify with the following;

I was slow to learn that having preconceived ideas about students or having an answer for them can be damage acts of learning , teaching and performing .

- I was subject content rich – I was not oriented to the process of learning
- I was In charge – I was not a collaborator
- I was giving answers – I overlooked the value of self-discovery and more importantly what students already know
- I was pointing out poor habits and failures – I did not recognize that there is no failure, only usable feedback for future reference (both conscious and non-conscious reference)
- I was trying to fix unwanted outcomes – I was not helping to change poor insights
- I was just reacting to poor outcomes – I was not providing a pro-active learning experience. Some teachers give their students the test back until the student gets an A
- I was trying to teach a subject – I was not supporting a journey of self-learning
- I was trying to teach details using expert models – I was not using a learning model consisting of general, non-specific, just in the ball park concepts

- I was giving commands – I was not providing guidelines and choices
- I was slow to realize that a lesson is an opportunity to experiment, not a time to try to get-it-right
- I was trying to improve performance – I was not helping students to reach their potential.

“Ignoring research based on the principles of learning can have negative effects on student learning.”
Daniel T. Willingham, cognitive scientist, University of Virginia.

When you try to change an unwanted outcome you can win or lose, but when you help the individuals learn you always win. I now keep in mind; trying to teach is different from helping someone to learn.

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Training the Club

By Michael Hebron

Years ago a highly respected golf instructor said "Michael keep in mind every golfer is different". While this is true there are two's important similarities that I use to help students experience more enjoyment.

1 Every club a golfer uses has a shaft ,head , and face

2 All golfers hit wanted and unwanted shots, that happen for the same reasons

The reason: how a golf ball flies: high , low , long , short , hook , slice or goes straight , is caused by how the golf clubs shaft , face , and head are aligned through impact . There is no other reason, I call this the "golf club laws "

In 1919 Harry Vardon " the best advice, obey the club and what the club wants you to do, letting the results be natural "

It may help to see the golf ball as a computer

Now see the golf clubs motion as what is programming the computer, then see the flight of the ball as what the computer can print out, keeping in mind, junk in , junk out Golf clubs are tools and similar to all the other tools we enjoyed learning to do different things with , learning what to do with the golf clubs shaft, face and head to cause different ball flights will enhance anyone's golf experience .

In 1930 Bobby Jones " No one can play good golf until they know all the different ways a ball can be expected to react when struck in different ways "

The most useful swing model that golfers can use is the golf course and the design of the golf club. A golf course speaks to golfers telling them what club to swing, and what to do with the shaft, face and head of a golf club for the shot they want to play .

Form follows function is at the hart of playing golf , guided by the golf club laws ,the foundation of creating golf

shots . Bobby Jones " golfers should first learn how the club face and the ball interact at impact "

SLICES : normally through impact the shaft is swinging back down over the angle that it occupied at the address. The club face is open or looking to the right. The club head is behind the grip end of the shaft.

HOOKS : normally through impact the club head is behind the grip end of the shaft. The shaft is swinging parallel to the same angle it occupied at address. The club face is closed or looking left.

STRAIGHT: normally through impact the club head has not past the grip end of the shaft . The shaft is swinging parallel to the angle it occupied at address. The club face is allied in the direction of the target.

If your ball is slicing, when practicing try hitting hooks . If your ball is hooking, when practicing try hitting slices . Don't try and fix your unwanted outcome, always "train your change "in a proactive manor. Don't try to fix learn by training the club.

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Wide Attention vs Diligent Focus

By Michael Hebron

Read what follows with two realities in mind.

- 1: past experiences unconsciously influence what we can learn, perform and create when training or playing golf .
- 2 : information from many different locations in the brain unconsciously come together to help solve problems on the golf course .

Some golfers are focusing so hard that that are damaging their ability to perform up to their potential. Studies from several research centers including Harvard, have uncovered that acts of focusing can make learning and performing more difficult then nature intended them to be , but wide attention is useful .

, University of Pennsylvania neuroscientist Martha Farah said " People assume that increased focus is always better, but they do not realize that intense focus comes with some real trade -offs "

Everything about performing and creativity is supported by unconscious associations with past experiences, - if this, then that, a skill that is suppressed by focusing When golfers at every skill level are about to play a shot, past experiences encoded in their non conscious mind can help them perform up to their potential .

If the brain was caddying for us it would say " just putt,just swing , do not try to putt or try to swing , just let it happen without focusing on trying to get it right " The unconscious brain would never talk to a golfer the way many golfers talk to themselves when learning creating and playing .

Studies show that when the mind is diligently focused on the shot we are about to play, it prevents us from making useable connections to information from our past experiences that can support what we are doing in the present. Prior shots and putts can help us with a shot or putt we are about to play if we are not focusing on getting something right.

Below our awareness the brain will let in useful information from past experiences to support workable outcomes

when we are not trying hard to focus Dr. Marcus Raichle a Washington University neurologist " When your brain is supposedly doing nothing , (not focusing) it is really doing a tremendous amount"

Use wide attention and not deep focus, is the suggestion I make to golfers at every skill level. " Without focusing, creativity remains in contact with useful information that is unconsciously streaming into the brain " Prof. Jordan Peterson, University of Toronto.

The brain unconsciously gathers dissimilar information from many different experiences to support what we are doing in the present . We recall old ideas or past solutions and apply them to new situations when training or playing golf, if we are not trying hard to focus .

Decisions not to focus help to ensure a rich mixture of insights that focusing cannot produce. If you are not diligently focused and keep your attention wide when looking at a putt or shot you are about to play, every putt and swing you ever experienced can help you with that putt or shot. Keep in mind everything we do is based on prior knowledge and past experiences.

In closing one of the reasons we recall an answer after the test is over is because we stopped focusing on trying to remember it . Can you imagine how many car accidents there would be if people were diligently focusing on how to drive their car. Golfers may want to find a message from those two examples and bring it to their golf games. Wide attention not diligent focus should be your caddy.

During non focusing the brain, our gateway to learning, uses " conceptual blending " which is crucial to learning, performing and creativity. Below our awareness the brain blends different prior experiences in golf to non consciously support a workable outcome for the shot or putt we are about to play. Perhaps a counter intuitive insight, but true.

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WORDS And THOUGHTS

By michael Hebron, PGA hall of fame

Playing golf and performing up to our potential can be an adventure filled with struggle, confusion and many other intangibles thrown in. -Intangibles are often things that are never measured, but can have more bearing on the outcomes of golf swings than what is measured by new

It turns out that words and thoughts are intangibles that clearly are the most powerful performance influencing drug. They cause the release of chemicals into our nervous system that support or suppress workable outcomes of our golf swings .

What was your personal perception of a golf situation; safe, unsafe, good, bad, hard, easy? Other words that could be attached to our golf experiences include, "I can do it, I can't do it, I like it, I don't like it "

All statements that will emotionally release chemicals into our brain and entire nervous system that influence how we perform on the golf course.

The use of words is often taken for granted. But language, our brain and our behavior in golf are all interconnected. Most of our physical actions, including golf swings are a response to the brains emotional reaction (positive or negative) to the mental thoughts we have about the external world every round of golf and golf course

Keep in mind the same brain that is preparing to swing, is also making that swing for both wanted and unwanted outcomes. The same brain is evaluating results. Many successful tour professionals answer a reporters questions about a poor shot with a non response and start talking and thinking about what they liked about their golf that day. I have found less successful golfers willing to talk about their unwanted outcomes.

We could say that information from the golf environment is not being transferred to individuals but to their emotional memory. Warning :Negative words , thoughts and stories release chemicals that cause outcomes below our potential.

The term "fitness " is normally associated with increased physical well being. Dr Bailey in his book "MIND CODE " points out that there is also something called "language fitness". This fitness develops when we adjust the words we use in a way that helps us to increase workable outcomes and also decrease our unwanted outcomes. Depending on the environment and stages of the round, some words and thoughts are more fit then others.

Playing golf is an emotional -chemical activity influenced by our words and thoughts. Everything starts with a word .The implications are: when playing golf words of Fear, Doubt and Criticism hurt your chances of being what Dr. Joseph Dispenza calls a "good accomplisher "

When playing or training golf use positive words and thoughts aimed at the internal emotional self and not the external physical self.

In golf, words and thoughts can help or hurt performance:

- They can cause every kind of emotion;
- They build or destroy confidence;
- They construct thoughts and answers;
- They are personal or not;
- They make sense or create confusion;
- They are proactive or reactive;
- They are ours or someone else's;
- They are meaningful or not

WORDS and THOUGHTS The most powerful performance influence drugs available. They influence outcomes in golf, both workable and unworkable.

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The Spirit of the game

By Michael Hebron

The amount of golf being played in America has been on the decline for several years. Some say that golf is broken and in need of fixing. Others say it is not golf that needs fixing, but its culture and how golf is often perceived clearly needs to be rethought.

Perhaps golf not broken, the problem may lie in a culture that is influencing perceptions of the game of golf. Where do the perceptions about golf come from? Unfortunately, often from the golf industry. Are we reaping what we have sown?

When the golf industry states that "golf is a hard game to learn and it takes too long to play", that hurts golf. Do these kind of perceptions motivate people to play a game that offers mental, social, emotional and physical components found in the joy of playing a game? I think not.

The spirit of the game has gotten lost in the culture of the sport of golf.

The view here is that the sport of golf and the game of golf are now different. The sport is filled with damaging "experiences", while the game is meant to be an enjoyable "experience". Experiences and different from Experiences!

The sport of golf is filled with ego driven expectations about how far the ball must go, low scores, perfect swings, and a need to fix unwanted outcomes. These kind of expectations clearly create personal frustrations that do not support growing golf.

On the other hand playing a game of golf is meant to be an experience to be enjoyed. Golf can be a bridge or tunnel into the essence of ourselves and others. That's an opportunity not available when golf becomes an example of a culture that is trying to get something right, believing something is wrong.

The game of golf, unlike the sport of golf, can promote an experience that connects with us as people first, then as

golfers , while enjoying a green grass experience . The social aspect of being human is elevated during a game of golf. In this culture there is something more going on then wanted and unwanted outcomes, I suggest it is "the sprit of the game "

The sprit of the game goes back hundreds of years to time when the game was called ""COLF". A spirit that existed in Tom Morris ' time, in Bobby Jones time, and in Arnold Palmers time.

By the mid 1970s golf started moving in the direction of a culture that started to value expectations over experiences .The game was moving away from offering up a wonderful pastime, into a culture that was offering time filled with expectations, frustration and intimation.

The golf industry should promote a culture that embraces the sprit of the game. My associations call letters PGA should stand for " pleasurable game for all" and not perfect golf alignments. This view can get lost in the culture of expiation's and business of golf.

Skiing and cooking have a different culture then the sport of golf. After driving for hours to ski, people with high handicap ski skills, can fall down a lot and still say they enjoyed themselves. Also people without good cooking skills say they still love to cook and barbecue for their friends. Acts of skiing and cooking are an experience with our fellow man and not an ego driven exhibition of skills. Golf industry should take note.

Individuals and companies that see themselves as being in the golf business have been in trouble. But those who see themselves as being in the "golfer " business are doing ok. A view that is wrapped in the sprit of the game.

The game of golf when embraces the sprit of the game is not broken In need of fixing. By rethinking the kind expectations that exists in the of the sport golf, can help grow a game that some see as "at risk "

There are blind golfers, one armed players and golfers with one leg who not only enjoy the experience the sprit of the game, some have scores in 70s.

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Train the Whole Motion

By Michael Hebron

Studies in the book TEN STEPS TO COMPLEX LEARNING points out that the whole is more important than the sum of the parts.

Overwhelming evidence has been uncovered that shows breaking a task down into a set of separate elements, then teaching or training those objectives does not work when complex learning is the aim. (Clark and Estes 1999, Spector and Anderson 2006).

Put attention on the integrated whole, which sets objectives for real life task performances. A well designed training program will not teach each component of a skill separately, but will help students learn (and see) the parts as a whole or one integrated motion.

Complex Learning is defined as a integration of knowledge, skills and attunes. A coordination of different skill sets, based on real life environments and tasks.

A Tale of Two classrooms

Classroom A

Teacher knows everything.
Mistakes = ☹️
Teacher Questions.
Kids listen.
Goal is good grades.
Memorize Facts.
Finish Pages.
One Size Fits All.
Rules enforced.

good
for robots

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Classroom B

Teacher as learner.
Mistakes = Learning
Kids Question.
Kids think.
Goal is learning.
Solve Problems.
Create.
One Size Fits EACH.
Rules unnecessary.

great for
kids

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