

The World Swimming Coaches Association Newsletter

Vol 11 Issue 2

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ITEMS for the FINA Congress- July 2011 —Shanghai

The following three items are of the utmost importance to swimming coaches. We hope you will read carefully and encourage your Federation Delegates to the Congress to **SUPPORT** this proposal to include **A COACH** on the FINA Bureau!

The second item relates to the **RIGHT** of a nation to participate in FINA events, without it being an **OBLIGATION**.

Clearly, both are important to our

swimming and coaching interests around the World.



John Leonard

Topic: Athlete on the FINA Bureau

Initial Submission by U.S. Aquatic Sports in January 2011:

C 17.1.7 - There shall be one athlete, elected by his/her peers at the FINA World Championships, to sit as a member of the FINA Bureau. ~~The Chairman of the Athletes' Committee shall be a member of the FINA Bureau.~~

Amended Proposal by U.S. Aquatic Sports in May 2011:

C 17.1.7 (amended): There shall be one athlete member of the FINA Bureau, selected by the president from a pool of five athletes who are recommended by the Athletes' Committee.

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Rationale for Rule and Amendment:

United States Aquatic Sports initially believed the athlete on the Bureau should be elected by his/her peers because this was the best and most democratic method. However, after further analysis, the best possible athlete on the FINA Bureau would come from a pool of vetted and qualified athlete candidates versus by through actual election of the athletes. For this reason, we are amending our proposal to have the President of FINA select this athlete on the Bureau from a pool of five candidates who would be vetted by the Athletes' Committee.

Topic: Coach on the FINA Bureau

Initial Submission by U.S. Aquatic Sports in January 2011:

NEW — C 17.1.8 — There shall be one coach, elected by his/her peers at the FINA World Championships, to sit as a member of the FINA Bureau.

Amended Proposal by U.S. Aquatic Sports in May 2011:

C 17.1.8 (amended): There shall be one coach member of the FINA Bureau, selected by the president from a pool of five coaches who are recommended by the Coaches' Committee.

Rationale for Rule and Amendment:

United States Aquatic Sports strongly believes that having a coach on the Bureau is a critical step forward for FINA. Initially we believed the coach on the Bureau should be elected by his/her peers because this was the best and most democratic method. However, after further analysis, the best possible coach on the FINA Bureau would come from a pool of vetted and qualified coach candidates versus through an election. For this reason, we are amending our proposal to have the President of FINA select this coach on the Bureau from a pool of five candidates who would be vetted by the Coaches' Committee.

Topic: Rights and Duties of Member (C 8.2.7)

Issue: A new proposal states the following: "All members are obliged to participate in international Aquatics' Competitions especially in the FINA World Championships and other FINA Competitions." The U.S. believes it should be a "right" to participate, but not an "obligation."

Goal: The U.S. will work with federation contacts around the world to have this proposal voted down. •

500 days to London

By Bill Sweetenham

If my calculations are correct, March 14, 2011 marked 500 days until the London Olympic Games. Not long!! I have always believed that in preparing for the Olympics and when it gets to the final countdown of 500 days out, the preparations take on a higher degree of urgency where the priority of weeks and months now converts to days and hours. I have attached an article from *Psychology Today* called "A Nation of Wimps" (<https://www.swimmingcoach.org/pdf/NationofWimps.pdf>). This was sent to me by Dean Pugh. It was sent as a flow-on to the Generation Y article which has created so much interest and inter-action. Swimming Coach Matt Magee sought opinions on this and got great feedback from his swimmers. My observations of coaches who are successfully dealing with the Gen Y athlete are basically taking the approach that they do not change or alter the training of the athlete (i.e., physical preparation) but they do take a different approach to coaching the person as opposed to coaching the athlete.

Coaching the person when this person is a Gen Y athlete is now more important than ever. There is no question that some coaches will address this change and some will struggle. The strength and the trust of a winning athlete/coach partnership is also now more important than ever. I have heard many people talk about Gen Y but very few are practitioners as compared to theorists who deal with this issue on a daily basis. For me, there is nothing greater in coaching than standing in the Call Room with an athlete who has gone the extra yards in preparation and who is about to do something very special in the competition pool on the global stage.

In contrast, there is nothing more devastating than to know that both the athlete and you are about to experience under-achievement due to

a compromised preparation. This is usually due to the coach chancing the shortcut preparation in order to appease the athlete. It is only then that you can fully understand the effect of a compromised Gen Y approach at best will provide a Gen Y result. I believe there are many athletes who still take pride in taking the tough options sometimes even when it is not required to mentally understand and know that their preparation has been complete.

For those who are swim coaches and wish to stay abreast of performances, go to, www.swimrankings.net and this will provide full details of the Top 100 rankings, both Junior and Senior (ongoing and current) and it is well worth looking at. The French Trials are on next weekend in Strasbourg and these should be interesting. The French coaches are working extremely hard with an old-school approach to endurance and preparation, but a very modern approach to sprint swimming. It was interesting to note that last week, the French were beaten in Rugby Union for the first time ever by Italy, and they have immediately released approximately half of their players and replaced them with their best youth talent. This included Chabal who was the first rugby player in Europe to earn 1 million Euros per month. The old saying goes that change occurs when it is nearly too late, too late or with the intervention of great leadership. I wonder how many lessons are in this exercise for Australian sport?

I have also attached a practice drill for breaststroke that you might find of interest. (Reprinted on page 5.) Please give me feedback if you choose to give this a try.

For those of you who are preparing for the Australian Trials, I wish you all the best.

“Focused” Practice

By Rod Havriluk, Ph.D., Swimming Technology Research

According to research by experts in several fields, it takes 10,000 hours of practice to achieve expertise. Most serious swimmers have logged 10,000 hours of training by the time they finish high school, yet still have technique limitations. Why?

The answer has to do with the quality of the practice. How many of those 10,000 hours is a swimmer just trying to get to the wall for a rest, live through a set, or finish the workout and go home? If there is no focus on technique, then that time doesn't count toward the 10,000 hours.

“Focused” practice is the key to quality training. (Focused practice has similarities to the “deliberate” practice of Anders Ericsson, a psychology professor, and the “deep” practice of Daniel Coyle, author of [The Talent Code](#).) Only the training hours where a swimmer is focused on the specific cues of an effective technique count towards proficiency. (A cue explains a specific orientation of body parts that a swimmer can see or feel while training.) Attending to these cues provides a swimmer with feedback about whether he/she is complying with effective technique or executing the skill with error.

There are a number of strategies for “focused” practice that expedite skill learning:

- Review of a model of optimal technique
- Instructional cues for key body orientations and motions
- Cue-focused practice of short

swims at a slow speed with limited breathing

- Instructional reminders before each swim
- Individual feedback about compliance with cues after each swim
- An analysis that explains positive technique elements as well as limitations
- Drills and exercises that isolate and allow focus on select cues

Havriluk's research found that a program with the above components produces an effect from 12 hours of focused practice that is comparable to 2,000 hours of unfocused practice (Havriluk, 2006). How many hours of your practice count for today?

Havriluk, R. (2006). Magnitude of the effect of an instructional intervention on swimming technique and performance. In J. P. Vilas-Boas, F. Alves, A. Marques (Eds.), *Biomechanics and Medicine in Swimming X*. Portuguese Journal of Sport Sciences, 6(Suppl. 2), 218-220.

Havriluk, R. (2008). Improving performance in swimming: Learning strategies for basic technology. Retrieved March 22, 2011 from <http://216.197.124.49/SwimmingWorld/Magazine/July08/ImprovingPerformanceinSwimming.pdf>

Breaststroke Arm Power and Acceleration Drill

By Bill Sweetenham

Take a set of flat paddles that are slightly larger than your hand size and drill an additional three holes in them as follows:

First hole – close to the middle (lengthwise) of your normal finger strap position but in the very centre of this part of the paddle.

Second hole – drill the next hole right in the position where the centre of where your hand would be. If you were to hold the paddle and balance it with one finger, then this is the perfect centre of your paddle.

Third hole – the next hole is drilled approximately halfway between the second drilled hole and the bottom of the paddle but slightly towards the bottom edge.

If you can use Hans paddles then there is no need to drill any holes as these are perfect for this exercise. The holes should only be big enough to thread through a length of limited size stretch cord (surgical rubber) which should be thin and quite elastic in nature.

The cord is threaded through and tied off in each paddle, coming through the bottom of the paddle. It should be that the rubber (length and strength wise) will become taught at approximately 30-40% of your outward sweep when doing full stroke breaststroke.

The following progression may be of interest to those coaches who are working with breaststroke or medley swimmers:

- Practice shorter and longer pulls (experiment with this). Be sure to commence the pull with arms fully extended. The first hole when used will place emphasis on pressing outwards with the fingers. The second hole will emphasise the sculling action both on outward and inward sweep, and the third hole will further emphasise the sculling action, both outward and on recovery.
- Practice breaststroke swim and breaststroke pull utilising the stretch cord in all three holes, commencing the stroke with wrists locked out and elbows locked in.
- Utilise all three positions (individually and all together) working on pitch/force application of the hand.
- Practice pull using the above with pull-buoy and band, but at race stroke rate and breathing every two strokes.
- Practice breaststroke scull mid-point. Head down/head up, locked/anchored elbows – then mid point hold “rap” scull, then scull into full stroke.

Repeat all of the above:

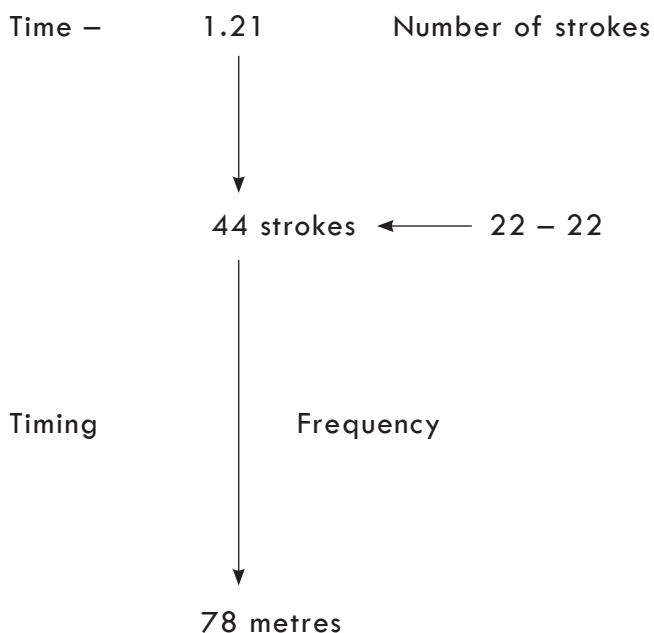
1. Without paddles but with surgical gloves
2. Without paddles but with normal gloves (wrist straps)

Breaststroke Efficiency Test:

- 100 breaststroke time (PB) and number of strokes (be accurate).
- distance kicked in PB time and same number of kicks. This may take several attempts where the athlete will kick with the same number of kicks that they did in their PB and for a time exactly the same as their PB time. Once this is practised and measured, you will be aware

of both the swimmer's kicking and pulling efficiency. See the example below. This is for a 100m breaststroke swimmer who has a PB of 1.21 with 44 strokes and can kick 78m in 2.21 with 44 kicks including pull-out at start and turn.

Example only:



10 X 100 1.21 44 – 78

(ie. kick 78m in 1.21 then swim or pull at race stroke rate the last 22 m)

This can be replicated using the same protocols with pull, ie. distance achieved in pull 44 strokes in 1.21, then kick or swim the remaining distance at race stroke rate. •

Little bit of Magic.

Bryan Craig

When I started coaching I was mentored by Bob Gillett, Bob always told me to do it my way and add a bit of the unusual to everything I do, I have carried this forward through my coaching career, I now understand what he meant by the “But what if factor” I will explain a little for you, just think about it.

10x100 IM rest 30

Above is a very boring session in which the swimmer becomes a north-south swimmer, swimming up and down the pool but getting nowhere.

10x100 IM reversed, sprint the free and fly count strokes in breast

Above is the same set all changed up with focus points and mind tricks to keep the children thinking about exactly what they are doing. When a child does this kind of session they tend not to get lost and tend to not get bored.

Ok but when it's high-end aerobic every child should get bored as it's very long distance e.g. 1000 free.

How about 1000 free every fourth lap is sprint but of a secondary stroke! A lot less boring.

Many coaches come onto deck at the end of the day exhausted and do not have the passion to coach. They tend to give out the norm in training sessions, and then wonder why they loose children to other louder more inventive coaches. This is the one thing I have stuck by: change it every day.

Don't get stuck with the well this is how we did it when I swam 40 years ago it made me good this is what we will do today. Children and parents have a different frame of mind from then until now.

If a child changes coach and suddenly starts to get faster is it the new coaches doing? Perhaps mentally but physically no, well not for the first 6 weeks. The functional adaptation of the human body will not be obvious within the first 6 weeks. Will the first 6 weeks of new training help? Yes! But you won't observe that until the next 6 week block so therefore each coach is only as good as the last 6 week block.

The automatic change come when a swimmer ramps up say going from 2 sessions a week to 5 or 6. Then the adaptation period is slightly quicker, roughly 4 weeks, but the swimmer will fatigue faster over that period also.

My challenge to all coaches and parents is be patient. Things will come around but it may take that first 6 week period before it does.

Change it, mix it, don't be boring. One of the greatest coaches I have seen do this is my assistant he is a very strange character and has the ability to turn 10x100 free into a game for the kids. What does this do well let's just say those 10x100s are much more effective than most coaches version.

This is where the magic begins. I could give you every single training session, and while you would know what to do with them would you know how to do it to get the results that I do? Well no, you wouldn't, because you as a coach have no clue what is going on within my mind. Back comes the “but what if factor”: But what if I do it this way; But what if I do it that way?

Open your mind to the new unusual and inventive, and you will in turn become a great coach.

Bill Sweetnam once asked me what I do with my swimmers and how I do it. My reply was the same as you but I add a whole lot of me.

Right there is my little bit of magic. •

Coaching Swimmers to Coach Themselves, During Swimming Training

By Thomas Topolski

It was in 1973 when I attended my first ASCA World Clinic in Chicago. All the greats were there, a virtual Who's Who of swimming, and it was everything I thought it would be. I remember the late, great swim coach, Dr. James Counsilman, telling the audience, "I train my swimmers not to need me." Set up swimming training so swimmers learn to coach themselves. I thought that empowering swimmers to a level where they could coach themselves was what real coaching was all about, or what it should be about.

I've attended many World Clinics since then (four of the last five) and at every single one, I always managed to pick up pearls of wisdom that have shaped my coaching career, like the one from Dr. Counsilman. It's taken nearly 40 years, but I finally wrote this article, and have changed how I coach, all because I went to that clinic in Chicago.

I arbitrarily rate swimmers' intelligence about stroke mechanics and swimming training, and the ability to effectively apply what they learn, on a 1-10 scale. A 1 means the athlete seems to swim recreationally or just put in their laps and won't or can't apply the things they need to do to improve their stroke. Ranking them as a recreational swimmer doesn't mean they don't train hard, it simply means their stroke and how they train hasn't evolved. A ranking of a 1 doesn't mean a swimmer hasn't gained important experiences that truly enrich their lives; the ranking means that the swimmer may train very hard but not very smart.

A 10 means the swimmer trains smart and comes to workouts daily, with a strategy on how to improve, and applies that strategy successfully. The ranking is, again, subjective, but the differences when you talk to a swimmer you rank as a 1 and the swimmer you rank as a 10 becomes glaring. I think we can, as coaches, help all swimmers improve their ranking, or what I'm going to call their Training Intelligence Quotient (TIQ). The TIQ is a subjective way to evaluate swimmers' knowledge about how to correct their strokes. It's important to note that a small change for a swimmer with great stroke mechanics is just as important as a large change for a swimmer with poor stroke mechanics.

The way I work to improve their TIQ is by asking individuals before they start their drills what they need to work on to swim faster. Before they get in the water a swimmer must tell one of the coaches what they're going to work on. Like most coaches, I collectively teach everyone a lot of drills and tell them what stroke flaw they're designed to correct. As the season progresses and they understand how to correctly perform the drills, I start allowing them to choose the drills they think are most effective in correcting their particular stroke flaw(s).

The learning curve for swimmers is, of course, different, and patience on the coach's part becomes imperative. The building of a swimmer's TIQ begins with probing questions from the coach. When explanations by the swimmers about effective ways to improve their stroke get better, and they can apply that knowledge to

bring about positive change, their TIQ goes up. It may go up from a one to a two, but the point is, it's going up.

At the beginning of the season, the answers from most swimmers, when I pose probing questions mimic what they've heard me preach about during practices. When I ask them questions like: "Show me the flaw you're trying to correct? Tell me what kind of drill are you going to do to correct your flaw? Besides dropping time, how are you going to measure improvement?" When I'm satisfied with their responses, I test their TIQ further by having them get in the water to see if they can apply their knowledge.

I've developed a list of technical swimming variables responsible for swimming fast. Swimmers who understand these variables and learn how to successfully manipulate them should be more successful. When swimmers learn the concept of training smarter and not just harder, they will begin to understand that they are ultimately responsible for their own destiny. The list of variables responsible for effective, efficient swimming could vary and expand from coach to coach, but the important thing is that you start with a (your) list.

The following principles are things I want my swimmers to learn so well that they can manipulate them to unlock their true potential:

1. Hand Position - The area of the hand, stiffness of the hand, angle the hand upon entry, and angle throughout the stroke and finish.
2. Stroke Pattern - The pulling pattern or design that the hand travels throughout each quadrant of the stroke.

3. Length of the Pull - The stride of short axis or long axis strokes. An effective extension of the beginning and end of each stroke.
4. Stroke Depth - Understanding how an individual's somatotype can affect how one effectively leverages the water.
5. Early Vertical Forearm Position - EVF and the length of time in EVF create one of the key components responsible for swimming speed.
6. Speed of Hand Movement - Too fast or too slow compromises optimum drag potential.
7. Kicking Efficiency - Decreasing the angle of the ankle is the best way to increase kicking speed.
8. Athleticism - The building block of competitive sports. Adaptation to stress and specificity training, resulting in improved efficiency and power, comes from a stronger body. It's a difficult variable to trump.
9. Timing - Knowing how a stroke works in each quadrant. Setting up a stroke, application of pressure, synchronization of movement.
10. Body Position - In the water space know how your body and its parts can reduce drag and improve efficiency
11. Test Sets - Know how test sets and records can evaluate everything from speed DPS, starts, turns, pain tolerance, pace, act. Muy Importante.

When your swimmers tell you about their shortcomings, revelations and insights to improving their strokes, you're witnessing the evolution of the athletes you train. •



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Swimming Terminology

One Man's List

By Brian Fazzino, ASCA Level 2 Coach

12.5 – This is a half pool sprint. We do these at the end of our warm up every day. This focuses on exploding off the wall or into the wall. This works on push offs and finishes.

2 kicks 1 pull – A breaststroke drill in which you kick twice and do one full breaststroke pull.

Ascend – This is a term that is not used very often. If it is it would be during warm down. The term is to get slower on each 100. As you are swimming each part of the set you are actually getting slower on each one. The time is what is actually ascending within the set. In a set of 5 x 100's ascending the first one is the fastest and each one gets slower. The last one would be the slowest.

Breathe every 3, 5, 7, and 9 – This set is usually a longer length that is divided up with these types of numbers. These numbers are the amount of strokes to take between each breath. The idea is that even going into a turn if the swimmer has 4 left of the 7 they are to finish that after the flip turn before they breathe. This is very difficult to many of the swimmers.

Broken By 100/50 – This is a set that is of longer length. The length is broken up by 100 or 50's. The idea is to get about the same time for each 100 or 50.

CI – This is called Cruise Interval and the basis of most practices. The CI is the time that a swimmer could come in on for multiple 100s without getting tired. This is the time that the swimmer is to leave on when doing a set. This is a time that is not too slow and also not too fast. The reason we use CI as opposed to times is because each swimmer will be working the same amount based on their level of swimming ability.

If you put a 100 on 2:00 then one swimmer may get a minute rest and the other may get 5 seconds. To determine the CI we have the swimmers swim 5 x 100 on 5 seconds rest. We take the average time that the swimmer came in on and add ten seconds and this is the CI. We can make the swimmer go on a faster time with a CI -5 or a slower time with a CI +5. We can also do a 200 on 2 x CI. (You just multiply the CI times 2.)

Cut the Cake – A backstroke drill. The swimmer rolls to one side brings their arm up to 90 degrees and then back down to their hip. They then bring it back up again and over as they are doing a full stroke and they then roll onto the other side and repeat.

Dart – A breaststroke drill in which the swimmer focuses on darting their hands in to the water and then focuses on the glide.

Descend – This is a set where each one of the 100s whatever the distance may be gets faster. The term descends comes from the time it takes for the swimmer to complete the length. The swimmer gets faster each one until the last one is the fastest.

DR – DR is Drill and in warm up is combined with DR/S. The swimmers are to divide the length up by drilling and swimming. When the swimmers do drill they tend to race through it like they are just swimming. Sometimes it is good to ask them what drill they are working on so they reference that they are indeed supposed to be working on a drill. Drills are also used in individual sets where they are to work specific drills for that specific stroke.

DPS – Distance per stroke. The swimmers count their strokes for each 25 then they report back to the coaches what the strokes were. We want the kids to focus on lengthening the stroke and get their DPS down while trying to go fast. Many times swimmers will start to spin their wheels and go so fast they do not grab any water and actually go slower.

Eo – Every other. This is a longer set where the swimmer is to switch between swimming a length of the swim one way and another part of the swim another way. Another way this may be used is if every other 100 is supposed to be all out or something along those lines.

Elbow drag – A freestyle drill that is used to really work on the Big 4. You use a pull buoy and go really slow. You literally drag your elbow on the surface to move through the Big 4.

FAK – This is an abbreviation for what I call Forearm kick. I have made many variations to this kick. The normal forearm kick is to have the swimmers grab a half kickboard and kick regularly on their stomach. The difference is instead of holding the kickboard flat on the surface I have them push it into the water and hold their arms straight down with the kick board underwater straight underneath their chest. This gets them kicking faster because they need to keep themselves afloat. This kick also makes the kids use more core strength and works their abdominals. By having them do this it also makes it very difficult for them to talk while they are kicking. I will sometimes add a medicine ball to this instead of just the kick boards.

FAKM (Forearm kick moving) – This is one of the variations that I have developed. In this one the swimmers start off with the regular forearm kick. Instead of keeping their arms straight down they are moving their arms while kicking. The arms stay straight but they move them, using their shoulders from straight down to straight out. This adds in a little shoulder mobility exercise while they are kicking.

FAKSO (Forearm kick straight out) – This variation is the same as the regular FAK except

the arms are straight in front and the board is perpendicular to the water.

FAKI (Forearm kick inverted) – In this variation it is the exact same thing as the normal FAK except done on the back. The arms are straight up and the board is over the chest. This really makes the core work hard.

Flips – This set the idea is to flip over very fast during the course of the yardage determined. For example 100 flips would be a 100 yard swim and ever 8 strokes the swimmer would do a front flip fast and tucked tight. After the flip they would push out of the flip and continue on with the swim in the same direction they were heading.

Golf – I use this as a game that the kids seem to enjoy. I will let some of them sit out on a few 100s based on how well they do. I will either have them play using how many breaths they breathe in a 100 or how many strokes they take in the 100. The person who takes the least gets to sit out the next 100. This also teaches the kids about honesty and responsibility.

High Elbow – This is a term that the coaches use. This means that the swimmer is dropping their elbow down in the water when they are pulling. By dropping their elbow they are not getting as much water to grab and not using their pull to its fullest potential.

Horse – These are benches that were made by a swim team parent. We use these to lay the kids down on and teach proper technique using stretch cords.

Hypoxic – This is a set that is very rarely used. It is a longer set that the swimmer breathes every number that they have left. For example a 500 Hypoxic would mean the first 100 the swimmer breathes every 5, the second 100 the swimmer breathes every 4 (because there is 400 left) and the third 100 every 3 and so on.

IMO – This is a set where the swimmer is to swim the length in IM order not IM. In a set of 4 x 100 IMO the idea is to swim 1 100 Fly, 1 Back, 1 Breast and 1 Free not 4 x 100 IM.

Ind – Individual Stroke. This is a set that is to work on individual strokes. The younger swimmers are to actually pick a stroke to work on that is not freestyle because they do not specialize in just free. The older swimmers if they are distance swimmers may do one of the sets free if it is a multiple time set. They should switch up the stroke as well to switch up the muscle groups that are being used.

K – K in itself means kick. In warm up kick will usually be combined with K/S which is kick and swim. When this is done the swimmers are to divide the length up by kicking and swimming. Ideally they will switch it every 25 or 50 not do a 100 kick then a 100 swim. Kick in warm up is freestyle and I would rather not let them use kick boards or else they talk. The older swimmers are also not allowed to use breaststroke kick unless they are indeed breaststrokers. When kick is on a time they may use boards and may use any kick as long as they are making the time.

K/Sprint – These are 25's that are done at the end of warm up. The swimmer kicks half way in a tight streamline and then sprints the rest of the 25.

Long – This is usually done in warm up or in a longer set. The idea is to get the swimmers to really focus on being long in the water. This is the same idea as DPS but this is for a longer swim. The swimmers need not count their strokes, but they want to try and be as long as possible.

Lunge Walks – This is used as a punishment for those who are late to practice and do not have a note. They have to do a lap of lunge walks around the pool. A lunge walk is a walk where you place one foot stretched out in front of the other and with your back straight you bring the back knee all the way to the floor. Then you take that back foot and put it in front of the other one. This is done in streamline position.

Mid Pool – This is a set where the swimmer will go to the middle of the pool. They will do the length of the swim from the middle of the pool. This set is either done with 25's or 50's. This is a set that is designed to get two turns out of one 50 or a turn in a 25.

Mid Pool Flips – The idea in this set is to sprint halfway across the pool, complete a flip turn in the middle of the pool and sprint back towards the wall. The idea of this is that if they can tuck tight enough and explode without a wall they will definitely be able to with the wall.

Moderate, Fast, Blast, AO – Many times the kids will ask what the difference between all the terms are. Moderate is a nice even pace at about 70-75% of the individual's fastest pace. Fast is at about 80-85% and blast is about 90%. AO stands for all out. In this situation the swimmer is to swim the length as fast as they possibly can. When AO is on the board the swimmer should look to get their own time. When swimming AO the coaches may ask the swimmer what they did for a time. It is good to get in the habit of getting the time anyways so the swimmers know how they are swimming.

Negative Split – A set where in the middle of the length the swimmer will stop for 5 seconds to look at their time. They then swim the second half of the length and try and go faster than they did on the first half.

No Breath in Blue – This is usually a longer length of a swim. The idea is to swim and not breathe from the flags into the wall and then out past the flags. This is combined with the term 4-2. The swimmer is to try and kick 4 times off the wall and take two strokes before they go to breathe. The longer a swimmer can get off the wall the less swimming they have to do and the more DPS they get.

Pace – The swimmer is to try and pace the length of the swim. The idea is to not get faster and not get slower. The swimmer is to try to maintain an even pace throughout the swim. It is important to teach the swimmers that in pace they need to know how fast they are going and they need to learn to use the clock while they are swimming.

Press and Pop – A drill that is very slow that works the rhythm of butterfly. The swimmer presses their chest down and pops up their hips.

Popping hips – In both Breaststroke and Butterfly the swimmer wants to create an action where their hips pop up over the surface of the

water and their butt slightly comes out of the water.

Pull – Pull is when the swimmers use a pull buoy and this is usually done during warm up. It is important that the swimmer does not kick when pulling. The idea is to get the feel for the stroke. When pulling, the swimmer is to swim only freestyle unless a coach specifically tells them to do another stroke. If a swimmer has shoulder injuries it is not advised to pull.

Pull out – In breaststroke this is what is done by the swimmer off the wall. The coaching staff would like the swimmer to wait three seconds before they pull down for the initial pull and then again before the hands come up to the surface.

Push off – The push off is the first initial push off the wall to start the set or length of the swim.

R – This is written either between a set or in the middle of a set. Whatever amount of seconds it says is very important because the swimmer does not want to take too much rest and reduce the heart rate too much.

Race Turn – This is a set where the length is swum at a moderate pace. From the flags into the wall and off the wall to the flags again is an all out sprint. This is to practice doing flip turns while swimming fast.

Race Strategy or RS – This is a set that I use quite frequently with the swimmers. I use a race strategy that breaks every race into 4 parts. This first part is long and smooth. The second part is attack the arms, third is attack the legs and final is all out. A perfect example of this is a 200. You would do one 50 of each of the components of the race strategy.

Long and Smooth – This is the first component of the Race strategy that we use. Here the swimmer will take out the first quarter of the race long and smooth. They will not be really driving their arms and legs but using more technique so that they are not spinning their arms. The idea is that at the beginning of the race the swimmer will already be going fast due to the adrenaline. This makes it so they are going fast but not exerting all of their energy.

Attack the Arms – This is the second component of the race strategy that we use. We build into this from long and smooth. In this quarter of the race we pick up the arm rotation and really start to drive our arms to propel us forward.

Attack the Legs – This is the third component of the race strategy. Here after attacking the arms on the last quarter you really want to drive the legs on this one. In most races the third quarter is the weakest quarter. The momentum and adrenaline kind of leave after the first two and on the last one you're finishing so it comes back. On the third one though I feel it is crucial that you really start to drive your legs as your arms get tired. By focusing on this the kids realize they cannot take the third quarter off completely. By making them drive their legs the idea is that this split will not be as slow as it normally could be.

All Out – The final component to any race. The idea here is bring it home with whatever you have left.

Reach Long – This is a term that is used by the coaching staff that is referring to the swimmer chopping in the water too short. This is hampering the swimmers DPS and making the swimmer work a lot harder than they need to be. Reach longer before you set is common language from the coach.

Roll – This is a common drill that is used for either freestyle or backstroke. The swimmer will roll to one side and be completely on the side. After 6 or 8 kicks the swimmer rolls completely to the opposite side.

S – This is the abbreviation for regular swimming. This is mostly used in warm up. Since it is part of warm up swim usually means freestyle to loosen up. Other terms will mean the other strokes.

Slinky – This is a set that some teams do for warm up. It is a set where in one lane two swimmers will swim side by side. They will swim to the other end and flip turn. As they flip turn they stay underwater in streamline kick position until the other group behind them all pass over them and then they will surface to the top. This works on breath control and can open up some lane space if it is very tight.

Smooth – This is a term that is usually in warm up. The swimmer is to go nice and smooth through the water. The idea is to keep a nice tempo and pace going and not sprinting but also not swimming warm down pace.

Streamline – This is what is expected off each wall and the initial push off. This is a tight position with your arms extended over your head and your legs tightly squeezed together.

Streamline Jumpies – Either at the shallow end or the deep end the goal is to get to the bottom of the pool push off fast with your legs and break the surface with a tight streamline.

Tech/Big 4 – This is technique and the idea is to swim the full stroke but the swimmer is to concentrate on the key aspects of the Big 4. Like drill many times the swimmers will race through this but this is one of the most important parts of practice because this is where the swimmer works on the technique of the stroke.

Time – When written on the board the coaches want the swimmers to get their time. This is an all out swim and the swimmer is to try and go as fast as they can. Watches may or may not be provided for the longer swim so the swimmers may get their own time. If not they need to use the pace clock. They should ask the coach if there are watches or not.

Turns – This is a NMY made set that may be in warm up but is also written throughout the practices. This set is only done with either 50's or 100s. The idea is for the swimmer to swim normal freestyle. However off the push off and each wall the swimmer is to try and kick underwater half way or until they need to come up for air. The idea is to get the swimmers to work on their kicking off the wall, it is not beneficial to do a slow, long, drawn-out kick to try and make it. The idea is to have a rapid butterfly or freestyle kick. (The same type of kick that a swimmer would do off of the wall in a sprint.)

Turns (revised) – As the kids started to work on the former turns I noticed that they were going half way but they were staying under with a slow long kick so they could make it half way. I did not like this because it was just teaching them

to go long and slow. I revised the turns to mean 4 fast as possible kicks off the wall.

Triangles – I made this set up after listening to Dave Salo at a convention. In this set the swimmers will start in the middle of the pool. They will do backstroke into the wall, do a transition turn into breaststroke. Proceed to do a long pull out of breaststroke to the bottom of the pool. When they reach the bottom of the pool they push off the bottom and streamline dolphin kick to the surface of the water. As they break the surface they do a fast freestyle flip in the middle of the pool. This one little set gets a ton of useful things into a 25.

UW – Underwater. The swimmers try and make the length determined underwater. They may not be able to make the whole way, and this is fine as long as they are trying. The swimmer should be actually trying to make it underwater and not just coming up for air every two kicks.

Under/over – This is a drill that only the older swimmers would do. The idea is to go underwater for a 25 and then push off and sprint another 25 without breathing. This is very difficult and many may not be able to make it.

Undulation – The rhythm that a swimmer wants to establish in both in the breaststroke and butterfly. The idea is to try and swim as though you are swimming downhill.

Wall Sit – For a duration of time the swimmers will place their legs at 90 degrees and place their back on a wall. They will then place their arms in a streamline position.

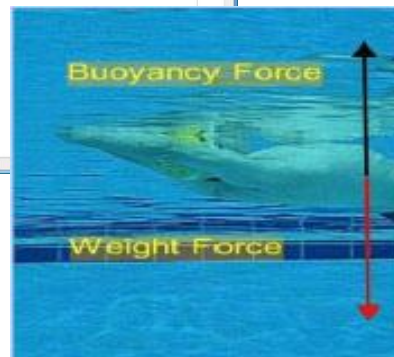
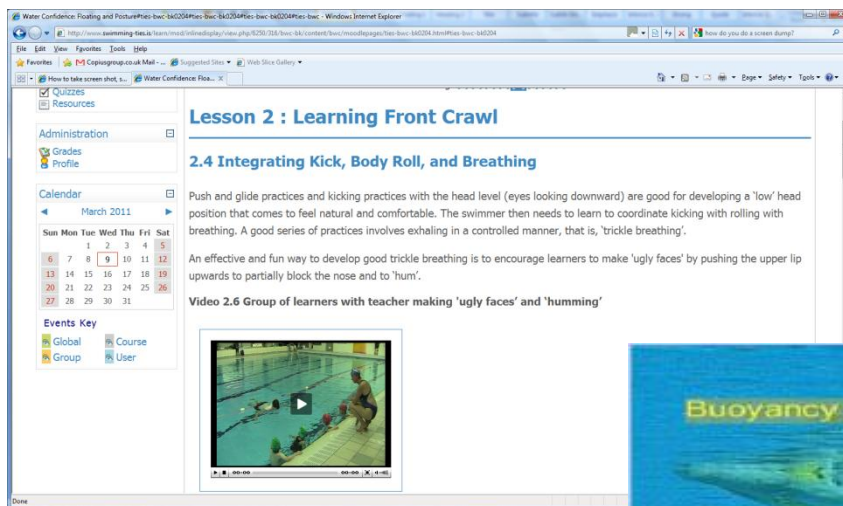
Wall Pushup – We use these during strength sets. The swimmers will grab onto the top of the wall, go underwater and then pull themselves up using their lats and creating a pull up motion.

Warm down – This is at the end of practice to cool down the muscles. The warm down could be done as slow as the swimmer would like. They should not race through it because that does not help the body cool down. It is also very important not to skip this part of practice because if the muscles do not cool down properly they may get tight and this is very commonly the reason for injuries. •

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