

Long-Term Athlete Development



Quebec Swimming Producing Staggering Results! Why?

When Alain Lefebvre was hired as Technical Director of FNQ Fédération Natation de Quebec (Quebec Swimming) he was given carte blanche to revitalize a stagnant swimming program. Following his implementation of Long-Term Athlete Development (LTAD) practices after year 2000, the first wave of Quebec swimmers from the revised program are now racking up successes nationally and internationally.

Lefebvre undertook a pilot project to implement LTAD-based swim practices in 80 swim clubs throughout the province after a year of on-the-ground research. This included dramatic changes to the competition structure for younger swimmers. “The system was an important part of the problem,” explains Alain. “You can make improvements to coaching, but success will be limited if the system works against your goals.”

LTAD - What was done?

LTAD is a framework that defines the sporting experience in stages based on chronological age and physiological age. At younger ages, these are defined as Active Start, Fundamentals, Learn to Train. As an athlete enters the teen years and progresses in a sport, the stages keep pace with their development in the Train to Train, Train to Compete and Train to Win stages.

“As everyone knows intuitively, a developing child has evolving capabilities, physical and mental,” explains Richard Way, Canadian Sport for Life Project Leader. “Yet traditionally sport competition does not consider this.”

While adult swimmers win by going from one end of the pool to another in the shortest time, this doesn't mean that children and youth should use the same measure of success. Indeed a winning result is a process of doing many things well: a start, a stroke, a turn and a finish. All require different technical abilities, and yet these specifics are often overlooked in early training. Changing the measure of success to encourage correct technique for young swimmers has been key to Quebec's Swimming success.

In Quebec prior to 2002, swimmers had to achieve a time standard by the age of 11 to be eligible to compete in a race. Achieving this standard encouraged young swimmers to focus on a single stroke and discouraged learning other strokes. Both swimmers and parents would complain about practicing other strokes because the competition structure rewarded those who swam fast in one category. This early specialization inhibited the mastery of different swim techniques at the best window of trainability – when swimmers are young children.

In 2002 FQN changed their competition structure. At the beginner's level, instead of timing a 100m race, the competition was broken down into a series of important technical skills. Swimmers would compete on time to complete turns, the number of strokes plus time over duration, kicking, and their start times. This encouraged swimmers to improve the important swimming skills in the Learn to Train stage, which is the optimal window of trainability for skill development. Today FQN has norms for each of these skill sets and can measure performance against provincial norms to provide bronze, silver or gold for certain results.

The result is that swimmers win while learning crucial techniques to become better swimmers. Another upside: there are more opportunities to win, and even if your turns are shaky, your starts might win you a medal – a big plus for a young swimmer!

Today, no 100m races exist in Quebec for swimmers 12 and under – swim racers do 50m races, which are shorter, less tiring and emphasize speed. They also swim 200m, 400m, 800 and 1500m events, which develop aerobic qualities better suited for their physiological development at that stage. Results now show performance of 100m when they are older hasn't suffered at all despite no one racing this distance when they're young.

When a swimmer reaches 14 years old, time standards become required to race but the only way to achieve the standard is through the 200m Individual Medley (IM) - an event with four different strokes & turns - and 200m freestyle or 400 IM and 400 freestyle. This requires swimmers to develop well-rounded swimming skills and allows both fast twitch swimmers (muscles which make you go fast) and aerobic swimmers (muscles which help you to go far) a chance for success.

At 15 years of age, swimmers can now focus on a single stroke but even then, after they've raced 'their race', a swimmer can also enter whatever event they want to swim at the swim meet.

Overcoming resistance

In his first year on the job, Alain and Claude Picard visited each of Quebec's 80 swim clubs twice. In his second year (April 2001), Alain held a series of meetings with coaches of the 11 regions (8-15 coaches per region). These sessions introduced the future rule changes according to the LTAD principles for the following September. While all the coaches agreed with the LTAD principles, the proposed rule changes were controversial. In the end all regions implemented the proposed competition structure with the provision that it be reviewed and open for changes the following year. Each year thereafter, the 100+ coaches regrouped, again by region, and made some changes, as they have every year since to improve implementation. But the key modifications remain.

"In a democratic society the only way to make a change is to modify the competitive structure to change behavior" Orjan Madsen, Sport Physiologist

The results?

Those young 'guinea pigs' who began the pilot project in 2002 are now 17-year old junior athletes. In the final quarter of 2007, six of those juniors produced top 10 (provincial – national – international) performances according to the FINA point system.

The changes in training to facilitate broad-based swimming techniques is resulting in single athletes beating provincial records in more than one stroke and some athletes up to four strokes.

After implementing a LTAD approach to swimming, Quebec has had a dramatic improvement in performance. In the 1990s swimmers annually set about 10 to 25 new provincial age group records. 2001 was the province's best year with 39 records broken. Now as the 'young guinea pigs' race in age groups, the records are being broken at an unprecedented rate: 65 provincial records were set in 2005, 91 in 2006, 87 in 2007 and this year the first three months have seen 47 new records!

At the next level, Quebec has traditionally made up about 10-15% of the national team. With the LTAD generation now reaching maturity, the province now makes up 25% of Canada's team. And the future looks even brighter as last year Quebec swimmers set seven new national records and in the first two months of 2008 they set another nine new national records.

"Quebec athletes have a tradition of being strong sprinters," points out Alain. "Now they're breaking records at longer distances – the 200m and 400m."

There's more.

The changes are also bolstering membership. For 15 years provincial membership has been stable; now it increases 2-4% every year, and while Alain isn't sure, he suspects the increase is partly from a reduced number of lapsed members. Perhaps a new format for swim meets in Quebec is a factor. A meet now cannot exceed 5 hours – a relief for parents and swimmers who used to spend hours poolside waiting for a single race.

What's next?

Alain is surveying his national level coaches to identify the non-technical skills that gifted athletes need to be successful on the international scene. "The first time they experience jet lag should not be on their way to a World Cup nor should it be the first time they are coached by a different person," explains Alain. "These are all experiences they need to be successful." As well, for some Quebec athletes, English instruction on the pool deck is a stressor contributing to poor performances. Alain encourages billeting at meets outside of Quebec so athletes can become more comfortable with English in a friendly environment.

While many sports in Canada are just beginning to implement changes based on LTAD, FNQ is seeing the results of their changes 7 years ago. Their early leadership and commitment to LTAD in training and competition has vaulted them ahead as national leaders in Canada's emerging international success in swimming!

LTAD in Manitoba!

Sport Manitoba is hosting a Sport Forum on June 4th, 2008 from 7pm to 9pm. The forum is a workshop format and is open to all Manitoba sport partners, PSO representatives, coaches, athletes, and sport administrators. It will be a chance to discuss the challenges, success stories, and the realities of implementing the Long-Term Athlete Development model in your sport.

For more information about the Sport Forum please contact Carol Johnson at Johnson@sport.mb.ca or at (204) 925-5605.