

Water Skills for Life Background information

Introduction

This paper provides background information to the participants of the Water Skills for Life (WSFL) Beach development workshop on 17 September 2020.

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The drowning problem

In New Zealand, the five year average 2015 – 2019 data indicates 103 drownings annually, with 82 of those drownings being preventable (WSNZ, 2020). Immersion incidents, where the victims had no intention of being in the water, are typically the most common types of drowning incident, followed by those where people simply went for a swim. Over 80% of preventable drownings are in open water environments (rivers, sea, lakes, ponds etc.).

In New Zealand young people are particularly vulnerable to drowning, as children are over-represented in statistics relative to other age groups (Croft & Button, 2015). Drowning in New Zealand is the second highest cause of death by unintentional injury for 1 – 24 year olds.

With abundant and varied natural water and swimming pools, WSNZ and partners must continue to emphasise and implement aquatic education and skills development with our young people so they can recreate safely around water, now and in the future.

Water Skills for Life – the programme

Water Skills for Life (WSFL) has been taught to primary school children (Years 1 – 8) for the past four years.

2015/16 – Sector developed the initiative

2016/17 – Year One - soft launch among providers

2017/18 – Year Two - traction among providers, launched into schools

2018/19 – Year Three – public launch to parents

2019/20 – Year Four – programme maturing

Water Skills for Life development

In 2015, the New Zealand Water Safety Sector Strategy 2020 was launched. This strategy includes a goal that every New Zealander receives the opportunity to develop water safety knowledge and skills. WSNZ commissioned a review into the way basic water safety skills are taught to children aged five to thirteen (Stevens, 2016). The review looked at national and international water safety, swimming and drowning prevention research to find out whether the current teaching of aquatic skills in New Zealand provided kids with adequate water safety skills.

Most schools provided at least some water-based aquatic education (94% of those surveyed), and most also offered some classroom-based aquatic education (88%). Primary schools were most likely to offer water-based aquatic education with around 97% indicating that they offered a water-based program. Slightly fewer offered a water-based program at intermediate level (79%) and secondary level (77%). Disappointingly though, just over a quarter of the schools surveyed (27%) achieved the WSNZ's suggested minimum of 8 or more lessons of at least 30 minutes (NZCER, 2017).

Overall, less than 4% of schools surveyed did not offer any water-based aquatic education (Stevens, 2016). In the review, Stevens cited research papers, surveys, practical evidence from other parts of the world and advice from New Zealand water safety sector experts indicating that the acquisition of a combination of water safety and swimming skills results in a reduced incidence of drowning in young children.

Based on this review, WSNZ concluded that there was a need for a greater emphasis on teaching water safety skills alongside stroke and distance focused swimming skills, and that offering exposure to a range of aquatic environments (such as rivers and cold open water where most New Zealand drownings occur) is a crucial part of water safety skills learning. WSNZ also identified that there was a need to establish a more consistent national approach to the teaching of water safety skills.

Water Skills for Life (WSFL) was the result and was launched by WSNZ in 2016 as the result of wide consultation amongst the water safety sector. WSFL includes a range of water safety skills and competencies that children are expected to have achieved by the time they are 13 years old (by the time they leave primary school). These skills are deemed crucial for the safe enjoyment

of aquatic activities in a range of environments. WSFL also provides the essential basis for participating in most water-based sports.

Skills and Achievements

WSFL is easy to teach and fun for the students to learn. It consists of 27 water safety skills across 7 core competency areas which can be taught in any order, at any time during students' time at primary school.

The seven core competency areas and their skills

Water safety and awareness

Delivered in the classroom (or addressed while undertaking pool training)

- Recognise an emergency for yourself or others. Know who to call for help and how
- Know, understand and respect water safety rules, hazards and risks around the home, farm and around pools
- Know, understand and respect water safety rules, hazards and risk in natural environments such as at the beach, offshore, river or lake.
- Know, understand and respect water safety rules, hazards and risks for water activities such as swimming, water sports and boating
- Know how and why to make safe decisions for yourself and others
- Know how to recognise hypothermia and how to treat it

What to do in an emergency - Safety of self and others

- Float and signal for help with and without a flotation aid
- Do a reach rescue and a throw rescue with a buddy
- Perform this sequence for five minutes: signal for help while treading water, sculling, floating, or a mixture, and while controlling breathing

Getting in and out of the water

- Get in and out of the water safely in any environment
- Perform this sequence with a buddy watching: check the depth of the water, check that the area is safe, jump into deep water, float on back for 1 minute to control breathing, return to edge and exit

Floating on the water - Personal Buoyancy

- Float, then regain feet
- Control breathing while floating on back for at least 1 minute
- Scull head-first and/or scull feet first for at least 3 minutes
- *Tread water for at least 3 minutes in deep water

- Perform this sequence in deep water: correctly fit a lifejacket then tread water, scull, float or a mixture for 3 minutes while controlling breathing. Then return to edge and get out of the water
- Perform this sequence: correctly fit a lifejacket, do a step entry into deep water, float in the H.E.L.P. position, then with a couple of buddies or a group form a huddle, return to edge and get out

Going under the water – Submersion

- Get under water, open eyes and control breathing
- Pick up an object from under the water
- Dive from a horizontal position in the water and move underwater for a slow count to five

Moving through the water – Propulsion

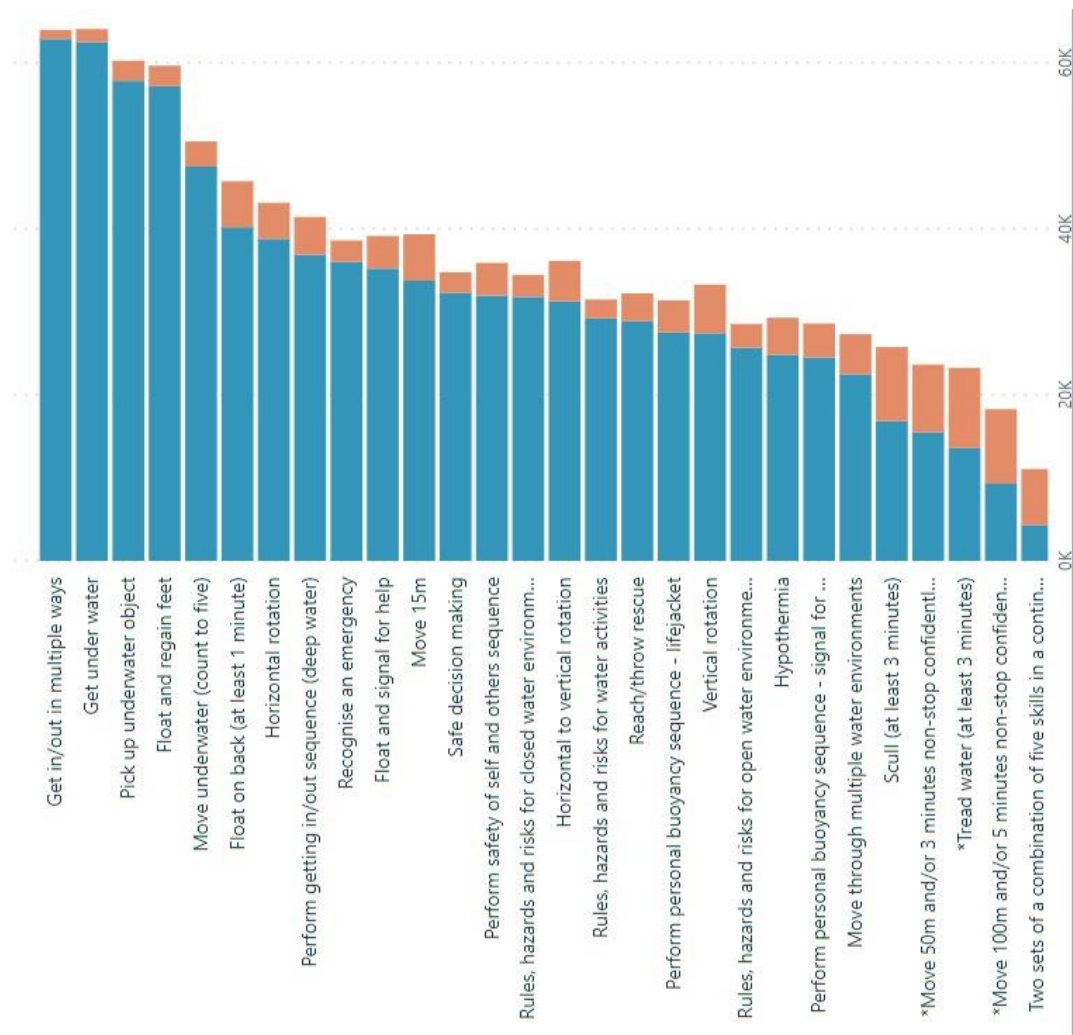
- Move 15m non-stop, using any form of propulsion
- Move through the water environments of all kinds (currents, waves, depth – in situ or simulated)
- *Move 50m and/or 3 minutes non-stop, confidently and competently – using any form of propulsion on their side, front, back, or a mixture
- * Move 100m and/or 5 minutes non-stop, confidently and competently – using any form of propulsion on their side, front, back, or a mixture

Rolling and turning in the water – Orientation

- Horizontal rotation (front to back and back to front)
- Horizontal to vertical rotation and vice versa (front or back to upright and return)
- Vertical rotation (half rotation and full rotation) around the body's vertical axis

The graph below is based on 2019/20 reach figures and is typical of skills achievements across most regions. Based on over one million records in the WSFL database, it identifies the achievement (or non-achievement) numbers for each of the 27 water safety skills students learn.

Skills Achieved vs Not Achieved



Over the past four years trends are emerging from the data which indicate both positive and negative outcomes from the training:

Top four achieved skills

Getting in and out in multiple ways	Achieved
Getting under the water	98%
Pick up underwater object	96%
Floating and regaining feet	96%

Bottom three achieved skills

Combining five skills in a continuous sequence, in two sets	Achieved
Treading water for three minutes	43%
Moving in the water for 100m or five minutes	56%

The bottom achieved skills are most vital for water safety. Not only are only half the registered students mastering these vital drowning prevention skills, but also low numbers of students are registered in the database as participating in these skills.

Delivery

WSFL can be delivered at school, in the classroom and the school pool by WSFL trained school teachers.

For those schools which don't have a school pool, or for aspects of the aquatic component of the programme which require deep water, WSFL can be delivered at an aquatic centre/community pool by a WSFL trained school teacher or swim teacher.

WSFL teacher training is conducted by Swimming New Zealand educators. Training is free for school teachers and this teaching method is the most cost efficient and effective way students learn WSFL.

The aquatic component of the programme must be conducted over a minimum of 10 half pool hour lessons. It is expected that more lessons should be invested in a student's WSFL education however, to ensure that skills are properly grounded and students are completely competent in WSFL.

Evaluation of WSFL for life-long water safety

Between 2017 and 2019, Water Safety New Zealand (WSNZ) commissioned two research projects with the University of Otago's School of Physical Education, Sport and Exercise Sciences, to understand better the impact of WSFL on children's water safety and survival of drowning now, and in the future.

The 2017 study¹ sought to demonstrate that a rational and balanced emphasis on fundamental aquatic skills in education programmes (Water Skills for Life) can improve the ability of children to evaluate risk and behave appropriately in and around water.

The 2019 study² sought to demonstrate that extending learning in authentic environments would help children retain their learnings for longer and better equip them for water safety in the future.

The outcome of the 2017 study identified that prior to students learning WSFL, they had a low level of survival skills competency. While WSFL improved children's skills competency, without regular and repeat lessons, children tended to forget previously learnt skills. The study identified the need for context to be incorporated into the learning process to help improve retention.

The outcome of the 2019 study identified that children retained WSFL skills development better when learning took place in authentic environments. Initial work conducted in pools was then built upon with lessons conducted in open water environments and this contextual learning did support retention levels.

A number of important learnings for the water safety sector have emerged from this and other research:

- That generally, children do have a low level of water skills understanding and ability and this needs to be improved³
- That children retain what they've learnt better with repeat and frequent skills training

¹ Assessing the Water Survival Skills Competency of Children, 2017. University of Otago. Button C, McGuire T, Cotter J and Jackson A.

² Developing a first principles approach to educating water skills for life to children, 2019. University of Otago. Button C, Button A, Jackson A, Cotter J and Maraj B.

³ Aquatic Education in New Zealand Schools Dec 2016. WSNZ study conducted by NZCER.

- That learnt skills can be retained better if they are learnt in authentic environments.

WSFL Expansion Plan

In New Zealand, despite the fact that the majority of drownings occur in open water, the majority of WSFL delivery occurs in swimming pools. It is possible that learning WSFL in a pool doesn't sufficiently prepare people to develop water competence when exposed to open water environments.

Most people in New Zealand have relatively easy access to open water environments and consequently engage in a wide range of different aquatic activities (e.g., swimming, fishing, snorkelling, scuba diving, jet boating, kayaking, water-skiing, windsurfing, waka ama, etc.). However, research suggests that many New Zealand residents are ill-prepared to recreate in these environments and underestimate the level of risk inherent in such activities (Moran et al., 2008). The safety organisation 'Safe Kids Worldwide' suggest that the assumption that a child is able to swim in a pool will be safe in open water may be one factor contributing to drowning statistics (Safe Kids Worldwide, 2018).

WSNZ is working collaboratively with sector partners to inform policy and strategies for a WSFL expansion plan. This includes:

- Exploring and promoting opportunities to teach water safety knowledge and skills to New Zealanders in open water environments
- Identifying and supporting 'expert' organisations best placed to provide education in different open water environments
- Liaising with and lobbying the Ministry of Education and NZ schools to consider how best to integrate open water safety education with swimming pool based skill acquisition programs

It is planned that the Expanded Programmes be piloted in the 21/22 year. The WSFL Expansion Plan development is underway.

Collateral and resources

The brand



WSFL is owned by WSNZ. The WSFL logo is integral to the programme and is used on all material pertaining to the programme. This includes but is not limited to use on teacher resources, classroom posters, student certificates, parent newsletters, social media posts and signage.

All resources and style guide are available on the WSNZ website at <https://waterskills.org.nz/>

Teacher resources

Teacher training resources and videos are available from WSNZ and Swimming New Zealand

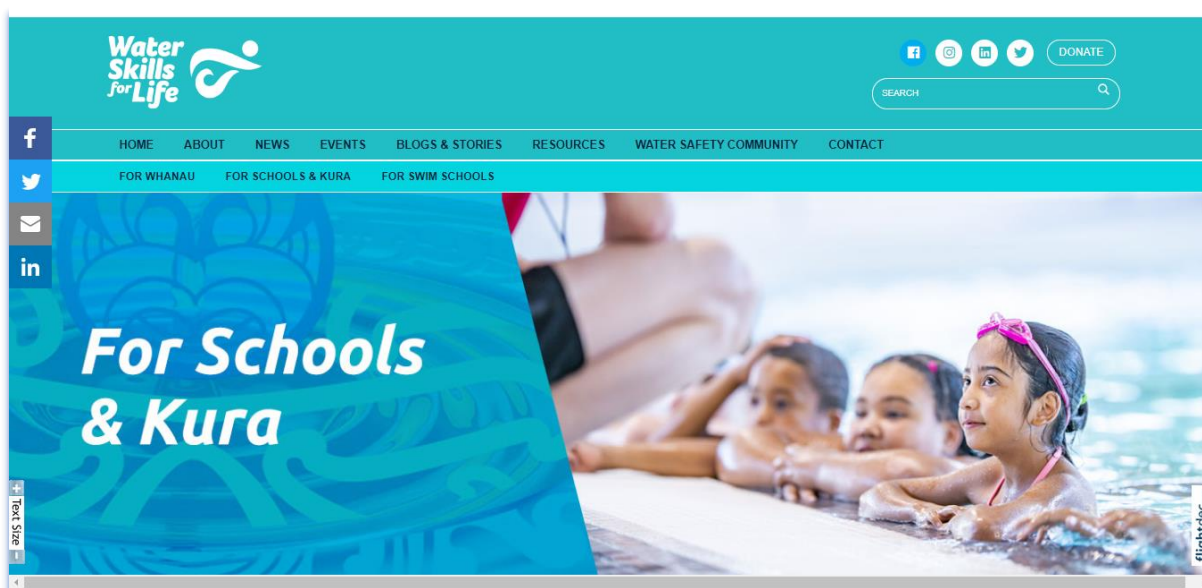
Certificates and posters

Digital files of student certificates and classroom posters are available and may be used to support student learning.

Signage and banners

Signage designs for schools, school pools and pool venues are available from WSNZ on request. All signage must use the WSFL logo.

Website (waterskills.org.nz)



Social Impact of WSFL

More indepth understanding of WSFL's impact on drowning reduction of young people, now and as they age is now at the forefront of WSNZ's work. Issues being considered are:

- Impact of skills training (in a pool)
- Importance of contextual learning in school (classroom)
- Importance of contextual learning in real environments (WSFL expanded)
- Retention of learning (minimum amount, frequency of lessons, various environments)
- The ecosystem WSFL is operating in:
 - What support systems including whanau, sport, popular culture are required to reinforce behaviour change?
 - How can the education system (MOE) be more supportive ie curriculum inclusion and unique student ID
 - Teacher training and the mandatory inclusion of WSFL training
 - Community and government influence
- Long term behaviour change
 - Goal setting, targets and timelines
 - Evaluations, methodologies and management of behaviour change over time

Analytics Evaluation

WSNZ employs a data driven model to measure delivery and the achievement of water safety skills. Programme reach is measured through enrolment numbers and skills achieved as entered into the WSFL Database.

These analytics provide indepth reporting which can be filtered in various ways to assist funding and delivery opportunities and accountabilities.

Quality control of delivery

Next steps are the auditing and evaluation of delivery methodology across hundreds of providers including environment and location of that delivery.

Student tracking

A pilot programme of tracking specific student participation in WSFL through the students' unique Education ID has commenced and will be built upon, pending the support of the Ministry of Education, principals and parents. This pilot is the fore runner to being able to measure the effectiveness of WSFL training on drowning prevention, in years to come, longitudinally.

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