Creativity, Experience, and Reflection: One Magic Formula to Develop Preventive Water Competences

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Cover Page Footnote

Abstract

Preventive water competences that children should learn to be safe in the water have been discussed and revised. Methodology to promote these wáter competences has not had the same amount of examination and discussion so far. From an ecological perspective, we share some key points derived from the objectives of the research-into-action program called "The development of preventive water competences in 5th and 6th grade school students" as conducted in Junior Lifeguard programs in Uruguay. It involved six groups of 10 to 12-year-old Estate School students studied in two cycles. The whole process conveyed how our methodology changed from experiences and assessment results.

Keywords: water competence, drowning prevention, ecological instructional methodology, guided discovery

Research Context

Our country (Uruguay) contains a large number of diverse aquatic environments; however, due to economic limitations and lack of enough public programs, access to aquatic education is limited. In addition, most aquatic education programs promote swimming strokes in place of a focus on water safety and drowning prevention. In 2008 the World Health Organization (WHO) declared that adequate water safety and drowning prevention needed to consider attitudes, values, and knowledge related to water safety in addition to physical aquatic skills.

According to the recent global report on drowning (WHO, 2014), drowning is among the five main causes of death in adolescents in Uruguay. In Montevideo, adolescence represents the beginning of teenager's independent trips to the beach or other bodies of water. Unfortunately, many of these aquatic locations may involve non-lifeguarded areas which also may lack proper adult supervision and permits consequently risky behaviours. Moreover, some current drowning concepts recognize the association among critical socioeconomic contexts and commonly facilitated exposure to water environments together increase the risk factors that make persons vulnerable to drowning (van Beeck, Branche, Szpilman, Modell, & Bierens, 2005).

The "Junior Lifeguard" (JL) program was developed in some Estate Schools in Montevideo as part of an "Everyone, enjoy the water!" intervention which intended to democratize access to aquatic education in order to prevent drowning. The intervention program is co-managed by the City Council of Montevideo, the National Secretariat of Sports, and the National Lifeguard Association of Uruguay. It involves neighbourhoods where the community culture and identity are rooted in the presence of the coast and its aquatic environments.

The intervention program promotes the development of aquatic competences that focus on drowning prevention. It also intends to promote transfer of aquatic skills and knowledge to different open water scenarios.

The Junior Lifeguard program targets 10 to 12-year-old children during their last elementary school years. These are children who will soon represent a population highly vulnerable to drowning. In order to ensure that children attend the program, it is offered during the school time schedule. The program involves 16 to 24 lessons, offered twice a week. In addition to aquatic skills, the program includes first aid competence as well as dynamic coastal workshops. Aquatic education is part of the Council of Initial and Elementary Education state curriculum (CEIP, 2008); however, it is not a compulsory subject. Furthermore, although the curriculum states that aquatic activities involve vital safety issues for children and adolescents, it does not adequately focus on prevention aspects of water safety.

Addressing aquatic activities during childhood is fundamental to give each child self-confidence as well as safety skills for aquatic environments. Activities in the aquatic environment imply vital safety issues. In fact, the program development is conditioned both by the necessary aquatic activities in conjunction with the available facility (CEIP, 2008, p. 226)

Although the program refers to "safety issues," the nature of the issues has not been specified. Safety is inextricably linked to the appropriate development of the activities. In addition to this, the psychomotor aquatic skills refer to several basic and technical skills, but no drowning prevention contents have been associated with them. For example, and very surprisingly, flotation is never even mentioned as part of the program. This program lacks teaching orientation related to important content, methodology, and minimum learning levels or standards of achievement. Consequently, although water safety is an important aspect of the program that teachers should take into account, water safety focus is not part of the content to teach in the program.

Our preferred methodology is grounded on an ecological motor and sport learning standpoint as proposed by Moreno and Gutiérrez (1998) and is based on the analysis of the relationships between the environmental and morphological limitations. This analysis involves three control aspects such as the environment, the student, and the demands of the task. They wrote that it is the teacher´s task to create the particular environmental challenges to promote the quest for multiple autonomous motor solutions and self organized responses (Moreno &Gutiérrez, 1998). In order to accomplish that goal, motor problems should arise and each student could solve them differently. Thus, there were not simple "correct"

responses. This enhanced a hopeful practice in agreement with Langendorfer's (2007) developmental perspective, because it involved and allowed evolution (i.e., change), whether by recognizing mistakes (errors) or from morphologic (structural or functional) constraints that are part of a unique learning process.

As educators, we felt the need to develop activities which comprehensively promoted aquatic drowning prevention through competence based education. Therefore, during 2013 and 2014, we conducted a research pilot study as a part of these programs.

Latorre (2003) claimed that for schools to change it was necessary that teachers' practices also must change; likewise, he felt education as a creative teaching process could contribute to improving and transforming the professorate's educational practices. Since schools in Uruguay may represent the only chance for many children to access aquatic education, setting a practical and theoretical background concerning methodology and drowning prevention contents became a critical part of the curriculum. We found it essential to integrate teaching and research.

Swimming Education and Aquatic Education for Drowning Prevention Based on Water Competence

UNICEF (2008) questioned whether swimming lessons improved swimming skills as well as the survival capacity to protect life in some way; at that time they felt that no conclusive evidence existed showing that swimming capability conferred protection against the peril of drowning. Accordingly, generalized swimming teaching was considered an unsufficiently documented strategy for drowning prevention.

Children and teenagersare often attracted to the water, and they often overestimate their own skills and become overconfident in it. Even more, when children know how to swim it can lead their parents or caregivers to provide less vigilant surveillance and supervision around the water. UNICEF has also stated that it was necessary to better assess of the results of swimming lessons for drowning prevention purposes as well as the skills and knowledge that should be taught.

> Imparting knowledge and skills beyond the basic swimming strokes is certainly necessary. This includes teaching children to swim safely in open water, to identify hazards such as rocks, currents and dangerous weather conditions, and to recognize, avoid and – if necessary – escape from rip currents (UNICEF, 2008, p. 70).

Basic aquatic skills (e.g., floating, controlling breathing, turning over) by themselves provide a certain protective value; this value is collective when they are integrated with one another. Stallman (2013) wrote that the protective effect of basic aquatic skills expands even more when knowledge, values, and attitudes were involved. This meant that to know how to swim in itself was not enough to prevent drowning. Similarly, Moran (2006) stated "Drowning (…) is a significant, complex and multifaceted phenomenon, which has at its heart, the way in which humans interact with the aquatic environment" (p. 155). From a constructivist point of view as it applies to water competence, Andrade (2008) asserted that the development of water competence had to be done in a practical way, but enhanced by significant learning which could be transferred to real life situations involving problems solving.

Accordingly, Stallman (2013; Stallman, Moran, Quan, & Langendorfer, 2017) insisted that a water competence definition must be placed in a drowning prevention context and had to include cognitive competences, attitudes, and values in addition to swimming skills. Broadening the water competence definition addressed behaviours that provided additional protection from drowning. Indeed, when contrasting the capability to swim to water competence, it can be seen that the former includes the core of water competences but lacks concern for prevention while the latter includes the "minimum package" that should be delivered.

Regarding aquatic education associated with prevention, we considered water competence as the application of water safety skills to the solution of problems related to different situations which may generate injuries in aquatic environments. They include the likelihood of making a critical judgment about such situations and of putting into practice knowledge, skills, and attitudes in order to figure out the best feasible intervention. On the whole, physical swimming skills alone are certainly not enough to prevent drowning.

Interaction and Emotions as Engines for Learnings

Vygotzky (1978) wrote that development consists of internalising cultural instruments which originally did not belong to individuals but we acquired them from the group(s) to which we belong. These interactions ensured learning. From his point of view, Vigotzky described the concept of the "zone of proximal development" as:

> … It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guide or in collaboration with more capable peers (Vygotzky, 1978, p. 86).

On the one hand, during the research process the methodological action sought to generate an optimal "emotional impact" to motivate learning. According to Moreno (1998), motivations and emotions depended on the first and second brain structures which unconsciously react to pleasant or unpleasant sensations. The motor programs saved in those brain structures would be stored and colored in tones of these emotions and more complex learning would be supported by them.

Nicoliello (2010) stressed emotions as the impulses which controlled automatic reactions and constituted an innate set of adaptations to the environment system (p. 233). Emotions were critical to think clearly and to make the right decisions. They lead to ideas that interact with reasoning. We stand up on emotional learning to disregard or take into account certain options (Nicoliello, 2010, p. 99). Joy, understood as the emotion which depicts the expectations and projects accomplishments, moves a positive feeling which broadens the mood and therefore it should be part of the working atmosphere (Nicollielo, 2010).

To encourage significant learning, we considered each lesson was successful if it created an optimal emotional atmosphere. Rodríguez Cobos (2006) considered that it was bluntly obvious that emotion played a key role in the memory trace. Contents were associated in an emotional situation context. From this perspective, what we remembered and looked back on portrayed friendly atmospheres and this reinforced learning and teaching tasks.

For our project learner-centered cognitive teaching styles were developed that focused on guided discovery and problem solving. Creative teaching styles attempt to create different solutions by enhancing divergent thinking. To the contrary, teaching styles based on teacher-centered command styles such as direct command and tasks assignment set one or two inducements that only encouraged reproduction or copying (Moreno and Gutiérrez, 1998).

Competence-based education requires that learners comprehend the logic of the learning content. Throughout this process we sought to identify the possible causes of injuries in, on, and around water which could take place in our city. We imagined ways to recreate them in pool activities by simulating real situations using emotional aspects, the hypothesis development, and trial and error so that these could constitute a process towards accomplishing the program objectives. All the activities would involve taking care of oneself and others, recognizing and validating multiple solutions in the context of a peer group work.

According to Greene (2005), it is mainly imagination htat makes empathy possible. Because of our cognitives capacities; "imagination is precisely the one

which allows us to credit alternative realities. It enabled us to break up with what we took for granted, to leave aside the distinctions and the definitions to which we were familiar." (Greene, 2005, p. 14).

Freire (1997), from a critical pedagogy standpoint, remarked that teaching should enable pupils through developing their curiosity and turning it more and more critical to produce knowledge in collaborations with teachers (p. 46). Therefore, interactions, joy, curiosity, creativity, and challenge would be engines that motivate learning. From this perspective, we were determined to unfold them through group work, cognitive, and creative teaching styles.

Method

We were attracted to the research – action method because it went beyond a critical understanding of its study subject and it was committed to transform collective practices (Latorre, 2003). Consequently, we contributed to one of the specific objectives from the original paperwork: "to improve educative practices focused on processes which promote self-adaptation to the aquatic environment and self-evaluation." In other words, we will see the impact cognitive and creative teaching styles have on improving aquatic competences and the student perceptions of them.

Instruments and Participants

The research was performed using five Junior Lifeguard groups, involving a total of 74 students. Three of these schools belonged to the Program of Priority Attention to Relative Structural Difficulties Contexts (PA). This school categorization involved two more critical socio-economic quintiles of the country state schools (CEIP, 2010). Every case study consisted of participant observations of the 16 to 24 lessons that occurred over the course of the program. Regarding this objective, observations were triangulated with a researcher diary, initial and final program assessments, and the attendance record analysis. The researcher´s diary was a daily subjective record of the events of the class. It included an activities analysis, the teachers' perceptions of the students' experiences, and some hints for planning subsequent classes.

Using the process stated by Kemmis (Latorre, 2003), the study was divided into two consecutive cycles of four interrelated stages. Each cycle included the following four phases: 1) planning, 2) action, 3) observation and 4) reflection. As described by the author, when these four phases are integrated, it would be like hammering into shape a self-reflective spiral of knowledge and action cycles.

Table 1. Outline of a researcher´s diary

Date:				Lesson Nº		
Skills:						
Teaching Styles	Direct command	Task assignment	Experimen- tation	Reciprocal teaching	Guided discovery	Problem solving
Activities Development:						
Difficulties:						
Possible Solutions:						
Students Experience	Pleasant			Neutral		
	Fun Uncomfortable with fear			Ready Interested in Challenged		
Comments:						
Notes for Next Class:						

Table 2. Features of studied groups

Case Study		Grade	Participants nº	Program lessons	School context	Period
1st Cycle	**School 1**	6º	19	24	PA	April – November 2013
	School 2	5º	13	16	PA	
	School 3	5º	16	24		
2nd Cycle	**School 4**	6º	16	24	PA	April – September 2014
	School 5	**6º**	**10**	**16**		

Schools 1 to 3 took part in the first cycle, the others in the second one. Both of them involved 5º and 6º students (10 to 12 year- old children).

The Process and Its Results

One of the objectives of this research was to create an educative practice focused on processes which promoted self-adaptation to the aquatic environment and self –evaluation. We will see what was observed and modified through different data

categories that included class atmosphere, use of the environment and equipment, skills and teaching styles, role playing, and evaluation.

Class Atmosphere
In this section, we mention aspects which have contributed to create friendly and suitable class atmospheres. Some of them are related to the pool as an environment and some of them to the elements of the class content itself.

Regarding the students with no previous experience, we observed that the possibility of being able to stand on the bottom of the pool, of having a place on the edge to get out of the water and of knowing how to get out all were key points for student success. Consequently, knowing how deep the water was and practicing exits as much as entrances were part of positive emotional safety perceptions contributed to positive atmospheres for novice students.

Punctuality was also an important point to consider. Negative class atmosphere appeared during those times in which some children arrived late for different reasons. This aspect affected the continuity of the activities and the readiness to really get involved in them. Quickly trying to catch up late students did not appear to help.

When some children got bored or were not interested, the whole class atmosphere was affected negatively. Activities needed to represent appropriate challenge levels; the activities had to be compelling, or to provide a chance to wonder and keep thinking and trying, or offer an opportunity to practice the known challenges the students enjoyed. Tasks offered in open settings allowed students to individualize them so everyone could attempt them from their own readiness or competence levels.

The teacher´s role was an essential factor. When teachers were actively involved during the whole process, both inside and outside the water, it contributed to a positive class atmosphere. We found that teaching as a comprehensive and integrated experience shared by teachers and students was the bottom line.

Using the Environment and Equipment
School 3 group worked in a 25m pool with a progressive depth across the shallow half that ranged from 1.10 meters to 1.60 meters. Consequently, not all children could stand on the bottom. The School 1 and 2 groups worked in a 25 m pool with a constant 1.40 depth in the shallow part where children could stand or where they knew that the water depth was the same throughout the shallow part of the pool.

These differences in pool facilities required different learning processes especially with shorter students.

First cycle. The use of the pool was promoted using an exploration process of its characteristics but in a semi-directive teaching style called guided discovery. Considering drowning prevention, we decided that shorter students should be placed in the zones where they could easily stand up while working across the same-depth width of the pool or were close to the edge if they were traveling the length of it.

Methodogically, equipment was used progressively to offer more to less support and from more to fewer balance possibilities to promote success in their skills development. Floating assistance was always available during the final independent time at the end of the lesson for those who thought they would need it.

Second cycle. Creating awareness of the pool environment was the main idea during this cycle. Direct teaching styles were substituted based on experience and reflection. We set out to make decisions continously:

Independent time instances. Children should identify the places where they could manage themselves safely, keeping floating devices for the use of those who considered they needed them in the shallow as well as in the deeper water.

Use of the length and width of the pool. Each one should solve whether they would swim parallel close to the edge or to a lane line. The same occurred when using the width; each child chose the depth level they could deal with safely and successfully.

Swimming distance. Since the first lesson children would swim the distance they preferred, 12 m or 25m whether swimming or while holding on to the edge. Regardless of the swimming level, children could use the whole length from the very beginning including the deep part of the pool.

Equipment usage. It was up to the students. This was one more task to solve according to their own preference and the knowledge about the amount of support they may have needed. For example: noodles, hydrogym equipment, or kickboards were available to use. Teachers only dictated in which activities they were allowed to use them.

We considered each environmental interaction was an opportunity for decision making by students, including allowing them to estimate their own and the environment possibilities and limits as well as their capability to resist peer

pressure as it might occur when they began their independent peer group trips to the beach.

Skills and Teaching Styles

The researcher´s diary (Table 1) recorded the teaching styles applied for the learning of each skill as well as notes describing relevant observations about student learning. The whole process motivated us to say less and ask more.

First cycle. Problem solving and creative teaching styles were part of the basic skills development. Difficulties arose when teaching how to swim and to float dynamically. In this case, we certainly applied the traditional sport swimming methodology that used directive command teaching. That is to say, that after achieving some basic aquatic skills, we began by promoting global swimming movements, decomposing them into kicking, breathing, stroking, and coordination phases, and then back to global afterwards which is the way we approach the performance front crawl whether breathing to a side or to the front. In the learning literature this has been called a whole-part-whole teaching strategy. This was the most useful swimming style we had considered more suitable for our kind of natural environment.

During the first cycle, some surprising revelations emerged to deepen our reflection about methodology. Most children from PA schools utterly lacked any previous formal educational aquatic experience. Despite this fact, these were children who often used to go to a quarry with their friends. Their aquatic movements were stunning. Some other children after the first lessons suddenly called out to gain our attention: *"Look how I can swim!"* and they swam rudimentary front crawl fairly well. All of them showed that they could perform some swimming skills without any formal previous teaching.

How Did They Learn? How Do They Learn? How Are We Teaching?

Undoubtedly, their previous experiences in natural environments included self-directed problem solving, engagement in action tasks, interactions with others, and above all, providing the oppportunities to allow play in the water to evoke their developmental potential to adapt to the aquatic environment (Pérez, 1997; Stallman, Junge and Blixt, 2008).

Second cycle. During this cycle, we thought about promoting swimming exclusively through task actions, focusing on understanding the logic of each aspect for it. We would not build techniques; instead we would understand every skill as an adaptive basic skill, disregarding standarized swimming techniques.

For instance, how would they use flotation in a real scenario? How should static or dynamic flotation be employed? A specific stereotyped technique was not relevant but rather the bottom line was to float smoothly and balanced to raise an arm for help, applying it differently according to the time demands, or to mantain the face above the water or to rest, or to seek directional orientation while swimming in open waters. Then, both static and dynamic floating skills would be resources to apply in a pre-determined period of time resulting from individual possibilities and the situation requirements.

We realized every observed child was different and unique. Initially, we had aimed for all children to acquire a stereotyped swimming pattern derived from an externally-imposed rhythm. From that time onwards until today we were determined to individualize aquatic skills to meet task and environmental requirements by setting the following tasks:

"From here to there." According to the lessons' experiences and the basic skills acquisition, in every class we challenged children to go from one point to another, whether by wading, grabbing the edge, or swimming with the face underneath, bubbling, or above the water, using their own means that they selected themselves. Skills developed by themselves through the task and environmental demands and how children´s experiences interacted with them.

Propulsion awareness, using floatation aids in creative ways. By using different floating aids in varied and creative forms, the students significantly improved the acquisition of different forms of propulsion, to assume vertical to horizontal body positions, and propulsion on their front, back, side or a mixture of them. Children could also identify which flotation aids were able to hinder or facilitate the performance of the task, raising awareness of the progress they made.

Swimming longer distances with assistance or not. Following the previous experience of floating and balance, effective swimming techniques were modified by requiring the use of breath control and suitably aligning the head along the different body planes.

Playing with rhythm, coordination, and control. By manipulating elements of rhythm, timing, coordination, and control, we were able to facilitate changes in movement.

Accelerating. Trying to move faster generated commonly and spontaneously alternating leg propulsion (e.g., kicking races in pairs without demanding a specific kick).

Moving in slow motion. Asking students to try swimming in slow motion promoted global swimming movements as they were put together.

Imitating motions. We asked students to swim with partners while mimicking different swimming rythms or skills while swimming together, side-by-side.

Using music. By representing different rhythms such as reggae or rock allowed students to discover different kicks, strokes, and timing. It also helped them to find the most suitable or comfortable one for each student.

As part of the logic for using rhythm, it was obvious that arms moved functionally aligned with the motion of leg propulsion whether they needed to be alternating or simultaneous. Each child had the opportunity to figure out their own personal rhythm and swimming technique. As a result, rudimentary swimming first appeared and then evolved as most kids achieved longer distances and applied different strokes and flotation for a single distance. According to the awareness of their knowledge and possibilities, all-around skills were applied, whether in the shallow or deeper water, showing the acquisition of richer movement resources than the original fundamental swimming techniques.

Role Playing. Through these special games, we created challenging situations that needed to be solved such as a friend fell down from a dock or the canoe turned upside down. Each scenario was followed by this question, "How would you help them?" Then, we elicited ideas that tried to arrive in each case to part's of Szpilman and colleagues' (2013) Drowning Chain of Survival which we demonstrated afterwards. These questions and brainstorming generated new activities that we set in simple-to-complex order according to the skill acquisition process.

Role playing (RP) was successful in every group. From an emotional impact perspective, we concluded that they were better applied when preceded by activities related to emotional expressions. For example, the students might perform water entry while demonstrating different moods. They represented the chance to sum up water competences so discussion and brainstorming times were as relevant as the practice experiences themselves. When applied after the coastal dynamics and first aid workshops, they reinforced topics related to rip currents and the drowning chain of survival which promoted transferring knowledge and skills. Caring for the other attitudes was often observed during the lessons and during independent class times. As we moved on through different role playing

situations, more effective and suitable responses came out, suggesting the aformentioned drowning chain of survival was being internalised.

As teachers, we achieved a better understanding of their incidence which enhanced greater transfer between the skill applications and the knowledge involved. For example, if during the first lessons we worked on floating with breath control in different planes and body positions, this was applied afterwards to swimming and to floating with clothes and then taking them off in the water, to helping possible victims, or to creating mock situations in which someone lost their standing balance due large surf waves.

During the first cycle, the time requirements to develop a certain swimming technique took time from their application. During the second cycle, the change in methodology allowed the neccessary emphasis on application and time to boost them.

Table 3. A class example applying role playing

Skills:	• Floating with instability and asking for help
	• Grabbing and swimming with unconventional equipment
	• Drowning Chain of Survival (DCoS)
	• Rescues from land

Activities	**1.** To float using the brought object in different ways	The group is divided in two. One group will be the victims, the other the rescuers from land. After eliciting towards the DS, the activity is developed from the middle of the pool.	
	2. To float differently using a partner´s object	*Victim role:* One by one fall, ask for help, grab the object and swim to a safety exit. They decide to exit whether swimming across the deep half or the shallow half.	*Rescuer role:* Recognize the situation and pretend to call for help, throw the object and follow the victim by the shore to a safety exit to exchange roles afterwards.
	3. RP: A friend unexpecedly fell down to the river quite far from the shore; how would you help him?	• Were there any difficulties? (e.g: to grab the object, to swim, to throw the object) • How could we solve them? Perform the RP again according to the new hints	

For this activity we had previously asked children to bring objects they could find when camping that could help them to float (e.g., bottles, balls). It was important to illustrate that prevention needed to go to homes, too.

Evaluation

During the first cycle, self evaluation was a truly effective resource to identify the children's own strengths, limits, and areas needing improvement. It was accomplished through observing different tasks but a formal assessment was not accomplished. For example:

- Regarding swimming skills, the pool edge was marked approximately every two meters. Therefore, children could wade or swim and clearly see how far they could get without standing up, grabbing the edge, or the lane line, while trying longer distances each time.

- Concerning submersions, children worked in pairs. One of the pair placed an object underwater to pick up based on the partner's level of skill so the second one could pick it up while variables such as the depth, the distance from the edge, the kind of water entry, or from already being in the pool, and the most effective body position could be gradually modified.

At this point, we wondered whether the program emphasis should be focused on achieving efficient swimming or flotation as survival skills or on recognizing each child's own strengths and limits. Moreover, during the first cycle we formally assessed levels of swimming skills; during the second cycle we decided to assess the self-perception of skills level for each child according to the following tasks.

To decide where to dive to collect an object from the bottom. Children determined the kind of water entry and where to do it, in either the shallow or deep end of the pool.

To float 30 seconds, raising an arm for help at least once, and to swim 12m to a safe exit. Children attempted different floating and swimming skills, combining swimming strokes both on the front or on the back or combined with floating to rest, if necessary.

To perform an unknown water entry and to swim with orientation. In this task, children chose whether to swim a 12m or a 25m distance heading for marks, placed every 5m, along the edge and others in front. They also could complete their way by swimming their preferred strokes and including the possibility to float if they needed to rest

To swim 12m, 25m, or 50m. Children chose the distance first and then attempted to do it. The swimming skill was observed and classified into three technique categories: 1) rudimentary swimming, 2) swimming without breathing control; or 3) efficient swimming. Because we measured whether they could

achieve the distance of the task, not how they did it, each child could combine different swimming and floating skills and techniques as they needed.

Conclusions

The methodology we applied was designed to work on attitudes and values involved in drowning prevention. For example, we focused on different learning rythms and on independence from them. We also measured whether everyone could do every task and whether this process enhanced the student's self esteem which was a key focus to see whether they had developed self care attitudes about drowning prevention. We venture to claim that we had reached a successful achievement by developing water competences associated with the prevention of water-related injuries using our curriculum.

Practice makes better teachers. Teaching knowledge, attitudes, values, and skills effectively provided teachers time to practice and reflect. Generally, we considered that neither participating in this kind of program nor the exclusive achievement of certain swimming skills was sufficient. Specifically, even though changes in methodology and assessment broadened the achievements in aquatic skill competence, the practice of analyzing situations, the constant measuring of one´s skills, and the application of decision making in each lesson might have been the most valuable resources the program delivered. We are fully confident that our methodology was responsible for these accomplishments.

To achieve skills was important, but appreciating how to interact with the environment to facilitate learning and transfer was the most critically important outcome. It has been reported that those recognized as "good swimmers" also can drown (Stallman et al, 2008). We did not consider that there were better or worse swimming qualities in a drowning prevention context. Skill achievement was conditioned by aspects which transcended the specific methodology and included socio-cultural and emotional factors as well.

Concerning water safety, the capacity to make decisions, to make situational critical judgements, to identify, to build, and to create their own possibilities based on experience and reflection were all essential elements of what we learned about acquiring water competence. Sensitizing our educational practices and promoting learner-centered teaching processes which understood that the main aim was personal fulfillment was vital.

We strongly believe that aquatic education for drowning prevention should be the first and most important approach to engage the aquatic environment. Obviously, there is a strong need for further studies along with extensive discussion and experience with appropriate practices. Having experienced this

unique approach, we cherished all the moments as well as the children's smiles and knowing glances. We deeply appreciate the honour of experiencing them.

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