Pedagogical resources
AQUATIC ACTIVITIES

AQUATIC LITERACY AND DROWNING PREVENTION: FROM TEACHING HOW TO SWIM TO EDUCATING TO DECIDE

Rita Fonseca Pinto and Juan Antonio Moreno Murcia

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Drowning prevention is also something we learn. Aquatic education must go beyond teaching motor skills to help people understand their environment, recognize their abilities and limitations, and make more informed decisions. Aquatic literacy provides an educational framework for learning to act autonomously, mindfully, and responsibly in different aquatic situations.

Introduction

Teaching in an aquatic environment involves helping people to develop skills, understand their abilities, and interact with water in a variety of conditions. Learning to float, move about, find one's bearings, use a lifejacket, or get out of the water is a fundamental part of this process. Its educational value is enhanced when the individual understands the purpose of these skills, recognises the circumstances in which they can be used, and learns to decide when they need help or when it is best not to put themselves at risk.

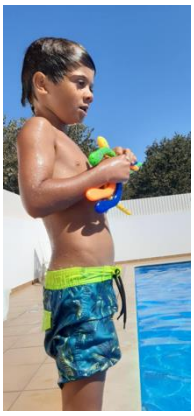
This perspective is particularly relevant to the prevention of drowning. The World Health Organisation lists the teaching of basic swimming and water safety skills amongst the recommended interventions for drowning prevention, as part of a strategy that also incorporates supervision, control of access to water, safe environments and preparedness to respond to emergencies (World Health Organisation [WHO], 2014, 2021). Water safety education therefore has a role to play, as part of a broader protection system.

For educators, this idea raises a practical question: **how can we make the most of regular sessions so that people learn not only skills such as swimming?** This resource aims to re-examine teaching from the perspective of this question, through simple guidelines and examples that can be adapted to different students and contexts. The aim of this resource is therefore to provide professionals with practical guidance on incorporating the principles of aquatic literacy into their teaching, promoting not only the acquisition of skills but also an understanding of the environment, recognition of one's own abilities and limitations, and informed decision-making that contributes to a safer, more independent and responsible relationship with the aquatic environment.

From learning to swim to aquatic literacy

The evolution of aquatic education has involved a gradual broadening of focus from learning to swim towards a more comprehensive preparation for interacting with aquatic environments. Stallman et al. (2017) contributed to this shift by proposing the concept of aquatic competence, which integrates motor skills, knowledge, and affective components related to drowning prevention. From this perspective, knowing how to move through the water is an important part of this education, but it does not, on its own, allow us to predict

how a person will respond when the conditions of a situation change.



Aquatic literacy broadens this perspective and sets as its educational goal the ability to interact with the aquatic environment in an increasingly autonomous, conscious and responsible manner throughout one's life, without focusing on specific disciplines, but rather seeking, through the aquatic experience, feelings of pleasure, well-being, development, and even performance. This involves integrating motor skills with an understanding of the environment, decision-making, the experience of positive sensations, emotional regulation and adaptation to different situations (Moreno-Murcia, 2026). The educational question is thus no longer limited to "can they swim?", but incorporates another: **"do they understand the situation and have the resources to act?"**

This development also has a clear preventative dimension. Education for prevention is not merely about teaching how to respond to an emergency, but about helping people to observe their surroundings, recognise their own abilities and limitations, identify conditions that may increase unnecessary risk (for example, a red flag or an unsupervised beach) and make appropriate decisions before a more dangerous situation arises. From this perspective, preventive water safety education links the acquisition of skills with understanding, risk perception, perceived competence and decision-making (Ortiz et al., 2025).

For professionals, this approach does not mean abandoning the teaching of any skills or adding new content for its own sake. It involves broadening the educational purpose of the experiences already offered: teaching how to perform tasks by drawing on various aquatic practices and, at the same time, helping learners to understand **when, how, why and under what conditions** what they have learnt can be applied.

This learning to observe, think, and make decisions requires opportunities to consider alternatives, make choices, experiment and review a response. In an aquatic environment, these opportunities must be organised within an educational context, whilst adhering to the safety guidelines set by the professional. In this way, the student's autonomy is developed through guidance, support and boundaries appropriate to their individual characteristics.

Three key ideas to guide teaching

Skills are necessary, and only become meaningful when we learn to use them. Floating, swimming underwater, staying afloat, moving through the water, finding one's bearings, and entering and exiting the water are some of the fundamental skills to be learnt. From the perspective of aquatic competence, mastering these skills must be linked to the ability to interpret a situation and select an appropriate response (Stallman et al., 2017). Therefore, observing a person performing an action in a specific context provides relevant information, but it is not sufficient to understand how they will respond when conditions change (change in depth, the flotation aid moving away, etc.).

For example, activities involving flotation aids help to illustrate this. Children are used to playing with a tube float between their legs, but what happens when they pick up the ball and throw it, lose their balance and drop the float? What alternatives do they have to ensure their safety and well-being? The educator can build on this experience by helping them identify alternative courses of action, recognise the most appropriate one for the situation, and broaden their knowledge and perspective. Performance, knowledge and understanding are developed in an interrelated manner.

When the situation changes, we need to reassess the response. Stallman et al. (2017) and Ortiz et al. (2025) highlight the importance of considering the demands of aquatic situations when assessing competence. Therefore, demonstrating a skill in one specific environment does not automatically imply an equivalent response in another. Transfer is an educational objective that needs to be developed and tested within the limits of each experience. For the educator, this involves teaching pupils to identify relevant changes. This can be done through simple, pre-assessed variations, but also through photographs, discussions, or scenarios presented out of the water or in simulated situations. It is not necessary to recreate a hazard in order to help pupils understand it.

For example, how should we react to an unexpected current? Let's imagine we are in a river and a current appears that sweeps us in a certain direction. What options do we have for responding to this situation? Calling for help, adopting a back float position and assessing how to position the body to protect the head from potential obstacles are some of the possibilities. We need to make the educational experience more realistic by exploring possibilities, encouraging critical thinking and developing skills, because in a moment of surprise, emotional management is crucial and knowing how to regulate one's response can be of great help.

Asking for help, pausing or choosing not to enter are also lessons to be learnt. A person may need to pause, express discomfort or request an adjustment. Another might recognise that they do not have enough information to decide whether to enter an unfamiliar space. These responses deserve an explicit place in teaching. If a student expresses uncertainty and is pressured to continue, they may learn that voicing a difficulty has unpleasant consequences. This approach also promotes self-esteem and mutual respect amongst peers, taking into account their individual paces, needs and skill levels, as well as their condition at any given moment. Furthermore, during childhood, it is important to remember that autonomy does not diminish the adult's responsibility to supervise and protect (WHO, 2014), regardless of the aquatic environment in which they find themselves (whether familiar or unfamiliar).

For example, if a child says, "I don't want to do it, I'm scared", we must acknowledge what they have said ("thank you for telling me"), clarify what is the need ("What do you think might happen?") and adjust their involvement (by offering support, simplifying the task, staying with them or postponing the activity).

Proposals for incorporating water literacy into your sessions

This approach is based on a concept of water competence that integrates skills, knowledge and affective components (Stallman et al., 2017), alongside the need to organise teaching under appropriate safety conditions (WHO, 2022). The proposed activities have been designed for use in a specific aquatic context and have not been validated for use in other contexts. It is therefore up to each professional to adapt them to the characteristics of the group and the conditions of the environment.

Proposal 1. Before entering the water, I observe

Objective. To identify the authorised access point, the exit point, the area of activity and the designated professional. Also, to recognise that certain conditions must be explained or verified by the educator.
Implementation. Before entering, gather the group in a safe area. Ask them to point out the authorised access point, the route and the exit. Locate the support points and the designated staff member. Fill in the information and then check whether they are using these references.
Questions. "What do you need to ask yourself before you start?"; "where can you exit?" and "how do you plan to get there?"
What to look for. Even if they identify the reference points and use them, simply stating a rule does not mean it is being applied.
Adaptation and safety. Use photographs, pictograms or demonstrations; allow them to respond by pointing. The professional checks the conditions of the environment.
Transfer. Imagine we are in a different location and there is a wind causing the waves to grow; what adjustments would you make in that situation?

Proposal 2. I choose a route that suits me

Objective. To select an option based on its characteristics, explain why they have chosen it, and review the decision after making it.
Implementation. Present two short routes that have previously been deemed suitable, with slight differences in distance and whether or not support can be used. Ask them to observe, choose and explain their decision. Review the choice once they have completed the route.
Questions. "What did you take into account?" and "having tried it, would you stick with your choice?"
What to look for. Whether they consider distance, aids, comparison with their peers or previous experience. Explore their reasons before interpreting a choice.
Adaptation and safety. Suggest that they use an object to mark the distance they believe they are capable of covering according to some pre-established criterion. If only one option is suitable, do not present the other as an alternative. Modify the task if the response indicates that adjustments are needed.
Transfer. Imagine the water is very cold and you need to get out, what would you do? Would you choose a longer distance with a guaranteed exit, or a shorter distance with a more challenging exit?

Proposal 3. If a reference point changes, I pause and reassess

Objective. To identify relevant changes in the environment and learn to pause, reassess the situation and adjust the decision before continuing.
Implementation. First, present some cues or reference points from the environment and check that the student understands their meaning. During a familiar task and under controlled conditions, alter one of these reference points, for example, the finish line or the sign indicating the route. Before continuing, inform the student that a change has occurred and ask them to identify it, assess what it implies and decide how to proceed.
Questions. **"**What has changed?", "does that change affect what you were going to do?", "what do you need to check before carrying on?" and "would you stick to your decision or change it?"
What to look for. If they identify the change, they pause to assess its consequences and adjust their behaviour before continuing. Also observe whether they act automatically, following the previous routine, or whether they need help to reconsider their decision.
Adaptation and safety. Introduce just one change at a time, one that is clearly identifiable and always within a safe situation. Monitor the situation and, if it causes confusion or uncertainty, return to the familiar situation. Do not introduce unexpected changes whilst on the move, nor remove any supports needed to carry out the activity safely.
Transfer. Apply this reflection to a real-life situation: "imagine you are taking part in a water-based activity and it starts to rain and thunder. What has changed? What information do you need to consider? Would you carry on with what you were doing or change your decision?"

Proposal 4. I can communicate what I need

Objective. To recognise and communicate a need and to participate in finding an appropriate adjustment.
Implementation. Agree on a phrase or signal to request attention or to stop the activity. Practise this in a calm situation. During tasks, respond to requests, clarify the need and offer an appropriate adjustment.
Questions. "Which part are you finding difficult?", "what do you need to be able to take part?"
What to look for. Whether the student knows and uses the signal, and what response they receive. Silence does not indicate well-being or understanding.
Adaptation and safety. Use gestures, pictograms or familiar communication systems. In the event of discomfort, significant difficulties or a request to stop, interrupt the task and act in accordance with the centre's procedures, and respecting the student's physical and emotional well-being.
Transfer. Present simple, simulated situations, always under teacher supervision, in which one or more classmates insist that the student carry out an activity they do not wish to do. Use the situation to encourage dialogue and reflect on how to express refusal, respect others' decisions and recognise the effects that different forms of communication can have on safety and wellbeing.

Proposal 5. What I can do here, what does that enable me to decide elsewhere?

Objective. To recognise differences between aquatic environments and understand the implications for personal behaviour before acting.
Implementation. Out of the water, compare photographs of a familiar swimming pool with other aquatic environments. Identify what information you have, what you do not know, and whether there is anyone you can consult, and if so, who? Conclude by specifying what to do whilst information is lacking.
Questions. "What's different here?", "what can't we tell from a photograph?", "what activity would you like to do here, but what could you actually do in reality?"
What to look for. Whether they recognise the limits of the available information. 'I don't know; I need to ask' can be a relevant response.
Adaptation and safety. With young students, focus on just one key point: stay with the responsible adult and ask before acting. Analysing images does not demonstrate the ability to cope in the spaces depicted.
Transfer. With young children, imagine we've arrived at the swimming pool: what should we look out for before getting in? When should we get in? What should we do if we accidentally fall into the pool?

Assessing to understand and adapt teaching

Assessment forms part of this process. It enables us to recognise progress, identify needs and review whether the approach facilitates learning, taking into account the diversity of aquatic environments and the range of practical activities available. It is agreed that when teaching integrates skills, knowledge and affective components, observation must gather information on these dimensions, in addition to motor outcomes (Stallman et al., 2017; Fonseca-Pinto & Moreno-Murcia, 2025). It is not necessary to record everything that happens, but the professional must know what to observe, which factors have the greatest impact on behaviour and what their observations mean. To this end, before observing, it is important to specify exactly what we wish to find out.

For example, an objective such as “improving decision-making” is too broad to guide the observation of a session. We need to specify what type of decision we wish to teach, in which task it will arise, and which questions might provide information regarding the effectiveness of learning. Let’s imagine a situation in which we have to decide whether to keep moving through the water to reach a ball. What happens if the distance between us and the ball increases, if the ball changes direction, or if, on the beach, the wind starts to blow it away from us? Because knowing how to act does not mean knowing when it is safe to continue doing so.

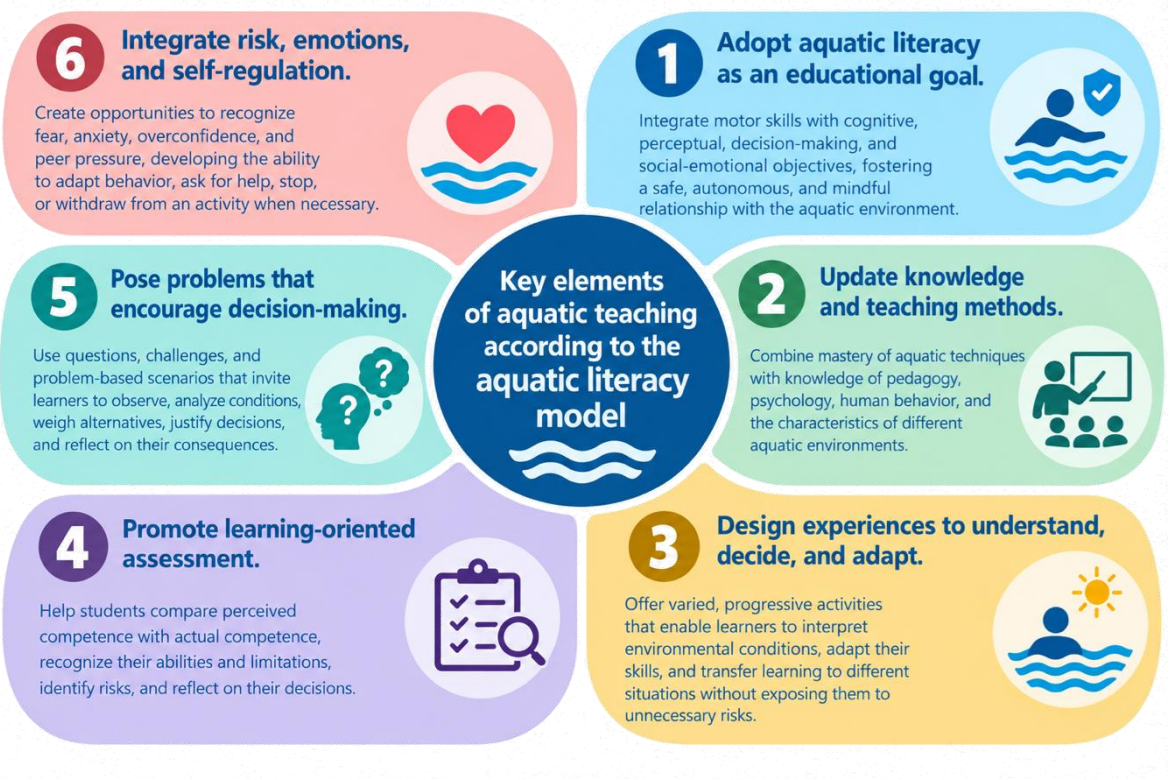
How might we assess pupils’ behaviour in a way that provides useful information for the learning process? The best records are those that describe actions; that is why it is advisable to use an assessment that supplements labels such as “is reckless”, “is afraid” or “is not paying attention” with more descriptive information, such as, for example, “chooses to keep looking for the ball because their attention is on the object, forgetting their surroundings”. We must return to the experience and, through questioning, explore the possibilities.

In an environment such as the aquatic setting, with so many variable factors, there is no there is no one-size-fits-all approach to assessment. Moments of practice, assessment and reflection shape the process and, consequently, learning.

The professional impact

Incorporating aquatic literacy into aquatic education means broadening our perspective on the scope of teaching. It is not just about teaching skills, but about designing experiences that integrate an understanding of the environment, decision-making, emotions and the ability to adapt. This requires more intentional planning of tasks, materials, and group organization, helping to enrich learning and foster a more autonomous, safe, and responsible relationship with the aquatic environment. To support the implementation of this approach, we propose six key elements to guide teaching practice from the perspective of aquatic literacy (Figure 1).

Figure 1. Key elements of aquatic education from the perspective of aquatic literacy.



Conclusion

Learning to move about, float, play with a ball in the water and perform underwater strokes forms a fundamental basis, but these skills only acquire their true educational value when they are linked to an understanding of situations, respect for individual needs and autonomy in decision-making. This process requires recognising that learning manifests itself under specific conditions. Success in a familiar swimming pool provides insight into what a person demonstrates in that context; however, this alone does not guarantee the transfer of skills or the ability to adapt to other situations.

From this perspective, moving from swimming instruction towards aquatic competence and literacy does not mean replacing one set of skills with another, but rather progressively broadening its purpose In this process, teacher commitment becomes particularly important and is reflected in session planning, the teaching methods used, and the way relationships with the group are established.

The educational contribution to drowning prevention should be understood as an integral part of a shared protection system involving supervision, the selection of safe environments, the implementation of protective measures, and the adequate training of professionals. In this context, aquatic learning also plays an important role by promoting the knowledge, skills, and attitudes needed to foster a more informed, autonomous, and responsible relationship with water.

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