Pedagogical resources
AQUATIC ACTIVITIES

AQUATIC SAFETY: THE IMPORTANCE OF PROMOTING DEPTH VARIATION EXPERIENCES

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AQUATIC SAFETY: THE IMPORTANCE OF PROMOTING DEPTH VARIATION EXPERIENCES

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Beginners or people who are not accustomed to the aquatic environment often find it difficult to move between different depths within a body of water. This lack of adaptation increases the risk of accidents in aquatic environments, as it can trigger anxiety and fear, factors that make it difficult to make sound decisions. For this reason, this becomes an essential topic that must be included in swimming lessons.

Introduction

One of the recommendations set out in the United Nations (UN) resolution is to expand swimming lessons in schools and promote educational activities to raise public awareness of drowning prevention (WHO, 2025). With this in mind, researchers at the Rio de Janeiro State University (UERJ) in Brazil have been developing methodologies for teaching swimming with a focus on prevention (Vasconcellos, 2025).

Drowning prevention must be one of the cornerstones of early swimming lessons, even before the four competitive strokes—front crawl, backstroke, breaststroke, and butterfly—are taught (Vasconcellos, 2025). Understanding and developing awareness of basic water safety rules, such as never entering the pool without supervision, respecting depth limits, avoiding pushing games and informing the instructor of any discomfort (Barros, 2025), significantly reduces the risk of accidents (Leavy et al., 2023). Furthermore, it contributes to the development of a responsible attitude in the water, as well as to potential autonomy in decision-making when faced with adverse situations and respect for the risks of the aquatic environment.

Similarly, Australian researchers highlight the need to improve knowledge, attitudes, behaviours and skills relating to water safety (Leavy et al., 2023).

Teaching should prioritise the development of skills that enable learners to act safely in different situations within the aquatic environment. These include perceiving different depths, remaining calm when losing footing, staying in deep water with one's head above the water to avoid inhaling water and observing one's surroundings, regaining a safe position, identifying appropriate ways of entering and exiting the water, moving whilst submerged, and recognising situations that pose a risk to oneself and others, thereby facilitating decision-making aimed at reaching a safe place (Schnitzler et al., 2015; Duijn et al., 2022). In this context, an important topic to be covered in swimming lessons is teaching the transition between shallow - deep - shallow areas, as this skill helps learners to gradually adapt to changes in depth, expand their body awareness and gain greater confidence in various aquatic environments.

With this resource, we aim to present a teaching approach that emphasises the importance

of alternating between different depths during the initial stage of swimming instruction, although it is also important to bear this in mind at other stages of the learning process.

The importance of alternating between different depths (shallow - deep - shallow)

Learning to move comfortably and safely in both the shallow and deep ends of the pool is a fundamental stage in the process of teaching swimming (Barros, 2025). Beginners often feel insecure when their feet lose contact with the bottom, making this one of the essential aspects when starting aquatic activities (Vasconcellos and Caloiero, 2025). In this regard, a series of exercises is recommended that progress from the shallow end to the deep end, such as walking in different ways, crouching, submerging oneself, raising one's arms to signal for help, and moving about using "kangaroo hops" in the deep end of the pool, whilst keeping one's face and arms above the water.

Objectives of teaching the alternation between levels of depth

For learning to be meaningful, the teaching sequence to be used is important. With this in mind, we set out below a series of objectives to serve as a guiding thread throughout the process:

a) To raise awareness of the risks, characteristics and safe ways of using shallow and deep water areas.

b) To help prevent drowning during swimming lessons and recreational activities in aquatic environments, by preparing pupils to cope with changes in depth, unexpected situations and possible anxiety arising from the unpredictability of the environment.

c) To encourage adaptation to the aquatic environment in a safer, more gradual and confident manner.

Furthermore, teaching pupils to control their bodies, master their breathing, remain calm whilst sinking and return to the surface forms part of a pedagogical approach to swimming instruction with an emphasis on drowning prevention (Vasconcellos, 2025).

Developing this skill contributes to autonomy, spatial awareness and adaptation to the aquatic environment, promoting safer behaviour during swimming and a more effective response to unforeseen situations.

Pedagogical stages for learning the transition between depths

Teaching these skills for transitioning between the shallow and deep ends can be organised into three pedagogical stages:

Stage 1: teaching the crouching bend or dive in the shallow end, breath control and understanding the concepts of the shallow and deep ends

Before teaching a pupil to move around in the deep end, it is important to ensure that they are able, in the shallow end of the pool, to control their breathing, change their body position, float, orientate themselves spatially and return to an upright position. Progression to deeper areas should be gradual, starting with small challenges involving a momentary loss of footing and moving on to more complex tasks, such as entering the water, returning to the surface, floating, calling for help, moving about and exiting safely.

At this stage, the learner learns that the shallow end corresponds to a depth below the navel, making it suitable for swimming but unsuitable for jumping or diving. The deep end, on the other hand, is characterised by a depth that prevents the feet from touching the bottom, making it unsuitable for people who are not yet able to swim or float unaided (Barros, 2025). Learners also learn that, to use the deep end, they need to know how to move about and stay safe without support.

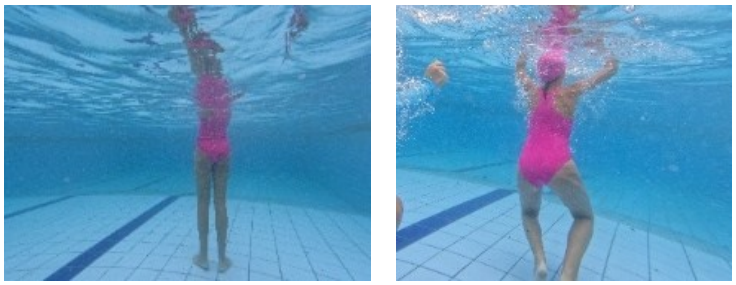
In addition, educational signs, such as “deep end” and “no diving”, can be used to reinforce water safety concepts and promote preventative awareness.

Stage 2: teaching the squat, moving around in the shallow end and asking for help

Before reaching the deep end, the instructor can carry out activities in an intermediate area (the transition from the shallow end to the deep end), where the water gradually deepens from waist-deep to chest-deep and then to shoulder-deep. The progression may include walking out to a depth where the face remains above the water, stopping, crouching down, floating and returning to the shallow end.

An important activity in this phase is the so-called “standing boundary” (Figure 1), in which the pupil approaches the area where they almost lose contact with the floor, experiences lifting their feet for a few seconds, floats or performs leg movements, and then returns to the shallow end. The aim is to normalise the sensation of “not standing”, thereby reducing fear and increasing confidence.

Figure 1. Proposed “standing boundary” activity.



One teaching method is the “controlled back-and-forth”: starting from the shallow end, the pupil glides towards a slightly deeper area, rolls onto their back, controls their breathing, returns to the prone position and moves back to the starting point.

During the activities, the instructor must make pupils aware of safety strategies in situations where they lose their footing, teaching them to stay calm, seek the surface, adopt the supine position, float, signal for help, locate the edge or the shallow end, and move unhurriedly to a safe place.

Another possible activity involves starting from a squatting position, pushing off with both feet until touching the bottom again, and performing successive pushes to emerge forwards, exit the danger zone or approach the edge of the pool in search of secure support.

A key aspect is teaching the hand signal for help. Teaching pupils to signal correctly in difficult situations is an important preventive measure. The gesture of raising one arm above the head and waving it calmly is a universal signal for calling for help. This should be emphasised from the very first lessons, as it helps pupils understand the importance of staying calm and seeking help effectively in situations of insecurity or fatigue (SOBRASA, 2023).

Stage 3: teaching children how to crouch and move from the deep end to the shallow end or to the edge

Progression into the deep end must be carried out in a highly controlled and individualised manner, considering each pupil’s level of adaptation and confidence.

A simple teaching sequence might include: entering the water in a seated position from the edge, returning to the surface, floating on one’s back for a few seconds, orienting oneself towards the edge, swimming a short distance and exiting the water safely. Another suggestion involves the sequence for entering deep water: entering with one’s feet first, returning to the surface, turning the body, locating the exit, remaining afloat or in a vertical position, and swimming to the edge. These skills are similar to the water safety skills recommended internationally.

The “three-step safety challenge” can also be practised: coming to the surface, taking a breath and choosing a safe exit. The pupil only begins to move once they have demonstrated composure and spatial awareness.

Vertical buoyancy exercises are also important, such as kicking your legs whilst standing upright for 5, 10, 20 or 30 seconds; moving your arms in and out of the water; signalling for help with one hand; and then making your way to the edge.

To integrate experiences between the deep and shallow ends, the “deep - shallow circuit” can be introduced, in which the pupil starts from the edge in the deep end, floats or moves to the intermediate zone, touches the bottom where possible, and continues to the shallow end. They then complete the circuit in reverse, always under the close supervision of the instructor.

Problem-solving should also form part of the teaching, making the activities more realistic. Situations such as: “You’re tired, what should you do?”, “You don’t know where the ladder is, how can you find the edge?”, “You’ve lost your goggles, how can you stay calm?” or “You’re far from the edge, should you swim quickly or float first?” encourage decision-making and safe behaviour. These activities aim to develop a pedagogical progression in which the pupil initially learns to crouch, submerge and jump in the shallow end of the pool and is gradually exposed to deeper areas. The aim is to enable them to use these techniques in real-life situations, whether to call for help, stay safe, recognise dangers or choose the best route to reach the Edge or a safe area (Vasconcellos, 2025b).

Conclusion

Water safety education must take centre stage in the early stages of learning to swim, prioritising the development of skills related to drowning prevention. In this context, transition exercises between the shallow, deep and shallow zones are essential for learners to develop a gradual adaptation to different depths, learn to remain calm when they lose foot contact with the bottom, and gain the autonomy to make safe decisions in the water. Teaching skills such as floating, vertical buoyancy, breath control, safe movement and calling for help can help to build preventive behaviours and reduce risks in aquatic environments.

Furthermore, the use of structured and contextualised teaching progressions based on real-life situations promotes more meaningful, safe and efficient learning. By experiencing gradual challenges at different depths, learners build their confidence, body awareness and ability to solve problems in adverse situations. Thus, teaching pupils to alternate between shallow and deep water should not be viewed merely as a supplementary aspect of swimming instruction, but as an essential strategy for water safety education, capable of preparing individuals to be more aware, independent and able to take preventative action in the face of potential risks.

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