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## Effective Water Competence Training for School-Aged Children: Teaching Strategies for Skills, Knowledge, and Attitudes

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## Effective Water Competence Training for School-Aged Children:

### Teaching Strategies for Skills, Knowledge, and Attitudes

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In drowning prevention four categories of strategies are distinguished: (a) education and information, (b) acquisition of survival skills, (c) denial of access, barriers and regulations, (d) provision of supervision (ILS, 2015). In a recent review, Stallman et al. (2017) describe what physical, cognitive and affective competencies make a person water competent / safe and thus less susceptible to the risk of drowning. They use the following definition of water competence as a starting point: *“sum of all personal aquatic movements that help prevent drowning, as well as the associated water safety knowledge, attitudes, and behaviors that facilitate safety in, on, and around water”* (Moran, 2013).

The purpose of this contribution was to analyze the effectiveness of water competence training for elementary and secondary school children in the local community in general and in a school context in particular. We realized that we needed to understand the capacities and interests of children and adolescents receiving and processing information differently according to their maturity.

While elementary school children have a relatively low drowning rate, adolescents show a shift in aquatic participation location from around the home to open water places such as rivers, lakes, and beaches (Franklin et al., 2010; WHO, 2014). The transition from elementary to secondary school can be considered as a critical point in time to provide drowning prevention education. Moreover, it is an important phase in children's life because of the increasing role of peers to stimulate safe or dangerous behavior in, on, and around water.

I provided an overview of teaching approaches using didactical tools in (a) classroom context, (b) swimming pool (c) open water and (d) as homework. International good practices and research data, as described in the literature (for example the reviews of Crawford *et al.*, 2014; Leavy *et al.*, 2016) help us to figure out different learning and teaching strategies for an integrated approach of skills, knowledge, and attitude in water competence training. We used the Teaching Spectrum of Mosston & Ashworth (2008) as our framework. The alignment of a water competence program, translated in (a) program objectives, (b) tasks and activities (c) teacher-learner interaction, (d) medium used and (e) outcomes was crucial. Here we distinguished different levels of decision-making concerning individual and environmental aspects in the world of daily aquatic reality. Information from other safety domains such as traffic education also were taken into account.

## References

- Crawford, G., Leavy, J., Portsmouth, L., Jancey, J., Leaversuch, F., Nimmo, L., Reid-Dornbusch, L., & Hills, E. (2014). Development of a systematic review of public health interventions to prevent children drowning. *Open Journal of Preventive Medicine*, 4, 100-106. <http://dx.doi.org/10.4236/ojpm.2014.43014>
- Franklin, R.C., Scarr, J.P., & Pearn, J.H. (2010). Reducing drowning deaths: The continued challenge of immersion fatalities in Australia. *The Medical Journal of Australia*, 192(3), 123-126.
- International Life Saving Federation (ILSF) (2015). *Total Life Saving Service Plan*. <https://www.ilsf.org/sites/ilsf.org/files/filefield/01-01-ABS%20-%20Peter%20George%20-%20Total%20Life%20Saving%20Service%20Plan.pdf>
- Leavy, J.E., Crawford, G., Leaversuch, F. *et al.* (2016). A review of drowning prevention interventions for children and young people in high, low, and middle income countries. *Journal of Community Health*, 41(2), 424-441 doi:10.1007/s10900-015-0105-2
- Moran, K. (2013). Defining 'swim and survive' in the context of New Zealand drowning prevention strategies: A discussion paper. Auckland: WaterSafe Auckland. Available from: <http://watersafe.org.nz/educators/research-and-information/research-reference/>
- Mosston, M. & Ashworth, S. (2008). *Teaching Physical Education* (1<sup>st</sup> online ed.). San Francisco: Benjamin Cummings.
- Stallman, R.K., Moran, K., Quan, L., & Langendorfer, S. (2017). From swimming skill to water competence: Towards a more inclusive drowning prevention future, *International Journal of Aquatic Research and Education*, 10(2), Art. 3, DOI: 10.25035/ijare.10.02.03
- World Health Organisation (2014). *Global Report on Drowning: Preventing a Leading Killer*. Geneva: World Health Organisation.



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