International Journal of Aquatic Research and Education

Volume 3 | Number 1 Article 9

2009

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Recommended Citation
Langendorfer, Stephen J. (2009) "Water Learning: Improving Mental, Physical, and Social Skills Through Water Activities," *International Journal of Aquatic Research and Education*: Vol. 3 : No. 1 , Article 9.
DOI: https://doi.org/10.25035/ijare.03.01.09
Available at: https://scholarworks.bgsu.edu/ijare/vol3/iss1/9

MEDIA REVIEWS

International Journal of Aquatic Research and Education, 2009, 3, 101-104

Water Learning: Improving Mental, Physical, and Social Skills Through Water Activities

By Susan J. Grosse, MS. Published in 2007 by Human Kinetics; 190 pages; $20.00.

Reviewed by Stephen J. Langendorfer, PhD, Bowling Green State University

As regular readers of the media review section of the International Journal of Aquatic Research and Education know, Human Kinetics continues to expand its many aquatic and swimming monograph publications. The current text I am reviewing, Water Learning, is one of the more unique tomes among all these publications. Unlike the other more typical swimming texts, this work dares to take a very novel approach: to promote learning in the cognitive, psychomotor, and affective educational domains through the use of water and aquatic activities. Learning to swim is completely secondary to the purpose of this book. Neither the book nor the author downplays the importance of learning to swim, but the focus of this book is on much broader goals and aims for children.

Susan J. Grosse, the well-known author of Water Learning, is one of the country's premier water safety and adapted aquatic instructors and writers. Her extensive experience and expertise as a practitioner, author, and speaker has been widely recognized in aquatic circles for many decades. Because of Susan's strong teaching and curricular background and interests in adapted aquatics, she strikes me as the ideal author for this text. The forward to Water Learning written by Louise Priest, retired executive director of the now-defunct Council for National Cooperation in Aquatics (CNCA), reaffirms the author's pioneering efforts as an expert in promoting learning through movement exploration using water.

As with several other recent instructional swimming books from Human Kinetics (e.g., Terri Lees' Water Fun), Water Learning starts with a section entitled the "Activity Finder," which enables readers and practitioners to quickly and easily identify activities and equipment described throughout the book. The first section illustrates a large number (~80) of alphabetized learning and motor development concepts that can be reinforced by aquatic-related activities described throughout the book. It is followed by a list of over 50 unique types of equipment that can be used in conjunction with the water activities to promote learning and development. Both sections of the activity finder are organized to identify either the different concepts reinforced or the equipment, the name of the activity, and the page where one can locate the full description of each activity. In hindsight, I believe my own text, Aquatic Readiness (1995), would have benefited from starting with an activity finder section because the 114 activities we described were widely overlooked by readers. This feature is an important addition to a practitioner-oriented text because it allows readers to appreciate the wide variety of games available at a quick glance.

Water Learning is organized into two major sections, each with three chapters apiece. The first section, "Foundations of Water Learning," provides the theoretical and practical basis for the book's unique approach. The first three chapters describe the benefits of the water environment to reinforce learning and the use of the student-centered, indirect teaching approach known as movement exploration. Elements of maintaining health and safety are presented in the third chapter. The second section, "Water Learning Activities," organizes and presents the extensive activities and games into non-pool and pool environments as well as illustrating how to plan and assess them. The chapter describing non-pool water learning activities presents a fascinating number of learning activities using sinks, basins, and buckets. The second chapter provides the more typical pool aquatic activities except that these are designed to promote a wide variety of learning goals, not primarily to teach a child to swim. Many of the activities are reminiscent of perceptual-motor activities that we used in Purdue University's preschool Developmental Movement Education (DME) program in the 1970s. Finally, the second section concludes with a planning and assessment chapter.

So, the reader may be wondering after reading my initial comments, "What is water learning?" The author provides the answer to that question in her first chapter. She writes that "water learning refers to using water . . . for educational purposes" (p. 3). She continues, explaining that "water learning uses activities in an aquatic environment to enrich and reinforce learning in nonaquatic areas of child development. Water learning is used primarily to reinforce academics. However, water learning can also reinforce motor skills, physical fitness, perceptual-motor development, and sport skills" (p. 3). It purports to not only enhance the acquisition of cognitive processing and psychomotor functioning, but also problem solving and creativity. Further, the author emphasizes "water learning does not involve learning to swim, even though activities may take place in a swimming pool . . . [although it] can facilitate water orientation, submersion, breath holding, breath control, locomotion in the water, comfort with buoyancy, balance, and ability to change direction [in the water] . . . [and can] make great warm-up activities for regular swim lessons" (p. 5).

Unique to Grosse's water learning approach is the role of the teacher, parent, or caregiver as facilitator of learning, not as a directive or authoritarian figure more typical of traditional teachers. The water learning approach embraces several variations on the movement exploration approach using problem solving and guided discovery techniques to elicit desired behaviors from clients. Water learning is proposed for all children, regardless of age, ability, or functional level. It is particularly useful for children who do face particular challenges due to various kinds of disabilities. It purports to reinforce and enhance classroom-based academic learning through the integrative value of learning in a water environment.

As a motor development specialist, I was interested to read about the underlying developmental and learning principles associated with water learning. Activities should be presented in a predictable, logical order using an inter and multisensory approach employing problem solving techniques that attempt to integrate various components of perceptual-motor functioning such as balance, directionality, and spatial orientation. Also as part of the integrative approach, all significant support personnel such as teachers, parents, grandparents, coaches, therapists, and caregivers are encouraged to be part of the process. Importantly and reminiscent

of the premise upon which Roberton and Halverson based their pioneering motor development work, *Developing Children: Their Changing Movement* (1984), water learning employs a success orientation that stresses learning should be fun and allow students to be motivated by positive opportunities to be successful.

Another important element of water learning is the attention given to establishing a safe, healthful and stimulating aquatic learning environment, regardless of whether the water is in a sink, tub, or bucket, a modern swimming pool, or a lake or river. The second and third chapters describe how to create optimal water learning environments while ensuring that the learners remain safe and healthy. The second chapter systematically identifies the important components for nonaquatic, pool, and open water learning settings such as the physical settings, water and air temperatures, and appropriate equipment. Chapter 3 stresses how to reduce the risk of drowning, prevent transmission of infectious contagions, and avoid injuries in any of the water learning settings.

The final section of Water Learning is comprised of two chapters that describe in detail each of the many learning activities and a third chapter that details how to plan and assess achievement. Chapter 4 presents over 50 learning activities possible in a non-pool environment while chapter 5 illustrates over 60 activities in pool and open water aquatic settings. Each activity is presented with four components: the specific learning component the activity reinforces, necessary equipment for the activity, a thorough description of the activity, and finally, possible ways to vary and adapt the activity to meet individual differences and needs.

I scrutinized the final chapter, "Planning and Assessment," because of my interest and expertise in measurement and evaluation. The chapter is organized around a series of planning charts and assessment matrices. The planning process centers on the water learning planning chart, which intends to promote the integration and reinforcement of learning across environments and behavioral areas. In the planning chart, columns identify at least four settings (i.e., classroom, physical education, therapeutic intervention, and water learning). The rows of the planning chart illustrate possible areas of growth and development such as academics, motor development, fitness, social development, behavioral needs, and activities of daily living.

I was particularly interested in the proposed assessment and evaluation process. Essentially, Grosse has created two charts, the pool activity learning chart, and the aquatic movement assessment matrix, for purposes of assessment. The pool activity learning chart serves as a transition document between the planning chart and the assessment matrix. It reminds facilitators for what purposes the equipment and activities are designed and helps them to plan pre and postassessment. The aquatic movement assessment matrix is a comprehensive chart organized to evaluate at least 16 perceptual motor, fitness, and cognitive concepts, each with a number of concrete items. For example, directionality is assessed with five items such as "can move forward and backward," "can turn in circles," and "can change level and demonstrate up and down." Flexibility, a component of fitness, is assessed with items such as "can fully extend arms overhead" or "can reach diagonally hand to foot on both sides." Each of the items is rated according to one of four categories: "not present/skill just emerging," "50% accuracy/sometimes/trying," "75% accuracy/usually/improving," and "100% accuracy/always/skilled."

I suspect that many aquatic instructors may find Susan Grosse's Water Learning to be a challenging work that they may or may not want to incorporate into their instructional programs. This is understandable because Water Learning was not written primarily as a swimming instructional text. I predict is will be attractive to those individuals who wish to promote a broad based educational experience for children using water as a learning and therapeutic tool. I think that it certainly would be useful to intervention specialists and adapted aquatic instructors. I would hope that other water safety instructors might be open to expanding their focus to promote water learning and to incorporate a wider repertoire of aquatic learning activities that can be found in Water Learning.

References

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