Assistive Technology and Dolphin Therapy: A Wonderful Combination

By Eli Smith and Gretchen Thomasson

In this 12-part series, EP explores the benefits of aquatics therapy and recreation for people with special needs.

Madison and her sister, Madeline, in the water with dolphin, Squirt, and staff from Island Dolphin Care.

I want pudding please." These are words that might be taken for granted, but what makes this so special is that Madison is telling her mom what she wants to eat for the very first time. It is therapist Gretchen Thomasson, BS, SpEd from Island Dolphin Care (IDC), a non-profit agency in Key Largo, FL, who introduced a special eye-tracking computer called the MyoTobii to Madison and her family. Madison is an adorable four-year-old child who attended Island Dolphin Care's five-day program with her parents and twin sister, Madeline.

The program at IDC includes creative classroom sessions and motivational in-water therapy sessions with the dolphins. Activities are tailored to meet the needs and abilities of each child. During the sessions, family members are welcomed to join in the fun while learning techniques that they can take home.

Madison was born with cerebral palsy and cortical vision impairment. As a result, she has very limited use of her extremities and is just starting to walk with assistance. She is predominately non-verbal, with the exception of a few words (more, yes, hug). Madison is an incredibly smart girl who understands much more than she can express. Just how intelligent she is became apparent to Thomasson after placing the MyoTobii in front of her. A series of cameras pick up the movement of Madison's eyes, while software determines where to place the cursor. What was so amazing about this for Madison was that it enabled her to communicate with her eyes, which is truly her best way to make choices. Madison's mother and Thomasson began designing pages for her to use while participating in class and during meals. A combination of illuminated symbols and black backgrounds provided an effective way for Madison to distinguish between choices. Now that she was able to see objects on the screen, the team needed to find an exciting way to capture her attention. It was determined that Madison's twin sister, Madeline, has voice sound and inflection very similar to Madison. Madeline's speech was recorded to each button on the computer screen.

Thomasson first introduced Madison to pages containing two options (i.e., eat or drink). After she used her eyes to select the desired button, the computer spoke, and she was reinforced with the food, paint color, or toy immediately. Madison was learning cause and effect each time she selected a button.

Using the computer allowed Madison to interact with her family in a way that she never had before. Rather than guessing, she was finally able to tell them exactly what she...
notebook size boards offer bright contrasting colors and symbols that are large in size. Madison was now able to choose what she wanted by looking at one board that said yes or the other that said no. Her mother, father, and sister all took turns asking Madison if she wanted Squirt to ‘play’ with a big rubber duck. She simply looked to yes if the idea sounded fun or to no if she was thinking about a different toy, like a volleyball. Having the opportunity to interact with Squirt in different ways empowered Madison to make choices using the symbol boards. She left the water and the classroom each day with increased confidence and the understanding that she can communicate with the people around her using assistive technology like the Yes/No boards or the MyTobii.

Island Dolphin Care works to find positive solutions for people like Madison and her family. They not only come to swim with dolphins, but to learn techniques and strategies that will help

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improve the quality of their lives across all environments: school, home, work, the community, etc. The program is designed to assist children and adolescents who have chronic medical, developmental, or physical disabilities. The family is a main focus of the program.

Gretchen Thomasson holds a Bachelor’s Degree in Special Education from the University of Maryland at College Park. Prior to joining the staff, Gretchen was a special education teacher in Maryland for six years. She came to Island Dolphin Care in July 2005 and currently works as a therapist and internship coordinator.

Elia Smith holds a Bachelor’s Degree in Special Education from Ball State University in Indiana. He came to Island Dolphin Care in 2006 as a dolphin assisted therapist. He offers assistive technology workshops to families attending the program, as well as from the community. Please visit Island Dolphin Care’s Web site for additional information at www.islanddolphincare.org. You may also contact the office by email: Email to Fonzie@islanddolphincare.org or phone at 305-451-5884.

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