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Phillip Conatser

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# International Perspective of Aquatic Instructors' Attitudes Toward Teaching Swimming to Children With Disabilities

Phillip Conatser

The purpose of this study was to examine attitudes of aquatic instructors ( $N = 23$ ) toward teaching swimming to children with mild and severe disabilities in an inclusive setting. Aquatic instructors from 23 cities in 7 countries participated in the study. Data were collected by mail survey using the Aquatic Instructors Attitudes Toward Teaching Swimming to Individuals With Disabilities questionnaire (Conatser, Block, & Lapore, 2000). A correlated  $t$  test showed that aquatic instructors were significantly more favorable toward teaching aquatics to children with mild disabilities than children with severe disabilities. Instructors agreed they should include children with mild disabilities and disagreed over including severe disabilities. Although 100% of their programs offered swimming for children with disabilities, over half the instructors had segregated programs, did not consider parents' thoughts in placement decisions, and did not feel prepared to teach children with disabilities. Results from this study are similar to findings from other studies conducted on aquatic instructors in the United States (Conatser, 2004, 2007a, 2007c; Conatser & Block 2001, 2002; Conatser, Block, & Gansneder, 2002).

**Keywords:** adapted aquatics, inclusion, theory of reasoned action, aquatic rehabilitation, aqua therapy

There has been a long history of water recreation, education, and rehabilitation having a positive physical, social, behavioral, and mental benefit for people with disabilities (Conatser, 2007a; Daniels, 1954; Fait, 1966; Langendorfer & Bruya, 1995). Aquatic activities provide a form of exercise in mainstream society that is fun and relaxing and helps promote social acceptance (Conatser, 2007b; Lepore, Gayle, & Stevens, 2007; Sherrill, 2003). Many aquatic programs around the United States continue to offer segregated swimming programs for children with disabilities (Conatser et al., 2002, 2000; Lepore et al.). Aquatic programs are not offering choices in placement or considering parental wishes (Conatser, 2007c). Although the trend is to include children with disabilities in regular swimming programs, aquatic instructors are not offering inclusion opportunities (American Red Cross, 2004; Block, 2007; Lepore et al.).

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The author is with Health and Human Performance, University of Texas–Brownsville, Brownsville, TX 78520.

Instructors with more training and experience in inclusive settings tend to be more competent, have more favorable attitudes, and in turn provide more inclusive aquatic programs (Conatser, 2007c; Conatser et al., 2002). Other research on physical education teachers' attitudes toward inclusion suggest that those with more academic preparation in adapted physical education and special education, and more experience with children who have disabilities, have more favorable attitudes toward inclusion and offer more opportunities and better programs (Block, 2007; Block & Rizzo, 1995; Lepore et al., 2007; Rizzo & Kirkendall, 1995; Rizzo & Kowalski, 1996).

However disheartening it may be, most aquatic instructors have no training in inclusion, no experience, and no support for offering appropriate programs (Conatser, 2004, 2007c). Although instructors are expected to provide meaningful instruction, very few have specific training in conducting inclusive aquatic programs (Lepore et al., 2007). The lack of training and experience can lead to unfavorable attitudes, fewer opportunities, and poorer instruction for children with disabilities. To date, the research on inclusion and aquatics has been limited to the United States; therefore, understanding a more global perspective could shed new light on how other countries view inclusion and to what extent children with disabilities are being served. There are several questions that should be asked to help our understanding. Such questions might include, What are aquatic instructors' attitudes and social beliefs toward instructing children with disabilities in regular swim programs? What are their experiences and training? What types of support and resources would benefit inclusive programs? Therefore, the purpose of this study was to (a) assess the attitudes of aquatic instructors from countries other than the United States toward inclusion, (b) determine demographic characteristics of aquatic instructors, and (c) assess the perceived needs for instructing in an inclusive setting.

## Attitude Theory

The instrument used was the Aquatic Instructors Attitudes Toward Teaching Swimming to Individuals With Disabilities (AIATTSID) questionnaire (Conatser, Block, & Lepore, 2000). The AIATTSID was constructed following the guidelines of the theory of reasoned action (Ajzen & Fishbein, 1980), which postulates that behaviors begin in people's belief systems with behaviors being achieved under their own volition and reason. Because people make decisions about their actual behavior based on beliefs (e.g., desires, favorable outcomes), they can be taught to reason about different beliefs and to act in different ways. The theory of reasoned action attempts to explain the determinants of behavior and predict plausible outcomes.

The theory consists of several components including attitudes, subjective norm, intentions, and actual behaviors. It postulates that intention is a predictor of actual behavior and attitude, and subjective norm predicts intention. Attitudes and subjective norm are measured by collecting information about people's personal and normative beliefs in relation to what they would like to do or see happen and their motivation to comply with what others might feel toward their actions. The antecedent of actual behavior is the intention to perform the behavior in question. Discussion of this theory in more detail can be found in Ajzen and Fishbein (1980), Fishbein and Ajzen (1975), and Tripp and Sherrill (1991).

## Method

### Data Collection

The survey followed the techniques outlined in Dillman (1978), Miller and Smith (1983), and Porretta, Kozub, and Lisboa (2000). The sampling design used was cluster, with all addresses obtained from the directory of the National Swim School Association, which is composed of aquatic instructors from private businesses, schools, and clubs. The directory listed 32 aquatic instructors from eight different countries.

Aquatic instructors were mailed the survey instrument with a stamped, return-addressed envelope and a cover letter. Five days from the first mailing, a reminder postcard was sent to all participants. Nonrespondents were sent a third mailing 30 days after the postcard reminder with the survey instrument, a stamped, return-addressed envelope, and a cover letter. Ten days from the third mailing, a reminder postcard was sent. After 2 months, 23 aquatic instructors from seven countries (New Zealand, Australia, Cayman Island, Deutschland, Canada, Mexico, and Argentina) had responded to the survey, representing an overall return rate of 71%.

### Measures

The instrument used to measure attitudes was the AIATTSID (Conatser et al., 2000). The survey consists of questions on attitudes, subjective norm, demographic variables, and an open-ended question.

Aquatic instructors were asked to convey their beliefs (attitude, subjective norm) strength toward statements concerning inclusion of children with mild and severe disabilities in aquatic programs using a 5-point Likert scale. Scores for belief statements negatively phrased were reversed to obtain proper scale means. Belief-statement scores were summed and divided by the total number of statements to obtain a final score with reference to the original scale.

### Definitions Used in the AIATTSID

Students with mild disabilities were defined as those with learning disabilities, mild or moderate mental retardation, mild behavior problems, partial vision, hearing loss, mild autistic tendencies, or deafness.

Students with severe disabilities were defined as those with severe or profound mental retardation, severe behavior problems, blindness, physical disabilities, multiple disabilities, or severe autism.

Attitude toward the behavior was measured with 20 belief statements designed to measure aquatic instructors' attitudes (e.g., beneficial or harmful, pleasant or unpleasant, good or bad, valuable or worthless, motivating or disruptive, safe or unsafe) toward teaching an inclusive aquatics class for students with mild and severe disabilities on a 5-point unipolar Likert scale (5 = *strongly agree* to 1 = *strongly disagree*). For example, aquatic instructors would be asked to rate this statement: "I believe both students with mild and/or severe disabilities and students without disabilities benefit from participating together in swimming classes."

Subjective norm was assessed by measuring social expectations and motivation of parents, other aquatic instructors, supervisors, and people who are important to comply on five belief statements. Aquatic instructors indicated their agreement or disagreement with each referent on a 5-point unipolar Likert scale. For example, a social statement read “Most parents of students with disabilities think that their children should be taught in regular swimming classes” and the corresponding compliance statement “Generally speaking, I will go along with what parents of students without disabilities think I should do, when teaching students with disabilities in my swimming classes.”

## Demographic Variables

Aquatic instructors were asked to respond to the following 11 demographic questions:

- Are you a male or female?
- How many years have you been teaching swimming?
- What is the highest degree and/or certifications you have earned?
- How many undergraduate or graduate courses have you taken in physical education for students with disabilities?
- How many undergraduate or graduate courses have you taken (outside of physical education, e.g., special education) that have dealt specifically with students with disabilities?
- Have you had teaching experiences with students with disabilities?
- If yes, then what extent and type of experience have you had?
- Do you/your agency offer swim programs for student with disabilities?
- If yes, are students with disabilities included in regular swim programs, or do you have separate programs for students with disabilities?
- If you answered yes to both of the last two questions, who makes the decision on where students are placed in your program?
- Assuming you might have some students with disabilities entering your swimming class, what types of support services would be of most benefit to help you teach your classes?

## Reliability

Reliability for the AIATTSID was established in two ways. First, internal consistency was measured using a Cronbach’s (1951) alpha test for two subscales (mild disability and severe disability), subjective norm, and the overall AIATTSID. Results showed alpha scores for attitude of .82 for mild, .89 for severe, normative .67, and .88 for overall score. Second, stability across time was measured by test–retest reliability. A second survey was mailed to 10 randomly selected aquatic instructors from the 23 who had returned their surveys 1 month after the last survey had been received. The intraclass correlation formula (2, 1) by Shrout and Fleiss (1979) for test–retest reliability resulted in an ICC of .84 and the standard error

of measurement of .08. These results indicate a high reliability and precision of measurement (Denegar & Ball, 1993).

## Validity

Content validity of the AIATTSID was established by five experts in adapted physical education and four in aquatics. After review and minor changes all experts agreed the statements did measure attitudes of aquatic instructors toward teaching swimming to students with disabilities in an inclusive setting. Furthermore, construct validity was established for the items on the AIATTSID using principle-component factor analyses, which revealed one factor loading of an eigenvalue greater than 1 for each component, representing 68% of the total variance. For further evidence of validation refer to Conatser et al. (2000).

## Results and Discussion

There were 23 aquatic instructors who participated in the study, 19 women and 4 men. Aquatic instructors' average years of experience teaching swimming was 16, with a range of 3–37 years ( $SD = 8.15$ ). All the aquatic instructors had some experience teaching swimming to children with disabilities. Aquatic instructors reported working with an average of four different types of disabilities (e.g., intellectual disability, autism, cerebral palsy, amputation, etc.). Aquatic instructors had an average of three different types of aquatic certifications; however, no instructor had specific aquatic certifications related to people with disabilities. Furthermore, only 47% of the instructors had taken one or more college courses in adapted physical education, and only 43% had taken one or more special education courses.

Although all the instructors had taught children with disabilities, their experience was infrequent and limited, with no apparent formal training or certifications specific to adapted aquatics. Furthermore, less than half had taken even one college class related to disabilities. Instructors repeated that they had to learn effective teaching strategies through trial and error. Research indicates that more courses in adapted physical education, special education, or adapted aquatic increase favorable beliefs toward children with disabilities and in turn increase participation in inclusive aquatic programs (Conatser & Block, 2001; Conatser et al., 2002). Aquatic instructors from this study appear to be similar to instructors in the United States, such as in the need for specific aquatic training for disabilities, strategies for inclusion, and providing appropriate instruction (Conatser et al., 2000). Teaching only students without disabilities has little effect on increasing favorable beliefs (Conatser & Block, 2001).

Instructors were asked if their agencies offered swimming programs for children with disabilities. Eighty-two percent of the respondents said they did. For the instructors who did offer swimming programs for children with disabilities, 57% offered both separate and inclusive swim classes, 13% only offered inclusive programs, and 30% only offered separate programs. When making placement decisions, 25% said they conferred with the parents, 55% said they made the decision, and 18% said the agency or school decided where children with disabilities should be placed.

Most of the programs afford aquatic instruction for children with disabilities; however, there were some programs that chose not to. For programs that did not teach children with disabilities, their administrators might reflect on the benefits aquatics can offer children, as well as the realization that 12% of the world's population have a disability. Individuals with disabilities are in our communities and should be afforded the same aquatic opportunities as children without disabilities.

For programs that only offered segregated programs, attempts should be made to teach a small class with only one child who has a disability. A small-class situation is a very teachable format for inclusion. A one-to-one instructor-to-student ratio is not always the best environment for learning. On the other hand, full inclusion of all children with disabilities might not be appropriate either, especially for instructors with limited experience. The best approach to placement decisions is offering both inclusive and separate programs. Allowing for choices in placement based on individual needs is the ideal situation (Block, 2007).

Parents should take the lead role in making decisions about their child's placement. Parents should be considered experts in what is best for their child. Half of the aquatic instructors in this study continue to conduct their programs autocratically. Parental involvement is crucial for the child's success (Sherrill, 2003). Unfortunately, many aquatic instructors do not appear to take advantage of parental wisdom when making placement decisions. This practice should change for the betterment of the child. Superiors should also be responsive to the suggestions and needs of the instructors, parents, and children. Aquatic programs that allow for choices in placement, consider the requests of all participants, have support from management, and offer inclusive aquatic programs will have a greater chance of success.

### **Aquatic Instructors' Attitudes and Subjective Norm**

In regard to attitudes toward including students with mild and severe disabilities, a correlated *t* test showed significant difference between attitudes toward including students with mild versus severe disabilities,  $t(23) = 5.60, p < .001$ . Aquatic instructors had more favorable attitudes toward including students with mild disabilities ( $M = 3.57, SD = 0.50$ ) than including students with severe disabilities ( $M = 2.84, SD = 0.66$ ). The effect size was 1.26, which is considered large (Cohen, 1988). Instructors' subjective norm toward inclusion was  $M = 2.84, SD = 0.66$ .

Results show that aquatic instructors agreed that children with mild disabilities should be included, but they were undecided about including children with more severe disabilities. The study supports including children with mild disabilities for several reasons such as (a) it will promote acceptance, (b) it requires minimal modification for appropriate instruction, (c) it requires less of the instructor's attention, (d) participation is more active, and (e) students with and without disabilities will be motivated to learn together. On the other hand, instructors believe that severe disabilities would (a) increase modifications, (b) place an unfair burden on the instructor, (c) require additional special equipment, and (d) lower motivation for learning, and (e) they do not feel sufficiently trained. Being undecided overall about severe disabilities allows room for possible negotiation for inclusion. For both mild and severe disabilities instructors strongly agreed inclusive programs increased acceptance of others and would be beneficial.

Instructors' decision-making process about inclusion did not include outside social influence (subjective norm). Instructors did not make decisions based on social pressure. Perhaps instructors having many years of experience believed their judgments were best. The most noninfluencing groups were parents and other aquatic instructors. A plausible argument for the inclusion of parents and other instructors would be to focus on the importance and benefit of learning acceptance skills. Instructors should have a "give it a try" attitude. Remember, with experience, attitudes become more favorable toward inclusion.

## Correlations

Some interesting correlations are worth mentioning. For example, more years of experience significantly related to more academic degrees, offering more inclusive swim programs, and more favorable beliefs toward severe disabilities ( $r^2 = .17$ ,  $r^2 = .21$ , and  $r^2 = .20$ , respectfully). Furthermore, individuals with more degrees also worked with more types of disabilities ( $r^2 = .21$ ). These instructors shared the same characteristics as instructors in the United States. That is, more experience with children who have disabilities and formal training increase favorable beliefs and confidence and in turn increase more inclusive opportunities (Conatser et al., 2002). Instructor training appears to be a critical part for inclusive behavior, as well as having ample hands-on teaching experience with several types of disabilities. In-service training on inclusion should be conducted yearly by a qualified instructor or specialist in adapted aquatics (Conatser & Block, 2002).

## Perceived Needs

Aquatic instructors were asked to respond to the following open-ended question: Assuming you might have some students with disabilities entering your swimming class, what types of support services would be of most benefit to help you teach your classes? Responses to this -ended question were analyzed using an emergent design model (Lincoln & Guba, 1985). The emergent design model suggests that analysis is guided by the results of the responses. Analysis revealed training, equipment, and class-management categories. One point was given to each category for each sentence focusing on that topic. Aquatic instructors' response-frequency rate was 42% for training, 29% for equipment, and 29% for class-management techniques. These results are somewhat similar to those of previous research (Conatser 2007c); however, these instructors believe that training and use of equipment was more important. Many of the instructors expressed an extreme lack of equipment, staffing, and training opportunities.

Several instructors wrote 2- or 3-page responses, and one sent a video of his program about teaching children with disabilities and asked for help. All the instructors responded elegantly with their concerns, as well as suggestions for improving instruction.

Some of the aquatic instructors' responses are as follows:

- "We consider that we really need some advice in order to perfect our techniques, and of course we don't have adequate equipment."
- "Most of the parents who have children with mild disabilities seem to prefer mainstream classes."



- “I think the problem is that many instructor have not been trained (e.g., managing, controlling techniques) in dealing with children who have disabilities.”
- “Our pool temperature is not very high and suitable for children with severe disabilities; we do not conduct classes regularly.”
- “On the whole, most of the instructors think children with mild disabilities should be integrated into the regular class.”
- “We work with kids who have severe disabilities, and we consider it impossible that they can work together with kids without disabilities.”
- “We need training and support from agencies that are experts in the field.”

Responses to the open-ended question further highlight instructors’ perceived need for more training even though all of the aquatic instructors had training and several held certifications. Apparently, the desire for aquatic training was related specifically to teaching children without disabilities and/or insufficient training for children with disabilities.

A major problem in formal certification and training programs for adapted aquatics is the limited curriculum scope, as well as finding qualified instructors to teach all the necessary components (Conatser, 2007b). Most certification programs only spend time teaching basic information and very little, if any, information on inclusion (Block, 2007). This is especially true for including children with severe disabilities (Conatser et al., 2002). Moreover, certification programs emphasize teaching those with mild disabilities, leaving out those with the more challenging severe disabilities (Conatser & Block 2001). One instructor said, “The Red Cross program does not supply enough information or resources for our programs.” Although training has been shown to have a positive effect on attitudes toward including children with disabilities in regular aquatics programs, the specific type of training is very important. If training programs included information on specific severe disabilities, class-management strategies, and inclusion, more instructors likely would have positive attitudes. Furthermore, more favorable attitudes lead to appropriate and successful programs.

Although instructors had concerns, they also believed that with additional resources and instructional techniques, children with disabilities would benefit greatly from aquatics. Instructors offered some suggestions they use to help provide appropriate programming:

- “Depending on disability we often adjust the class number—usually by putting one less child in the class.”
- “One-to-two ratio for children with to without disabilities.”
- “Training students without disabilities to assist and work with disabled students.”
- “Experience, common sense, medical information, cooperation with therapist, patience, cooperation with parents, and defining expectations are essential characteristics.”
- “We offer extension courses and a help phone line for sharing information to programs in need.”
- “We have a video that is presented to parents of kids as a summary of the course.”

On the whole, surveyed instructors had some helpful suggestions; however, individually they were lacking information. Instructors felt a strong need to collaborate with other professionals who work with children who have disabilities and develop strategies to improve instruction. Because more children with disabilities are entering swimming programs and their parents are pushing for inclusion, aquatic instructor training is very important.

## Conclusion

Aquatic instructors who responded to this survey need specific information and support in adapting and modifying equipment for children with disabilities, as well as class-management techniques for conducting successful instruction to classes with a wide range of abilities. Education and experience have been shown to increase favorable attitudes toward inclusion and in turn increase opportunities for children with disabilities. In addition, the more competent instructors feel, the more likely it is that children with disabilities will receive appropriate and successful instruction.

Instructors believed that children with mild disabilities should be included and children with severe disabilities should not be included in regular swim programs. Attitudes toward mild and severe disabilities are reflected in how instructors perceive inclusion. Inclusion opportunities have the potential to increase for children with disabilities, because attitudes can be changed through education, experience, and self-confidence. The challenge will be for instructors to seek more knowledge, hands-on opportunities, and collaboration with other dedicated individuals toward children who have disabilities.

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