

Scaffolding Children with Autism: Teaching Swimming through Instilling Trust

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Abstract— Generally, children with autism are known to display inadequacies in communication skills, social interaction and motor performance. Previous studies have suggested that swimming is beneficial for children with autism. However, they are still marginalized in this activity as swimming teachers' knowledge about these learners is inadequate. Embracing the Sociocultural Theory by Vygotsky, particularly the 'Zone of Proximal Development' which states that a learner can achieve success with guidance and support from a skilled teacher, this paper is aimed at featuring the importance of swimming teachers exercising patience and building learners' trust. These traits and their implications are discussed further in this paper.

Keywords—swimming teachers, children with autism, patience, instilling trust.

I. INTRODUCTION

Children with autism suffer from multifaceted deficiencies in communication skills, social interaction and physical skills, and have repetitive behaviours, restricted interests and special obsessions [1]. Autism is a spectrum disorder, which means that some individuals with autism may have serious mental retardation and austere language interruptions, whereas others may be high-functioning individuals who can speak and are very intelligent [2]. The explanation signifies that individuals suffering from it can have symptoms that can extremely vary on a spectrum. The diagnosis is principally clinical and supported by interviews with the parents and specific tool tests [3].

Autism is on the rise worldwide. Studies in Europe and Scandinavia have found as many as 12 in 1,000 children with autism, while in the United States between two and seven per 1,000 children [3]. In Malaysia alone, close to 50,000 children are diagnosed suffering from autism and this number keeps increasing at 3% every year [4].

Swimming has been claimed to be beneficial for children with autism [4] since it can be stimulating and motivating, besides allowing them to increase their eye-contact, attention, social skills, balance and muscle strength [5]. However, children with autism are marginalized in

swimming worldwide as swimming teachers' knowledge to handle them is inadequate [6].

The researchers are both swimming teachers for people with disabilities and have had extensive experience teaching swimming to children with autism. It is true that most of the children whom we have worked with have displayed such behaviours which we normal people would have termed as 'disruptive' since they yell, hum, show tantrums and self-hit. In addition, some others may have exhibited poor eye-contact and made no engagement with us when being taught. To many, all these can lead to another misapprehension of them being rude and non-attentive although in actual fact they are not.

However, the time has come for all to not be ignorant of autism. Children with autism may have limitations but learning more about their disorders can help bridging the relationship of theirs and ours. Just like other abled children, they can achieve success if they are given guidance and scaffolding.

Reflecting on the experiences working with children with autism in some corporate social responsibility projects sponsored by the Bank Rakyat, Malaysia, and revisiting Vygotsky (1986) Sociocultural Theory with the concept of 'Zone of Proximal Development' [7], this paper, thus is aimed at featuring the importance of swimming teachers exercising patience and instilling trust in children with autism while teaching them swimming.

II. REVIEW OF LITERATURE

A. Theoretical Framework

Our experiences were informed by the Sociocultural Theory by Vygotsky (1986) that proposes that social process adds to human learning. In the theory, it is stated that communication that children have with their significant

others like parents, teachers, friends and society can contribute to the children's learning.

An important postulation in the Sociocultural Theory is the Zone of Proximal Development. It means that children can obtain knowledge and perform skills with guidance from more knowledgeable others, for example their teachers. Similarly, children with autism require no exception. Although children with autism may have several deficiencies, the theory illuminates that they can benefit from very patient and passionate teachers who can teach them the most vital component -- instilling trust -- and focus on what the pupils can accomplish rather than what they cannot do. He called it 'positive differentiation'. Teachers are required to provide continuous necessary assistance or scaffolding until the learners can achieve the specified tasks independently, and until specific learning goals are met. Besides, it is also important that swimming teachers learn about how these children learn.

B. How Children with Autism Learn

There is no one right way of teaching children with autism [8]. However, knowing in general how they learn can help us teach them better.

Teachers need to establish an initial rapport with children with autism. They normally have difficulty following instructions given by unfamiliar people. Thus, prior to teaching, teachers must create an initial rapport with the children, such as devising some ice-breaking activities to secure their auditory and visual attention [8]. Some other activities are smiling to them, shaking their hands, looking straight into their eyes, and telling them the teachers' names. These give indications that they are significant and that the teachers are interested in teaching them. For example, we can introduce ourselves by saying, "Hi. I'm Coach Jaz and this is Coach Rofi." We can then ask them to state their names. However, there will be some who will only repeat after us using the words we have used; nonetheless, this is expected, and it is called 'echolalia'.

Children with autism may have difficulty complying with verbal directives [8]. Thus, it is suggested that systematic instruction is used with them. One example of a systematic instruction is discrete trial teaching, which consists of any of these: verbal instructions, modelling or physical prompts, responses and consequences. Discrete trial teaching may begin with an explicit, short verbal instruction, such as, "Kick your feet", "Face down", "Blow bubbles" and "To the wall". The verbal instruction will only be given when the autistic learner whose ears are above water, pays attention, and not talking to or playing with any toy. The verbal instruction is immediately followed by a modelling or physical prompt first by the teacher and then the learner. For example, after saying "blow bubbles", the teacher puts his face in the water and blows bubbles out of his nose for the autistic learner to see. The learner is required to follow the physical prompt, which is intended to help the learner produce the targetted or correct response or behaviour. This targetted behaviour is then given a positive reinforcement,

such as, "Good job" or "Well-done", or non-verbal social feedback, such as smiling and high fives. Children with autism respond well to positive reinforcement [8][7]. However, if the target behaviour is not portrayed, the swimming teacher needs to re-issue the verbal instruction in simpler and a more directive manner than on the first attempt.

III. SWIMMING TEACHERS EXERCISING PATIENCE

We believe in a one-on-one approach when teaching swimming to autistic learners. We have seen that many children with autism perform better in private classes.

We also believe that any swimming teachers who want to teach children with autism must be able to exercise patience and handle the class in an appropriate and safe manner for both of them and the children. A swimming class should start with teaching the importance of walking near a swimming pool and not running. Then, the children are taught to sit on the pool deck and paddle their feet to warm up. They may touch the water and get a little excited, but this is all right.

However, because the swimming pool is not a usual place that these children always visit, the unfamiliarity may result in some of them acting out with physical aggression or tantrum when they enter the water. This may sound weird but physical aggression happens because of their inability to communicate pain or fear. This type of communication somehow is effective and universally understandable [9]. They may also grip onto, pinch or bite the teachers. Thus, swimming teachers need to know how to handle these behaviours, such as holding them at one arm's level, and comforting them by hugging as parents always do. An important thing to do is to maintain the patience and not to over-react.

IV. SWIMMING TEACHERS INSTILLING AUTISTIC LEARNERS' TRUST

Being in water can be a very fearful experience for many, children with autism included. Thus, the issue of fear must be addressed by swimming teachers. There is a need to instill trust among the children in their swimming teachers, the swimming noodles, the swimming pool deck and the learners themselves. However, the question is "How?"

A. In Swimming Teachers

Swimming teachers have a very important role to play since they need to teach children with autism to be safe, confident and competent in water.

Swimming teachers must at least hold a lifeguard certification. Having teaching certification for swimming for people with disabilities is a bonus. Parents who put faith in the teachers for taking care of their children's lives,

especially, can be rest assured that their children are in a safe environment while learning to swim.

Handling children with autism is an art in itself. To develop a trusting relationship between the swimming teachers and the autistic learners, the latter need to be shown that the teachers mean what they say. For example, many will at first be scared to soak their face in the water. We tell them in simple words that anyone is scared. Then, we tell them that we will do this together with them. Putting both hands under their armpits and holding them tight, the teachers and the learners go under water together. We let them share this experience and show them that they need not fear because we are there for them. Doing this a few times will instill confidence in them.



Fig. 1. Instill trust in the swimming teacher

B. In Swimming Noodles

Swimming noodles are made of polyethylene foam and are about three inches thick and four feet long each. Swimming noodles have a few characteristics that explain their benefits. They can float very well, and are durable, flexible, and inexpensive.

When swimming noodles are placed across the chest and under the armpits of the children with autism, these swimming noodles allow the children to keep their heads above water, and float in a vertical position without strain.

Later, when the children have mastered balance and felt comfortable, the swimming noodles can be placed across their chests and under their armpits while floating in a horizontal prone position to practise the flutter kick or the breaststroke kick.

Swimming noodles can provide the feeling of comfort and security to children with autism. These help them learn swimming without being scared. However, when these noodles are deliberately taken away from them, they consequently learn that they are capable of sinking. Thus, they realise that they must trust the swimming noodles which act as additional support for them in learning swimming.



Fig. 2. Instill trust in the swimming noodle

C. In Swimming Pool Deck

From the very beginning, our autistic learners are taught to trust the swimming pool deck. They are taught to come down safely from the swimming pool deck, hold it with their two hands while blowing bubbles, and get up on it when swimming is over.

They need to understand the discipline that they must swim back to the swimming pool deck for safety. We start small by bringing them off the pool deck and in the water with about an arm's length and allow them to swim back to the deck. When they are braver and become more confident, the length is gradually increased. When these learners touch the swimming pool deck, we say, "Good job," and encourage them to swim again to us. The same process is repeated until it stays in their memory.

Their success in swimming back and forth is a great achievement for these children and is celebrated by giving them a high-five. The positive words and warm gestures are actually positive reinforcement and motivation for larger accomplishments.



Fig. 3. Instill trust in swimming to the pool deck.

D. In the Learners Themselves

When children with autism feel confident of the learning atmosphere: they are comfortable with the swimming teachers, can rely on the extra support provided by the swimming noodle, and know that there is a safe spot, that is the swimming pool deck, they will be eager to learn further. Learning to float, kick, and tread water, first with the help of the swimming teachers and then on their own, helps in instilling the trust that they can actually swim after undergoing some learning process.

Trusting oneself is a trait that is built over time and takes place from influences of the surrounding. If the swimming teachers exude a trusting behaviour and confidence over the children with autism, the latter will learn that from the

former. Teachers' cheers of assurance and positive language used while teaching these learners swimming all play a part in making them feel confident, content, safe and wanting to learn more.



Fig. 4. The learner believes in herself that she can swim.

V. CONCLUSION

We presented at the beginning of the paper that swimming, although beneficial for children with autism, is not taught to them by many swimming teachers all over the world since the latter lack the vital knowledge in handling these types of learners. Then we argued that children with autism can be taught swimming if we scaffold them and instill trust among them. Trust can come in many forms: trusting the swimming teachers, the swimming noodles, the swimming pool deck and the children themselves.

What we have presented in this paper are our awareness of the Sociocultural Theory by Vygotsky (1986) and the knowledge and experiences we have obtained by teaching hundreds of children with autism swim. Our hope in writing this paper is to share with other teachers and policymakers our successful strategies in helping our autistic learners swim.

If policymakers are to take this study seriously, other autistic learners in Malaysia and other parts of the world may be assisted in swimming. We believe that instilling trust is the key to opening their many potentials, not just in swimming but also in other aspects of their daily lives. Having said that, we understand that our paces are still a beginning. In the name of helping them celebrate life, it would be fruitful for other researchers to pursue further research about instilling trust among these learners in other areas too besides the ones we have written.

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REFERENCES

- [1] A. P. Association, *Diagnostic and statistical manual of mental disorders (DSM; 5th ed.)*, 5th ed. Philadelphia: American Psychiatric Association Publishing., 2013.
- [2] F. Konukman, İ. Yılmaz, M. Yanardağ, and J.-H. Yu, "Teaching Sport Skills to Children with Autism," *J. Phys. Educ. Recreat. Danc.*, vol. 88, no. 1, pp. 65–66, 2017. doi: 10.1080/07303084.2016.1249774.
- [3] P. T. M. Gomes, L. H. L. Lima, M. K. G. Bueno, L. A. Araújo, and N. M. Souza, "Autism in Brazil: A systematic review of family challenges and coping strategies," *J. Pediatr. (Rio. J.)*, vol. 91, no. 2, pp. 111–121, 2015. doi: 10.1016/j.jped.2014.08.009.
- [4] R. A. Bakar and J. A. Bakar, "Whatsapp as a source of support for parents of autistic children," *Int. J. Recent Technol. Eng.*, vol. 8, no. 2 Special Issue 9, pp. 202–206, 2019. doi: 10.35940/ijrte.B1046.0982S919.
- [5] C. Y. Pan, "Effects of water exercise swimming program on aquatic skills and social behaviors in children with autism spectrum disorders," *Autism*, vol. 14, no. 1, pp. 9–28, 2010. doi: 10.1177/1362361309339496.
- [6] E. Kraft and R. Leblanc, "Instructing children with Autism Spectrum Disorder: Examining swim instructors' knowledge building experiences," *Disabil. Health J.*, vol. 11, no. 3, pp. 451–455, 2018. doi: 10.1016/j.dhjo.2017.11.002.
- [7] V. John-Steiner and H. Mahn, "Sociocultural approaches to learning and development: A Vygotskian framework," *Educ. Psychol.*, vol. 31, no. 3–4, pp. 191–206, 1996. doi: 10.1080/00461520.1996.9653266.
- [8] R. Arroyo, "Effective ways of teaching children with Autism Spectrum Disorder in inclusive physical education setting," *Kinesiol. Sport Stud. Phys. Educ. Synth. Proj.*, vol. 81, 2019.
- [9] W. Sailor, G. Dunlap, G. Sugai, and R. Horner, *Handbook of Positive Behavior Support*. 2008. [E-book] Available: <https://ezaccess.library.uitm.edu.my/login?url=http://dx.doi.org/10.1007/978-0-387-09632-2>
- [10] W. Stillman, "Presuming Intellect: 10 Ways to Enrich Our Relationships Through a Belief in Competence." [Online]. Available: <https://www.williamstillman.com/archive/presuming-intellect.phpe>.