i-InTeLEC 2019

UNIVERSITI TEKNOLOGI MARA | Cawangan Kedah Kampus Sungai Petani

International
Innovation in
Teaching and
Learning & Language
Education Conference

Teaching Communication Behaviour Through Dance and Movement to Children with Autism Spectrum Disorder (ASD) in Sarawak

Teo Jing Xin
Swinburne University of Technology
xteo@swinburne.edu.my

Lau Bee Theng
Swinburne University of Technology
blau@swinburne.edu.my

Patrick Then
Swinburne University of Technology
pthen@swinburne.edu.my

ABSTRACT

This paper highlights the struggles of parents in Sarawak that have children with autism spectrum disorders (ASD), and introduces the authors' proposed intervention programme for this population. With the belief that parental buy-in to an intervention would result in a higher level of follow-through and therefore improvement to the benefit of their children, the Fun, Inclusive, and Tolerant (FIT) dance and movement based behavioural intervention was designed and developed for Sarawakian children on the spectrum, specifically with the objective to acknowledge and address parental cultural narratives, desires, and expectations; while teaching appropriate behaviours to their children. The focus of this paper is two-fold. Firstly, to demonstrate how dances in this programme were created, by explaining the formulation of an individual dance which was developed for a child with an expressive speech delay; and secondly, to present parental feedback regarding the programme. Concluding remarks touch upon the authors' future directions in this research.

Key Words: *Autism spectrum disorder, Dance and movement therapy, behavioural intervention, Malaysia*

INTRODUCTION

They enjoy it, music, dancing, it's fun, and autistic children love this sort of thing. Every time Chinese New Year comes around, we usually have a family dinner and we have the tong tong chiang[1], *and you see him enjoying and flapping his hands and the sparkle in his eyes. It helps somewhere along the line, and not only him but a majority of them all. I don't know why, but I can see that. Music, dancing, all this, I'm sure there's something linked to autism, but I don't know what it is. –* Father of a child with ASD, educator and advocate for children with ASD in Sarawak

Research has demonstrated that activities with music and dance for children with Autism spectrum disorders (ASD) are a worthwhile endeavour. Benefits include stimulating multiple parts of the brain, gains from physical exercise such as fine and gross muscle movement and motor development, and positive emotional experiences such as leisure, relaxation and self-expression (Lang et al., 2010; Srinivasan & Bhat, 2013; Brondino et. al., 2015; LaGrasse, 2017). In that final regard, music and dance are often thought of as their own language and a way for humans to communicate (Arsith & Tănase, 2018; North, 2014).

---

[1] Sound of lion dance

As alternative and complementary interventions grow in popularity worldwide (Bowker et. al., 2011), there is room for programme designers to explore leveraging the creative arts. Indeed, it is not uncommon to see in ASD intervention research a variety of sports and arts such as animal therapy, martial arts, tai chi, yoga, and of course music and dance (Brondino et al., 2015). As awareness of ASD and its potential treatments permeates the developing world, there is an opportunity here for designers to work with their audience in terms of demands and desires from a cultural perspective. This value adding in intervention programming can be thought of as a way to resonate with particular populations and in doing so, generate interest, goodwill, trust and buy-in to an intervention plan, specifically from the perspective of parents, which then filters down to the well-being of their children. The authors believe that catering to cultural conventions and values can play an important part in parental drive to cooperate with interventionists and to follow-through on their children's intervention plans, thus allowing children better chances of behavioural improvement.

With this initiative in mind, the authors proposed the design and development of a Fun, Inclusive and Tolerant (FIT) dance and movement based behavioural intervention for children in Sarawak, with a focus to appeal both to children and their parents through dance and the acceptance of local parenting respectively, as well as acknowledge the individual learning styles of each child and the constraints parents faced within their own socio-cultural surroundings. While the greater project discusses applications from various learning theories, classical dance pedagogy, the researched needs of children with ASD in Sarawak, and cultural and parental expectations and practices related to the education of children with ASD in the state; this paper aims specifically to illustrate how an individual dance in this programme was put together for a child with an expressive speech delay and parental feedback after trials on the experience of participation.

LITERATURE REVIEW

This literature review briefly outlines the challenges faced by children with ASD in communicating with others, and the position of dance as a language of self-expression and alternative communication. The situation in Sarawak of low ASD awareness and the lack of services for children with ASD, explains the need in Sarawak for viable interventions and the authors' decision to develop the FIT dance and movement behavioural intervention programme

2.1. Communicative Challenges in ASD

ASD is often characterised by deficits affecting areas such as social interaction, developmental delays, sensory sensitivities, repetitive behaviours, physical characteristics such as low muscle tone and uncoordinated gait, and communicative delays (Cangialose & Jackson, 2014; CDC, 2018; McCartney, 2015). The latter is known to cause further impact on an autistic person's life such as not being able to make their needs known, being misunderstood or even risk being unable to report mistreatment or abuse (Edelson, 2010). This can be a source of frustration and stress leading to other behavioural problems such as meltdowns or aggressive/antisocial behaviours (NIDCD, 2018). Critiques by autistic persons and ASD advocates include the emphasis on traditional behavioural intervention that focus on verbal speech rather than facilitating communication within an individual's capabilities and abilities (Tager-Flusberg & Kasari, 2013; Reyes & Reyes, 2018). As the neruodiversity movement gains more traction in recent years, this increases awareness and opens avenues to explore more individual focused education for children with ASD.

Other problems which may affect communication efforts include being overwhelmed by the environment due to sensory overstimulation, or being unable to comprehend communication that is not literal (Hobson, 2012; Marco et. al., 2011). Some autistic persons describe this as feeling like a "frayed wire" producing "static" and "sparks" . A child with ASD might experience one , a few, or all of these communication challenges above, among others.

i-InTeLEC 2019

International
Innovation in
Teaching and
Learning & Language
Education Conference

2.2. Dance as Language

The creative arts such as music, dance, drama and art have long been channels for self and societal expressions, and a means of communication. In human history, dance is thought to have been a part of the human species for as long as it has been in existence (LaMonthe, 2015).

The notion of dance as a communicative tool in more modern times is intrinsically appreciated by dancers of all genres - the performance being thought of as essentially a message or story to impart to the audience (Eli & Kay, 2015; Simpson, 2006). The experiences of dance teachers in traditional studio spaces focus on the conformity and discipline of routine, compliance to instruction, and simply, hard work aiming for a standard of technical skill - aspects thought to appeal to the rigid nature of ASD, while working towards this performance aspect (Hunt, 2012; Keglon, 2011; Foster, 2010).

In the realm of disability and ASD, in particular research in the area of dance and movement therapy, the focus of veterans in the field is on firstly, a positive experience for the child (Reinders, 2015), seeing and being seen, freedom of being one's authentic self, and an alternative form of communication and self expression (Adler, 2003; Homann, 2010; Torrance, 2003). Indeed, it was found that there is a significant element of intuitiveness and universalness in movement depending on the musical stimulus (Van Dyck et. al., 2013) Apart from the perspective of individuals with autism, Shikanai, Sawada, and Ishii (2013), also found that observers of dance were able to accurately perceive emotional articulations through dance, demonstrating that the language of dance is not only to be expressed, but can also be understood by the layman.

2.3. ASD and the Lack of Intervention Services in Sarawak

Prevalence of ASD in Malaysia is thought to be 1 in every 625 births (Neik. et. al., 2014 via Azizan, 2008). In countries with more developed awareness of the condition and diagnosis procedures, the prevalence is closer to 1 out of 59 children as reported by the Centers for Disease Control and Prevention (2018) in the USA, while the National Health Service (2019) reports that 1 out of 100 people is estimated to be autistic in the UK. As no official statistics concerning ASD prevalence exist in Malaysia, the number of children with ASD here is thought to be similar to that of the USA and UK (Neik. Et. al., 2014).

Despite the numbers, infrastructure to deal with ASD in Malaysia is generally lacking (Tan, 2017; Ilias et. al., 2017). Public awareness has been found to be very low, even among medical and educational professionals (Low & Zailan, 2018). There is considerably less research produced in the country concerning the condition compared to neighbouring Singapore despite a much larger population (Neik et. al., 2014). This in turn suggests that there would be overall lower levels of resources available for caregivers in Malaysia.

This would ring particularly true in the case of Sarawak. Although it is the fourth most populous state in Malaysia with a population of 2.65 million (DSM, 2016), There are currently only seven known intervention centres for children with ASD in Sarawak, three of which cater specifically to children with ASD. Admission ranges from 20 to 150 students per establishment, all of which rely heavily on donations and fundraising to stay in operation and report very long waiting lists as well as a shortage of funds and manpower (Dr. S. C. Yao, personal communication, June 14, 2016; D.Tie, personal communication, June 9, 2016; S.Y. Ling, personal communication, June 13, 2016; C. Su, personal communication, June 14, 2016; S. Cheng, personal communication, June 15, 2016; J. Chia, personal communication, June 16, 2016; C.H. Lu, personal communication, June 17, 2016). Every centre was also located in the main cities of the state, which means that children with ASD in rural areas, which comprises 46.2 percent of the state (DSM, 2010), do not receive even this slim possibility of assistance.

i-InTeLEC 2019

International
Innovation in
Teaching and
Learning & Language
Education Conference

Coupled with the fact that Sarawak is geographically and politically separate from the peninsula of the country where the Malaysian capital is located, results in overall fewer public and private services for disability, including ASD. Conclusively, there is an immense gap between available service and need in Sarawak. This leads to a situation whereby parents are often struggling on their own without a clear idea of how they can better their child's condition or where they might turn to for help.

A PRACTICAL EXAMPLE

This section demonstrates how an individual dance for the FIT dance and movement behavioural intervention is developed and put together. A social story is formulated then dance steps are paired with music and the words. Together, the music and movements act as memory anchors for the words in an attempt to teach the child particular social behaviours.

3.1. Formulating a Social Story

According to Gray (2010), social stories are formulaic short stories custom written for an individual child, regarding a specific social event with the intention to help him or her better understand social situations and learn how to manage their own reactions to them.

There are ten criteria to be fulfilled, with some criteria having several components (Gray, 2010). For the purposes of the FIT dance and movement intervention project, the criteria adhered to were to make the story goal oriented, to gain an understanding of the child's needs, to structure the story with a logical flow, to tailor the story to the child's ability to understand it, to use positive and literally accurate language, to ask relevant questions regarding the situation, and to limit imperatives within the story.

Generally, the premise for a social story would start with a problem brought up by a child's parents which they wished to have addressed.
In considering this parental complaint:

"…he cannot call people. If we say "call auntie, call uncle" - he just walk past them like tidak perasan[2]. If it is my family members then still OK. Friends and colleagues or people we are not so close to will already say "what is wrong with him ah?""

In this case, the problem can be boiled down to the parents' distress at their child disregarding the local social convention of acknowledging their elders, in particular non-family members who are known to the family. The end goal in writing the social story then is to have the child greet his parents' friends in a certain way. In achieving said goal, parental stress and social tensions may be reduced and the child learns appropriate behaviours for this particular situation.

In order to achieve this goal, the child needs to be prepared for the event of meeting his parent's friends. The interventionist is able to glean other relevant information used to craft the social story by asking questions such as what the child is expected to say or do, and how; where or when he should react, and why these reactions should be made. The latter would be in a bid to explain the reasons to him, thus helping him fill gaps in his social knowledge.

Taking care to include the other criteria previously mentioned, the interventionist might end up with a social story as follows:

---

[2] Without realization

Mum and Dad have a lot of friends.

When I see them, it is polite for me to greet them.

When I say "hello Uncle" or "hello auntie" to my mum and dad's friends, this makes them very happy.

If their friend is a man, I can call him "uncle".

If their friend is a woman, I can call her "auntie".

Sometimes they will want to shake my hand.

If they want to shake my hand, they will put out their hand to me "like this" (instructor to demonstrate).

It is polite if I shake their hand "like this".

I look friendly if I smile also.

I can practice different ways of greeting their friends.

I can say "how are you", "how do you do", "how are you today" or just say "auntie" and "uncle" - that is OK too.

3.2. Music and Lyrics

The social story can now be refined to a few short lyrical verses. At this stage, the interventionist may wish to select a piece of instrumental music, or potential pieces to pair with dance steps and the lyrics.

A relatively simple way to pair music and dance if one is unfamiliar with this process, is to use music written in common time, otherwise known as the 4/4 time signature. Certainly, one will find that this feels the most "natural" as it is the time signature that most popular music today is composed in. As well, song tempo from between 95 - 140 beats per minute (bpm) are confirmed to be the most danceable (Tough, 2017). From here, the interventionist need only choose the style, or emotive mood of the music they wish to use. Perhaps, by this stage they may already have a rough idea of what the dance and song might look, sound, and feel like which will aid selection. Having a child's input on musical choice is also encouraged as it keeps them in the creation process and uses their individual preferences to keep their motivation up (Elliott & Dillenburger, 2016).

With a potential piece of music in mind, the lyrical versus are then guided by the tempo, beat, rhythm, and/or tune. The social story is refined to flow to the music. Rhyming is a suitable way to achieve this as it assists in committing vocabulary, word patterns, word groups, and sentence structure in the mind of the child (Juan Rubio & Conesa, 2015). The social story may then evolve to the following verses:

Mum and dad have lots of friends
It's polite to say "hello" to them
When I greet "Uncle", "Auntie"
Mum and dad are proud of me.

I say "Uncle" to call the men
I say "Auntie" for lady friends
If their hand comes out to me
I smile and shake it gently

Hello Auntie, how are you?
Hi Uncle, how do you do?
Auntie, how are you today?
Or just "Uncle" is also OK.

3.2. Formulating a Dance

For the FIT dance and movement behavioural intervention project, dances were formulated in three steps, namely, determining logical movements for keywords, creating a base using mastered and known movements, and introducing one or two new target movements - depending on the abilities of the child, taking care not to overwhelm him or her with excessive information. With this method of gradually introducing new dance steps, the interventionist is able to work within the comfort zone of the child and ensure that he or she remains successful and therefore motivated to continue learning.

The table below illustrates a tidy way of listing and referencing movements and dance elements by category. The movements chosen for the keywords in this case, are Makaton sign language because the child is exposed to some Makaton in school and is already familiar with "hello". As such, the interventionist may decide in the interest of connectivity and consistency, to follow-through with Makaton signage for the words "auntie" and "uncle".

Table 1 Listing Steps and Movements for Dance Formulation

	Keyword Movements	Mastered / Maintenance Steps	Target Step(s)
Auntie	Makaton (Chin tap twice)	Step tap	Cross turn
Uncle	Makaton (Chin tap left, right)	Step ball step	
Hello	Makaton (palm makes semicircle)	Heel stamp	
		Side gallops	

The function of dance notation is to serve as a way for the interventionist to set up and recall the sequence of steps and movement. As such, the way dances are recorded should be for the benefit and convenience of the instructor. While technical forms of dance notation exist, ultimately, there is no right or wrong way to record movement since each choreographer or teacher will tend towards methods which are most comfortable for themselves.

A clean and organized table breaking up movements by sets of 8-counts, while matching the sections of the social story to the dance steps and its individual counts, is a format which has worked well in this dance programme. Once the interventionist has choreographed around the keywords and target, they may end up with the following result.

Table 2 Notation for FIT Dance and Movement Programme

Title: Remembering to Call "Uncle" and "Auntie"– 4/4, 8-count intro. Begin 1st position, Akimbo			
Set of 8	Counts	Dance Steps	Social Story
1	1-4	Step ball, SB, SB, Close to R / Arms to 5th, circle back to waist.	Mum and dad have lots of friends It's polite to say "hello" to them
	5-8	Repeat SB to left / Hands hello L R	

i-InTeLEC 2019

International
Innovation in
Teaching and
Learning & Language
Education Conference

2	1-2	Heel stamp R / Fists on waist / Body inclined towards working leg.	When I greet
	3-4	Makaton signs / On the spot	"Uncle", "Auntie"
	5-6	Heel stamp L / Fists on Waist / Body inclined.	Mum and dad are
	7-8	3 hops / 3 claps	proud of me.
3	1-2	Step tap R / Fists on waist / Uncle	I say "Uncle"
	3-4	Rise on demi-pointe / L arm wrap around waist, R arm parallel head level	to call the men
	5-6	Step tap L / Fists on waist / Auntie	I say "Auntie"
	7-8	Gentlemanly bow with arm gesturing "ladies first"	for lady friends
4	1-4	*Courru* forward / Fists on waist / To handshake gesture with partner	If their hand comes out to me
	5-8	Mime handshake	I smile and shake it gently
5	1-4	Side gallops R / Hello Auntie and wave	Hello Auntie, how are you?
	5-8	Side gallops L / Hello Uncle and wave	Hi Uncle, how do you do?
6	1-4	Auntie / Slow cross turn R	Auntie, how are you today?
	5-8	Uncle / Slow cross turn L	Or just "Uncle" is also OK.

METHODS AND MATERIALS

This section gives an overview of the methodology used in the experimental portion of the FIT dance and movement project. For the purposes of this paper, only the instrument used in gauging parental perceptions of the programme and its data analysis methods are presented.

4.1. Participants

Participants were recruited through a multilingual poster advertisement for a dance and movement intervention for ASD study, sent out to special education schools and ASD intervention centres in a major city of. Respondents were invited to attend a short interview, if their child had a formal diagnosis of ASD, and their child was primary school aged, which is between the ages of 6 and 12.

From the interviews conducted, 12 participants and their parents were selected to take part in the study. Sample size was decided based on the maximum amount of time the primary investigator was able to run intervention sessions per week with the children. The final selection was

dependent on parents' ability to commit to three 1.5-hour sessions per week for two 12-week blocks. Priority was given to children who were reported to enjoy dancing and music.

The exclusion criteria was children who were aggressive towards themselves or others, to the point of inflicting injury, and had a tendency to destroy property. Since the researchers were using a rented hall within a shared building with a shared lobby for the dance sessions, the exclusion criteria were necessary as they had to be mindful of other people's safety and property.

4.2. Materials

Materials needed were basic and consisted of a small to medium sized room to conduct therapy sessions in, a simple sound system to play music out of, a range of music to suit different preferences and age groups, some props, rewarding reinforcements, and the developed social stories and dances for each individual child..

4.3. Instrument

A "final thoughts" questionnaire was developed by the researchers with the aim of getting parents' perspective on the overall programme after it ended. It consisted of six open-ended questions asked by the interviewer so parents could relay their experiences regarding what they found most and least helpful after taking part in the programme, as well as offer any other spontaneous feedback without being confined to thinking how to phrase written answers, predetermined multiple choice answers, or a sliding scale.

4.4. Procedure

As a qualified dance instructor and trained ABA interventionist, the first author ran a dance and movement intervention programme for 12 participants. The early weeks emphasised observing behavioural triggers as well as forging an understanding each child's temperament, deficits, and level of ability. This allowed for more personalized instruction for each participant depending on their particular needs. Doing so kept the researchers in line with recommendations set out by The Autism Society of America (2006) which identifies both individualized programmes (p.4) and low student-to-teacher ratio (p. 7) as two of the most significant contributors to effective ASD programme design. A teacher from the school the sessions were held at was present to lend assistance when necessary, such as in helping participants drink water or go to the washroom.

Each child was allocated two parts of intervention. Each part consisted of 54 hours of intervention for 12 weeks, which translates to three 1.5-hour sessions per week. Parents were required to attend and join in at least 10 sessions per part, in order to gain a better understanding of the intervention as well as to advocate for their children should they wish to withdraw, require help going to the washroom, drink water, or if they needed a moment to calm down. Participants were never left on their own during active sessions in order to ensure control over the sessions and safety of the child. At the end of each part, parents were invited to attend a short discussion session to answer questions and discuss topics set out in the final questionnaire.

The second part of this experimental phase involved re-administering the dance and movement programme after analysing data collected to test for efficacy, and so that conclusions could be drawn as to what needed to be improved in terms of intervention for each participant. Improvements were made through appropriately adjusting and redesigning relevant sections of the programme. There was an element of organic evolution in terms of the dances and music used since the researchers attempted to tailor the programme to the participants in whatever way was both sensible and possible at the time. The sessions then commenced again, as detailed above.

i-InTeLEC 2019

International
Innovation in
Teaching and
Learning & Language
Education Conference

4.5. Data Analysis

Qualitative data was analysed through thematic analysis. This included pinpointing recurring themes through cutting and sorting, identifying word repetitions, word co-occurrence, and developing word lists. Identified themes were named, defined, and discussed.

DATA AND RESULTS

Parents responses were categorized and themes in responses identified. Percentage scores in Table 3 indicate the prevalence of a particular theme and therefore essentially, the prevalence of a certain opinion or mindset. This summary was further interpreted in Figure 1 to facilitate an analysis of components which resonated most with parents.

Table 3 Thematic Summary of Parental Feedback

Question	Thematic summary	% P1 (n=12)	% P2 (n=9)
Describe your feelings of the programme in a few words.	Concrete improvement is highly valued.	91.7	100
	There is value in leisure activities for children with ASD, for the sake of leisure	83.3	100
	Awareness of CATs for ASD is lacking, but parents are willing to try new approaches.	66.7	55.6
What did you like most?	There is value in leisure activities for children with ASD, for the sake of leisure	83.3	77.8
	Academic or "school" progress is still of utmost importance, regardless of having an ASD diagnosis.	83.3	88.9
	Programmes with higher intensity or more focus/attention on the child are difficult to find and recognised as an important factor in working towards progress.	41.7	22.2
	Behavioural improvement is secondary to academic improvement.	58.3	66.7
	Acceptance of the individual is appreciated, but not expected.	25	11.1
What did you like least?	Of all resources, parents primarily lack time. Aspects which consume time are a source of frustration.	50	55.6
	Lack of enjoyment on the part of the children was a cause of stress for some parents.	16.7	11.1
	(None)	33.3	33.3
Should anything be changed?	Academic or "school" progress is still of utmost importance, regardless of having an ASD diagnosis.	41.7	33.3
	Social interaction is considered important. Some parents prefer interactions with neurotypical peers.	33.3	0
	Programmes with higher intensity or more focus/attention on the child are recognised as an important factor in working towards progress.	25	44.4
	(None)	16.7	22.2
Have you had an overall positive, neutral or negative experience, and why?	This program is generally accepted by local parents with children with ASD.	100	100
Other feedback?	(None)	33.3	22.2

i-InTeLEC 2019

International
Innovation in
Teaching and
Learning & Language
Education Conference

	Parents are interested in amassing knowledge in this area. Some are open to taking part in their child's intervention.	33.3	0
	Intervention or ASD-friendly/inclusive programmes are difficult to find and sought after.	33.3	77.8
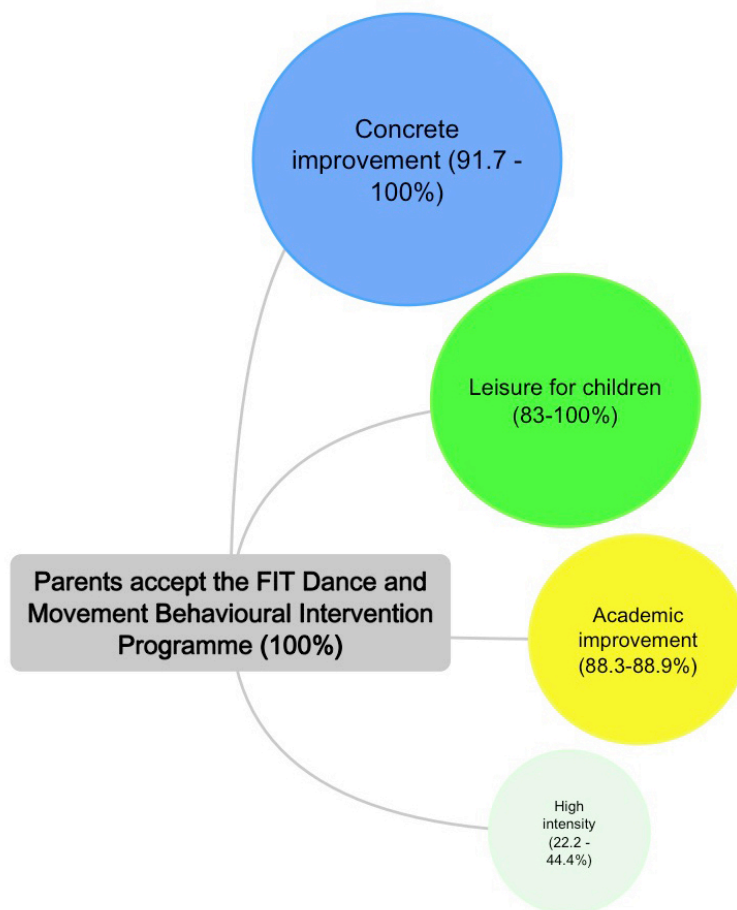
Figure 1 Interpretation of Parental Acceptance

CONCLUDING DISCUSSION

In an area of the world where awareness of ASD is lacking, there is a legitimate concern that it is all too easy for young children to be left behind in terms of adequate intervention, thus being deprived of the chance of amelioration particularly during a "window of opportunity" in early childhood learning. The purpose of the overall FIT dance and movement project was ultimately to design and develop a programme which could not only facilitate communication and teach behaviours to children with ASD, but most importantly, as an intervention method, resonate with Sarawakian parents by accommodating and addressing their own cultural narrative, desires, and expectations.

From the parental feedback collected, it is argued that parents of children with ASD in Sarawak overwhelmingly accept the programme and it is interpreted that the specific reasons of doing so, in order of significance, comes down to parental observation of behavioural

i-InTeLEC 2019

International
Innovation in
Teaching and
Learning & Language
Education Conference

improvement in their children after taking part in the experiment, an appreciation of their children enjoying the programme, efforts to integrate academic elements into the sessions, and the one-on-one format of instruction which resulted in full attention paid per child and high energy sessions.

With regard to the appreciation of leisure, parents were noted to view this result as a "bonus" rather than an integral criteria of accepting the programme. This is supported by the noticeable lack of parents actually expressing that they prioritize enjoyment, while only two and one parent(s) in each part respectively, explicitly stated their discomfort at their child's distress or non-enjoyment. Furthermore, it may be difficult to understand what children themselves want out of an intervention programme simply because many may not be able to express these desires. In the interest of avoiding bias, researchers must consider that parental reports of their children's enjoyment may reflect a version of what they think their children like, that in itself possibly being heavily influenced by their own ideas of what might be "good" for their children.

On the other hand, adherence to a traditional Asian viewpoint of placing academic achievement as a priority is openly reflected in the parental narrative, despite the diagnosis of ASD. This is further emphasized by results which propose, worryingly so, that more than half of the parents believe that academic improvement is more important than behavioural improvement, and that almost half would like to see even more inclusion of academic focus in this programme. While this is in-line with Malaysian research reporting the growth and popularity of the country's parent-driven industry supplying additional academic tutoring outside of school (Kenayathulla, 2013), the authors believe that a solid effort should be made to educate parents of children with ASD in the state that high demandingness in terms of academic achievement must unequivocably be paired with high responsiveness for the best chance of a desired result (Huang & Gove, 2015). This, despite the potential limitations and frustrations of the condition; and crucially with the former admission that the lack of enjoyment in intervention may not be a cause of concern for most parents since gaining desired results presumably overshadows a child's enjoyment. These findings do however, confirm the notion that any intervention introduced into Sarawak needs to be highly relevant to the parents themselves in order to gain a following and build traction.

Finally, although all parents participating in the experimental portion of this project reported an overall positive experience and impression of the programme, it should be highlighted that this did not negate the fact that half the parental units in this sample still reported elements they disliked about the programme, while a third expressed the desire for certain aspects to be changed, adjusted, or improved upon. Moving forward, further research in this area by the authors if undertaken, would focus on this feedback for programme refinement as well as working on potential ways to adapt the FIT dance and movement programme for home intervention, with the purpose of easing financial and time demands on parents that have children on the spectrum in Sarawak.

REFERENCES

Adler, J. (2003). From Autism to the discipline of authentic movement. *American Journal Of Dance Therapy*, 25(1), 5–16

Arsith, M., & Tănase, D. A. P. (2018). Nonverbal communication through dance. Acta Universitatis Danubius.Communicatio, 12(1), 53–60.

ASA (Autism Society of America). (2006). Building our future: Educating students on the spectrum. Retrieved from https://www.autism-society.org/wp-content/uploads/2014/04/buildingourfuture06.pdf

Bowker, A., D'Angelo, N. M., Hicks, R., & Wells, K. (2011). Treatments for Autism: Parental Choices and Perceptions of Change. *Journal of Autism and Developmental Disorders*, *41*(10), 1373–1382. https://doi.org/10.1007/s10803-010-1164-y

Brondino, N., Fusar-Poli, L., Rocchetti, M., Provenzani, U., Barale, F., & Politi, P. (2015a). Complementary and Alternative Therapies for Autism Spectrum Disorder. *Evidence-Based Complementary and Alternative Medicine*, *2015*, 1–31. https://doi.org/10.1155/2015/258589

Brondino, N., Fusar-Poli, L., Rocchetti, M., Provenzani, U., Barale, F., & Politi, P. (2015b). Complementary and Alternative Therapies for Autism Spectrum Disorder. *Evidence-Based Complementary and Alternative Medicine*, *2015*, 1–31. https://doi.org/10.1155/2015/258589

Cangialose, A., & Allen, P. J. (2014). Screening for autism spectrum disorders in infants before 18 months of age. *Pediatric Nursing*, *40*(1), 33–37CDC, C. for D. C. and P. (2018, November 15). Retrieved February 27, 2019, from https://www.cdc.gov/ncbddd/autism/data.html

CDC. (2018, April 26). Data and Statistics | Autism Spectrum Disorder (ASD) | NCBDDD | CDC. Retrieved February 27, 2019, from https://www.cdc.gov/ncbddd/autism/data.html

DSM (Department of Statistics Malaysia). (2016). Department of Statistics Malaysia Official Portal. Retrieved from https://www.statistics.gov.my/index.php?r=column/cone&menu_id=clJnWTlTbWFHdmUwbmtSTE1EQStFZz0

Edelson, M. G. (2010). Sexual abuse of children with autism: Factors that increase risk and interfere with recognition of abuse. *Disabilities Studies Quarterly*, *30*(1).

Eli, K., & Kay, R. (2015). Choreographing lived experience: dance, feelings and the storytelling body. *Medical Humanities*, *41*(1), 63–68. https://doi.org/10.1136/medhum-2014-010602

Elliott, C., & Dillenburger, K. (2016). The effect of choice on motivation for young children on the autism spectrum during discrete trial teaching: Journal of Research in Special Educational Needs. *Journal of Research in Special Educational Needs*, *16*(3), 187–198. https://doi.org/10.1111/1471-3802.12073

Foster, R. (2010). The teaching and learning process. In *Ballet pedagogy: The art of teaching* (pp. 90–95). Gainesville, FL: University Press of Florida.

Gray, C. (2010). *The new social story book* (10th anniversary ed., rev. and expanded). Arlington, Tex: Future Horizons.

Hobson, R. P. (2012). Autism, Literal Language and Concrete Thinking: Some Developmental Considerations. *Metaphor and Symbol*, *27*(1), 4–21. https://doi.org/10.1080/10926488.2012.638814

Homann, K. B. (2010). Embodied Concepts of Neurobiology in Dance/Movement Therapy Practice. *American Journal of Dance Therapy*, *32*(2), 80–99. https://doi.org/10.1007/s10465-010-9099-6

Huang, G. H. C., & Gove, M. (2015). Asian parenting styles and academic achievement: views from Eastern and Western perspectives. *Education*, *135*(3), 389–397.

Hunt, M. E. (2012). Autism in the Studio. *Dance Teacher - Theory and Practice*, *34*(9), 82.

Juan Rubio, A. D., & Conesa, I. M. G. (2015). The use of rhymes and songs in the Teaching of English in Primary Education. *Docencia e Investigación*, *25*(2), 83–101.

Keglon, J. (2011). Camp Thunderbird: Taking Flight with Dance and Physical Education for Special Populations. *Journal of Physical Education, Recreation & Dance*, *82*(2), 32–38. https://doi.org/10.1080/07303084.2011.10598579

Kenayathulla, H. B. (2013). Household expenditures on private tutoring: emerging evidence from Malaysia. *Asia Pacific Education Review; Dordrecht*, *14*(4), 629–644. http://swinburnedb.librarynet.com.my:2090/10.1007/s12564-013-9289-2

LaGasse, B. (2017). Social outcomes in children with autism spectrum disorder: a review of music therapy outcomes. *Patient Related Outcome Measures*, *Volume 8*, 23–32. https://doi.org/10.2147/PROM.S106267

LaMonthe, K. (2015, March 31). Why do humans dance? Retrieved from https://www.psychologytoday.com/blog/what-body-knows/201503/why-do-humans-Dance

Lang, R., Koegel, L. K., Ashbaugh, K., Regester, A., Ence, W., & Smith, W. (2010). Physical exercise and individuals with autism spectrum disorders: A systematic review. *Research in Autism Spectrum Disorders*, *4*(4), 565–576. https://doi.org/10.1016/j.rasd.2010.01.006

Low, H. M., & Zailan, F. (2018). Medical students' perceptions, awareness, societal attitudes and knowledge of autism spectrum disorder: an exploratory study in Malaysia. *International Journal of Developmental Disabilities*, *64*(2), 86–95. https://doi.org/10.1080/20473869.2016.1264663

Marco, E. J., Hinkley, L. B. N., Hill, S. S., & Nagarajan, S. S. (2011). Sensory Processing in Autism: A Review of Neurophysiologic Findings: *Pediatric Research*, *69*(5 Part 2), 48R-54R. https://doi.org/10.1203/PDR.0b013e3182130c54

McCartney, D. (2015, March 13). Detecting signs of autism in young children. *Winnipeg Free Press*, p. A15.

Neik, T. T., Lee, L. W., Low, H. M., Chia, N. K., & Chua, A. C. (2014). Prevalence, diagnosis, treatment and research on autism spectrum disorders (ASD) in Singapore and Malaysia. *International Journal of Special Education*, *29*(3), 1–10.

NHS, N. H. S. (2019, February 4). Retrieved February 27, 2019, from https://www.nhs.uk/conditions/autism/

NIDCD, N. I. on D. and O. C. D. (2018). Autism spectrum disorder: Communication problems in children. Retrieved from https://www.nidcd.nih.gov/health/autism-spectrum-disorder-communication-problems-children

North, F. (2014). Music, communication, relationship: A dual practitioner perspective from music therapy/speech and language therapy. *Psychology of Music*, *42*(6), 776–790. https://doi.org/10.1177/0305735614552720

Reinders, N. (2015). *Dancing with autism spectrum disorder: A mixed methods investigation* (Doctoral dissertation). Retrieved from http://scholars.wlu.ca/

Reyes, P., & Reyes, L. (n.d.). I have nonverbal autism. Here's what I want you to know. Retrieved from https://researchautism.org/i-have-nonverbal-autism-heres-what-i-want-you-to-know/

Sealy, L. (2016). My answer to the question "What does autism feel like?" Retrieved from https://themighty.com/2016/04/what-does-autism-feel-like/

Shikanai, N., Sawada, M., & Ishii, M. (2013). Development of the Movements Impressions Emotions Model: Evaluation of Movements and Impressions Related to the Perception of Emotions in Dance. *Journal of Nonverbal Behavior*, *37*(2), 107–121. https://doi.org/10.1007/s10919-013-0148-y

Simpson, J. (2006). Narrative now: The art of telling stories in dance. *Dance Now*, *13*(3), 25–29.

Srinivasan, S. M., & Bhat, A. N. (2013). A review of "music and movement" therapies for children with autism: embodied interventions for multisystem development. *Frontiers in Integrative Neuroscience*, *7*. https://doi.org/10.3389/fnint.2013.00022

Tager-Flusberg, H., & Kasari, C. (2013). Minimally Verbal School-Aged Children with Autism Spectrum Disorder: The Neglected End of the Spectrum: Minimally verbal children with ASD. *Autism Research*, *6*(6), 468–478. https://doi.org/10.1002/aur.1329

Torrance, J. (2003). Autism, aggression, and developing a therapeutic contract. *American Journal of Dance Therap*, *25*(2), 97–109.

Tough, D. (2017). An Analysis of Common Songwriting and Production Practices in 2014-2015 Billboard Hot 100 Songs. *Journal of the Music and Entertainment Industry Educators Association*, *17*(1), 79–120. https://doi.org/10.25101/17.4

Van Dyck, E., Maes, P.-J., Hargreaves, J., Lesaffre, M., & Leman, M. (2013). Expressing Induced Emotions Through Free Dance Movement. *Journal of Nonverbal Behavior*, *37*(3), 175–190. https://doi.org/10.1007/s10919-013-0153-1