Action Research:
Imaginative Education and Individual Education Plans (IEP’s) for students with
Autism Spectrum Disorders

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EDUC 904

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Abstract/ Rationale

Autism Spectrum Disorders (ASD) are developmental disabilities that cause significant deficits in basic areas of functioning, including social interaction, communication, and learning (Simpson, de Boer-Ott, & Myles, 2003). At an early age and typically continuing throughout their lives, students with ASD have difficulty relating appropriately with others. These students with ASD frequently encounter difficulty in successfully following and mastering basic school curriculum.

Schreibman (2005) makes clear how the Individual with Disabilities Education Act (IDEA) states that every child is entitled to a free and appropriate public school education. This means that every child is entitled to an Individual Education Plan (IEP) based on his or her specific needs and is entitled to be educated in the least restrictive environment possible. This document also states that a child’s rights may be protected through due process, and that parents have the right to participate in educational decisions for their children. The BC Ministry of Education (2013) takes this further by expressly detailing how IEPs are intended to assist students with disabilities achieve success in regular classroom instruction. The Ministry outlines that IEP’s will include individualized goals with measurable objectives, adaptations and modifications where appropriate. Unfortunately, what is not included is a clear outline or tools for developing specific curriculum for children with ASD arising from the IEP. For the teachers and special education staff supporting these children, an effective IEP is what will ideally provide the structure and guidance needed for a successful educational experience. But where more work
is needed is in strategies for developing specific curriculum for children with ASD based on the IEP.

Because the etiology of ASD is still unclear, various medical and educational strategies have been demonstrated to be effective in helping individuals manage some of their symptoms and improve their quality of life (Myles & Adreon, 2001; Tsai, 2005). According to Parent’s Handbook in BC: Your guide to Autism programs by the Ministry of Children and Family Development (2013), Applied Behaviour Analysis (ABA) is one of the best practices for Autism Intervention. ABA is a set of principles that form the basis for many behavioral treatments. It is also based on the science of learning and behavior and this science includes general “laws” about how behavior works and how learning takes place. ABA therapy applies these laws to behavior treatments in a way that helps to increase useful or desired behaviors and reduce behaviors that may interfere with learning or behaviors that may harmful.

Therefore, ABA is widely considered the gold standard of treatment. But, in British Columbia for example, government funding for Autism puts the main emphasis for ABA on Early Intervention, prior to when a child enters the mainstream education system (prior to age 6). Once a child enters the school system, we need to look at how ABA approaches can be effectively integrated into the school IEP goals, in conjunction with the child’s home programs. It will be useful to find complementary approaches for curriculum development, which can arguably help adapt and apply ABA principles within the evolving needs of the formal classroom environment in conjunction with the home environment.
This research project considers Imaginative Education as a complementary approach to curriculum development, and utilizes an Action Research framework to answer the questions: Does using Imaginative Education approaches for curriculum development increase successful adoption, implementation, and satisfaction levels for Individual Education Plans (IEP’s) for students with ASD? How can Imaginative cognitive tools support teachers and the special education team to assist in the ongoing planning, organizing, adapting and implementing of IEP’s? How can educators develop specific curriculum for children with ASD by considering their individual strengths and challenges? How can we encourage and measure the parents’/families’ engagement and satisfaction levels with the IEP process for their child?

This paper describes how Action Research was engaged to analyze the role of IEP’s in the context of the mainstream (integrated) classroom and how Imaginative Education was explored as a means to more fully support the educational goals of students with autism. The research involved a literature review followed by primary research consisting of surveys of education assistants and parents regarding the role of IEP’s in satisfactorily achieving educational goals, as well as a case study with one family with a son who has ASD, specifically evaluating three of the child’s IEP goals, and how they were addressed in a home program utilizing Imaginative Education tools and related theories to implement the IEP goals. The research also explored “double journaling” as a means to improving communication and satisfaction levels of the family regarding their son’s education goals and programs.
Introduction/ Methodology

At the beginning of the project, parents and 5 EAs (Education assistants) completed a survey with a Lichert scale. The survey measured the perception of EA's and parents regarding their satisfaction and the success of the Individual Education Plan (IEP). These results provided the baseline for analyzing what factors could potentially influence satisfaction and success, with regards to curriculum development and implementation in particular.

**Education Assistant Satisfaction with Individual Education Plan (IEP)**

<table>
<thead>
<tr>
<th>EA Satisfaction</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participate in developing activities</td>
<td>0%</td>
<td>60%</td>
<td>40%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Participate in decision affecting IEP</td>
<td>0%</td>
<td>20%</td>
<td>60%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Considered as an equal partner with teachers and other professionals</td>
<td>0%</td>
<td>20%</td>
<td>40%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>School personnel encourage participation in the IEP decision-making</td>
<td>0%</td>
<td>40%</td>
<td>60%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Parents communicate regularly</td>
<td>0%</td>
<td>0%</td>
<td>20%</td>
<td>60%</td>
<td>20%</td>
</tr>
<tr>
<td>Have enough time to research/ design programs or activities</td>
<td>0%</td>
<td>0%</td>
<td>60%</td>
<td>40%</td>
<td>0%</td>
</tr>
<tr>
<td>Have opportunities to develop activities</td>
<td>0%</td>
<td>20%</td>
<td>60%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Empowered to work with teachers collaboratively</td>
<td>0%</td>
<td>40%</td>
<td>0%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Equipped to anticipate the unique behaviour of special needs students</td>
<td>0%</td>
<td>40%</td>
<td>40%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Have enough resources to support designing activities based on IEP objectives</td>
<td>0%</td>
<td>20%</td>
<td>80%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I need more training on successfully implementing the goals of IEP's</td>
<td>0%</td>
<td>40%</td>
<td>40%</td>
<td>20%</td>
<td>0%</td>
</tr>
</tbody>
</table>
**Significance**

The survey findings indicate that most education assistants felt there is not enough regular communication with parents regarding students’ progress on IEP goals. In addition, the EA’s indicate they don’t feel they are empowered to work with teachers collaboratively to develop and implement programs for students. A related finding is that nearly half of the EA’s felt they need more training on successfully implementing the goals of IEP’s and designing appropriate activities to meet IEP goals.

**Parents Satisfaction with Individual Education Plan (IEP)**

<table>
<thead>
<tr>
<th>Parents Satisfaction</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEP covers all appropriate aspects of my child’s development</td>
<td>0%</td>
<td>60%</td>
<td>40%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Considered as an equal partner with teachers and other professionals</td>
<td>0%</td>
<td>40%</td>
<td>60%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>IEP tells how progress towards goals will be measured</td>
<td>0%</td>
<td>30%</td>
<td>40%</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>Satisfied with the degree of participation in decision affecting IEP</td>
<td>0%</td>
<td>0%</td>
<td>40%</td>
<td>60%</td>
<td>0%</td>
</tr>
<tr>
<td>School personnel encourage me to participate in the decision-making process</td>
<td>0%</td>
<td>0%</td>
<td>10%</td>
<td>60%</td>
<td>30%</td>
</tr>
<tr>
<td>Find it useful to be able to report regularly to my child's teachers regarding my child's learning patterns</td>
<td>0%</td>
<td>0%</td>
<td>60%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>My child’s skills had made a great deal of progress toward IEP goals</td>
<td>0%</td>
<td>0%</td>
<td>50%</td>
<td>40%</td>
<td>10%</td>
</tr>
<tr>
<td>I felt included as a member of the IEP team during the IEP meeting</td>
<td>0%</td>
<td>20%</td>
<td>40%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>After the IEP meeting, I am clear about what accommodations my child will receive</td>
<td>0%</td>
<td>40%</td>
<td>50%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>There is communication between home and school by adding follow up meetings</td>
<td>0%</td>
<td>0%</td>
<td>20%</td>
<td>40%</td>
<td>40%</td>
</tr>
</tbody>
</table>
**Significance**

The survey reveals that parents are not satisfied with the degree of participation in decisions affecting the IEP and the decision-making process. Nearly half of parents answered their child’s skills had not made a great deal of progress toward IEP goals and objectives and there is not enough communication between home and school by adding follow up meetings or providing updates for their child.

**Family Case study/ Participant with ASD**

A case study approach was employed with one family, including their son who has ASD, utilizing an action research framework to investigate how Imaginative Education (IE) cognitive tools were utilized in the home program supporting the child’s IEP goals, and how implementation with IE influenced parents’ satisfaction with the home program.

Their son, L, is a happy, sensitive 8-year-old boy diagnosed with Autism, who enjoys being physically active, including skateboarding, bike riding, ice hockey, swimming, and playing “chase” at school with his peers. He is currently enrolled in grade 2 and attending a Catholic Independent school with 1:1 support. L is a social person who lacks social understanding and spatial awareness. He demonstrates signs of normal intelligence in some areas but he has been assessed with a severe speech delay and apraxia of speech. He has a strong memory and recall, and has difficulty expressing his thoughts and feelings.
Dialogic Journal writing/log with parents

To facilitate communication with parents during the case study, I chose “double” or dialogic journal writing with parents in order to hear their reflections, thoughts on curricular material and satisfaction levels.

Step 1 on the left page: Students carry on an interactive dialogue with the material, recording their summaries or restating the content in their own language and constructing personal meaning. Take notes from assigned readings, direct quotations, observations, lists, images, models, description of events, or summaries. Questions to be addressed: “What is new here?” “How does this link to what I knew or read before?” “What do I understand/not understand?”

Step 2 on the right page: They use their notebooks as shared texts with peers to construct the knowledge socially to advance understanding. E.g., comments, reactions, objections, feelings, questions, and new learning; Questions to be addressed: “I like this idea” “I’ve never seen this idea work in real life” etc. Comments should reflect thoughtful views on the implications of what the author is saying. The why should be explored rather than the what.


Rationale

The process of evaluating student work within Imaginative Education can have very different outcomes depending on learner and teacher activities. How can teachers evaluate the success of IE for students and, related to that, what tools are needed for assessing student work within an Imaginative Education program which will shed light on the Program’s success as much as shedding light on the learner’s progress? According to Cohen (1988), “knowledge is human creating rather than a
human reception” (p.12). Students must construct knowledge rather than passively absorb it. To learn, to make knowledge their own, students must reflect on, interact with, and react to the materials presented to them. This is consistent with a constructivist paradigm of education, where “Constructivists believe that learning is the meaning-making process of discovering complex information and transforming this information into internal constructions of reality” (Naude, Van Den Bergh, & Kruger, 2014, p.213).

Due to L’s age, severe speech delay, and cognitive challenges, in this case it was not feasible to utilize student journaling, but in this case parent journaling could provide useful insights regarding L’s responses to the home program and the curricular approaches of IE, as well as regarding family background and other contextual information relevant to the study. Also, consistent with the notion of dialogism, the researcher herself benefitted from receiving responses to her work which could influence her implementation.
3/31/2015

VC.

L and I worked on using simple sentences with "because".

This week we did "L is happy because he is on the swings." We used pictures from when he was smiling on the swings last week and talked about what smiling means (smile = happy = he liked it).

We talked about it and then afterwards we went to the park and I brought up the picture and showed him the swings again to go over what we talked about at home. (e.g. that he liked the swings and that it made him happy.)

This was pretty basic for L, but I think it was a good start to understanding "because." He understood how to use it right away and it was better than the pictures of other people doing the activities.

- I like that idea and we do find that L will spontaneously say (unprompted) that he feels happy.

- We do notice that L will often refer to himself (not always, but often) in 3rd person.

  "Liam feels happy."
  "Liam feels sad."

- He also mixes up pronouns "I" vs. "you" so I wonder if he has decided that "Liam" is the most reliable way to express himself unambiguously!

An example of dialogic journal writing with parents
Literature Review: Using Imaginative Education Approaches to Enhance Learning in Naturalistic and Social Settings

The parents used in the case study were adamant that they wished L’s home program to utilize naturalistic and socially oriented implementations rather than academically oriented (“table work”) implementations. Therefore, the researcher chose to focus on play-based implementations supporting IEP goals. The following Literature Review provides the theoretical support for play-based approaches (including Imaginative Education) in supporting children with ASD.

Autism Spectrum Disorders (ASD) differ from one another in many ways but they have much in common, as children with ASD face significant challenges in learning how to play, socialize with peers, and communicate (Wolfberg & Schuler, 1999). In recent years, there has been an increasing number of students with autism and other disabilities integrated into the general education classrooms along with their typically developing peers (McDonnell, 1998). The positive effects of integration in the general education classroom are many and have been widely discussed. However, on the important topic of play, and, specifically, on how children learn to play and how they engage in socially interactive and imaginative play, there is evidence to suggest more work can be done to support the development of interactive and imaginative play among children with ASD in the integrated classroom. In this regard Vygotsky's concepts of play and mediation, along with the studies of other researchers, can potentially help direct further work.

The research has shown that just placing children with autism in proximity to typical peers does not automatically lead to increases in social interaction. Wolfberg & Schuler (1999) report that when given the opportunity to play freely,
children with autism tend to engage in repetitive activities ranging from manipulating objects and enacting elaborate routines to pursuing obsessive and narrowly focused interests. According to this research, they are less likely to engage in functionally appropriate play and rarely produce pretend play. The research suggests that children with autism usually need to be taught to play and interact, which includes teaching how to initiate social interactions and how to maintain them. What are the key factors needed to increase the opportunity for children with autism to become skilled in play – play, which is a leading factor in development and social competence later in life?

The critical point here is that children with autism are likely to lead impoverished play lives without some form of intervention (Wolfberg & Schuler, 1999), and without rich play lives these children stand to be deprived of essential intellectual tools. Lev Vygotsky (1978) views play as a social means of development and states that the influence of play on a child’s development is enormous. Through play children are able to better understand the customs and norms relevant to their culture. Further, Vygotsky (1978) asserts that in play a child creates an imaginary situation that is very close to the real one, and thus emerge rules in the development of play. Gajdamaschko (2006) takes this further by explicitly explaining that capacity of the imagination is developed in play and it enables a child to create and sustain imaginary situations that can be a tool for developing abstract thought. Therefore, well developed imaginative activity leads the child to more successful ways of dealing with not only intellectual but also educational tasks.

Looking at the specific challenges faced by children with autism in terms of
play, socialization, and communication, the role of mediation becomes paramount. Mediation, one of Vygotsky’s central concepts, is summed up by Kozulin (2003) in these terms, “the role of the human mediator is defined in the notion that each psychological function appears twice in development, once in the form of actual interaction between people, and the second time as an inner internalized form of this function” (p.19). When addressing the integrated classroom we can state that there are two types of mediators for children with autism: peers and teachers. We could argue that although both types of mediators play important roles for both typical and children with ASD, arguably what needs to be underlined is the critical interdependence of the interplay between both types of mediators, peers and teachers, for children with ASD. Based on the research, it seems that, unlike typical children, children with autism will need to start with adult/teacher as mediator in order to learn foundational play skills. Once foundational play skills are established, these children can move to peer as mediator in developing richer play lives.

At the same time, evidence indicates that children with autism also need peers as mediators in order to develop critical play skills; these cannot flourish with only the adult/teacher functioning as mediator. According to Wolfberg & Schuler (1993), children with disabilities who do not have playmates to share, diversify, adapt, and discuss play routines, will have their play stay rigid and unimaginative. The research by Pierce and Schreibman (1995) supports that when utilizing typical peers to implement naturalistic teaching tactics in the absence of direct supervision in a general education classroom environment, children with autism engage in sustained interactions, initiate play and conversations, increase engagement in
language and joint attention behaviors, and display positive changes in social behaviors as reported by their teachers. Similarly, Kohler et al. (1997) remark that the involvement of typical peers likely provides a much richer and more elaborate context for addressing skills. Tellingly, though, the research of Kohler et al. (1997) also asserts that the success of peer play hinges on the role of the teacher.

This is because the teacher can also observe and build on the responses of not only a child with autism but also the talk and actions of a few different typically developing peers at the same time. In order to implement any of these intervention strategies, the teacher’s systematic instruction and participation are critical. The focus in the Kohler et al. (1997) study was using the teacher’s participation and direction for social interaction with peers, and the teacher implementing three different types of directions. Instructions consisted of telling the child to imitate a skill demonstrated by a typically developing peer, directing a child and/or peer to engage in nonverbal cooperation or related interaction, and, lastly, telling a child and/or peer to direct a verbal comment to each other. Thus the crucial interdependence of the two mediator types is again brought to light.

Arguably typical children benefit from or even require to a certain extent both types of mediator – peer and adult/teacher – to develop robust play skills. But it seems evident that in children with autism the interdependence of the two mediator types requires awareness and regular adjustment to consciously and systematically ensure the two mediator types are working in concert. This is an important reason the classroom teachers need to ensure that systematic instruction is provided across all activities and areas in the classroom as mediator. It has been
determined that through the use of better planning, the amount of systematic instruction that is embedded into the ongoing classroom routines and activities has increased the success of peer related intervention strategies. The teacher's (as mediator) deliberate planning to support peer learning is essential in helping children with autism participate more fully, communicate more effectively, and interact more successfully (Garfinkle & Schwartz, 2002).

To conclude, the key differentiators with children with autism are the degree to which they need the teacher mediator, not only to teach the foundational play skills but also to mediate successful peer play on an ongoing basis, and the interdependence of peer and teacher mediators in helping children with autism develop rich play lives. Typical children seem to demonstrate more flexibility in developing play and imagination skills primarily through peers’ interaction, for example, or with more limited adult mediation. A final point is that, given the amount of planning and systematic work required by the teacher for the successful interplay of the two mediator types, the teachers’ belief and attitudes toward children with special needs will dramatically affect the success and effectiveness of their instruction.

Play has a critical role because it is a primary social and cultural activity for acquiring social knowledge, symbolic capacities, and interpersonal skills (Wolfberg & Schuler, 1999). Learning involves the interplay of imagination, knowledge accumulation and psychological development. It is critical that children with special needs should be provided with mediated learning experiences for creating a new perspective for acculturation, socialization, and inclusive special education (Gindis,
2003). The key question that still requires further investigation is what kinds of play strategies are most effective in mediating the development of children with autism and can they all be implemented with equal success in the general education classroom. However, it is clear that both teacher and peer have essential and interdependent roles as mediators for children with autism and that developmental play opportunities will be very limited without systematic mediation and instruction.

**Findings**

Using the survey results, the Literature Review, and assessment of L’s progress on IEP goals (as noted in the published IEP shared by the school with the family and other members of L’s clinical team), the researcher designed play-based and Imaginative Education-influenced approaches to implementing the IEP goals in the home program, focusing on three IEP goals in particular.

**IEP goal #1**

*The student will be able to participate and follow along well with reading independently.*

Following up on the parents’ request for naturalistic and socially oriented implementations, the researcher chose a play-based, interactive (mediated) format for reading practice. In particular, toys and action figures representing characters in the books, and/or representative photographs and images displayed on the iPad, were used to “act out” and discuss different parts of the story. Following the “acting out”/naturalistic (conversation based) discussion of the story, we would then go back and re-read the story without any props. During the naturalistic (conversation
based) episodes, we were not restricted to merely what was happening on the page. The “conversation” was allowed to take on related but different topics, including links to L’s own experience. For example, if a character was depicted as crying in a story, L might incorporate his own recollection of a girl crying at recess at school.

**Action and analysis**

According to Egan (1997), “images allow us in a limited but very real sense to extend our grasp on the world. Affective images do not need to reduce the content being taught; rather, they provide a means for the child to “incorporate” it” (p.62). Temple Grandin, a doctor of animal science and someone who was diagnosed with ASD as a child, claims that children with ASD have problems learning things that cannot be taught about in pictures. The easiest words for children with ASD to learn are nouns, because they directly relate to pictures. Egan (1997) supports this by stating that “image performed in traditional oral cultures the crucial social role of aiding memorization and guided imagery can be a powerfully effective technique in many circumstances. The teacher should be consistently conscious of the vivid images that are a part of every topic and to draw on them consistently in vivifying knowledge and concepts” (p.61). Using images and stories, teachers are also able to introduce binary opposites that are the most basic and powerful tools for organizing and categorizing knowledge.
March 28th, 2015 - Personal session note #3

While I am reading the story of ‘Three little pigs’, I used actual objects, then used representations (pictures), and finally moved instruction to the abstract stage using words only. I found delays in the components of reading comprehension so I used a story map framework in order to help him to generate and respond to questions. First I modeled, we practiced together and he performed independently. I noticed that one of the advantages of written text is when L’s attention is focused on the story, the written text provides a stable context for locating the relevant words unlike in oral language where the listener cannot return to the spoken medium to extract relevant details. Given written text, L can be prompted or reminded to read for meaning and to locate antecedent events that caused subsequent events. It would be a great practice for children with ASD who are challenged to understand recognizing others’ thoughts and feelings.

Egan (2005) indicates that binary opposites easily divide the world into good/bad, high/low, and hot/cold, and so on endlessly. They also serve to organize some topics and then allow people to make further discriminations. By focusing on such oppositions in a topic, we have one additional tool for making the subject imaginatively engaging to students, and by shaping a story around abstract binary opposites, we evoke curiosity and interest in the topic and story. Furthermore, mythic understanding is significantly more imagistic than is common for forms of understanding built on literacy. Because of the affective charge associated with images, they are in some ways more vivid and more closely tied in with emotions (Egan, 1997). According to Enki Education (1998), “we are conscious of the images but do not analyze or conceptually understand them: we live them, relating directly from the heart” (p.57). Egan (2005) mentions that storytelling stimulates the imagination by creating an emotional attachment to the subject matter, drawing on the imagination that is a creative experience for the students. This emotional engagement invites children to reflect, which further fixes information in the long-
term memory. It is vital to provide imagination-based remedial reading opportunities for children with Autism, in order to nurture their own unique sense of creativity and emotional expression. And they can still benefit from curriculum designed to use powerful and carefully chosen images to bring the benefits of emotional engagement, categorization by binary opposites, and mythic understanding.

**Significance**

Egan (2005) asserts that stories are one of the most powerful cognitive tools students have available for imaginatively engaging with knowledge. Also, he argues, stories are instruments for orienting human emotions to their contents; they do not just convey information but engage our emotions – stories orient, or shape, our emotions to the events and characters in a particular way.

Reading comprehension is an important skill for all children to acquire. Understanding language, whether in written or oral discourse, is essential for communicative interactions (Randi, Newman & Grigorenko, 2010). Unfortunately, due to their particular communication challenges, children and youth with Autism need specific strategies to become successful, lifelong readers – an absolutely critical skill. Teaching children to read for meaning is no easy task as reading comprehension involves a complex set of skills and processes and is sensitive to individual differences, often requiring different kinds of instruction for different learners (Duke and Pearson, 2002).

With regards to reading in particular, due in large part to global communication challenges, children with Autism often face specific challenges to
reading abilities. The language of children with autism may be restricted to the very literal; analogies, metaphors, and humor are essentially incomprehensible (Schereibman, 2005). Although there are numerous studies of interventions for children with ASDs, surprisingly few interventions for teaching reading comprehension have been described in the literature, and most of these focus on instructional approaches, rather than interventions that target particular reading comprehension difficulties (Randi et al., 2010).

Based on the preliminary results of the home program implemented by the researcher, there is a promising connection between using a social and play-based approach to reading comprehension, and concrete success on the IEP goal. What play-based implementation demonstrates is the benefit of social interaction or mediation prior to (or as a complement to) “independent” reading. Arguably teachers need to understand the importance of using images and interactive role playing, as well as naturalistic “conversation”, in helping children with ASD be able to fully experience the stories and engage emotionally.

**IEP goal #2**

The student will be able to demonstrate comprehensive knowledge of 50 curriculum-based words for grade 2. Presently, the student can complete classroom worksheets, but this is more due to his ability to do rote work than actual comprehension of any tasks. Pull out times with EA (Educational Assistant) to work on building true comprehension skills is needed.

Once again, consistent with the parents’ request for naturalistic and socially oriented implementations, the researcher chose a play-based, interactive (mediated), and experiential format for vocabulary practice. We would complete a hands-on task together, such as baking, building, crafting, etc, to learn and apply a particular set of vocabulary. In addition, whenever possible, we would incorporate a “mini field trip” (community visit) as part of this hands-on task, such as going to the store to buy supplies or going to the park to gather leaves for an art project. In this
way, we could use and practice a set of vocabulary, while at the same time ensuring that L’s grasp was not “rote” and superficial but rather lived and applied.

**Action and analysis**

Fettes (2013) explains that there are two sides of experience, the active (making) and the passive (observation). These are brought together under the one quality of mind. He supports Dewey’s conception of imagination’s role in learning. That is, direct experience engenders meaningful experience by conjuring up a wished-for state of affairs that motivates subsequent action. Further, it also must be intimately connected with our knowledge of reality, through which we must call for and carry out a plan of activity. This viewpoint perceives education as a kind of personal knowledge that enables the learner to discover more possibilities for purposeful action, or, conversely, a process of purposeful action leading to imaginative growth. Dewey (1987) directly asserts that “[He] believes that the active side precedes the passive in the development of the child’s nature; that expression comes before conscious impression; that the muscular development precedes the sensory; that movements come before conscious sensations; [he] believes that consciousness is essentially motor or impulsive; that conscious states tend to project themselves in action” (p.79).

Where there are real shared interests, there are real engagement, real interaction, and real learning. Dewey (1934) states “there is always some measure of adventure in the meeting of the minds and universe”. Dewey then adds, “… this adventure is, in its measure, imagination” (p.267). According to Enki Education (1998), “we think that if we talk about it, understand it, then it just “is.” But, in fact,
this commentary could not be further from the truth because it actually separates us from direct experience. When we keep up a running commentary we pull the children out of their own experience and into trying to “understand,” or to participate in our experience. By definition this is dis-integrating” (p.58). Teaching and learning are not only about the teacher revealing that which is hidden to the student but also about constructing experiences for students that enable them to discover the ‘hidden’ for themselves. Thus, children with autism will benefit from curriculum which specifically utilizes naturalistic, exploratory, and experiential approaches to help them encounter understanding beyond rote learning.

**April 1st, 2015 - Personal session note #4**

L and I went to the grocery shopping and made cookies together.

1. Write ‘shopping list’ together
2. Go to Safeway
3. Get items we need
4. Bake cookies
5. Share the story!

I learned that real-life activities as means to learn language and language-foundation skills as the experiences make language stick in memory and make language more retrievable for use. I also noticed that ‘real experience’ approach increased L’s motivation to learn by incorporating choices, reinforcing attempts, using suitable modeling, and providing natural consequences. I took pictures of steps and after finishing baking, L and I made ‘experiencing journal’. I introduced vocabulary work within the context of experience-based learning and followed up with a photo ‘journal’ that links the vocabulary with pictures of himself ‘doing’ the activity and ‘experiencing’ the new vocabulary. The positive feature of naturalistic strategies is that unlike therapeutic settings in which artificial interactions are set up based on external goals, in naturalistic settings children with autism are able to interact over genuine mutual interest, and share these interests with people who really, honestly care.
Significance

Rote learning is learning based on repetition, and the memorization of chunks of information about something without full understanding. This leads to the lack of creativity and tendency to forget the items memorized. According to Boucher and Bowler (2008), the memories of people with autism have strengths in rote learning, perceptual memory, mnemonic abilities, priming, cued recall, and recognition memory. However, interestingly enough, their weaknesses are in free recall of episodic memories, encoding of contextual or relational information and social memory. How can teachers support the weaknesses of children with ASD while maximizing on their strengths, and still offer more creative learning opportunities? How can we benefit by the view that experience might serve the same ends as language? Fettes (2011) said,

“We think of language and experience as parallel sources of imaginative enrichment and transformation. Such a framework would suggest that Somatic and Mythic understanding need to be encouraged to develop in tandem with one another, in opposition to our culture’s tendency to leave the body behind in the rush to language. Of course, the tension between the two is not to be ignored, but we are freed to explore areas of similarity and synergy as well (p.124)”.

Nielson (2006) proposes that, “the imaginative teaching method of exploration is exemplified by teachers constructing learning activities intended to allow children to explore feelings and ideas using their imagination and direct experience” (p.253). Imaginative Education Research Group (2008) states that somatic understanding is the first kind of understanding and it refers to the physical and pre-linguistic way to know the world around the child. It is also the fundamental grasp of the world throughout our lives by the information provided
by senses of sight, hearing, touch, taste, and smell, and significantly also our emotions that are tied up with these. A child also experiences the world and sensations of balance, movement, tension, pain, pleasure, and so forth, through the way his or her body physically relates to the objects and persons they encounter.

Based on the preliminary results of the home program implemented by the researcher, there is a promising connection between using a social (interactive) and experiential, play-based approach to vocabulary comprehension, and concrete success on the IEP goal. Arguably teachers need to understand the importance of not only exposing the student to hands-on learning, but also incorporating the social (mediation) element with any hands-on project to further support “true comprehension skills”. The “social element” can refer to the teacher-mediator, peers, and also the wider community.

**IEP goal #3**

The student will demonstrate appropriate peer relationships with other students by taking turns, reciprocating peer interactions and participating in groups with one prompt on 7 of 10 occasions by June 2015.

Although in some ways this IEP goal lends itself most to the parents’ request for naturalistic and socially oriented implementations, the researcher still had to consider how best to help support this goal using a play-based, interactive (mediated) approach. The researcher chose simple sing-alongs and rhyming games where the participants take turns saying or singing words and phrases in sequence. This requires participants to learn the structure of the game, to take turns, to be attentive to peers, and to use vocalizing and rhyming abilities to express themselves. This may also support reading development if it is combined with the reading of rhyming books.
**Action and analysis**

Research by Kim, Wigram & Gold (2009) provides significant evidence supporting the value of music therapy in promoting social, emotional and motivational development in children with ASD. It also shows that improvisational music therapy produced significantly more and longer events of ‘joy’, ‘emotional synchronicity’ and ‘initiation of engagement’ behaviours in the children than playing with toys. Enki Education (1998) endorses that “if we are able to choose language and rhythms that bring to life that which we are describing, the listener sinks right in and lives the words. Inviting rhythm, tone and imagination to work together to create an experience” (p.57). Rhyme also plays a critical role for children with ASD. Rhyme can increase the understanding of children with ASD about what they are actually doing and help their language by using the same repetitive, familiar and rhythmic verses for them to anticipate and imitate. It also helps to draw their attention to their movement and encourage participating in the activity (Moor, 2008).

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**April 4, 2015 - Personal session note #5**

We have been reading *Cat in the Hat* and *Green Eggs and Ham*, and other rhyming books, as well as putting the words of books like *Cat in the Hat* into simple tunes (like the tune for *Twinkle Twinkle Little Star*). We take turns reading, saying, or singing different parts. I noticed L’s purposeful eye gaze, active participation, expressive language-vocalizations, imitation skills, emotional expression, and flexibility. I realized that when L feels at ease and comfortable with an experience, and has the freedom to direct his own learning, he becomes more interested and content. Through musical experiences, L’s self-confidence has elevated and he could learn to be an active communicator, not a passive communicator. When I look at the language production of L, it is clear that he can respond with a creative attitude towards how language is used. I realize it is very important to encourage this and give him an opportunity to be expressive in participating in rhyme, pattern, and
music making activities along with playmates in order to help build meaningful activities with peers at school. So, I believe curriculum incorporating these “musical” activities can significantly assist in creating successful peer interaction opportunities for L and his typical peers.

**Significance**

Egan (2005) insists that, “rhymes, rhythms, and patterns are potent tools for giving meaningful, memorable, and attractive shape to any content. This means that their roles in learning are numerous, and their power to engage the imagination in learning the rhythms, and patterns of language, and the underlying emotions that they reflect is enormous. They are important to learning all symbol systems, like mathematics and music, and all forms of knowledge and experience” (p.3). Enki Education (1998) takes this further by clearly explaining that song is the first cousin to speech. With song we have the added aspect of music and we all know that, even without words, different tunes are able to create different moods. In addition to this, integrating the content, rhythm and tone of our speech has a powerful influence on the listener and can challenge or support his or her confidence in the ability to understand.

Historically speaking, students with disabilities have been segregated from their peers, and even from society as a whole (Karagiannis, Stainback, & Stainback, 1996). More recently, however, there has been an increasing amount of students with autism and other disabilities included into the general education classrooms along with their typically developing peers (McDonnell, 1998). Full inclusion is the process of putting children with autism and special needs into classrooms alongside
typical children with the idea that this will enhance the social development of these children. The pivotal argument is that general education settings offer the best opportunities for contact with typical peers (Simpson, et al., 2003).

Increasing the chances for children with autism to become skilled in play with typical peers is important for their social competence later in life (Stone & La Greca, 1986). Children with autism usually need to be taught to interact, which includes teaching how to initiate social interactions and how to maintain them. Teachers need to help children with ASD engage in meaningful activities with peers at school, but it is not always clear how best to do so. Musical and rhyming activities and games can provide naturalistic opportunities for peers to interact while also encouraging appropriate behaviours of turn taking and attention.

*Based on the preliminary results of the home program implemented by the researcher, there are promising outcomes using musical and rhyming games or songs to promote social interaction and appropriate play-based interactions among participants. If the classroom team wishes to encourage appropriate peer relationships and social behaviours, using songs and rhymes can present fun, interactive, and naturalistic opportunities for peers to interact, while also supporting the student with ASD in language acquisition and other therapeutic benefits of music.*

**Challenges Encountered in the Research Project**

The results of implementing Imaginative Education approaches in the home program were promising. Looking at the "double journal" session logs, the 15 total entries for the research period were rated using a qualitative analysis on the basis of whether the journals indicated an attitude of positive progress towards the IEP goal. For the parents, 14 out of 15 journal entries (93%) indicated an attitude of positive progress towards the IEP goal. For the researcher, 13 out of 15 journal entries (87%) indicated an attitude of positive progress towards the IEP goal.
When the project was initiated, the researcher and the parents had hoped to introduce some of the play-based approaches to curriculum into the school environment. This would have provided the ability to compare the success of these approaches in the home environment versus the formal classroom environment. However, as the project progressed, various logistical and philosophical barriers impaired progress on this front; for example, the availability of staff to cross-train on the play-based programs, the inability for the researcher to work within the classroom due to rules and regulations, and some hesitancy of the school team to change entrenched approaches to the IEP process, despite the parents’ support of the researcher’s project.

These barriers would need to be overcome in future studies, possibly by achieving “buy-in” first from the school team, well before the first formal IEP meeting of the school year.

**Directions for Future Research: the need for teacher training**

An important change in early intervention services is that children with ASD often receive services in community-based programs, with typically developing peers. This change is seen in how children with special needs have received services and in turn it has influenced the way instruction is provided. It is, therefore, critical that instruction be effective and frequent enough for children to learn the skills that will enable them to function more independently (McBride & Schwartz, 2003). With an increasing amount of students with ASD being served in regular education classes, it is often difficult for general educators to teach children with ASD, because they do not have the necessary training and background to understand the
characteristics of this exceptionality, how to communicate with persons with limited verbal skills, or academic procedures that have been proven effective for this population (Koegel, Rincover, & Egel, 1982).

The need for collaborative relationships designed to help general education teachers plan for these students is increasingly being recognized. Most teachers receive relatively little formal instruction in evidence-based practices for children with autism (National Research Council, 2001). According to Simpson et al. (2003), “General education teachers have been found to lack support for inclusion and the adoption of new instructional methods for students with disabilities unless they receive assistance from qualified resource personnel” (p.113). Teachers tend to perceive inclusion as a positive educational practice, contingent on appropriate teacher training and support (Simpson et al., 2003). Myles and Simpson (1989) go on to report that 86% of the general educators they surveyed were willing to accept a student with a disability in their classrooms on a full-time basis if appropriate support and training were provided.

This brings about the questions of what types of training are needed for teachers and how can they apply embedded instruction in a busy classroom learning environment? McBride and Schwartz (2003) provide some answers to the above questions by stating that, “... a common requirement for effective instruction is the presence of contingent and responsive adults. The basis of instruction is the actual interaction between the child and the adult” (p.6). Summer and Spietz (1994) support this by concluding that these basic interactions between children and adults are what establish a basis for contingent interactions and a mechanism by which
children begin to understand the relationship between their behavior and the social environment. Also, well-substantiated evidence helps teams work successfully including parents, teachers, and other professionals who often come to the table with different theoretical orientations or belief systems. Schwartz et al., (2004) also believe that it helps everyone on the team to remain focused on the reason they are all assembled to facilitate optimal development in every child with whom they work.

Another key element to consider is one mentioned as early as Martin (1974), who warned that unless educators developed strategies to create an accepting environment for students with disabilities, “we will be painfully naïve, and we will subject many children to a painful and frustrating educational experience in the name of progress” (p.150). An effective education for children with autism is one that is child-centred. Every child with autism is different, experiencing different strengths and challenges, and their education must reflect this. The understanding gained through comprehensive autism training is key to help teachers to be more effective in planning a child's curriculum by assessing individual needs and abilities rather than basing learning design on broader expectations for that child’s age.

**Conclusion**

With an increasing amount of students with ASD being included in regular education classes, it is often difficult for general educators to effectively teach these children with ASD, because the teachers themselves do not have the specialized training in effective strategies for providing the best learning environment. Based on the numerous behavioral difficulties and learning disabilities observed in
children with autism, effective strategies are critical in order for these children to adapt to and benefit from full inclusion educational settings.

The IEP should ideally provide the needed structure, support, and guidance for the teachers and education assistants to thrive in the learning relationship and create an effective educational environment without undue strain. However, teachers and EA’s need more specific strategies to build curriculum based on the IEP goals and objectives. Imaginative Education (IE) potentially offers the opportunity and the specific strategies to create curriculum to support educational goals while valuing and building upon the way children understand and the way they experience things. The purpose of this research project was a preliminary exploration of how IE could be applied as a complementary tool to bridge the home programs and the school programs in support of the IEP.

The one caveat is, of course, that the tools and concepts of Imaginative Education cannot simply be blindly applied en masse to curriculum for special needs children. Imaginative Education tools need to be applied with particular attention paid to the cognitive needs of children with ASD. For example, due to deficits in language comprehension, as discussed above the technique of story telling for children with ASD should be implemented using thoughtful and carefully chosen images and role play. Similarly, considering the difficulties most children with ASD have with social communication, the use of rhyme, rhythm, and music making to encourage peer interaction and cooperation as discussed above must be carefully staged and broken into discrete parts so that the child with ASD can learn the various parts in sequence and at a pace which supports their success. Therefore,
there is much work still to be done applying IE to meet the needs of children with ASD: for example, to create sample curriculum which meets common IEP goals, to create a library of suggested adaptations of various IE strategies to apply to children with ASD, and to create specific training tools for teachers and special education assistants to facilitate the application of IE to support children with ASD.

Learning involves the interplay of imagination, knowledge accumulation and psychological development. Imaginative Education offers great potential to educators to help build effective adapted curriculum in order to foster the success of children with ASD in our classrooms. Imaginative cognitive tools can be implemented to support the educational goals of students with ASD and to ultimately generate understanding that is more flexible, lasting, and links learners to the world around them, helping learners utilize creativity in this process. Most significantly, Imaginative Education potentially enables teachers to push the boundaries of preconceptions that limited what they thought was relevant to education. The ability to reach out to children who face severe challenges in the learning process, whether from ASD or from other issues, is an invaluable tool for teachers and a testament to the strength of the Imaginative approach. What remains is the question of how best to bridge logistical, philosophical, and communication gaps between the knowledge and needs of the family versus the knowledge and needs of the school.
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