

# First We Imagine, Then, We Collaborate: An Insight with Autistic Children

*Normaliza Abd Rahim*  
*Department of Malay Language*  
*Faculty of Modern Languages and Communication*  
*Universiti Putra Malaysia*  
*Serdang, 43400 Selangor*  
*Email: normaliza@fbmk.upm.edu.my*

*Nik Ismail Harun*  
*Academy of Language Studies*  
*Universiti Teknologi MARA (UiTM), Malaysia*  
*Email: nikismail@pahang.uitm.edu.my*

## ABSTRACT

*This research focuses on the autistic children learning a second language. It investigates the nature, number and balance of interactions of ten children and further investigates the content of discussion and reactions which occurred while they were using the learning approach. The subjects consist of 10 children (7 to 15 years old) with autism from five schools in Selangor and Negeri Sembilan, Malaysia. The 'Imaginative Learning Approach' is introduced to enhance learning the English language and, in turn, encourage subjects in collaborating with their peers. It is found that autistic learners are able to collaborate with peers in the 'Imaginative Learning Approach'.*

**Keywords:** *imaginative Learning Approach, autistic*

## **Introduction**

Autism is a complex developmental disorder that appears in the first 3 years of life, though it is, at times, diagnosed much later. It affects the brain's normal development of social and communication skills. Autism is a spectrum that encompasses a wide continuum of behaviour (Bailey et al. 2001). Core features include impaired social interactions, impaired verbal and nonverbal communication and restricted and repetitive patterns of behaviour. Bailey et al. (2001) added that symptoms may vary from quite mild to quite severe. Mild autism is known as Asperger's syndrome. The next level of autistic is the Attention Deficit Disorder (ADD) and Attention Deficit Highly Disorder (ADHD). Autistic children have no social skills, therefore, integration of moral values will be advised.

The implementation of the Integrated Curriculum for Secondary Schools (KBSM) in 1989 was designed to produce balanced students who are harmony intellectually, spiritually, emotionally and physically (KBSM 1989; Mahathir Muhammad 1991). The KBSM is a follow-up of the Integrated Curriculum for Primary Schools (KBSR) (KBSR 1988). The English curricula in both KBSR and KBSM are aimed to develop the four language skills of listening, speaking, reading and writing, as well as focusing on grammar, the sound system of the language and vocabulary. Besides seeking to educate students to be proficient in the language, the English language programme inculcates moral values (e.g. respect and caring) and the ability to contribute successfully towards nation building.

In 1970, the role of English changed from being the medium of instruction to the 'first' second language. The Education Minister of Malaysia, Dato' Seri Najib Razak (as cited in Chin 1995: 7) stated that the

*'English Language is vital for the (economic) survival of a nation and is also vital for education at the tertiary level'.*

From this statement, it is clear that bilingualism (Malay and English Language) is the stated objective of the Malaysian education. However, the Malaysian Education system itself does not cater for special needs, as there is no special syllabus for the autistic children. Children with autism are expected to learn the same thing with the rest of the children at the national schools. Autistic children have difficulty to concentrate and, therefore, the same learning syllabus with the normal children will

make it difficult for them to acquire the language in limited class periods. Even though the normal children have the difficulties in learning the language, they have a lot of time to learn it at home or with their friends around them. In another way, the autistic children will have to learn more than the normal children do.

## **Collaborative Learning**

It is important to explore why collaborative work is important in this research. According to Johnson and Johnson (1986), the concept of collaborative learning is the grouping and pairing of students at various performance levels for the purpose of achieving an academic goal, i.e., the students are responsible for one another's learning as well as their own. Therefore, the success of one student helps other students to be successful. The proponents of collaborative learning claim that the active exchange of ideas within small groups not only increases interest among the participants but also promotes critical thinking (Johnson & Johnson 1986). Johnson and Johnson (1986) added that there is persuasive evidence that cooperative teams achieve higher levels of thoughts and retain information longer than students who work quietly as individuals. The shared learning gives students an opportunity to engage in discussion, take responsibility for their own learning, and thus, become critical thinkers (Totten et al. 1991). Many studies on collaborative learning have been done at the primary and secondary levels. However, there has been little empirical evidence available on its effectiveness at the college level.

Cooper (2002) pointed out that the role of a teacher is also important in collaborative learning as s/he plays a number of vital roles in the success in the implementation of peer learning: as developer of an educational programme, as model of an expert learner, as activities coordinator, as a Socratic interlocutor and mentor, and as an evaluator. This research utilises the teacher and researcher in a specific way, which is reflected on the roles mentioned above, but only insofar as:

- the programme is outlined initially but not in specific detail by the teacher/researcher
- the teacher or researcher only act as models or coordinators in a more limited way and directly at the request of the participants
- the roles of socratic interlocutor and evaluator are used at all times to help the participants move forward more independently toward full joint production.

Cooper (2002) further noted that in joint production, students have the opportunity to observe and internalise the processes modeled by their peers. The real aim of such a process is that the individuals will appropriate the shared processes to themselves, and will be able to continue the collaboration even in the absence of their partners.

The essence of collaboration, therefore, is the construction of shared meanings for conversations, concepts, and experiences (Roschelle 1992) and to create greater autonomy in the longer term. This may occur if motivation is enhanced. Chan and Baskin (1988) indicated a motivational role of collaborative work in that the feedback of peers in the negotiation of the final product helps students gain a sense of authority over their own writing, which in turn, leading to a greater motivation to write. Thus, the collaboratively produced outcome of the project, the storyboard, should represent a greater achievement than either of the participant pairs could have achieved alone.

## **The Study**

This research was designed to take into account the theories reviewed above. The design included open-ended collaborative with a great deal of choice about subject matter and the style of the materials to be produced. The use of pairs rather than groups seemed sensible as groups do not often feature in the normal curriculum and this reflected the issues raised on autistic children. The task was designed to be sufficiently open-ended to allow discussion but to be manageable by a pair of collaborators in terms of the negotiation and need for some compromise to meet the time frame of the project. Alongside this, the research sought to increase confidence through collaboration and investigated how far a growth in confidence seemed to allow a coping with a growth in cognitive demand. In addition, the research sought to find out as to whether autistic learners are able to collaborate with their peers by ‘Imaginative Learning Approach’ in the language classroom.

## **Research Problem**

In schools, English is taught in 4-hour lessons in a week (two hours per lesson) and it is not a medium of instruction in the classroom. Therefore, it is almost impossible for teachers to devise a curriculum which broadens

and deepens language knowledge and develops collaborative work in such a context.

The research questions can be expressed in the following way:

- What can we discover about the engagement of the subjects in the ‘Imaginative Learning Approach’ by an analysis of the content of the interactions in the session transcripts?
- What are the predominant learning styles of students of English in this context?

## **Subjects**

The research involved 10 children who were selected at random from five schools in Selangor and Negeri Sembilan, Malaysia. These 10 children are autistic children aged between 7 to 15 years old. The autistic children were chosen in terms of their needs in learning the second language. The subjects have the difficulty in concentrating and at the same time teaching them to communicate in the second language is a priority. The subjects have high levels of interest in computer and they managed to try out new programmes given to them in hours compared to the normal children where they have to acquire the computer skills in a few days. The subjects have been labeled by the psychologist as asperger syndrome which is a mild autism. The subjects have tactile learning styles and at the same time they would prefer to work with a friend where there is an integration of moral values of respect and caring. The learning styles were able to support the second language learning. The subjects were asked to choose their own partners for the purpose of this research. They were to discuss and collaborate with their peers and at the same time using the Imaginative Learning Approach. The materials were chosen by the subjects from things in the classroom, creating the storyboard and using the computer.

## **Instruments**

### **The Perceptual Learning Style Preference Questionnaire**

*The Perceptual Learning Style Preference (PLSP)* was adapted from Reid (1987). She developed and normed the PLSP survey in 1984. It consists of thirty questions based on Dunn’s Learning style inventory

(1983, 1984). Reid made some modification from Dunn’s Learning style inventory. She included two new dimensions: ‘Group Learning’ and ‘Non-group learning’, i.e., ‘Individual Learning’. The thirty questions in the PLSP survey (Reid 1984) can be classified into the following six categories:

1. *Visual Learning Style Preference*  
Learners usually enjoy reading and prefer to see the words that they are learning. They also like to learn by looking at pictures and flashcards.
2. *Tactile Learning Style Preference*  
Learners learn by touching and manipulating objects – this is known as ‘hands-on’ work.
3. *Auditory Learning Style Preference*  
Learners learn by listening. They enjoy conversations and the chance for interactions with others. They do not need to see words written down.
4. *Group Learning Style Preference*  
Learners prefer to work in smaller or bigger group.
5. *Kinesthetic Learning Style Preference*  
Learners like movement and need frequent breaks in desk activities.
6. *Individual Learning Style Preference*  
Learners prefer to work alone.

For this research, the researchers decided to use all the six categories. The researchers felt that it was important to identify the specific learning style preference for all the subjects. The reason for the six categories is to make sure that they have all the learning style differences revealed for their subjects.

Reid’s (1998: 164) details of ‘Self-Scoring Sheet for Perceptual Learning Style Preference’ (Table 1) was also illustrated. The scoring was completed by the researcher based on Reid’s instructions as follows:

Table 1: Self-Scoring Sheet for Perceptual Learning Style Preference

Strongly Agree(SA)	Agree (A)	Undecided (U)	Disagree (D)	Strongly Disagree (SD)
5	4	3	2	1

The scores that have been accumulated will then determine the learning style according to the following guidelines: *major* learning style preference (38-50 scoring), *minor* learning style preference (25-37 scoring) and *negligible* learning style preference (0-24 scoring).

The PLSP survey was translated into the Malay Language (Bahasa Melayu) to avoid subjects' confusion concerning the language, terms and failure to respond appropriately.

## **Observation/Recording**

Observation of each storyboard session was carried out by both the teacher and researcher being present for all sessions but more importantly by videotaping each pair of subjects while they were working. Conversations were transcribed quantitatively according to the Nature, Number and Balance of Interactions, and, qualitatively for the Content of the Discussion. The transcriptions for Nature, Number and Balance of Interactions were analysed for the number of interactions between the subjects in each pair. All transcripts were arranged according to the principles of vertical running text (Edwards 1993).

## **Selection of Transcripts**

All 50 transcripts were analysed. Each pair has 10 transcripts (= 50). All the individual transcripts have been extensively analysed according to Nature, Number and Balance of Interaction and Content of Discussion.

## **Findings and Discussion**

An item analysis for the learning style preference was carried out for the pre- and post-test. Its intention was to enable better understanding of how learners responded to each item individually. In this section, the learning style preferences were considered for the 10 subjects who participated in the research. The 10 subjects were Subjects A, B, C, D, E, F, G, H, I, and J.

Table 2 shows the learning preference for the ten subjects involved in the Imaginative Learning research. It can be seen that they were well-balanced with two or three major and between two and four minor

Table 2: Learning Style Preferences

Subjects	Visual	Tactile	Auditory	Group	Kinesthetic	Individual
A	32	40	36	40	40	32
B	32	40	32	40	28	32
C	32	40	36	40	40	28
D	40	40	32	40	36	28
E	32	40	40	40	36	24
F	36	40	32	40	32	32
G	32	40	36	40	40	32
H	32	40	32	40	28	32
I	32	40	36	40	40	28
J	40	40	32	40	36	28

NB 38+ = major preference; 25-37 = minor preference; 24- = negligible preference

preferences. Only one subject showed a negligible preference and that was a borderline score. It is possible, therefore, that these subjects were aware of their own leaning style preference because they were more open in their approaches to learning. Nevertheless, all subjects had major preferences for both tactile and group styles, which suggest their willingness to work on projects involving the use of a computer and doing this collaboratively with a partner. For all subjects but one, the individual preference was the lowest or joint lowest score.

The results in Table 2 illustrate that the 10 subjects were open to working on collaborative hands-on projects (100%). This result was similar to Reid’s research with 1300 students where her subjects preferred the tactile learning style preference (100%). Of the ten most popular items, the statement concerning the teacher giving instructions was the only one not concerned with tactile/kinesthetic/collaborative working. Although this is an item suggesting auditory learning style preference, it could be construed as a need for support rather than independence. In other words, they prefer the teacher tell them instruction rather than read the instructions themselves. In fact, out of 10 statements which ranked as the highest mean scores, 5 concerned working with others.

The results further suggested that 5 out of 10 statements from the lowest mean scores were related to the least popular style; the individual learning style preference. It is also important to recognise that subjects did

not prefer to work alone. This could possibly be due to lack of confidence to work alone and lack of confidence to speak in English in front of the class. The result was similar to Reid's findings, where none of her subjects had major learning style for the Individual Learning Style preference.

## **Content of Discussion of Five Pairs**

The transcripts were analysed according to the nature, number and balance of interactions and the content of discussions. It was found that:

- the numbers of interactions for all the five pairs increased while collaborating through Imaginative Learning Approach
- all pairs were willing to share ideas with peers through Imaginative Learning Approach

## **Implications to Teaching and Learning of English**

This new task has been introduced to motivate low attaining learners of autistic children in learning the language. The elements of collaboration and interactivity together with a more independent responsibility for their own work appear to have been successful. The concrete outcome of the Imaginative story, both their own and that of another pair, shows the value of the products of such a programme for those engaged in creating them. As Imaginative Learning is an interactive and collaborative learning experience this process has helped them in interactions with each other in the target language.

## **Conclusion**

It is hoped that the research has made an original contribution to the knowledge about the area of second language learning for the special needs children in the Malaysian school context. Despite the limitations above, the findings of this research have shown evidence of potential gains for the autistic low attaining students in learning English. It is also possible that the implications described would be appropriate to other learners in Malaysia. The research is of particular significance for the following reasons:

- This research has investigated an important area for special needs in Malaysia by utilising the Imaginative Learning in second language learning.
- It reveals a possible rationale for revision for educators in Malaysia to consider syllabus design for the special needs children.
- It provides a stepping stone in devising and revising the new curriculum for the special needs.

This research has provided useful data to support other studies reported in the literature that explored second language learning for the special needs. While more research always remains to be done, it is hoped that the results reported here will offer an original contribution in the area of teaching and learning English.

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