IDENTIFYING INDIVIDUAL DIFFERENCES AND LEARNING CHALLENGES AMONG CHILDREN OF SPECIAL NEEDS

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Abstract

The purpose of this study was to understand on how a teacher identified the individual differences and learning challenges among children of special needs in a special need school in Ipoh. This is a qualitative narrative study where primary data were collected from an experienced teacher in the school. Data were collected through an interview in order to obtain a comprehensive understanding of the matter under study. Ten students in the class were generally classified as Down Syndrome and some with hyperactivity. Different strategies and instructions were used especially in mapping out Individual Education Planning after consulting the parents or guardians involved. Simple games, employing the multisensory approaches and exercises were carried out to identify the students’ psychomotor development especially in gross and fine motor skills. Chewing soft jelly sweets were also used to help improve speech. ‘Time-out’ and Premack Principle were used by the teacher as an effective behavior control management. Among learning challenges faced by the teacher including speech and understanding of words by the students, cooperation from parents or guardians and getting students to learn and play in groups.

Keywords: Individual differences, learning challenges, Down Syndrome, ADHD.

Abstrak

Kajian ini bertujuan untuk mengetahui bagaimana seorang guru mengenal pasti perbezaan individu dan cabaran pembelajaran yang dihadapi dalam kalangan pelajar berkeperluan khas di sebuah sekolah pendidikan khas di Ipoh. Kajian ini merupakan satu kajian naratif kualitatif yang mana data primer diperoleh daripada seorang guru di sekolah tersebut. Data telah dikumpul melalui temubual untuk mendapatkan maklumat yang tepat dan menyeluruh. Sepuluh pelajar di dalam kelas merupakan pelajar-pelajar Down Sindrom dan beberapa antara mereka juga menunjukkan hiperaktiviti. Strategi dan pengajaran yang berbeza telah digunakan untuk merangka Rancangan Pengajaran Individu selepas perbincangan dengan ibu bapa atau penjaga pelajar-pelajar berkenaan. Permainan asas, pendekatan multi sensori dan senaman dijalankan untuk mengenal pasti
perkembangan psikomotor pelajar-pelajar terutamanya dalam perkembangan motor kasar dan motor halus. Selain itu, pengunyahan gula-gula jeli yang lembut telah digunakan untuk menambahbaik pertuturan. Untuk pengurusan tingkah laku yang berkesan, guru telah menggunakan teknik 'Time-out' dan prinsip Premack. Antara cabaran yang dihadapi oleh guru termasuklah pertuturan dan pemahaman perkataan yang digunakan oleh pelajar-pelajar, mendapatkan kerjasama daripada ibu bapa atau penjaga serta mendapatkan pelajar-pelajar belajar dan bermain dalam kumpulan.

**Kata Kunci:** Perbezaan individu, cabaran pembelajaran, Down Syndrome, ADHD.

**INTRODUCTION**

**Research Background**

This specific special needs school is run by Kiwanis Disability Information and Support Centre (KDISC) a Non-Government Organization (NGO) with the support of volunteers, the Welfare Department of Malaysia and the State Education Department of Perak. Although the school is classified as an NGO, its involvement and efforts in educating and training of children of special needs has exceeded thirty years.

This is a special school set up to teach special children, who are facing learning disabilities such as slow in learning due to Down Syndrome, Autism, Attention Deficit Hyperactivity Disorder (ADHD) and even Cerebral Palsy. Students here are taught how to live independently through learning skills such as simple personal management, basic cooking, cleaning and living skills.

The aim of this school is to help and provide the necessary skills to these special students so as to improve their lives by being able to live independently when they grow up. From the basic personal management skills, some of the pupils even managed to pursue further learning in simple carpentry skills, food catering and basic sewing skills.

**Statement of Problems**

Teachers who teach in this special school have faced many challenges as they need to face children with different learning disabilities in each class. They need to recognize and be aware of the individual differences in their abilities to learn even though majority of the students are generally classified as Down Syndrome students. It takes a lot of experiences, patience for the teachers to make teaching and learning interesting and possible in the class. The teaching processes in the classroom is also time consuming and need a lot of attention from the teacher in
charge. This is the main concern of the issues that need to be looked into. The researcher needs to probe a deep understanding into the current issues of concern. The teachers in the school are required to have adequate knowledge, experience and specific skills to accommodate and overcome the challenges of teaching in the class.

**Research Objectives**

The purpose of this narrative study was to understand on how a teacher deals with individual differences and learning challenges in a special needs school in Ipoh. At this stage in the research, the individual differences and learning challenges will be generally defined as:
1. Identifying the individual differences among the students
2. Strategies employed by the teacher to address the students’ learning needs.
3. The learning challenges faced by the teacher.

**Significance of the study**

The information obtained from the key informant that was the teacher is relevant and supportive to help all other teachers especially teachers who need to attend to special need students in an inclusive classroom or even in the normal classroom. The experiences, information and knowledge obtained can be useful in improving teaching practices especially regarding the special needs children in learning.

**LITERATURE REVIEW**

Children with learning disabilities demonstrate impairments in one or more psychological processes related to learning despite having average to above-average intelligence. These children have unexpectedly low academic achievement or at times average to above-average achievement attained only at the expense of unrealistically high levels of effort and/or educational support, and no other diagnosed problem or disability, such as an intellectual disability (developmental delay). Learning disabilities range in severity and interferes with the acquisition and use of oral language (e.g., listening, speaking, understanding), reading (e.g., decoding, comprehension), written language (e.g., spelling, written expression), and/or mathematics (e.g., computation, problem solving). Learning disabilities may also cause difficulties with organizational skills, social perception, and social interaction (Eggen & Kauchak, 2004). Improving outcomes for students with learning disabilities is a critical and challenging task for educators. At this time, there is no one intervention or program that is effective for all students with learning disabilities.
Learning disabilities focused in this study would be children with Down Syndrome and ADHD. Theoretically and generally, Down Syndrome (DS) or also named as Trisomy 21, is a genetic disorder caused by the presence of all or part of an extra 21\textsuperscript{st} chromosome. This special abnormality in the gene was first found by John Langdon Down in 1886. Down Syndrome children have delayed cognitive and social development. Some children exhibit only a few characteristics, others exhibit many. The most common features associated with Down Syndrome includes:

- Low muscle tone (babies appear "floppy")
- Flat facial features with a small nose
- Upward slant to the eyes
- Small skin folds on the inner corner of the eyes
- Small, abnormally shaped ears
- Single deep crease across the center of the palm
- Hyper flexibility (excessive ability to extend joints)
- Fifth finger has only one flexion furrow instead of two
- Extra space between the big toe and the second toe
- Enlarged tongue that tends to stick out

They are more than twice as likely to exhibit behavioral and emotional problems such as stubbornness, oppositional behavior, compulsivity, inattention, difficulties concentrating, attention seeking and impulsivity. Down Syndrome children may not follow the traditional pattern of cognitive development due to a physiological defect that is characteristic of all individuals with mental retardation (Omrod, 2013)

Attention deficit hyperactivity disorder (ADHD) is a disability in which children consistently show one or more of the following characteristics over a period of time: (1) inattention, (2) hyperactivity, and (3) impulsivity. Woolfolk (2012) explains that ADHD is typically associated with activity and attentional difficulties that start before the age of seven. Children who are inattentive have difficulty focusing on any one thing and might become bored with a task after only a few minutes. They often ignore details, make careless errors, and lose or forget things. These students have difficulty following instructions, completing activities, and staying organized. Children who are hyperactive show high levels of physical activity and almost always seem to be in motion. They often fidget and squirm and move about the classroom at inappropriate times. They experience difficulties working or playing quietly and are often described as talking constantly and excessively.

For teachers to handle children with ADHD effectively, behavior modification such as contingency management programs can be implemented. Positive social reinforcement, feedback in the form of a point accrual system, token programs for academic performance and assertive discipline proved to be effective for ADHD
children. Findings from Asher (1989) proves that training with the use of self-instructional methods, faded rehearsal and direct discovery on all ADHD children demonstrated significant gains and maintenance behavioral ratings which included attention, hyperactivity, social skills and oppositional behavior over a 22 week training and follow-up period. Logical consequences proved to be an effective behavior management to ADHD children too as stated in Asher (1989).

Karaaslan and Mahoney (2013) relates relationship focused (RF) intervention attempts to enhance the development and social emotional functioning of young children with Down Syndrome delays and disabilities by encouraging parents or other primary caregivers to engage in highly responsive interactions with their children. This approach to developmental intervention is derived from parenting studies that indicate parental responsiveness is one of the major social environmental influences on the development of young children. Several studies have reported that RF interventions can be effective at promoting children’s cognitive, communicative, and social emotional functioning. Karaaslan and Mahoney (2013) also uses responsive teaching (RT) with children with Down syndrome (DS) in their research. Responsive Teaching is a manualized developmental intervention that is designed to promote children’s cognitive, communicative, and social emotional functioning. Similar to other RF interventions, RT encourages parents to use the responsive interaction (RI) strategies as a means for increasing their level of responsiveness with their children. RT strategies are suggestions for modifying the various interactive dimensions of responsive behavior. As a result, RT encourages parents to model behaviors and communications that are matched to children’s current level of functioning and discourages parents from using directive instructional methods such as prompting, shaping, and reinforcing extrinsically to produce these behaviors. Rather, parents are encouraged to use RI strategies to increase their children’s use of the engagement, or pivotal, behaviors that are purported to be the foundations for developmental learning. Findings from the research proves that RT was effective at encouraging mothers to increase their responsiveness and decrease their achievement/directiveness. Children in the RT group made significant increases in their interactive engagement compared to control group children. These increases in engagement were highly correlated with their mothers’ level of responsiveness, suggesting that one of the immediate effects of RT is to encourage and support children to become more active participants in interactions with their parents.

On teaching Mathematics, Newman (1994) uses Multisensory approach (The Touch Math Method) adapting from dot notation system made by Kramer and Krug in 1973 to teach numerical. Analysis of the results of this intervention indicate that all the Down Syndrome students improved and reached the criteria set for single digit addition with addenda up to 5.
METHODOLOGY

Research Design

This qualitative study employed narrative research approach. It began with the experiences as expressed in lived and told stories of individuals (Creswell, 2013). The procedures to undertaking this research consisted of focusing on studying one individual, gathering data through the collection of their stories, reporting individual experiences and chronologically ordering the meaning of those experiences. Narrative stories were gathered through many different forms of data as in this study employed interview as the primary focus of data collection. The data were analyzed based on the stories and experiences shared by the teacher.

Research Sample

A purposeful sampling was used as only a teacher in a special needs school in Ipoh was specifically identified as the respondent. With twenty six years of teaching experience in the special needs school, the selected teacher can purposefully inform an understanding of the research problem and the issue of concern. The teacher was identified as the key informant (primary source of information). Only one teacher in the school was involved as a case for collecting data because of the suitability of studying interpretative and subjective aspects of the issue under research.

Research Instrument

An interview was carried out as information was gathered based on the respondent’s experiences, impressions and interaction with the special needs children in the classroom. Using an interview guide, the questions of the interview was developed. The questions asked were the sub questions in the research study phrased in way that the teacher can understand. References of documents such as the teacher’s record on students’ progress were also carried out in this research.

Data Collection Procedure

An appointment was made with the administrator who currently acts as the principal of the Special Needs School. The objective and also the findings of the research were spelt out to the administrator. The permission was obtained and a date was set for the interview. The respondent is a teacher who has twenty-six years of teaching experience and a particular class under the care of that teacher was identified. The teacher also voluntarily agreed to be interviewed regarding her experiences. A letter of recommendation from the university to conduct the interview was also given. In this aspect, the interview was conducted ethically. All information regarding the involved person was treated with the highest possible
confidentiality, and care was taken to protect the identity of the respondent and all the children concerned from the public (a requirement for confidentiality). The interview was conducted and recorded in the classroom. While the interview was being carried out, the students in the classroom were taken care of by the teacher’s assistant. The researcher was able to see for himself the actual situation in the classroom. Some references to certain students were made by the respondent regarding to their problems or the special needs as discussed or referred to in the interview. The recorded interview was later transcribed and analyzed as according to the specific questions in the research purpose. Observation of the situation, small talks with students and reference of some documents regarding the students’ progress report were also carried out.

FINDINGS AND DISCUSSION

Findings will be discussed following the research purpose statement as stated in the research objectives:

Identifying the individual differences among students with special needs in the class.

The children were from preschool age of five to six years old. They were being placed as preschoolers in the school. When the children were brought by the parents or guardians for enrolment in this school, the Senior Assistant in the school would identify the children’s disabilities through:-

(i) Medical reports/ recommendation from doctors regarding the students.

(ii) The physical appearance that is the growth size and also some physical features their facial appearances, postures, psychomotor abilities, bodily movements and also their behavior.

(iii) The respondent/teacher interviewed the parents or guardians regarding their children abilities and capabilities. The teacher also talked to the children to find out their speech abilities, visual abilities and also some simple word or graphic recognition of each student.

(iv) Besides observing the children’s behavior in the classroom, the teacher also observed other forms of disabilities which were identified in the medical reports or said by their parents. A student may be diagnosed as having Down Syndrome but may also inhibit some hyperactivity. The teacher found that each student in the class varies in their severity of disabilities though all of the ten students in the class are generally classified as Down Syndrome.
(v) The teacher also observed for other physical abnormalities in each child especially features of the students such as the flat facial features, having a small nose, an upward slant to the eyes, small skin folds on the inner corner of the eyes, small abnormally shaped ears, single deep crease across the center of the palm and the fifth finger has only one flexion furrow instead of two. This features observed is in accordance to the description by Newman (1994).

Strategies employed by the teacher to address the students’ learning needs

The main strategy used by the teacher is by interviewing the parents or guardians regarding the needs or expectations from them of their children. With the information obtained, the Individual Education Planning also known as Rancangan Pengajaran Individu (RPI) in Bahasa Melayu for that particular child is mapped out by the teacher.

Huraian Sukatan Pendidikan Khas Bermasalah Pembelajaran which is an elaborated syllabus for special education learning disabilities and Robert Deller’s book was referred when the teacher prepared the RPI. Ideas on appropriate activities carried out for the students were generated. The strategies used were very individualistic and differs from one student to another.

Some simple games and exercises were also carried out to identify students’ psychomotor abilities. Students with motor delays were evaluated with tests of in-hand manipulation, tactile defensiveness, stereo diagnosis, grasping strength, and fine motor skills. Games such as throwing and catching balls and fixing three dimensional solid shapes were used by the respondent. These activities were used to improve the students’ sensorimotor skills. Researches (Waldron, 1996; Snell & Brown, 2000) shows that the performance of complex skills can be influenced by sensations arising from the things the performer looks at, sensations from the muscles that are involved in the movement itself, and stimuli received through other sensory organs. Fine motor control is the coordination of muscles, bones, and nerves to produce small, precise movements. An example of fine motor control is picking up a small item with the index finger and thumb. Whereas gross motor skill are like crawling, jumping and running.

Problems of the brain, spinal cord, peripheral nerves, muscles, or joints may all decrease fine motor control. The amount of fine motor control in children is used to determine the child's developmental age. Children developed gross and fine motor skills over time, by practicing and being taught. For improvement in the students’ gross and fine motor skills, the teacher took the children out to draw on the sand. The teacher has also tried to practice techniques provided by Sousa (2007) that is
by setting a specific time for specific tasks and also using jelly sweets as reinforcements.

For students who are also slow in their speech, the teacher would ask the student to imitate her mouth movements to produce the same sound. She often holds the student’s head in her hands to encourage them to make certain sounds or words. She would further ask them to make different sounds such as ‘ah, ah, ah’, ‘boo, boo, boo’, ‘ping, ping, ping’ in order to improve the jaw and tongue muscles.

The teacher also used soft jelly sweets as incentives to attract and motivate her students to respond to her teaching and requests. The soft jelly is also another therapy used by the respondent to help improve the students’ speech. According to her, when the students’ are munching the soft jelly sweets, they are actually indirectly exercising their oral muscles and tongue. When their oral muscles and tongue are strengthened and agile, the students can speak better.

The teacher also adapted the ‘learning is fun’ approach by letting students to touch hidden objects inside a bag to guess the name of the objects. Besides that, the teacher also took the students out to play in the sand pit, letting them to write and draw things using their fingers. Besides using various strategies to teach, the teacher also needs to manage students who misbehave in the classroom. As for behavioural control, the respondent used “time-out” in a dark room as punishment. The teacher would be together with the student in the room. She would also ban any student who misbehaves by not letting him/her to watch TV or play computer games, using the Premack Principle. The respondent also rewards the students with tokens like smiley face stickers, stars and soft jelly sweets and also computer games other than words of praises as positive reinforcement.

**The learning challenges faced by the teacher**

There should be 10 students in the class but only seven were present on the day of the interview. All the students in this Year One class are basically Down Syndrome children. One of boys has Down Syndrome with eye sight problem, another Down Syndrome boy has Hyperactivity and another Down Syndrome boy has deformed feet.

The teacher has successfully educated and trained her students in some self-management skills such as toilet training, socializing and playing with friends. They also improved in their gross and fine motor skills such as being able to fix building blocks. In fact, all of them also have shown improvement in their speech. One boy has proven to his father by being able to help him to arrange his father’s shoes on the shoe rack at home. The children have become friendlier and more responsive to the teacher now. In fact, many of her previous students who are older in age can at times help the teacher by holding the younger one’s hands during
walks. Meanwhile, senior students were later groomed in living skills like basic carpentry, sewing and food packaging. They have managed to find jobs in industries located in Bercham and Jalan Kuala Kangsar. The students have indeed gained from their schooling in attaining skills, displayed good behavior, knowledge and attitude that resulted of them to get employed by some employers.

However, there were also many challenges that need to be faced by the teacher, they are:

(i) Speech and understanding of words.
In this aspect, the teacher incorporated the sound of the words with expressions or hand signs known as ‘Makaton’. Makaton is a language program using signs and symbols to help people communicate. It is designed to support the spoken language with special signs and symbols. This type of expression was also taught to their parents so that the pupils can communicate with their parents or guardians at home. It is quite a challenging task for most parents or guardians to pick up the ‘Makaton’ language.

(ii) Cooperation from parents or guardians.
The respondent has also taken up the responsibility to teach the parents and guardians regarding some skills of communicating with their children. For example, they must use hand-signs and words if the children cannot understand them. They need to use the hand-signs and words at home. Parents must enhance their children’s learning at home just like what the teacher had taught them in school.

(iii) Learning and playing in groups
The teacher also faced challenges of getting the students to learn and play as a group. There are students who do not like to socialize at all especially at the beginning of their enrolment. A particular boy with hyperactivity needed some incentives like rolling a ball or bowling in order to stay focused on what the teacher was teaching or asking him to do. The teacher needed to lure him with ball rolling/bowling and electronic games. With such incentives, that boy learned to take instructions from the teacher and learned to mingle with others during lesson time.

Conclusion
The findings from the study show that each individual student is different from the other in their severity of learning disabilities. The characteristics of Down Syndrome and ADHD students were observed and was found to be similar as in the theory of special needs children. Though the students in this class are generally categorized as Down Syndrome as diagnosed and confirmed by doctors, many of the students have more disabilities that may not be detected by the doctors due to
their tender age of development or growth. It takes an experienced and knowledgeable teacher to identify these special disabilities among the children. The strategies employed by the teacher are really good and conform to the techniques and research done by other researchers such as Newman (1994) in her research which uses the Multisensory approach (The Touch Math Method) adapting from the dot notation system made by Kramer and Krug in 1973 to teach numerical skills. In addition, the usage of bowling by the respondent is in line with Asher (1989) who suggested using self-instructional methods like fixing and arranging building blocks and balls. Suggestions by Karaaslan and Mahoney (2013) using the Relationship focused (RF) intervention attempts to enhance the development and social emotional functioning of young children with delays and disabilities by encouraging parents or other primary caregivers to engage in highly responsive interactions with their children was also being practiced by the teacher. The strategies suggested by Sousa (2007) such as displaying rules and making sure students understand them, calling attention to any schedule by clapping hands, setting specific times for specific tasks were also applied by the teacher. These strategies and techniques indeed helped students in learning, and improving their self behavior management. Such improvements gained praises from the parents.

**Suggestion**

More in depth interviews can be conducted as in a case study research can be carried out on special needs teachers for more in-depth information into assisting children of special needs and to know better what the challenges that they have to face and on how best to solve them.

**Research Limitation**

The research consisted of only one teacher as the respondent. This narrative study is not possible to make generalizations about the larger social context. These findings can only be used as an evidence base of information to explore further to more in-depth and larger studies.

**Research Implication**

Teachers need to be aware and adhere to individual differences of students of special needs in the classroom. Knowing the learning challenge faced by teachers in the special needs school, different effective strategies and methods can be used and adapted to help children with special needs to learn.
REFERENCES


