EARLY DETECTION OF LANGUAGE DIFFICULTIES IN

YOUNG MALAY-BACKGROUND CHILDREN:

IMPLICATIONS FOR SCHOOL PREPARATION

By

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It is my sincere prayer that this research would provide further help to people with disabilities and their families as they face the many challenges in school preparation. Towards that end, every travail and effort would then have been worthwhile.

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ABSTRAK

Perolehan bahasa mungkin satu-satunya perkembangan paling asas diperoleh oleh kanak-kanak bagi menyediakan diri untuk pendidikan formal. Biasanya, kanak-kanak memperolehi bahasa dengan mudah. Walaubagaimanapun, kadang-kadang sesuatu kesilapan berlaku, sistem sokongan sangat penting untuk menolong individu dan keluarga apabila masalah itu dijangka. Apabila diketahui adanya risiko kebantutan atau masalah dalam perkembangan bahasa (contohnya, bayi yang dilahirkan Sindrom Down) keluarga akan diberi panduan dalam interaksi dengan bayi mereka, jadi potensi optimum bayi boleh disedari.

Kesinambungan untuk perkembangan bahasa pragmatik bayi berkembang maju dari perkongsian perhatian dengan orang dewasa (contohnya, kedua-dua melihat pada permainan bergerak yang sama), mengikut apa yang orang dewasa perhatikan, (contohnya, orang dewasa menunjuk gambar dalam buku) dan mengarahkan perhatian orang dewasa (contohnya, kanak-kanak menunjuk ke arah pejalan kaki).

Oleh itu, kajian ini bertumpu kepada kepentingan kemahiran pra-verbal yang mempengaruhi perkembangan kemahiran verbal kemudian hari. Kajian ini berfokus kepada: Bilakah penggunaan bahasa pra-verbal yang awal muncul pada bayi normal? Adakah terdapat sebarang perbezaan pencapaian antara kanak-kanak normal dengan kanak-kanak yang bermasalah dalam bidang pragmatik?

Kajian perintis ini bertumpu kepada pra-verbal tahap tinggi, kemahiran pragmatik untuk menuding, memberi dan menunjuk. ESCS (Early Social Communication Scales) telah dipilih sebagai alat ujian utama untuk diperhatikan, dalam tiga tempoh, interaksi antara pengkaji dengan setiap satu daripada tujuh kanak-kanak yang normal, tujuh kanak-kanak Sindrom Down dan tujuh kanak-kanak Autisme.

Kemahiran-kemahiran yang disebut sebelum ini wujud antara umur 10 – 16 bulan. Manakala perbezaan dan kebantutan dicatat antara kanak-kanak normal dengan kanak-kanak istimewa.

Cadangan-cadangan diberi untuk membantu mengesan kebantutan awal pragmatik pada kanak-kanak dengan keperluan khas dan mereka yang berisiko bagi menyediakan mereka satu permulaan komunikasi yang lebih baik dan menyediakan mereka peluang untuk alam persekolahan yang lebih baik.

ABSTRACT

Language acquisition perhaps is the single. most fundamental development acquired by a child to prepare him for formal education. A child apparently and *usually* acquires his language(s) with ease. However, when sometimes something goes wrong it is imperative that a support system is in place to provide help to the individual and family as soon as the problem is suspected. When there are known at risks for delays or disorders in language development (e.g., a baby born with Down syndrome) then from birth onwards the family can be guided in their interaction with their infant so that his optimal potential can be realized.

The continuum for pragmatic language development is naturally infants progressed from sharing attention with the adult (e.g., both looking at the same activated toy) to following what the adult was attending to (e.g., adult points to pictures in the book) and finally to directing the adults' attention (e.g., child points to person walking by).

This research thus aimed to detail the emergence of essential pre-verbal skills purported to effect the development of later verbal skills. The research foci were; when did these crucial and early non-verbal usages of language emerge in typically developing infants? And then were there any differences between the performances of typically developing children with the performances of children who have disabilities in the area of pragmatics?

This pioneer research concentrated on the higher-level non-verbal, pragmatic skills of pointing, giving and showing. The Early Social Communication Scales (ESCS) was chosen as the main testing instrument to observe, on three occasions, interactions

between the researcher and each population of seven typically developing children; seven children with Down syndrome and seven children with Autism spectrum disorder. The aforementioned skills were documented as emerging between 10 – 16 months of age while differences and delays were noted amongst and between the typically developing children and the older-aged special needs children.

Recommendations were given to help in the early detection of pragmatic delays in special needs children along with those who may be at risk for pragmatic delays thus providing for them the necessary head start towards better communication and enhancing their chances of better school transition.

CHAPTER ONE

NATURE AND SCOPE OF THE PROBLEM

1.0   Background to The Study

1.1   The Importance of Language Acquisition

Language acquisition, essential to all areas of development cannot be overstated. Language learning and language acquisition provides the foundation for all areas of academic instruction (Tiegerman-Farber, 1995). Through language, a child gained information, tested his ideas about the world, asked questions, related imaginative and creative experiences, grasped values and attitudes as well as expressed feelings about self and others. Through language, he released emotional tension, related with adults and peers, role-played, and developed his self-image and awareness of others' feelings. He moved beyond the egocentric stage to meaningful relationships with others and his Creator. In other words, he developed intellectually, socially, emotionally and spiritually. It was probably the single most significant tool that a child acquired. Capute, Palmer, Shapiro (1987) purported that "language is the single best predictor of future cognition in a young child" (as cited in Rossetti 1996, p. 143). In fact, researchers understand that the most significant developmental occurrence between birth and four years of age was the acquisition of the language system (Tiegerman-Farber, 1995).

According to Tiegerman-Farber (1995), if functional language was not acquired by the age of five, the probability for normal language decreased dramatically for each six months of life. After age eight, there was almost no chance for the child to acquire a normal language system (Ibid, p. 7). In the area of linguistics, especially those who purported the innatist theory of language acquisition also suggested a critical period for language learning expiring sometime during early adolescence. Usually by puberty, if the

individual had not acquired a first language, doing so would become difficult or even impossible (Berko-Gleason & Ratner, 1998).

Likewise, this important link between communicative competence and school performance cannot be overemphasized. In fact, Rossetti (1996) claimed, "age-appropriate communication skill is the single best predictor of school performance" (p. 125). It was not surprising that research literature emphasized then that the earlier identification and intervention for children with language delays or disorders, developmental delays and those at high-risk for any delays was provided the better would be their chances of acquiring language and transitioning into the relevant school environment.

1.1.1 Disorders of Communication

Disorders of communication are the most common developmental disability in children, affecting 3% - 15% of the population depending upon how broad or narrow one's definition of language delay. Roughly 1% of the pediatric population in children will experience a severe language delay. Within the 3- to 5-year range of children with disabilities, 70% have speech and language impairments (Prizant, Wetherby, & Roberts, 1993 as cited in Rossetti, 1996, p. 129).

Communicative skills appeared to be the developmental realm that consistently divides low-risk from high-risk or no-risk children, with greatest frequency, regardless of the cause for risk. Some of the known risk factors according to Lockwood (1994) for the development of communication disorders were: low birth weight (less than 1,500 g); severe jaundice, hearing loss in family attributed to hereditary etiology; ototoxic drugs;

perinatal infections like rubella; a family history of speech problems or learning disabilities (child's immediate family or first-degree relative); and other birth defects (chromosomal syndrome, hydrocephalus, cleft lip/palate etc) (as cited and adapted by Rossetti, 1996, p. 144). There also existed already known established risk children for developmental delay (e.g., children with sensory disorders, atypical developmental disorders, exposed to severe toxins etc). These children who were at risk for communication delay or already known to have communication delay were also at high risk for developing learning problems once they reached school age.

In the United States of America, Public Law 99-457, (1986) required children with disabilities to be given IEP (Individualized Education Plan) services as young as three years of age to five years old (Tiergerman-Farber, 1995). Should the need arise; they and their family were helped even from birth of their disabled child under the IFSP (Individualized Family Service Plan) (Ibid.). Some states in the U.S. have begun to provide services for those infants and toddlers who were at high-risk for developmental delay due to different biological or environmental factors (Rossetti, 1996).

1.2   Context of The Problem

1.2.1   The Uniqueness of Malaysia

When considering Malaysia's situation, the most outstanding characteristic was its unique population that provided a primary example of a multi-racial society. Based on a 1991 census, Malaysia has 64 population groups with Malays and other Bumiputera being the predominant grouping followed by Chinese and then Indians being the larger minority groupings resulting in a total population of 17,567 (Hashim Isa, 1998, p. 66).

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Along with this very colorful ethnic mix, there existed a mosaic of languages at the very least, the same number as the 64 population groupings (Isa. 1998). Bahasa Melayu, was the official language of the country, for over half of the population of Malaysia or for the Malays, some Chinese, known as Babas, and some Indians called the Malacca Chetty (Wong & Thambyrajah, 1991). For this group, however, there existed no formal pragmatic language assessment for early detection of language delays in their primary language. Therefore, for this growing Malaysian population, one could only estimate the number of children who would have significant language-use difficulties.

1.2.2 Malaysia's Challenges

Under Malaysia's present educational system, although it was encouraged that all children start school at the age of six years or more, there was no law requiring that they do so. Waiting until the child was in primary one seriously hindered the identification and treatment of children with language problems. Efforts were being made to help the school-age child with learning difficulties, for example, the provision of special classes within public schools, inclusion opportunities, and special schools run by non-governmental agencies. These facilities, for the most part, were catering for the child above six years of age. Identification and therapy must begin before this time to ensure optimal chance of habilitation and school readiness.

Furthermore, children growing up in Malaysia cope with more than one language, as both Bahasa Melayu and English were compulsory subjects in the school system. Under normal circumstances, bilingualism will enrich one's life. However, based on the researcher's experience, coping with more than one language when a child was already experiencing difficulty in his primary language could confuse him and slow down the

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rate of first language acquisition. This was significant to the researcher as children with language delay or disorders would benefit from 1) starting earlier in the educational system (i.e., pre-school settings); 2) repeating a grade or level (if necessary); and 3) concentrating on one language until a good foundation has been achieved.

The problems were further compounded by the fact that even if a serious learning problem or learning disability was observed, there was no data base collection of the number of persons with learning difficulties here in Malaysia, except for the voluntary registration of disabled people with the Welfare Department. According to the Department of Statistics, Malaysia the 1980 Census resulted in 0.8 % of the populations in Malaysia were disabled. In an unpublished report of the 1980 Census the estimated number of disabled were 106,798 persons but only 84,120 have been registered as at August 31, 1999 (Rahman, 1999). With limited incentives or benefits by registering (coupled with the stigma associated with having a differently able child), it was difficult to know the true situation of how many persons with learning difficulties, disabilities or delays exist. This would also lead to insufficient educational services as well as lack of trained teachers, speech and language pathologists and audiologists to adequately provide services to children with language delays or disorders and their families.

Another area of concern was the current work force of trained personnel. According to Sandra Van Dort, Department of Audiology and Speech Sciences, Universiti Kebangsaan Malaysia (Kuala Lumpur) there were only 60 qualified speech and language pathologists in Malaysia (Chapman & Khoo, Sunday Star's Education section, December 16, 2001). This number was still grossly inadequate to cope with the ever-growing

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demands for aural, speech and language therapy especially since the majority of the above were based in the Klang Valley (Ibid.).

In the area of special education, there are several specialist teachers' training institutes as well as a few attempts by some local universities of late to train teachers for the slow learner, visually and hearing impaired populations, however, these were still too few to meet the needs.

1.3 Statement of The Problem

To date there was no documentation available in Malaysia for Malay-background children experiencing language delays or disorders in the area of pragmatics. During the child's early stage of language learning when he was at the pre-linguistic stage, it was important to observe how he communicated (i.e., gestural, nonverbal, looking, pointing, vocalizing), how often did he communicate and under what circumstances did he communicate or in other words, the pragmatics of language.

Development of pragmatics occurs along a continuum. This research documented specific key pragmatic skilled areas, such as, the appearance of requesting behavior, joint attention and social interaction as they emerged in typically developing children and compared their performance with special needs populations' of children with Down syndrome or autistic characteristics in the same above areas.

1.4 Research Objectives

• To identify the onset of specific, early pragmatic skills in pre-linguistic typically developing children within the Malaysian context.

- To describe the differences between the special needs population and the typically developing children in specific pragmatic language skills within the Malaysian context.

- To describe the differences within the population of children with special needs in specific pragmatic language skills within the Malaysian context.

1.5 Research Questions

- When did these specific, early pragmatic milestones emerge in the typically developing Malay background child?

- What were the differences in the development of these pragmatic milestones for the Malay background child with special needs in comparison to the typically developing child's performance?

- What were the differences in the pragmatic performances between children with Down syndrome and the children with Autism spectrum disorders?

1.6 Significance of The Study

1.6 1 The Earlier the Better

When intervention was conducted as early as possible, the chances were better for the child to develop a normal language system. Early assessment played a significant role in detecting infants and young children who showed early evidence of handicapping conditions and/or significant delays, so that intervention or treatment was provided when it was most likely to be effective. The earlier this initiative of intervention took place, the smaller the educational problems over time, the less severe the child's difficulties would be and the greater would be his integration or inclusion into the educational sphere.

The researcher quoted a study undertaken in the UK, which proposed that specific early communicative behaviors predicted a child's subsequent linguistic development. Liane Smith concluded that certain behaviors at 10 months reliably and effectively predicted language attainment scores at age two. These specific behaviors included key pragmatic skills such as initiating interactions, sharing experiences (joint attention), seeking assistance (requesting) and providing interactive feedback (social interaction) (Smith, 1998). If such a reliable early screening procedure were given to alert primary healthcare services, so that monitoring of high risk infants would be possible at an early age, then subsequently more appropriate referrals would be made to speech and language pathologists with intervention taking place as early as possible.

1.6.2   No Previous Research Available

As has been stated, in Malaysia, no documentation of the emergence of key stepping stones in children's early use of their nonverbal gestural communication skills has been made. There was also as yet no confirmation of the differences that existed between typically developing children and children with disabilities in this domain of pragmatics or use of language. Therefore research was vital in order to have assessment measures available to detect at-risk or established risk children for communication delay / disorder in Malaysia.

1.7   Limitations of The Study

- The sampling was restricted to the population of Penang with small numbers of children tested per category. The mental age was not directly tested.

• There could have been taboos or cultural faux pas that the researcher was not aware of which could affect the testing situation. This was a limitation for the researcher, being a non-Malaysian.

1.8   Definition of Terms Used in This Study

Typically Developing Children: Children who are developing according to what is known as normal.

Autism Spectrum Disorder: a widely used term that describes a large and diverse group of children who have difficulties in social interaction, play and communication. Specifically, autism then has an onset before three years of age with delay or abnormal function in at least one of: social interaction, language for social communication, symbolic or imaginative play (Trevarthen, Aitken, Papoudi & Roberts, 1998).

Down Syndrome: a chromosomal abnormality occurring once in about 800 – 1000 live births. Some of the characteristics included: low muscle tone; flat facial profile; upward slant to the eyes; abnormal shape of the ear; hyper-flexibility; and an enlarged tongue (National Down Syndrome Society, New York, NY).

Communication: expresses needs, thoughts and ideas to make something happen. It could involve language, speech, sounds, gestures, facial expressions and body movements.

Speech: is the most common form of expressing language by the physical act of making the sounds correctly and using good rhythm (intonation, stress, voice quality etc).

Language: is a system or code of arbitrary symbols used for human communication. These symbols represented meaning and the rules that governed that code. Furthermore, it involves understanding words, signs, gestures or symbols and being able to use these to communicate thoughts, ideas and concepts in a systematic way.

Language Disorder: is an impairment or deviant development of comprehension and/or use of a spoken, written, and/or other symbol system. The disorder may involve (1) the form of language (phonologic, morphologic, and syntactic systems), and/or (2) the content of language (semantic system), and/or (3) the function of language in communication (pragmatic system) in any combination [Smiley & Goldstein (1998) taken from the American Speech-Language-Hearing Association (1982) definition.]

Language Delay: is a developmental delay in so far that the language development was normal in all ways (content, form and use) only that it began later than was expected and proceeded more slowly than expected (Lahey, 1988). Thus the child used the same forms to talk about the same ideas in the same contexts and for the same purposes of the typically developing child, the only difference being the rate of development.

Pragmatics: according to Bates (1974), one of the early pioneers in this field, said simply, "pragmatics refers to the study of the use of language in context, by real speakers and hearers in real situations".

Pre-linguistic Communication: referred to that period of development before a child has a linguistic system for acquiring language.

Social Interaction Skills: concerned the use of eye contact, gestures and affective (emotional) signals to elicit and maintain turn taking (Mundy & Gomes, 1997 p 114), i.e., a toddler smiling, making eye contact, showing an open hands gesture to indicate his turn in a catch-the-ball game etc.

Requesting Skills or Behavior Regulation: concerned the use of gestures and eye contact to direct attention and evoke help in obtaining an object or event (Ibid.) (e.g., giving a wind-up toy while making eye contact with an adult in order to get help in winding it up).

Joint Attention Skills: similar to requesting skills except that the child was directing the adult's attention with the purpose of sharing the experience of an object or an event with him and not to obtain help from him (Ibid.).

1.9   Conclusion

Investigation into the domains of early nonverbal communication behavior (pragmatics) did yield significant information to lead one to suspect a child at risk for a language delay / disorder and did identify a child as having an established risk for communication disorder and/or developmental delay.

Therefore, in order for early identification and mediation of language disordered children/at-risk children, it was imperative that this research focused on the early use of communication in the form of requesting, joint attention and social interaction in the most natural context and at the earliest possible age. These key pragmatic developmental

skills have been targeted because they reflected early nonverbal communicative skills that were particularly linked to early language development.

In addition, the researcher presented three populations who underwent this investigation in order to compare the performances of typically developing children with special needs children. The different pragmatic profiles of these populations have shed further understanding to the linkage between early language development and nonverbal communication. This research has been instrumental in drawing up guidelines to encourage early identification and intervention of children with language-use difficulties to help ensure their appropriate school preparation and placement.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0   Chapter Preview

This chapter began with an overview of particularly relevant language learning models including the most common views of the nativist versus behaviorist controversy; the psycholinguistic theory; the classical view; the cognitive theory; the social interventionist theory and a relatively new theory known as the connectionist model. Next the literature review featured a brief look at the past and current developments in the field of pragmatics. Crucial issues related to pragmatics and the links between pre-linguistic communication and language development and their relationship to developmental disabilities were also explained. Normal language development followed along with early pragmatic skills from birth to 12 months and language development of children with Down syndrome and Autism spectrum disorders. Finally literature on the significance and reliability of parent reporting measures such as the MacArthur Communicative Development Inventories (CDI) concluded this chapter, as this research utilised one of the MacArthur Inventories and one parent interview measure.

2.1   Review of Related Theoretical Literature on Language Learning Models

2.1.1   Introduction

How did the typically developing child learn language? How did the child with special needs differ from the typically developing child when learning to communicate? These questions have no easy answers. Much variability in linguistic acquisition existed within both the typically developing child and the child who was differently able. Decades of research have invested time and effort in order to understand the dynamics of child

language acquisition. This research was not made any easier by the fact that children learned language rapidly, within only a few years.

Consider all that was involved in learning a language. First one must recognize the sound system of the language; the rules used in combining sounds into words; and that words represent objects, actions, and relationships from everyday experience. Then, one must use specific rules to combine words into sentences to express thoughts; as well as apply rules appropriately in the various usage's of language such as to get something, to comment, to convince; to ask for information or clarification and for social niceties, such as greetings.

There seemed to be similarities across languages of what was learned early or late. For example Berko Gleason and Ratner (1998) cited that first words were similar in phonetic form and meaning, even two word combinations had similarities in thought and intention, such as, phrases containing negation, recurrence and nonexistent type words. Furthermore, across languages there appeared to be a predictable sequence of what was learned first and so on (e.g., syntactic structures). Language learning theories must also account for why and how children made mistakes along with how input effects their learning.

2.1.2 Nativist Versus Behaviorist

In times past, language learning was always looked at from either the nativist or the behaviorist stance. Briefly stated, the nativists believe that the human brain was designed to learn language and that there were inborn mechanisms that made this possible. The principles of language therefore were preprogrammed. Although primarily focused on

biological factors (left hemisphere of the brain being the center for language), nativists would acknowledge that both genetics and the environment played a part in developing the brain (Smiley & Goldstein, 1998, p 21).

On the other hand, the behaviorists or learning theorists focused on the processes of acquisition and not on the linguistics or biological system. The learning theory behind this approach viewed language as a subset of other learned behaviours, or language was acquired according to the general laws of learning and was similar to any other learned behaviour. Language therefore was a learned or conditioned response to stimuli (Ibid, p 22) and developed as a result of the adults' reinforcement and gradually shaping the infants' babbling.

2.1.3 Psycholinguistic Theory

The leading researcher for this theory was Noam Chomsky. He purported that the child was born with an innate (biological) capacity, for example, "the language faculty" or "language acquisition device" (LAD) that predisposed the infant to acquire a language system / systems. Yet the environment activated the LAD thus allowing children to develop and use the universal rules underlying language (Smiley & Goldstein, p 26).

Numerous researchers beginning in the mid-70's until the present have shown evidence that infants are born with an innate ability to communicate with the feelings, interests and purposes of other persons (Trevarthen, Aitken, Papoudi & Robarts, 1998 p 93). This was not surprising, as even an unborn baby has learned to recognize the mother's voice (DeCasper & Fifer, 1980 as cited in Trevarthen et al, 1998). Lecanuet & Granier-Deferre (1993) proved that the unborn child could hear before he was born and could

demonstrate a preference for the mothers' voice shortly after his birth (as cited in Berko Gleason & Ratner, 1998 p 356).

It was through the development of these abilities that the child would learn to share his ideas, identify them with symbols and eventually learn how to explain them in the language of the 'mother tongue'. Many experiments have proved that infants were keenly alert to their surroundings and capable of remarkable discriminations among the signals from people, especially those giving information about "states of mind" (as cited in Trevarthen et al, 1998 p 93).

On the part of the infant, he showed emotions composed of facial expressions, vocalizations and body postures in an organized manner with respect to environmental events (Weinberg & Tronick, 1994). Even at birth, the newborn was capable of matching the adults' oral gestures (e.g., tongue-protruding), thus capable of making very early attempts at oral exploration of interesting objects (Jones, S. 1996 p 1952). Needless to say, it was evident that the newborn had capabilities that could not have been learned but must have some bearing on innate abilities in the infant.

2.1.4 Classical Theory

Classical thinkers believed that children's language formulation was creative and that children learn the rules for combining linguistic units making hypotheses about these rules and their applications (Chapman, Streim, Crais, Salmon, Strand, & Negri 1992 p 4). Advocates would even say that children have the ability to generate an infinite number of well-formed sentences given enough time. However, to query this thinking, it could be argued that this was an oversimplification of children's language learning. Nelson

(1986), Peters (1984), Bruner (1978), and Snow (1977) have called attention to the role of routine, predictable, interactive games of children with their parents. These social activities included peek-a-boo games, reading the same books or playing with the same toys over and over again. In these dyad and triad interactions, common expressions were repeated so that in time the child would be able to produce first, his or her part of the dialogue and later the parent's part too. Thus children did not always create utterances out of thin air. More frequently they said what they either have said before in that situation or what someone else has said to them (Chapman et al, 1992 p 5). Therefore, it was more correct to say that children were both reproducers and creators of their utterances rather than either one or the other.

This point was significant, as this research concentrated on activities done in a routine manner to engage the child in the same social interaction and joint attention games in order to observe and record the child's reactions over time.

2.1.5 Cognitive Theory

A key factor not yet mentioned pertained to a child's cognition. When considering the role cognition played in language development, cognitive theorists held to the belief that language was a subordinate part of cognitive development. Numerous cognitive theorists suggested first the child must learn about his world around him and then only could he map language onto this prior experience (Berko Gleason & Ratner 1998 p 383). Through physically moving about his world, the infant observed and developed a sensorimotor understanding of the space where he lived. Person permanence and object permanence were early time and causality concepts that the infant understood. The development of these cognitive skills was necessary for language to be built upon later.

Piaget's perspective would place language embedded or mapped onto a person's set of prior cognitive structures because principles of language were no different from other cognitive principles (Ibid. p 394).

2.1.6   Social Interactionist Theory

The social interactionist theory held that language as a facet of communicative behavior developed through interaction with other people (Berko Gleason & Ratner, 1998 p 386). It was not sufficient to have neuropsychological gifts (nativist position) nor exposure to language (learning by observation and imitation, the behaviourist position) to ensure its' development. But it was the special ways and language used by adults that enacted this process as the adult finely tunes or tailors these to the specific cognitive and communicative needs of the child (Berko Gleason & Ratner, 1998 p 386.) An example of this was the role of child-directed speech or baby talk. Babies seemed to prefer the adult to use many repetitions, simple syntax, exaggerated intonation and slower high frequency speech but this poor model did not inhibit the child's learning language over time (Ibid. p 385).

Bruner (1985) suggested an alternative to Chomsky's LAD "language acquisition device" in the LASS or "language acquisition socialisation system". Children, therefore, were not relying on their LAD to decode the syntax of language around them rather they were seen as social creatures who acquired language in the course of their need to communicate with others (Berko Gleason & Ratner 1998, p 386.) What may strongly be linked to a child's early word use was his own communicative goals of continuing the interaction, of drawing the parent's attention to himself or to the world, of obtaining a desirable object, or of protesting an undesirable action or object (Chapman, 1999 p 55).

This clearly related to early use of language (pragmatics, the focus of this research) and not initially to a system of linguistic rules

2.1.7   Connectionist Models (Parallel distributed processing or PDP model)

The final theory of language acquisition discussed was the connectionist model, a relatively recent approach. This theory explored how information may be built into a system or into the child's brain through neural connections. Parallel distributed processing (PDP) models claimed that connections and their statistical probabilities, not rules, underly language development. Associations were formed in the mind, based on the elements involved, and sufficient exposure to these elements led to the establishment of neural networks. The power of the system came from how the units were connected (Johnson-Laird, 1988 as cited in Berko Gleason & Ratner, 1998, p 387). A child established such connections over time through exposure to the forms of language associated with external events. That was why; clearly the activation of one concept in our minds had the capacity to bring up another (e.g., /b/ sound, the concept of bottle and milk are all nodes that lead the child to relate to the word 'bottle' and the concept of wanting a drink).

Ultimately those inter-connected associations became the meaning of the word. If for example, the particular construction appeared very frequently, then those connections were stronger. If a particular sequence were statistically likely, the model would extend previously noted regularities to the new data. This could explain how children often made mistakes in English with over-generalizations, such as 'showed, mowed, towed, glowed' produces 'growed' for the past tense of 'grow' (Berko Gleason & Ratner, 1998 p 388).

In conclusion, all theories were relatively selective concentrating on one or some of the phenomena involved in language learning to the possible exclusion of other key considerations. Bruner (1975), the early entrepreneur of pragmatics, however, succinctly summarized this issue of language learning. "Whatever view one takes of research on language acquisition – however, nativist or environmentalist one's bias" *(cognitive, social, psycholinguistic or connectionist)* – "one must still come to terms with the role or significance of the child's pre-speech communication system" (as cited in Mundy & Gomes, 1997 p 107). (Words in italics were the researcher's additions).

2.2 Early Historical Developments in the Pragmatics of Language

Due to a trend toward nativist thinking Bruner wanted to be sure that the pre-linguistic social and cognitive foundations for language development were not overlooked. He advanced an atmosphere of exploring the environmental and variable processes that supported the infants' capacity to acquire language (as cited in Mundy & Gomes, 1997 p 128). Furthermore, his rapt interest in infants' prelinguistic communicative behaviors between the ages of 8 – 12 months concluded that there was communicative intent before age one (Ibid. p 107).

In the early 1970's Dore (1974) proposed that the child apparently did express some primitive intentions before the onset of language. He hypothesised that before the child acquired sentence structures, he possessed systematic knowledge about the pragmatics of his language, which was best described in terms of "primitive speech acts" or PSA's (1974, p 344). Dore identified 9 PSA's, these were labeling, repeating, answering, requesting for an action and requesting for an answer, calling, greeting, protesting and practicing (Ibid. p 347).

Communicative functions expressed by children between 9 – 18 months of age were predominately requesting for objects and actions or information; protesting (rejecting); greeting; and naming behaviors. The researcher focused on observing only some of these functions during the course of the study because the age limits of the children studied were below 18 months for typically developing children.

Dore studied two children who used their primitive speech acts in very different ways. M's acts were basically representations of the world to herself (acts such as labelling, repeating and practicing words); whereas, J's acts were mainly to manipulate other people, hence more instrumental in nature (requesting, answering a question, calling someone or protesting). Thus in summary, M was mainly declaring things about her environment while J was directly influencing his (Dore, 1974 p 350).

Nelson (1973) referred to these two types of learning styles as the referential child (child M who emphasised objects) and the expressive child (child J who attended to people and feelings) (as cited in Berko Gleason & Ratner, 1998). This may have explained how children differed in their own style of learning but intent to communicate remained a vital part in this process of language acquisition.

2.3   Current Development in Pragmatics of Language

By the late 1970's and into the 1980's this movement to the study of pragmatics was dramatically shifting the study of language and communication development yielding significant changes in the fields of special education and speech-language pathology (Prizant & Wetherby, 1998). Previously it was thought that there was no need to assess the early non-verbal language (pre-linguistic) development of an infant (age one year or

below). This was because generally children did not learn to talk before their first birthday. However, this thinking that there was no need for a communication-based assessment before the age of 12 months old was a grave misconception. The researcher had often heard or read about parents having concerns for their child at quite an early age. They were often told by various professionals or their family members and friends, 'not to be concerned about it', 'wait until the child was older' or even 'he will probably grow out of it'. This notion was being challenged, as the following review of recent literature in this key area of pragmatics demonstrated.

2.4 Related Research Literature

2.4.1 Review of Pre-linguistic Communication and Language Development Links

It was a well-established fact that delayed pre-linguistic development affected linguistic communication or language development, which ultimately affected a child's readiness for school. Yoder and Warren (1993) presented two primary reasons why targeting pre-linguistic development will result in raised or increased linguistic development. First, improving the child's use of vocalization and intentional communication should help lay a foundation for utilisation of adult input in the language developmental process. And second, as the child's frequency and clarity of communication improves, an increase of adult-child interactions (turn-taking) result. Therefore, the outcome then was a better overall language performance for the child (as cited in Rossetti, 1996, p 186).

Furthermore, facilitative partner's style that follows the child's attentional focus, offers choices and alternatives within activities, responds to and acknowledges a child's intent, models a variety of communicative functions (including commenting on a child's activities), and expands and elaborates upon the topic of a child's verbal and nonverbal

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communication resulted in higher rates of student-initiated interactions, question asking, and conversational initiation in students with autism (Prizant & Wetherby, 1998 p 338).

The reverse was also noted when a highly adult directive approach emphasized adult-selected topics and activities, frequent use of commands and test questions, and intrusions on a child's behavior through a reliance on physical prompts of appropriate responses, resulted in fewer child initiations, less elaborate responses, a limited range of communicative functions expressed, and conversational reticence or passivity (Ibid.).

Therefore it was necessary to study this inter-relatedness between pre-linguistic communication and language development. Asma Hj. Omar (paper presentation, July 2000) in her case study with her grandson when he was aged 5 weeks up to 36 months old supported the theory that early speech was the communicative socialised type. She labeled the pre-verbal stage at one to 5 months old when the infant responded to voice and nursery rhymes; used body movements for affective / cognitive purposes; recognised a few words from baby language; produced monosyllables with no fixed meaning and simulated conversation. She divided the single word stage (linguistic stage) of 6 – 27 months in her case study into two phases. Phase 1 (from 6 – 16 months), the child expressed meaningful exclamations like /hai/; said full words with meaning (object words and kinship words for grandparents) and discourse based words (eg., sudah makan or finished eating; apa? or what? in response to his name); and understood commands and questions (where; which one). In Phase 2 (from 17 – 27 months) a tremendous increase in vocabulary took place; he referred to self; understood possession; responded verbally to questions and commands; understood discourse of other people and began to form concepts (knowing things have names by pointing to them) (Ibid.).

Asma Hj. Omar concluded from the socialised speech of the child, one could detect the child's learning of the social and cultural rules of his speech community, his affective-cognitive use of language, as well as his cognitive development. To the researcher's knowledge this was the first Malaysian long-term study of this magnitude that documented the Malay-background child's use of language at such an early age and for such a long-term relationship.

Another recent study investigated the significance between certain early interactive behaviours and children's subsequent communicative development. For example, a study in press by Morales, Mundy, Fullmer, Yale, Messinger, Neal and Schwartz indicated that responding to joint attention at 6, 8, 10, 12 and 18 months was positively related to individual differences in vocabulary development. This study also included a parent report measure of language development showing agreement with the above vocabulary acquisition predictions.

Liane Smith from Canterbury, UK, looked at infant pragmatic signaling systems and joint attention skills. During the course of the study, the frequency and distribution of these early behaviours in a random sample of 145 ten-month-old infants were investigated and followed-up at ages 24 and 36 months. Ten early communicative behaviours (from a total of 31-item assessment battery) had predictive validity for future language development. These included 1) reacts to sounds; 2) reacts to speech; 3) copies wave bye-bye; 4) defines by function (e.g., objects); 5) 'first words'; 6) feeds others (sharing); 7) follows directional point; 8) 'shows' objects (initiating interaction); 9) requests by reaching (seeking assistance); 10) hearing status (Smith, 1998 p 138).