

**Early Syntactic Development: Implementation of Early Start Denver Model (ESDM)
for Children with Special Needs**

Student Name: Kazi Afia Tasnim

172013042



Department of English and Humanities

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**Early Syntactic Development: Implementation of Early Start Denver Model (ESDM)
for Syntactic Development**

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Kazi Afia Tasnim

172013042

Supervisor name : Tanzia Siddiqua

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CERTIFICATE OF APPROVAL

I hereby declare that this thesis is the student's own work and effort. All sources of information incorporated here have been duly acknowledged. This thesis has been submitted with my approval.

Tanzia Siddiqua

Supervisor: Tanzia Siddiqua

Senior Lecturer

Department of English and Humanities

DECLARATION

This thesis is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgment of collaborative research and discussions.

(Student Name)

Student ID

Department of English and Humanities

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I want to thank Almighty Allah for helping me to come this far and I would like to mention and extend my innermost gratitude to my family and my teachers for their endless support throughout my educational journey.

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Abstract

The aim of this report is to observe the efficacy of the intervention of the Early Start Denver Model (ESDM) therapy applied in young toddlers (age 12-36) with autism and going on until ages (48-60) months to improve their cognition, social-emotional interaction, motor functioning, expressive & receptive language, self-care skills, play, and imitation. This trajectory includes an interdisciplinary approach that underlies the treatment as the curriculum of the model developed by a team of professionals from disciplines in these areas, combining developmental and clinical psychology, ABA, early childhood special education, SL-P, and OT. The ESDM method comprises routine learning, at a fast frequency, and is incorporated into play activities covering multiple objectives across developmental domains. Both parents and families are core individuals of the interdisciplinary team. The intervention with children in the ESDM is work within a family system. The result can be measured through the parent-child relationship and the parent's satisfaction with the progression of the child, parental understanding of the child's needs, and service manuals. The end of ESDM direct services should be a reflection on all that staff, parents, and the child has done while also carefully planning for the child's future development.

Keywords- intervention, typical children, neurotypical children, Early Start Denver Model, autism

Introduction

When we use the word "autism" or the phrase "special need," we tend to isolate or alienate the children who have autism. Typically, parents and professionals believe that in order to help children with special needs to enhance their communication skills, they must employ a method completely different from that used with neurotypical children. However, according to studies by Geraldine Dawson and Sally J. Rogers, children with special needs and neurotypical children both go through the same stages of language acquisition, including the development of expressive language and receptive language.

However, children with neurotypical development progress through several linguistic phases or automatically adjust to new languages. However, in order to help children with special needs advance in their comprehension and speech development, their support must be centered on their recreational activities. There are several intervention issues for young children with exceptional needs in south Asian nations like ours. For instance, it is a cultural norm in Southeast Asian countries for professionals and families to be quite prescriptive toward all children, not just those with special needs. According to research, if we can actively include the children through their motivation and interests, it will benefit their general development, including their speech acquisition. The Early Start Denver Model (ESDM) for Children with Special Needs in school children offers a variety of interventions for children in the early years of the developmental stage

The aim of this research is to find out the exact models or strategies that work best in young children that help the children to function well and get equal acceptance like other children in schools. The research papers involved in doing several surveys, diagnosis, behavior

management, and therapeutic approach to see the main challenges of Autism Spectrum Disorder in children and their caregivers or parents at home. The research fully focused on understanding the causes and how they can be cured with parent and peer support by the Early Start Denver Model (ESDM) implementation tools for learning the language, behavior management and social interactions more than by medical treatment.

Institution Profile

HOPE AUTISM WELFARE SOCIETY

Based in Dhaka, Bangladesh, the Hope Autism Welfare Society helps people with autism live better lives. Ankur International has come forward to help the center's work by contributing monetary support and the necessary resources for its operation, thereby enhancing the lives of special needs children and families. The Hope Autism Center's contribution to autism research: On May 17, 2012, researchers from the Hope Autism Center presented their findings at the International Society for Autism Research meeting in Toronto, Canada. Based in Dhaka, Bangladesh, the Hope Autism Center helps people with autism to live better lives.

The school located in 57/ B Lake Circus, Kalabagan, Dhaka 1205, Bangladesh

Dr. Nusrat Yasmeeen Ahmed, the co-author, wrote the following acknowledgment note: "I'm pleased to let you know that yesterday's International Society for Autism Research meeting in Toronto featured a presentation of our research findings. Prof. Amanda Richdale, my co-author, delivered the presentation on my behalf. This is, as far as I'm aware, the first study on autism to be given in Bangladesh at a major international conference. In our presentation, we mentioned Ankur International as a funding source. Many thanks for Ankur International's support of the Hope Autism Center's services and research endeavors." Regards Nusrat

My Work Description

In my internship program with Hope Autism Welfare Society, where my responsibilities included teaching both in a group environment and one-on-one. I also had a duty to monitor the children's performance of their established objectives. I regularly collect data to track the development of the children. I received training on behavioral intervention and techniques for teaching children with special needs to control their emotions while working at the center.

Upon working in an environment where the Autism center uses an evidence-based model known as the "Early Start Denver Model," gave me the opportunity to put this model into practice with both children with special needs and children who are normal functioning (possessing a typical (common, regular) method of processing sensory, verbal, and social instruction.

There is no framework to evaluate the growth of children's speech or language learning, which is a major issue in Southeast Asian nations like Bangladesh. The goal is to find the best intervention method in the developmental stages of children with autism.

Therefore, part of my role at this school is to create a database from the ESDM bookteaching in on and one session and provide the data to teachers so that teachers can use it to track daily data on their students' progress. This database will eventually allow families and professionals to assess whether the intervention is effective for the particular child.

Research Questions

- 1.How do the teachers at Hope Autism Welfare Society help the early intervention children with following the ESDM assessment for motor functioning, linguistic growth, and studies?
- 2.Does expressive and receptive language equally play a significant role in the toddler's learning stages?
- 3.Do the parents and teachers follow similar interventions at home and in school setting?
- 4.Do early stages of intervention successfully help children with special needs to adapt and socially interact in later stages in life?

Pioneers of the ESDM model

Geraldine Dawson, Ph.D. is a Research Professor of Psychiatry at the University of North Carolina and is Chief Science Officer at Autism Speaks, Professor Emeritus at the University of Washington (UW), and Adjunct Professor of Psychiatry at Columbia University. Earlier, She happened to be the Professor of Psychology and Psychiatry at UW and Founding Director of the UW Autism Center, It was recognized as an Autism Center of Excellence by the National Institutes of Health in 1996. Dr. Dawson oversaw a comprehensive autism research program at UW that concentrated on genetics, neuroimaging, diagnosis, and therapy. From 1980 until 2008, when she left the University of Washington to work for Autism Speaks, she received ongoing support for her study from the National Institutes of Health. The comprehensive clinical services program at the UW Autism Center, the largest of its kind in the noed States, was founded under her leadership. Dr. Dawson played a significant role on the Washington State Autism Task Force and testified before the U.S. Senate on behalf of people with autism. Her work focuses on early autism detection and therapy, early signs of brain malfunction (electrophysiology), and, more recently, the creation of endophenotypes for genetic research on autism.

Sally J. Rogers, Ph.D. is a professor of psychiatry at the University of California, Davis' MIND Institute. She is a developmental psychologist who participates in significant clinical and research initiatives on autism at the international level. One of the 10 Autism Centers of Excellence network projects she is working on is a multisite, randomized, controlled study of infant-toddler autism treatment. She also oversees an integrated postdoctoral training grant for scholars studying autism. Dr. Rogers is a member of the DSM-V workgroup on autism,

pervasive developmental disorder, and other developmental disorders. He also serves on the executive board of the International Society for Autism Research and as editor of the journal Autism Research. She has dedicated her whole career to researching the cognitive, social-communicational, and intervention needs of young children with impairments. She has written extensively on the clinical and developmental aspects of autism, with a focus on imitation issues. She serves as a clinician, offering examination, therapy, and consulting to children, adults, and their families who have autism.

Chapter 2: Literature Review

To start with a brief overview of the Autism Spectrum Disorder known as ASD is a profound developmental disorder that has an impact on behavior, sociability, and communication. Because it is characterized by a set of behaviors and affects people differently and to a diversified degree, autism is regarded as a spectrum condition.

A neurological imbalance in the brain called autism spectrum disorder affects how a person understands and interacts with others, which can lead to issues with social interaction and communication. Another characteristic of the condition is its limited and repeating behavioral patterns. In autism spectrum disorder, the word "spectrum" refers to the broad spectrum of symptoms and extremities. Autism, Asperger's syndrome, childhood disintegrative disorder, and an unidentified type of pervasive developmental disorder are all disorders that were formerly thought to be distinct conditions that makeup autism spectrum disorder. The name "Asperger's syndrome," which is widely considered to be at the mild end of autism spectrum disorder, is nonetheless occasionally used.

Early-onset autism spectrum disease eventually results in issues with social, academic, and occupational functioning in society. Children frequently display signs.

The signs may result in early-infancy symptoms of autism spectrum disorder including limited eye contact, a lack of responsiveness to their name, or a lack of interest in their surrounding caregivers. Other toddlers might grow normally during the first few months or years of life, but then all of a sudden turn introverted, unfriendly, or lose their acquired language abilities.

Typically, signs appear by the age of two. Since autism spectrum disorders range in intensity

from low functioning to high functioning, each autistic child is likely to exhibit a distinct behavioral pattern.

Prevention- Although there is no ending for autism spectrum condition, but there are treatments available. The best course of action is early diagnosis and intervention, which can enhance a child's behavior, abilities, and language growth. Intervention, however, is beneficial at any level. Although symptoms of autism spectrum condition typically do not go away in adolescents, they may learn to function successfully.

The Early Start Denver Model (ESDM) for Young Children with Autism: Promoting Language, Learning, and Engagement was developed by Rogers and Dawson. (Evidence-based Early Intervention, Guilford Press, New York, 2010) is a developmental and social communication program for infants and toddlers with autism spectrum disorder between the ages of 12 and 60 months. (NDBI; Schreibman et al. in Naturalistic Developmental Behavioral Interventions: Empirically Validated Treatments for Autism Spectrum Disorder, the ESDM is a Naturalistic Developmental Behavioral Intervention (NDBI). J Autism Dev Disord 45(8):2411-2428, 2015), showing that it has features in common with a variety of related early therapies, such as the use of behavioral principles and natural triggers and delivery in environments the child is familiar with. Because autism affects so many different domains—including motor functioning, sensory functioning, communication development, intellectual development, learning disabilities, behavioral functioning, health-related issues, and effects on family members—the ESDM combines multidisciplinary knowledge and skills into the intervention model.

The Early Start Denver Model (ESDM) for Children with Special Needs in school children offers a variety of interventions for children in the early years of the developmental stage. The ESDM

model explains an address towards working with little children with autism spectrum disorders (ASD) that navigates children's unconstrained likelihood to proceed towards and socialize with others. And their capability to catch with others. The approach, named Early Start Denver Model (ESDM) , observes every individual child's likes and inclinations and offers a 'scaffold' for the individual child's communication and interaction. Both the "constructionist" and "transactional" theories of child development are strongly embraced by the ESDM. Infants are seen as active beings that form their own mental and social worlds out of their motor, sensory, and interpersonal-affective experiences in the constructionist school of thought. To put it another way, the child is the artist constructing his or her own "representation" of the world. According to the transactional approach, the development of toddlers and the other individuals in their caregiving environment is affected and influenced by one another. The temperament, behavior, and emotions of the caregiver continuously mold and alter the infant's behavior and representations of other people and the world, while the infant's temperament, behavior, and skills continuously modify the behavior patterns of the caregivers. This process continues throughout the developmental period, which is one's entire life. The painting is co-created through this combined effort.

The ESDM aims to give ASD children the confidence they need to engage in social interactions and be engaged members of their community. A child's initiative is frequently impacted by autism. Particularly, autistic children frequently lack social curiosity and tend to concentrate on a small number of activities. One defining aspect of autism is the presence of this trait from birth and the persistence of the trait throughout the person's life. Fewer social experiences lead to fewer learning opportunities for young children, and a limited and repetitious range of activities leads to a limited range of learning opportunities. Learning possibilities are limited by autism's

nature, which affects every hour of the child's life and causes an increasing number of missed opportunities month after month and year after year. As a result, the young child with autism has considerably fewer experiences from which to build an awareness of the people and things that happen in the world.

Nevertheless, autism tends to put an impact not only on the child but on anyone interacting with the child. From all the initial stages of the infant's cries, babbling noises coughs, and worries of the inborn, infants act in ways where adults reciprocate with caregiving, play, and touches of laughter. All of these social interactions create several ways for infants to learn, whose comebacks to caregivers occur to bring out additional interactions.

As a result, from the moment they are born, infants help shape the quantity and nature of social interactions with caregivers. This child-initiated social interaction continues throughout the child's waking hours each day, providing hundreds of opportunities for language, social, play, and cognitive learning. These continuing social interactions are probably not beginning for young children with autism at a rate that is even somewhat close to that of other normal functioning toddlers not with caregivers or siblings or other children which lessens the learning chances immensely.

However, another hidden aspect of autism is that, even when other people start social interactions with young children with autism, as parents, siblings, and other children frequently do, the autistic child may not react with joy, eye contact, or laughter.

Evidence for the implementation of the Early Start Denver Model for Young Children With Autism Spectrum Disorder-

The Early Start Denver Model (ESDM) is a hand-crafted full-scale theory for infants and toddlers with an autism spectrum disorder. The model highlights interpersonal engagement through synchronism, reciprocity, and flow to decrease the severity of the symptoms and increase the speed of cognitive, social-emotional, and linguistic development.

The design of the model used predefined criteria for inclusion, PubMed, Scopus, Web of Science, Embase, and CINAHL were examined from 2010 to 2015. The quality of the findings was provided after the study's methodology, participant characteristics, and results had been assessed. The results that came are eight articles that encountered inclusion, two randomized controlled trials, four other controlled trials, and two observed cohort studies—that met the standards for inclusion. The level of evidence quality varied from low to intense. To conclude, the ESDM is a successful intervention that strengthens cognition, language and learning ability. Parents' use of ESDM methods in the home and in community group settings has the potential to be effective and practical.

Syntactic Developmental Stages-

A thorough early intervention strategy called the ESDM is designed for autistic toddlers between the ages of 12-36 months and 48-60 months. It improves, modifies, and extends the original Denver Model downward in age for pre-schoolers with ASD ages 24 to 60 months. In order to

help small babies who are at risk for autism follow a similar developmental pattern, ESDM makes use of knowledge about how the average baby progresses.

Early signs of autism lead to a problem with the brain systems that aid in social and linguistic growth. Many infants are likely to experience motor function disability as well. These infants spend less time looking at other people, are less responsive when their names are called, and frequently fail to develop early gestures, such as pointing, which are crucial for laying the groundwork for language development, according to studies from home videotapes of infants who later develop autism (Osterling & Dawson, 1994; Palomo, Belinchon, & Ozonoff, 2006).

The dominant stages of early language acquisition-

Early before birth, the first year, which is commonly referred to as the "babbling stage," the holophrastic stage, which lasts for about one to two years, the telegraphic stage, which lasts for about two to three years, and finally the post-telegraphic stage, which lasts for about three to five years. Each stage has a thorough teaching process that involves the child's unique manner of understanding language and producing speech that mirrors its surroundings, beginning with the language of the caretaker. Through the ESDM model, a child's speech learning procedures are designed according to the speech pathologist's strategies.

The Holophrastic Stage is one to two years where fast lexis acquisition occurs and basic syntax development. Approximate two hundred words are uttered before the child's second birthday. For example, the word "milk" could imply "I've split the milk," "I want some milk," "you have the milk," or other holophrases in a child's first attempt at grammar, which is referred to as holophrastic. The child occurs to develop broad choices of starting consonant sounds in their usage of lexis. The primary consonant sounds in English are articulated as /m/, /h/, and /b/.

Consonant sounds are formed at various times. Some phonemes (sounds) arrive earlier than others. The primary words contain nasal /m/ and /n/ sounds produced in the nasal region as well as the plosive /b/ and /p/ sounds, which require a slight explosion to form. The choices of lexis used by young toddlers do not occur to have any specific meaning; they appear to babble for the delight of it. The children's language is very limited but they have a broad comprehension of what is spoken to them.

The words which are learned at the initial stages between the ages of one and two are-

New words which are learned are nouns, pointing to people and objects in the infant's world (e.g. 'papa', 'ball', 'mum', 'doll', 'doggy') also family and pet names.

New lexis connects to personal interactions (e.g. 'bye bye', 'hi'), and easy verbs (e.g. 'sit', 'come', 'walk'). The child is more mindful of the world around them. The child's speech at this stage is concerned with their wants and needs and that helps them to convey the expression of emotional behavior and addressing of people and things in their world. And the language used by young infants is dependent on their family and caregiver of how much the child is spoken to by them.

The child's regard for learning is exceptional. The two-word stage expands abruptly during this time as the toddler's proficiency in their language widens and their level of expression gets turns more complex. Then the child starts to use two choices of lexis together (e.g. 'more milk', 'mummy ball', 'car go'). These syntax structures have no inflection-there occurs to be no mention of tense or person- but there is the disclosure of a sequence and order of meaning. Word conclusions provide an indication of the person talking (e.g. 'I want' / 'he wants'), when an action is occurring (e.g. 'I knock' / ' I knocked') and belonging,

An Example to be set from a special need child in the Autismcenter- Rehan, 60 months had very limited speech and only make variegated babbling noises. The child tends to form mouth formation of certain one-word object names like 'ball' when the child would want to play with the ball, He has to request to his teacher with his expressive language by saying and pointing 'ball' as the child is limited to speech, the teacher understands from the movement of his lips the child is requesting to get the ball. And the teacher gives a reinforcement for the toddler's request upon uttering the word 'ball'. In conclusion, the one-word stage for children with broken speech is achieved by object-leveling.

The speech forms from a child's intended vocalizations. The capacity to create a greater variety of phonemes (speech sounds) and copy the speech of others are fundamental building blocks of this growth. Hence the teacher tracks the progress of the child's one-word stage successfully.

The telegraphic stage has an increase of lexis in the child's utterances as frequent as ten words each week. Young toddlers may tend to have lexis of about 2000 by the time they turn five. And most of these words are learned between the ages of two and three.

During this first stage of linguistic growth children normally adapt to show their meaning using their limited word choices. This results in overextension. For example, the word 'daddy' may refer to all men; a sibling's name may be understood as all other children; and lexis used for items with different properties, such as 'glass', may be understood for other things having same as those properties. This is a usual characteristic of language acquisition at this time of the toddler's life, as the child is open to noticing more of the universe around them. The toddler's limited words may also end in underextension. For example, a child might use pencil to mean his or her pencils, but not his or her friend's. The telegraphic stage follows onwards from the two-

word stage when the length of the child's utterances gets bigger and more grammatically complex and many ideas may be missing in those syntactic structures. The lexis now have a wider purpose other than merely the spotting of humans and referents, yet they are until now condensed.

Some examples: "want ball now", "dad give juice".

An example in the case of special needs toddlers with no speech includes the same kind of situation where the child expresses his or her interests with babbling noises and pointing to a specific object to fulfill the toddler's request. And this may be used for conveying other interests too. An example is 'ball' this object can be used both in expressive language and receptive language for the particular child.

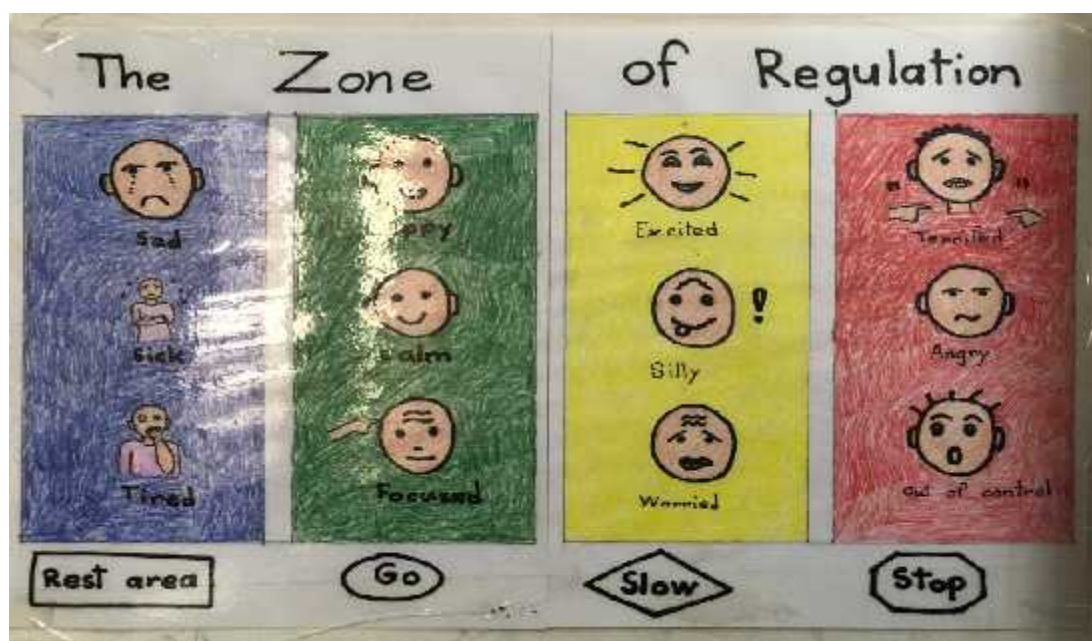
An example of a special needs child – "Afia ini mini minimo" A noun followed by the child's requests in two to three words. And that can convey the meaning that the child would like to hear the rhyme "ini mini minimo" or I want to play "iniminyo".

The toddler occurs to exchange words much more understandably. The lexis sequence is usually simple and plain with the subject (e.g. 'ball') and verb (e.g. 'give'), though it happens to delete auxiliary words (e.g. 'is'). Other information in the syntactic structures tends to have missing prepositions (e.g. 'under', 'to', 'from', 'by'), the determiners (e.g. 'the', 'a'), and inflections/suffixes to express tense and person (e.g. '-ed', '-ing', 's') these are deleted in the early telegraphic phase, but occur after progressing cognitively over the years.

The post-telegraphic stage is the phase where the child is 60 months and continuing development and where the child learns the skills to apply language in more intricate ways. This stage the child is able to keep the conversation and talk by utilizing more than one easy idea as they

connect ideas using coordinating conjunctions ‘and’ and ‘but’ and also subordinating conjunctions, such as ‘because’. Linguistic growth occurs to improve during this stage besides their cognitive and social development. Therefore the child’s social interactions with the surroundings move on to strengthen. For example – the language attributes grow very quick and they are connecting words (e.g ‘and’), lexis which conveys emotions, differentiating concepts (e.g. ‘longer’, ‘bigger’), family terms (e.g ‘sister’) etcetera.

An example at Hope Autism School- Four children with different cognitive levels sat in a group setting for sharing a group task that relates to the subject ‘The Zone of Regulation’



The above chart helps the children to identify their emotions and actions with the help of these colors. These concepts as mentioned in the chart above help the children regulate their emotions and what needs to be done when feeling a particular mood.

The expansion the lexis incorporates distinguishing hypernyms and hyponyms. The hypernyms are a classification of things (e.g. 'animals', 'vegetables') and hyponyms are a grouping of lexis within those classifications, (e.g. 'dog', 'cucumber').

This linguistic stage for toddlers of age three to five years makes them highly competent with their conversation. Their knowledge of syntax and lexis occurs to be accompanied by comprehending the rules of inflection because past tenses are adjoined and also plurals. The Wug test is an example of how children make virtuous errors and their own grammatical structures (e.g. 'runned', 'goes') this "wug" experiment was done by Jean Berko in 1958 to portray the application of grammatical constructions by children.

An example - A group of children was given an illustration of an imaginary object named as 'Wug' by Berko. Very distinctly the children were unaware of this name. And when two of these objects were shown the young children were requested to complete the syntactic structure 'There are two - ' the children offered a grammatical rule by adding a suffix 's' for plurals and answered 'wugs'. At this stage the children are able to produce more words, hence increasing fluency.

Typical Speech Development - Through exposure to their native tongue, vocal play, and neurological speech mechanism growth, infants first acquire new sounds unknowingly. Babbling is followed by the production of mostly middle and back vowel sounds in the traditional order of development for infant speech (vocalizing strings of consonants and vowels [CV] or vowels and consonants [VC], often in response to the speech of others).

As individual ages, their vowel and intonation productions vary more, and they also add new consonant productions. Infants exhibit CV or VC syllable repetitions, or reduplicative babbling (example: ba-ba.di-di), as usual, development progresses. They soon start to imitate others around them, including the intonation patterns of adult speech output.

The next type of babbling is known as variegated babbling, which is characterized by CV-CV or VC-VC sequences that are not identical (ba-da, da-di), as well as sequences that may also contain CVC or VCV combinations (pop,aba). Infants eventually progress to producing jargon, which is a long string of sounds with intonation patterns resembling those of adults. The preponderance of consonants in infant vocalizations are nasal phonemes (m, n), plosives (p, b, t, d), and approximants (w, y) (Leonard, Newhoff, and Mesalam, 1980); nonetheless, productions of "l" at this time are neither accurate nor fully developed. As a result, while choosing intervention targets, it is also important to take the normal age of mastery into account.

A typical preschooler may still exhibit developmental errors on the most mature sounds (e.g., th, r, and j). Typically, some of the earliest mastered phonemes include p,b,m,n,h, and w. These sounds are frequently followed by mastery of k,g,f,d,y, and t (Sander, 1972). As a result, when working with a child with autism who is just starting to develop spoken language, keep these developmental speech patterns in mind while selecting intervention activities and materials, and choose targets that apply the sounds in the first place of the sound that is accurate to the child's level of speech production development.

Morphological processes-The transformation of a word from a noun to a verb or any other form such that it fits in the situation's context or sometimes to the level of changing its grammatical function is known as the morphological process.

The morphemes are short pieces of language providing meaning. Morphemes can be used in a variety of ways to accomplish a certain function and give them significance. The following ideas include few types-

An example to be shown is how special needs children use the Morphological Processes – For example, Children in Hope use the English language as a means of communication for writing. English happens to be easy and simple for writing the Bangla spoken discourse with English spellings. Through the ESDM model, a child is observed, and at which level is the child, and then the child's ability is noted, along with the child's interest the child is given a certain task. For example – coloring pencils is a child's favorite thing or interest and soon the child's interests are worked on by their expressive and receptive language. The child forms words with their desired items. Each child who has limited speech communicates through visual boards. The expressive language of the child may utter – 'Ami khai/khabo' the inflectional changes occur within the child's expressive requests to the teacher.

Reduplication occurs with young toddlers go through turn-taking games and imitations. And an example from the early intervention child- Manu, 4 years imitates her teacher with a pencil and by turn-taking process, she reduplicates a babbling sound when her teacher shows (e.g. tapping the paper with a coloring pen and saying 'ta-ta')

Chapter 3:Methodology

The Implementation of the Early Start Denver Model assessment for young toddlers from 36-60 months toddlers is a qualitative observational approach where the intervention method is the building of short-term 12-week learning goals for the child and observing the child's progress. Research in ESDM is continuing. The way the Denver Model has evolved in the years, the ESDM also will change in the coming years. The treatment method needs to mutually act upon recent science at present. The set-up goals assist the interventionists to stay aware of certain behaviors and skills which may help to open learning opportunities for the child to accomplish the targeted skills. An evaluation of the child's present ability level using the ESDM curriculum serves as the foundation for the creation of short-term targets. The following 12 weeks are then spent developing and teaching the two to three goal competencies in each applicable developmental domain. Each skill is explained as a measurable learning objective in terms of behavioral response and accomplished level criteria. Each child has specific objectives to attain according to his or her cognitive, speech, and developmental abilities. The teachers and parents track the progress according to the performance of the child in eight important areas regarding the child's receptive and expressive language, motor functioning, social skills, joint attention behaviors, imitation, cognition, and personal independence. Initially, a child is observed about their level and if the child has verbal skills or not, and how appropriately the child can use words according to settings. If the child does not occur to have words then the ESDM assessment starts and starts with working on the one-word stage, two words, and more. The child's communication skills are developed through visual illustrations which help the children to respond distinctly.

The child's strengths and weaknesses and then given a task to do according to the individual child's cognitive abilities.

Chapter 4: Observation Analysis

The children's personal names are confidential by the school authority and hence addressed as alphabet

Child A – When child A first came to the center at 4 years of age, often wept and had various problem behaviors, used to not follow any teacher's instructions and was impulsive, and had attention span challenges. Gradually the teacher on and one set tried to find the child's interests and taught communication skills. And the child had been taught friendship skills, sharing things by making them sit together in class and learn to communicate and share things in friendly manners.

Child B – Child B is good in English language, but he would not communicate, he clearly could tell or write. Therefore the teacher on one and one set did was start to use visual pictures for the child to communicate. Each word carries a pictorial demonstration so gradually the child started to take a special interest to communicate. Because each word is a picture to the child. Hence through various visual illustrations and the words to match, they learned the meaning and the child attempted to speak appropriately the lexis and got enriched with vocabulary. Each child tends to have an interest in different aspects some in art, music, cooking, books, sewing etcetera. And through the child's interests, it gets easier for the teacher to help them speak and improve their social skills via vocational training. Each task is integrated that helps the child to improve in gross motor, fine motor, expressive, receptive, and social skills development.



The activity of the child Morphological process Syntactic structure

Child C- Shows interest in activity by marking and imitating adult play acts and continues the play schema being imitated.

An example- The child at the babbling one-word stage imitates the teacher and continues to enjoy the game and the teacher stops and waits for the child's demands(e.g. ' ball dao') when the child forms lip movements or any babbling sounds the teacher continues with the game providing the child a reward of his or her favorite item.

The date report for each child is measured through the chart shown as an example

□□□□	□□  □□□□	Receptive communication/ Level 1	Code
1.09.22	Child A	Looks when shown an object and asked, ‘‘Name, look.’’	
2.09.22	Child B	Looks, reach, or smiles in response to adult gestures and interacts in social games	
3.09.2022	Child C	Performs a one-step, routine instruction involving body actions paired with verbal/gesture cue (e.g., ‘‘sit down’’, ‘‘come here’’)	

Linguistic Understanding

A huge number of young children with autism occur to have great challenges in acquiring to comprehend speech, and this is why their receptive learning growth delays just as their expressive language progression. (Lord, Risi, et al., 2005; Stone et al., 1999; Rogers & DiLalla, 1991.). Hence

a variety of cue prompts and visual demonstrations help the child to function for receptive, expressive, motor functioning, and social skill growth.

Every child's each set-up goal is measured for 1 month and the child is observed on his or her receptive language skills, expressive, social, or motor skills if they are progressing. And according to the observation the data is filled. Once the child progress on their individual set-up goals then the child is moved to Level 2 of that specific Receptive, Expressive, Motor functioning, and other social development skills goal to get achieved. Through various vocational activities, sensory play, and group settings the instructions are given to the child. And through each set-up goal, the child's verbal, motor functioning, and social interactions are measured in this way as the data chart shows. Once the ESDM intervention completes the child is able to communicate and enrich verbal skills and develops in the other aforementioned areas. The data determines if the intervention method is working for the child or not. And if the child does not progress then the activities of the learning session may find other new strategies

Chapter 5: Conclusion

Through the ESDM model, the teacher gets to assess the child through his or her interests and opens a way of developing their social and communication skills in a variety of playful settings that helps to increase their level according to their cognition ability. The results are achievable due to the child's specific interests that make it easier to attain the child's linguistic growth, motor functioning, and social skills development by focusing on aspects like expressive language which play a role in fulfilling the other aspects of training the child regarding their receptive language, motor functioning, and social skills. The manual explains the model however it's studied and facilitated. It is hopeful that this research model will help the early special educators, parents, and interventionists in their work with ASD. And in later stages depending on the child's level and progress some children are shifted to mainstream schools.

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