Chandra's®

BLUE BOOK

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Class II BASLP

Subject Child language disorder-

School

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Language disorder in Children

SECTION-A

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1. Biological maturation theory

→ Biological maturation theory suggest that the language acquisition is closely related to the structural and functional development of brain affecting the environmental and genetic factors.

→ Universality of language learning in humans is explained in this theory

Assumption

* There are macrostructures that play a major role in the language learning these structures are present in brain and include temporal and frontal lobe

* There are microstructures that play a role for language learning along with other functions

* The environmental and genetic factors that also play a major role in the language learning.

Nativist introduced that the child's brain play a major role of language development but genetic and environmental factors are not that important Eventhough the other clinicians took his views, they added that brain functioning along with environmental and genetic factors influence language learning.

Chomsky introduced LAD [Language Acquisition Device] for assesment and he find out how these can be enable the child to learn rules of language within a short period of time.

Marshell go for a detailed structural & functional evaluation of LAD. he took the factors that affect LAD, and he made his findings

There are 3 areas that will affected in language learning

→ Cerebral assymetry
→ Brain weight
→ Neural control

① Cerebral assymetry

→ Early it was believed that the left and right hemisphere have equal potential.
→ This appears until an age 2,
after that lateralization will take place.

By Broca in 1865, introduced that

"Eventhough the left hemisphere is dominant in language acquisiting this function can be reversed, overpowered, to right hemisphere if there is any accident or injury in the brain at the critical period"

→ Later it was found that, there are cerebral assymetry that is present at birth.
→ Salvian fissure is large in newborn & children

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Brain weight

The structural development of brain can affect the functional implications
The weight of brain is triple times more at first 2 years of life.

Neural development

→ Neural development take place as the brain weight increase and there is a development in ~~rest~~ structures & functions of the brain.
→ Neural development will increase the branching, dendrites and axons.
→ it will also increase myliniation on dendrites

Advantages

- We can understand the cause of language development by checking if the child have any brain injuey, and ~~and~~ any disorders in brain.
  ∴ causes could be understood easily
- This theory can be used in clinics for assesment & diagnosis and therefore have some clinical implications.

Disadvantages

The theory is not widely accepted and there are areas yet to be discovered and worked on.

The language learning as said in this theory is not only depended on brain development there are many other factors that affect acquisition, so we can not only rely on this for assesment.

Clinical implications

→ For taking therapy for any disorders we need to diagnose the patient first.

→ we need to identify whether the:

→ the oral structures is functioning properly

→ is there any language difficulty

→ Learning / developmental disability

→ Brain injury / trauma / accident

- So, by using this theory, as it is stated that structural & functional abnormalities in brain affect language, we can check that during assessment
- This theory is applicable for children with learning disability, developmental delay, Cerebral palsy etc
- Marshall intended LAD, which can also be used for finding the language acquisition in child.

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4. 5. Reinforcement in language therapy

→ For better involvement / participation of child, we will give some reinforcement for the child during a therapy session.
→ Reinforcement play a major role in achieving a goal as the child will be encouraged to do a specific activity
→ also, reinforcement can be used for the removal of certain unwanted behaviours.

Reinforcement are of 2 types
→ Positive ~~A~~ Reinforcement
→ Negative Reinforcement

Positive reinforcement
Positive reinforcement is positively we are encourage a right activity that is done by the child.
eg: We are working on preposition and child kept the car under the table we will give any token/verbal praise to reinforce the child

Positive reinforcement are of 2 types:
Primary & secondary

Primary: We will give the child tangible items & foods, token ~~etc~~.

Secondary: We will give the child verbal praise, highfive, social smile and hence reinforce him.

Negative Reinforcement

Negative reinforcement as include

- Punishment
- timeout
- Response cause
- Avoidance

Punishment is any undesired behaviour that can result in an unwanted situation/event

Timeout: We will remove the child from the activity and we will continue the activity.

Response cause: We will make the child understand the cause of our behaviour due to his unwanted response.

Avoidance: We avoid the ~~the~~ child for sometime and we wont give attention to what he is doing.

Schedules of Reinforcement

Intermident: Reinforcement given for a specific time interval

Continuous: ~~We w~~ The clinician will give reinforcement soon as he sees every activity in a continuous way

Intermitent is divided into

Fixed Ratio	• fixed no of reinforcements for fixed activities
Fixed duration	- reinforcement after certain time intervels
Variable ratio	- Varying reinforcements (in number)
Variable duration	- Reinforcement is not fixed under time.

b) PECS

Picture Exchange Communication System ✓

- This is a type of AAC method used for children with Cerebral palsy, Developmental disability, Autism, or any motor speech disorders.
- AAC devices are augmentative and alternative communication device ~~that can be used~~
These are any tool/techniques or devices that can be used to supplement or support natural speech
- AAC is divided into 2:

Aided

Unaided

Aided: is used ~~for~~ with help of ~~elect~~ devices.

i.e. from writing with pen in book to high tech electronic devices will come under aided

Unaided: is ~~used~~ using body language, gestures, sign language for communication

PECS is a type of aided AAC. ✓

→ In PECS, the patient will be communicating through pictures and the exchange of these pictures for his/her desired needs.
→ Pictures that of words that the child use during communication [functional words] are made, these communication will happen through this pictures.
→ Then training is given under therapy setting for saying this words

There are six phases for PECS.

① They include how to communicate?
Here, we will give the client an idea about the entire process of communication and the child will be able to say the pictures that are used for this communication method.
② Clinician and client will practice the exchange of pictures are communication
③ This is more useful in children with Autism Spectrum disorders because their visual memory is high as compared to that of cognition
④ The child will then be able to understand the situations where to use these pictures for communications
⑤ His needs will be conveyed later in a social space to unfamiliar people

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2) Autism Spectrum Disorders

a) Definition

→ Autism spectrum disorder is a developmental disability that can affect the speech and language learning abilities in a child.

→ There are certain areas that will be affected by autism
child's ability to interact & communicate with others
The domains of autism include

- lack of communication
- lack of social interaction
- stereotypic behaviours

Lack of communication: Inability to communicate with the environment and not showing interest in making friends, not explaining about their emotions

lack of social interaction: No interaction with peers, not maintaining eye contact

Stereotypic behaviour: flapping, spinning, unwanted ~~rocki~~ behaviours
→ rocking of chairs

Autism is a ~~neurodev~~ language developmental disability that can affect the ~~secondary chala~~ social skills of child.

b) Characteristics of ASD

- Not listening to name call
- Not able to look at an object when pointed
- Inability to follow command
- Not showing interest to see things when shown
  eg: aeroplane flying child wont see them
- Pretend play is not found
- difficulty in academic performance
- Tempus tantrums can be seen
- short attention span of activities
- The child wont maintain eye contact
- Lack of social smile
- Not showing interest in making friends
- Stereotypical behaviours
  eg: Rocking of chair, spinning, flapping
- lining of objects
- No object permance
- cant wait in lines
- Cannot wait untill their turn comes
- Problems d insleeping
- Unwanted crying
- Inability to understand others feelings & emotions
- Cannot convey their emotions
- Not able to understand co orders
- Unusual play behaviours
- banging of head on chairs.

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2) Causes

There are biological & environmental causes.

- Biological

→ Genetic problem
→ Any problems during pregnancy
→ Unwanted usage of drugs, alcohol by mother
→ Parental history
→ Any person with autism in family.

- Environmental

→ Usage of any chemicals
→ Any drugs

- Infections

→ Any infections that takes place during pregnancy to mother

SECTION-B

6. Bilingualism

→ Bilingualism is the usage of multiple language by an individual

→ Bilingual/Monolingual individuals have same cognitive ability They are determined based on:

→ Proficiency in learning second language
→ Age at which second language is learn
→ Manner of learning
→ Context in which the second language is used

There are 2 types of bilingualism:

- Additive bilingualism
- Subtractive bilingualism

Additive Bilingualism

→ If the person know the first language and in addition to that a new language is learned due to situations that give exposure to second language acquisition.

Eg: Learning Kannada in addition to malayalam parallelly

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Subtractive bilingualism

Subtractive bilingualism is second language will become dominant compared to first language ~~do~~ because the first language can be used by a limited population.

Steps for second language acquisition

Pre-production
Early production
Intermitent fluency
Proficient fluency

Pre-production - usage of about 500 words for communication
Early production = usage of 1000 words
Intermediate fluency - usage of about 6000 words
Proficient fluency - after 5-6 years we will be able to communicate properly due to high vocabulary

8. REELS

→ Receptive Expressive Emergent language Scale

→ Introduced by Brock & League

→ age from 0-3, extended till 7.

→ here we will check the reception,
i.e. the child's understanding about objects, concepts, emotions

expression
i.e. the output child gives, how he convey his message.

Passing criteria 2/3 under the specified age.

Assesed based on age, one age below their chronological age

if the child is able to answers the question then he/she is age adequate or else we can find the age under which child fall

→ Useful for planning goals in therapy and other interventions

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COMDEAL

Communication developmental edlita approach of language learning

→ Assesment based on picture manual & questionaire
→ Parental assesment - questions are asked to parents

→ Introduced by Pratibha karanth
→ 0-6 yes of age
→ 6 domains are assesed.

- Fine motor skills
- Gross motor skills
- Receptive language
- Expressive language
- Activities of daily living
- Social skills
- Emotional skill
- Cognitive skills

We will check all these domains and ask questions related to each domain

0 - ~~Normal~~ Not present
1 - Emerging
2 - Acquired & inconsistent
3 - Acquied & consistent
4 - Acquied & consistent in every situation.

9. Choosing and Framing goals for intervention:

Choosing a goal is very important for the treatment of a desorides for children with ASD.

Goals are of 2 types
→ Short term goals
→ Long term goals

Short term goals: We will concentrate on a particular goal for a certain short period of time and we will shift to next goal.

Long term goals: Clinician will set a goal for a long period of time for consistency of the goal.

While setting a goal it is necessary to look at these 3 categories

→ condition
→ criteria
→ on-working

Condition: Under what condition the child is achieving the goal or giving a positive response
Eg: after some prompt & modelling child was able to say preposition

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criteria : what is the criteria for the goals achieved
percentage of acheivement
eg: 80% contistency 2/3 trials

2

on-working: These are the ~~K~~ categories we are working.
eg: working on comprehension of lexical category

7) Specific Learning disorder.

S.Learning disorder is a ~~hetero~~ group of heterogeneous disorders that can affect the learning in a child.
Eg: writing, learning, reading, cognition, comprehension etc is affected.

3

kirk's ~~class~~ definition

kirk defined as retardation or ~~dete~~ reduction in the learning of a child

There are many causes for specific learning disorder.

headinjury - open injury - only there is leaneage in skull
close injury - there is ~~d~~ ~~fra~~ repture of skull and brain.

Any infections,
stroke → interpretation in flow of blood to the brain

There are certain category that can be affected by learning disability

1 → dyslexia
2 → dyspraxia
3 → dyscalculia
4 → dysgraphia

1. Problems in reading
   skipping of lines while reading.
   not understanding some words
   incorrect pronounciation, spelling

2. fine motor skills & gross motor skills are affected

3. ~~d~~ problems related in solving maths
   inability to understand mathematical symbols eg: >, <,
   Unware of time & money concept

4. writing difficulty
   mixing uppercase and lowercase
   ~~not~~ not writing with proper spacing
   not holding pen properly
   messy handwriting

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10. Incidental teaching

⇒ Incidental teaching is a therapy technique used ~~for~~ by clinician
⇒ Incidental teaching uses the method of modelling & prompting
⇒ We will teach the child what is the concepts & category of specific objects -

Modelling

We will model the child about the object, for eg: showing an apple and we say
This is a red apple, this is sweet.

Self-talk

The clinician will say what he/she is doing
explaining our own activities

Parallel talk

Self-talk done for client.
We will explain what the child is doing.
eg: Now, you kept blue block on red one.

Recasting

We will ~~com~~ add comments to the remarks said by the child.
eg: picture of a doggy
we will ask ok, what the doggy is doing? -

BLUE BOOK

ACHIEVER

INTERNAL ASSESSMENT BOOK

Name LAKSHITA LUNKED

Subject NEUROLOGY Class 1st BASLP (II nd SEM)

Sl.No.	PARTICULARS	Test Date	Page No	Marks Awarded	Signature of Staff Incharge
1	TEST - I				
2	TEST - II				
3	TEST - III				
4					
5					

Certificate

This is to certify that Smt. / Sri.....has satisfactorily completed the course of Assignment prescribed by the.....University for the semester .....Degree Course in the Year 20 - 20

MARKS	
MAX	OBTAINED

Signature of the Student

Signature of H.O.D.

Signature of the Staff Member (Incharge of the Batch)

1st Internal assessment

16/08/22

SECTION - A

(1) There are 12 pairs of cranial nerves present in our body. They are:

CN I - Olfactory nerve
CN II - Optic nerve
CN III - Oculomotor nerve
CN IV - Trochlear nerve
CN V - Trigeminal nerve
CN VI - Abducens nerve
CN VII - Facial nerve
CN VIII - Vestibulocochlear nerve
CN IX - Glossopharyngeal nerve
CN X - Vagus nerve
CN XI - Spinal accessory nerve
CN XII - Hypoglossal nerve.

SSMM BMBSBBMM

The cranial nerves important for speech, language, Hearing and balance are:

CN no.	Name.	Origin	Sensory/ Motor	Function	Importance.
II	Optic nerve	anterior part of the brain	sensory	visual perception and integration	helps in the reading & writing of language.
V	Trigeminal nerve	pons	sensory and motor.	It provides sensory perception (of touch, temperature and pain) in the face and proprioception of facial and oral structures. supplies anterior 1/3rd of the tongue	important for articulation of speech and chewing of food.

CN no	Name	Origin	sensory / Motor	Function	Importance
				the mandible (jaw) and the teeth Dysfunction: loss of sensation to the face, abnormal jaw movement and abnormal movements of facial and oral structures	
VII	Facial nerve	pons	sensory and motor	it supplies the muscles of the face, the circular muscles of the lips, anterior 1/3rd of the tongue (to taste buds) and the auricle of the external ear. Dysfunction: facial paresis (weakness of the muscles of the face), facial palsy (paralysis of one / both sides of the face), loss of taste and lack of containment of food in oral cavity due to improper lip closure	important for articulation of speech, chewing of food and the perception of taste.
VIII	Vestibulo-cochlear nerve	pons	sensory and motor	perception of auditory stimulus from the cochlea of the inner ear and important in body balance and head movement responses	important in hearing and body balance.

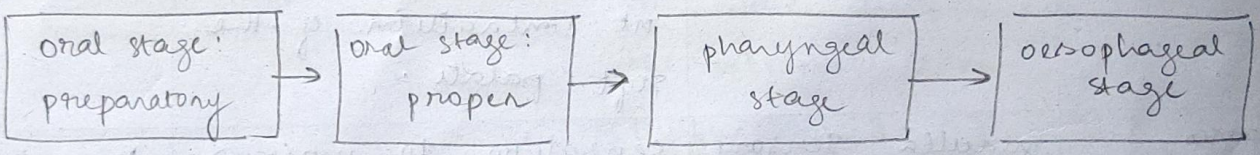
CN no	Name	Origin	Sensory/ Motor	Function	Importance
				Dysfunction: may lead to hearing loss and loss of body balance.	
IX	Glossopharyngeal nerve	medulla	sensory and motor	supplies the posterior 1/3rd of the tongue and lateral and posterior walls of the pharynx. Also supplies the soft palate. Dysfunction: absent or diminished gag reflex and nasal regurgitation due to insufficient contraction of the soft palate.	important in producing gag reflex, swallowing of food.
X	Vagus nerve	medulla	sensory and motor	sensation to most of the muscles of the larynx and their proprioception. Also supplies vocal cords and the posterior 1/3rd of the tongue Dysfunction: diminished or absent gag, changes in voice perceptual quality (hoarse, breathy, wet, gurgly).	important for articulation, voice production and resonance
XII	Hypoglossal nerve	medulla	motor	supplies intrinsic and extrinsic tongue muscles	important for feeding and

			Dysfunction: tongue fasciculations (involu-ntary tongue movem-ents), food left over in oral cavity after swallowing	and articulation of speech.

SECTION - B

(1.) Stages of swallow:

Swallowing of deglutition is the act of the movem-ent of food from the mouth until the stomach through the gastro-intestinal tract through co-ordina-ted neuromuscular movements. There are four main stages of swallowing:



a) Oral stage: preparatory

in this stage, the food, after being introduced into the oral cavity is prepared to be converted into a consistency and form that is suitable to be swallowed. First, chewing, biting, tearing of food takes place and it is then mixed up with saliva (mastication) and formed into a semi-solid state in the form of a ball of food called bolus. The tongue is used to move the food around and occlusion helps to contain the food.

→

b) Oral stage : proper : in this stage, the bolus is made to move to the posterior part of the tongue. The tongue then shrinks in size due to activity of it's intrinsic muscles and touches the hard palate by elevation due to extrinsic muscle activity. The bolus is contained in the oropharyngeal region.

c) Pharyngeal stage : in this stage, the bolus moves from the oropharynx into the cricopharyngeal region by contraction of the velum, to avoid any nasal regurgitation. It is a complex reflexive stage and is involuntary, unlike the last two stages.

d) Oesophageal stage : in this last stage, the bolus moves from the cricopharynx into the oesophagus by the co-ordinated upward elevation of the larynx and the closing of the epiglottal flap over it. The vocal fords are adducted and the bolus moves into the oesophagus and down by peristalsis and takes 10 - 15 seconds to enter the stomach.

(5) Oral reflexes :

The oral reflexes seen in typically developing infants are :

a) Rooting reflex : movement of the tongue towards the point of contact of the nipple of the breast during feeding.

can be elicited by touching the lower edge of the infants lip. The infant first moves the tongue

towards the point of contact and then turns the head towards the same side.

b) Sucking reflex: reflex wherein the infant sucks ~~and~~ any object placed in it's oral cavity can be elicited by placing a finger in the infant's oral cavity, he/she will suck at the finger.

c) Swallow reflex: it can be of two types:

Congenital swallow: non conditioned reflex when the infant thrusts the tongue out and swallows with mouth open

acquired swallow: conditioned reflex where tongue thrust is absent and infant swallows with mouth closed.

d) Mastication reflex: reflex wherein the infant/child chews the food placed in it's oral cavity. can be elicited by placing food in oral cavity.

e) Cry reflex: non-conditioned reflex where the child cries to express needs.

3 Differential cry is wherein the child has different types of cry for different needs.

(4) Cerebral blood supply: it is carried out by 2 main pathways:

Cerebral blood supply

internal carotid artery → anterior cerebral artery

posterior cerebral artery

vertebral artery → basilar artery

a) The common carotid artery divides into an internal and external branch. The internal carotid artery enters the brain and further divides into the anterior and posterior cerebral artery.

Anterior branch - supplies medial parts of frontal and parietal lobe and corpus callosum.

posterior branch - supplies the lateral parts of frontal and parietal lobes.

b) vertebral arteries branch out of the subclavicular artery and run upward and parallel to the spinal cord and supplies the brain stem. Then it divides into basilar arteries which supply the subcortical structures of the brain, occipital and temporal lobes and the cerebellum.

The vertebral - basilar network and internal carotid network converge to form a circle of blood vessels called the circle of Willis.

the significance of this is to neutralise and have equal blood pressure at all the areas of the brain

Diagram.

(3)

Lower motor neuron	Upper motor neuron
- originate from the spinal cord	- originate from the cerebral cortex.
- terminate at muscles and glands	- terminate at brain stem and spinal cord.
- regulated by acetylcholine neurotransmitter	- regulated by glutamate neurotransmitter.
- Do not have further classifications	- classified into: a) somatic b) brachial c) general visceral

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Diagram? Develop to be more elaborate

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