The Development of Language and Communication

What is Language?

‘an organised system of symbols which humans use to communicate. These symbols can be spoken, signed … or written down’.

(Davenport,1994:232)

- Spoken language consists of a series of basic sounds : ***phonemes*** – ‘st’ and ‘op’.

- These are combined to form more complex sounds which have meaning - ***morphemes*** – ‘stop’.

(Davenport,1994:232)

Communication

- The ‘transmission’ of some message or meaning from one place to another.

- May be vague or precise.

(Davenport,1994:233)

Language and Communication

- Human ability to use language separates us from the rest of the animal kingdom.
- Studies on animals have found that many animals communicate with each other through sounds or other non-verbal communication, but they do not use language.
- ‘Humans live in complex environments and have very complex relationships’ (Davenport, 1994:233)
- A ‘sophisticated system’ like language is needed by humans (ibid).

Four processes of language and communication development

- **Phonology**
- **Semantics**
- **Syntax**
- **Pragmatics**

- The production of meaningful sounds.
- The meaning of words.
- The grammar of language - how words are combined to form sentences.
- How language is used to communicate in differing social settings.

(Keenan, 2002)

Theories of Language Development

- Explaining how children learn language has proved to be one of the most interesting challenges of developmental psychology.
- Two main theories dominating the development of language are the behaviourist and the nativist approaches.

Language Acquisition Theory

Learning Theory *(Skinner)*

- Children learn to speak through observation, imitation and reinforcement, and are rewarded for producing recognisable sounds because they gain attention from their parents.

Observation & Modelling (*Bandura)*

- Children “pick up” what they hear spoken around them and repeat it - accents confirm this. Can also be embarrassing.

Skinner's Theory

- Children are born 'empty vessels' waiting to be filled.
- Adult involvement with the child provides the stimulus for learning.
- Child responds by imitating the adult's language.
- Reinforcement is given through smile or praise from the adult.

(Riddall-Leech, 2010)

Parent becomes involved with child and provides a **stimulus**

↓

Child **responds** by imitating and repeating parent's language

↓ ↓

Correct response | Incorrect response

↓ ↓

Parent **reinforces** the child with praise | Parent ignores or corrects the child

↓ ↓

Result: child gradually learns to talk by listening, imitating and repeating the language they hear

Burrhus Skinner

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Criticisms of Skinner's Theory

- Skinner's work developed with animals and applied to humans.
- Ignores 'invisible' aspects of humanity e.g. emotions, soul or affect; focusing only on visible acts.
- Skinner's rewards system also criticised.

(Riddall-Leech, 2010)

Criticisms of Skinner's Theory

- Children imitating adult language does not explain grammatical mistakes children make by saying things adults would not say such as " I doned it" rather than "I did it".
- Other examples: "I hurted myself when mine fell over" and "I falled off the bike my daddy gived me"
- Children use grammatical structures and words which they will never have (and will never) hear.
- Criticisms of Skinner's theory led to the development of alternative theories for language development.

(Riddall-Leech, 2010)

Language Acquisition Theory

Nativist (Biological) approach *(Chomsky)*

- All humans are predisposed to acquire language - L.A.D. Language Acquisition Device, which allows children to grasp rules of grammar and use them unintentionally.
- Once a child has mastered the basics, this allows for limitless combinations.

Lennenberg

- Also believed in a “predisposition” to language with the brain sensitive to acquiring language in a defined period - the critical period from birth to the onset of puberty.

Language Acquisition Theory

- **Slobin** suggests that very young infants focus on individual sounds and syllables in a stream of sounds, and are pre-programmed to pay attention to beginnings and endings of strings of sounds.

Language Acquisition Theory

Environmentalist/Interactionist Bruner

- The social support and context in language acquisition is as important as the biological factors.
- Scaffolding, motherese expansion and recast all facilitate the innate predisposition of language development.
- LASS (Language Acquisition Support System).

Language Acquisition Theory

Social-cognitive (Vygotsky)

- Emphasised the importance of culture and language – language invented by humans and used as a cultural tool.
- Learning and development affected by the family.
- A staged development of language.
- Changed educators' views of children's interactions with others, and promoted new ideas of diagnosing and meeting children needs.

(Riddall-Leech, 2010)

Vygotsky's 3 Stages of Language Development

- External
- Egocentric
- Internal

External Speech

- 0 to 3 years.
- Child’s use of language is in response to and directed towards the outside world.

Example:

- Child will ask for or indicate they want a drink.
- Child will respond to a question whether they want milk or water.

(Riddall-Leech, 2010)

Egocentric Speech

- Monologue/overt inner speech.
- 3 to 7 years.
- Child thinks aloud.

Example:

- “ I’m putting teddy to bed and he will go to sleep straight away”.

(Riddall-Leech, 2010)

Internal Speech

- Verbal thought.
- From 7 years onwards.
- Child thinks silently to him/herself.

Example:

- Thinking about the school day and remembering that PE kit will be needed the next day.

(Riddall-Leech, 2010)

The Development of Language

Motherese

- The quality of language as well as the quantity is important.
- Adults talk to children in a special way.
- Motherese (more scientifically described as infant-directed speech).
- Higher pitched voice, slower pace than speech to older children or adults.
- Sentences are short, grammatically simple and include concrete vocabulary.

Motherese

Parents repeat a lot, with minor variations.

- *‘Where’s the ball?, Can you see the ball? There’s the ball!’*

Recasting and Expansion

- Parents repeat child’s sentences often in longer more grammatically correct forms.
- *‘Mummy sock’ ‘Yes, it’s mummy’s sock’*
- *‘Daddy work’ ‘Daddy’s gone to work’*

Motherese

‘Babies as young as a few days old can discriminate between Motherese and speech directed at adults and they prefer to listen to motherese, whether it is spoken by a female or a male voice’.

(Cooper & Aslin,1994; Werker & McLeod, 1992; cited in Bee & Boyd, 2007:229)

How does language develop?

- Dependent on quality of the mother (or main carer) and child interaction and physical attributes of the baby.

- For the first year infants are not capable of speaking meaningful words.

Pre-linguistic Stage

- From 0 – 12 months.
- At birth babies engage in pre-linguistic vocalisation in the form of a “hunger cry”, a “mad cry” and a “pain cry” (*Wolff).*
- By the 3rd week they produce a “fake” cry.

Pre-linguistic Stage

- 3-5 weeks: Cooing.
- 4-6 months: Babbling.
- Up to 6 months all babies sound the same - but deaf babies start to fall behind and are unable to produce as well formed syllables as hearing children (*Oller & Ellers).*

- *According to DeBoysson-Bardies et al, adults are able to recognise infants of 8 months babbling in a different language !!!*

Holophrastic speech (the first words)

- At 1 year - “holophrases” single words representing an entire sentence worth of meaning.
- Language acquisition initially is slow, then the pace quickens by 24 months children know 186 words *(Nelson).*
- Two problems can occur - *Overextension*

  Underextension

Overextension

- ‘dog’ associated with family pet.
- Applied to anything that looks like dog – horse sheep, cow.
- Oranges, tomatoes, plums referred to as apple.
- Doesn’t mean children don’t know what apple is, they just haven’t learn word for orange, plum tomato, and apple is nearest that they do know.

Overextension

Examples:

Word	*1st used*	*Applied to*
da	father	men, boys, some women
baw	ball	toys, most fruit, stones
mil	milk	all drinks, bathwater, urine, sea

Underextension

- Having learned dog is an animal – all animals must have same characteristics (four legs and tail).
- Fish, bird can’t be animals.
- Grass grows in child’s garden - will underextend that grass can’t grow in park as well.

(Davenport, 1994)

From **Holophrases** to **Telegraphic** Speech

- At 18 - 24 months toddlers combine two words into simple sentences called telegraphic speech (critical content is retained and frills discarded).
- Start to use grammar (words in correct order).
- Language explosion occurs from age two.
- By 3 years – vocabulary approx 1000 words.
- 75% of utterances understood by strangers.

Determinants of Language Development

- Language acquisition is determined by the complex interaction of biological, cognitive and social aspects of maturation (*Slobin).*
- Children construct language making use of innate-language specific capacities and other conceptual developments that interact with specific experiences in the physical and social environment.
- When there is disruption to one of these parts language development is affected.

Determinants of Language Development

- It was thought that early years were crucially to learning language.
- First 2 years human babies make two enormous advances:
  - communicate through language.
  - move around environment independently.
- Both occur when child is mature enough and usually develop together.

Determinants of Language Development

- However maturation often varies for each skill.
- Not uncommon to find:
  - 1 year old who talks constantly but makes little effort to walk.
  - 18 month old who rushes around everywhere but rarely speaks.

Impaired Language Development

- Biological conditions - structural problems, autism, cerebral palsy.
- Extreme deprivation affecting linguistic, emotional or social development – Genie.

Genie

- Discovered 1970 aged 13.5 years.
- Brought up in conditions of neglect and extreme isolation.
- Severely disturbed and underdeveloped.
- Unable to learn language.
- No linguistic stimulation between 2 years and puberty.

Genie

- In her treatment and rehabilitation great efforts made to teach her to speak.
- Analysis showed several abnormalities:
  - gap between production and comprehension
  - variability in using rules
  - gaps in acquisition of syntactic skills (grammar)
  - general delayed rate of development
- Psycholinguistic tests concluded she was using right side of brain: a direct result of her beginning to learn language outside of the critical period.

Critical Period of Language Acquisition

- Lennenberg argued there was a critical period for language development.
- Language development considered to be result of brain development.
- Both sides of brain equipped to learn language at birth.
- Control gradually taken over by left side of brain (between 2 years and puberty) when brain fully developed.
- Beyond this point no neural ‘plasticity’ to enable right side of brain to take over language function.

(Crystal, 1997:265)

Critical Period of Language Acquisition

- Wrong to consider that early years are so crucial.
- Studies have shown that children who have not learned language in the early years can still learn reasonably well later.

(Davenport, 1994)

Observing Language Development

- When observing children in the setting note examples of the language they use. This could include examples of what they could not possibly have learnt from imitating or copying an adult. Note the response of adults or other children to any ‘incorrect’ language.
- Observe the children’s responses if they are corrected or ignored.
- Link your conclusions to the theories of language development.

References and Further Reading

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