

INTRODUCTION TO PSYCHOLINGUISTICS

EXPERIMENTAL TEMPLATE

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Outline

- What is a psycholinguistics
- What are the main topics of psycholinguistics
- Methodology
- experiment result

PSYCHOLINGUISTICS

- Psycholinguistics is a branch of study which combines the disciplines of psychology and linguistics. It is concerned with the relationship between the human mind and the language as it examines the processes that occur in brain while producing and perceiving both written and spoken discourse.

Psycholinguistics as a separate branch of study emerged in the late 1950s and 1960s as a result of Chomskyan revolution.

The three primary processes investigated in psycholinguistics

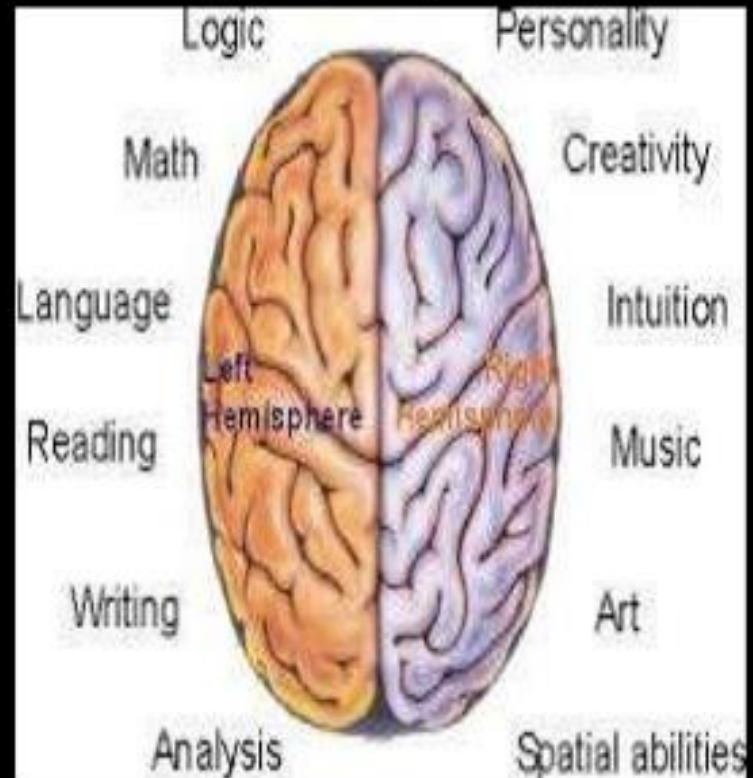
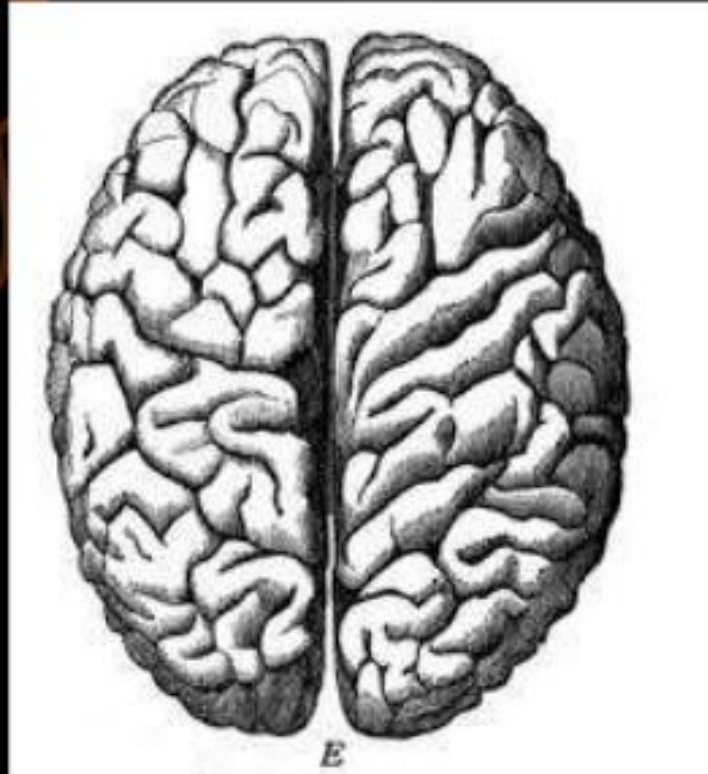
- Language Comprehension
- Language Production
- Language Acquisition

Language Comprehension

Comprehending language involves a variety of capacities, skills, processes, knowledge, and dispositions that are used to derive meaning from spoken, written, and signed language. Comprehension is mainly thought to occur in the Wernicke's area of the brain which is located in the left temporal lobe. Language comprehension is a complex process that occurs easily and effortlessly by humans. It develops along with the brain and is able to be enhanced with the use of gesture.

Old Theory

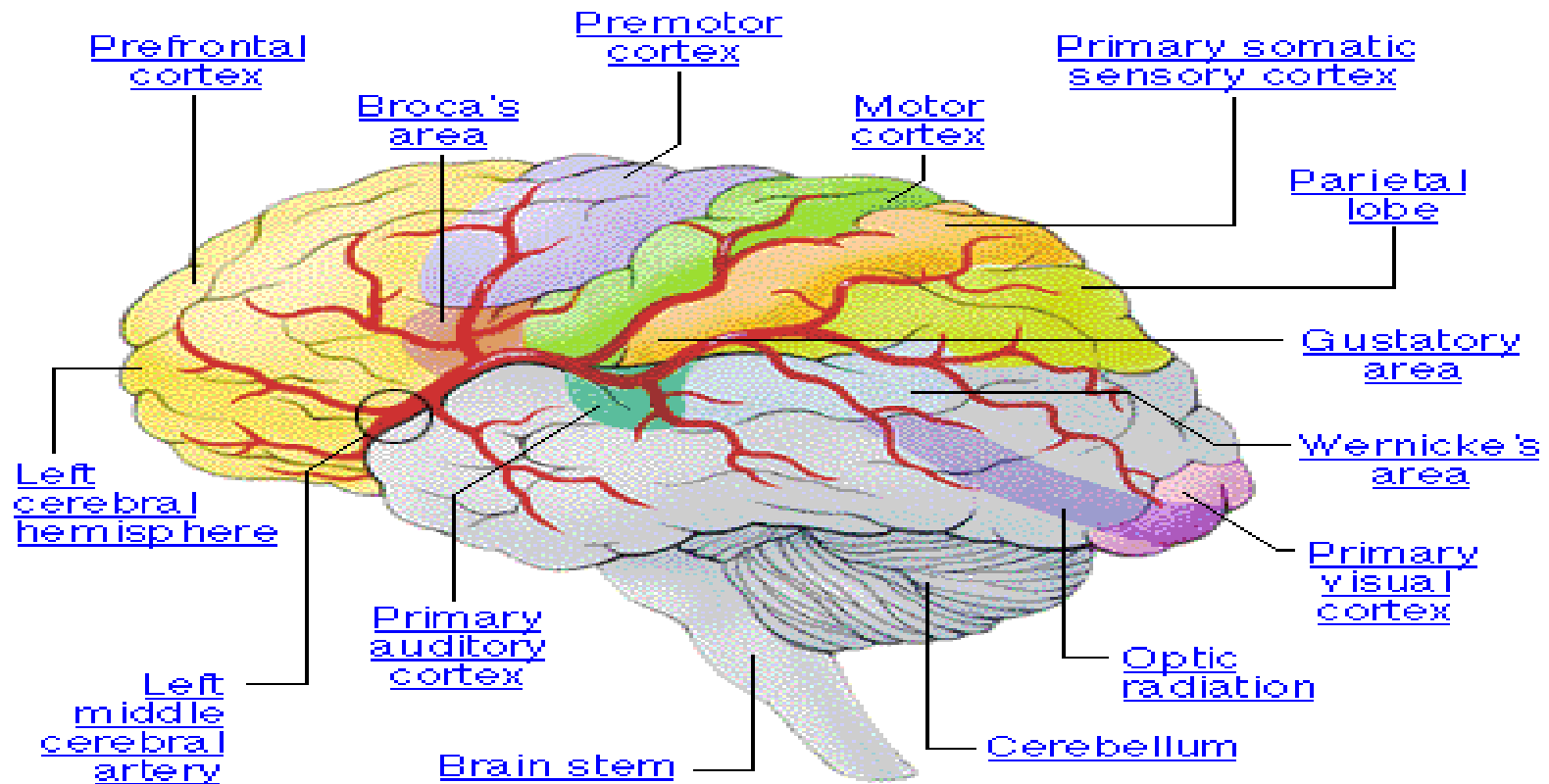
- 1st concept is that language exist in right hemisphere.



Language Production

- language production is the production of spoken or written language. It describes all of the stages between having a concept, and translating that concept into linguistic form. • Stages of production The basic loop occurring in the creation of language consists of the following stages: → Intended message → Encode message into linguistic form → Encode linguistic form into speech [motor system] → Sound goes from speaker's mouth to hearer's ear [auditory system] → Speech is decoded into linguistic form → Linguistic form is decoded into meaning

Language related areas



CHOMSKY'S AND SKINNER'S THEORY OF LANGUAGE

Who is Chomsky?

Avram Noam Chomsky

Born on December 7, 1928 in Philadelphia

Studied at University of Pennsylvania – BA, MA and PhD

American linguist, philosopher, cognitive scientist, logician,
political commentator and activist

Sometimes described as the “father of modern linguistics”

Professor Emeritus of Massachusetts Institute of Technology (MIT)

Creator or co-creator of Chomsky hierarchy, the universal grammar
theory and the Chomsky-Schutzenberger theorem

www.chomsky.info

CHOMSKY'S VIEW ON LANGUAGE ACQUISITION

- He argues that language acquisition is an innate structure, or function, of the human brain.
- Chomsky believes that there are structures of the brain that control the interpretation and production of speech.
- Children do not need any kind of formal teaching to learn to speak.
- Factors that Chomsky used to support his theory:
 - θ There is an optimal learning age. Between the ages 3 to 10 a child is the most likely to learn a language in its entirety and grasp fluency.
 - θ The child does not need a trigger to begin language acquisition, it happens on its own. The parent does not need to coax the child to speak, if it around language production, the child will work to produce that language on its own
 - θ It does not matter if a child is corrected, they still grasp the language in the same manner and speak the same way. During one stage, a child will make things plural that are already plural.

SKINNER'S VIEW ON LANGUAGE ACQUISITION

- Skinner viewed babies as 'empty vessels' which language had to be 'put in to'
- Skinner also viewed language acquisition as a cognitive behavior
- operant conditioning - child goes through trial-and-error in other words they tries and fails to use correct language until it succeeds; with reinforcement and shaping provided by the parents gestures (smiles, attention and approval) which are pleasant to the child.
- Skinner in Verbal Behavior (1957) differentiated between two types of verbal responses that a child makes : - Verbal behaviour that is reinforced by the child receiving something it wants. - Verbal behaviour caused by imitating others.
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Limitations :

- Children are often unable to repeat what an adult says especially if the adult utterance contains a structure the child has not yet started to use. - Critical period for language acquisition. Children who have not acquired language by the age of about seven will never entirely catch up. - Observational studies of parent-child conversations (Brown and Hanlon, 1970) show that parents rarely reinforce correct grammar in a child's speech, but instead tend to focus on the truthfulness or accuracy of statements.

SIMILARITIES AND DIFFERENCES BETWEEN CHOMSKY'S AND SKINNER'S THEORY

Similarities ⊗ Both men have different views and theories on the same study which is how all humans manage to obtain grammar

Differences ⊗ Subject of their study is children. Chomsky's Theory Skinner's theory Innate biological ability that all humans possess. He believed that every child has a 'language acquisition device'. Learning process involving the shaping of grammar into a correct form by the re-enforcement of other stimulus. innate learning mechanism enables a child to figure out how the language works (Traxler 2012) Approaches child as a blank slate that is filled up by knowledge gained through experience (Traxler, 2012)

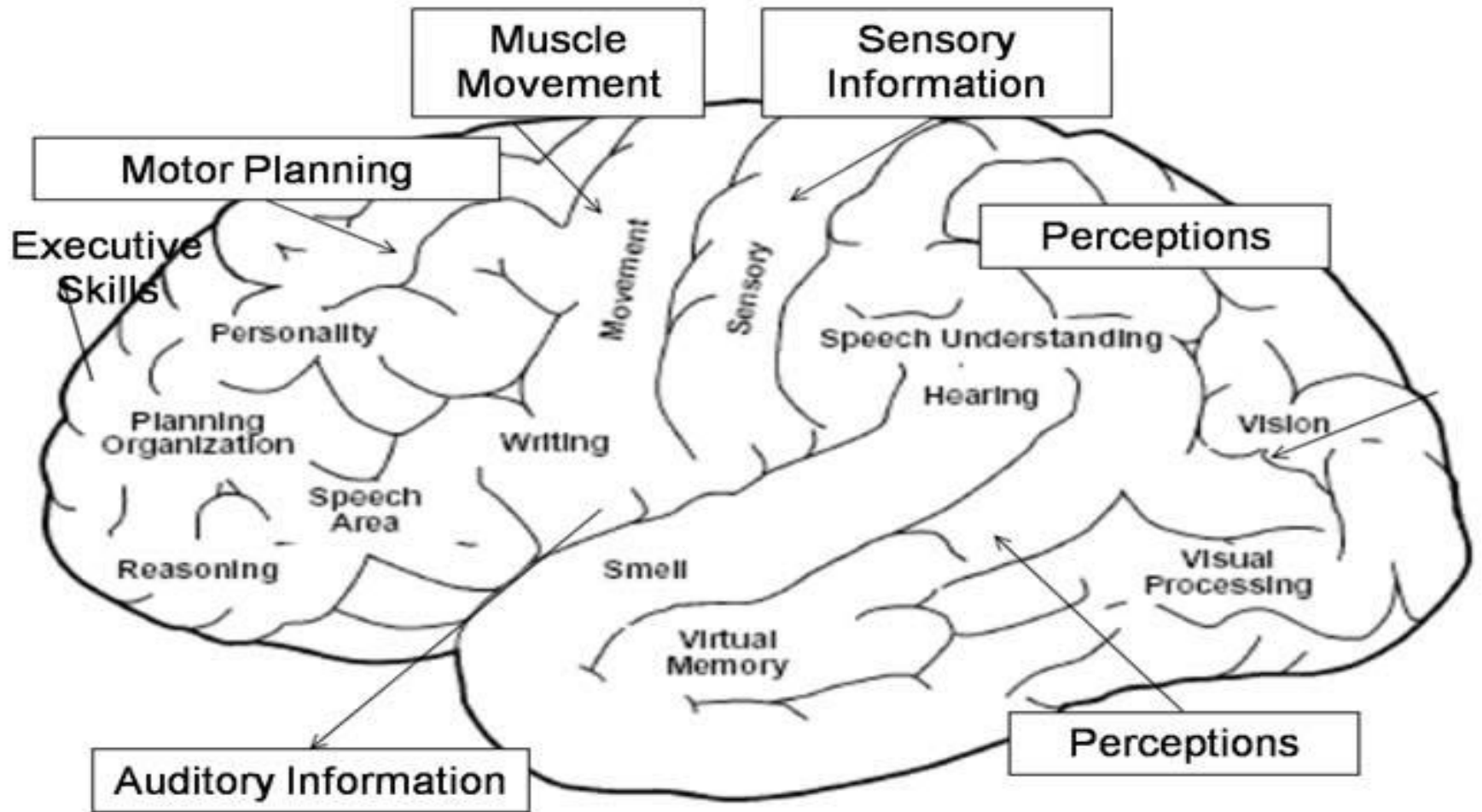
- Language Acquisition • Language acquisition is the process by which humans acquire the capacity to perceive and comprehend language, as well as to produce and use words and sentences to communicate. Language acquisition usually refers to first-language acquisition, which studies infants' acquisition of their native language. This is distinguished from second-language acquisition, which deals with the acquisition (in both children and adults) of additional languages. Language acquisition is just one strand of psycholinguistics which is all about how people learn to speak and the mental processes involved.

Central themes in psycholinguistics

1) What knowledge of language is needed for us to use language? — Tacit (implicit) knowledge vs. Explicit knowledge. — Tacit: knowledge of how to perform something, but not aware of full rules — explicit: knowledge of the processes of mechanisms in performing that thing

- What cognitive processes are involved in the ordinary use of language? • How do we understand a lecture, read a book, hold a conversation? • Cognitive processes: perception, memory, thinking, learning

Executive Skills and the Brain



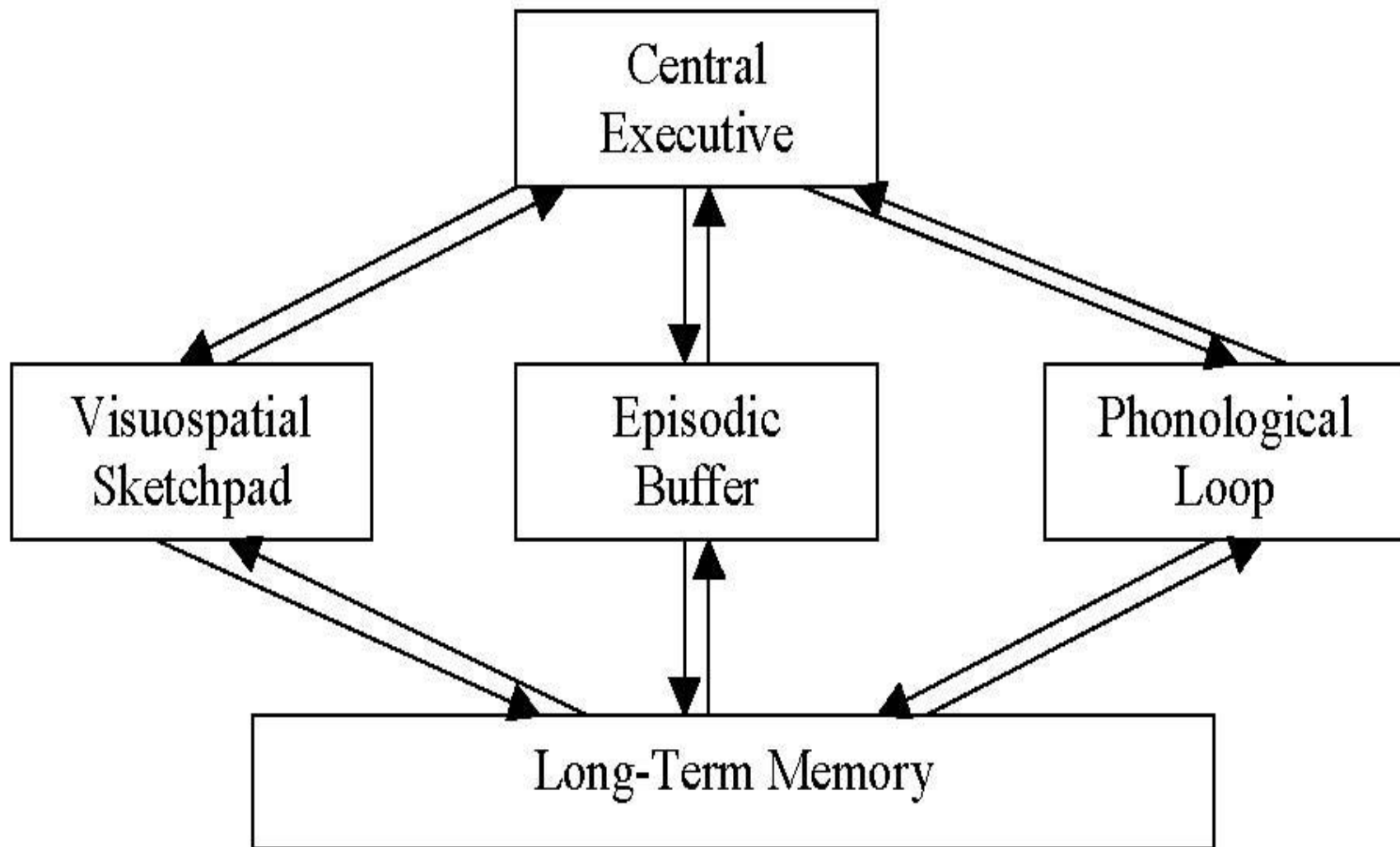
Research methods for Cognitive processes: perception, memory, thinking, learning

- Behavior task
- Language tasks
- ERP

EXPERIMENT WITH CUED RECALL

Language learning and working memory

- [Miller, Galanter, Pribram,](#)
- [Atkinson , Shiffrin](#)
- [Baddeley , Hitch](#) (1974)
- **Ericsson and Kintsch** (1995)



Ethics in experiment

Consent form and FAQ

Language exposure

Culture related exposure

Iq – test to measure standart deviation

m- group - Mono group

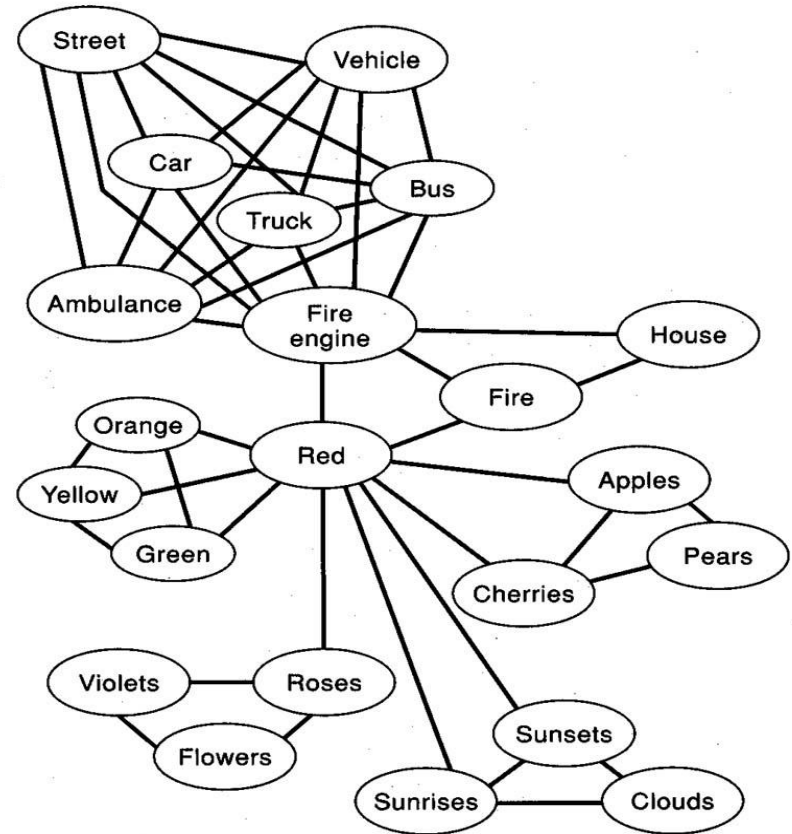
B- group Bilingbal group

Random sampling /60 students /

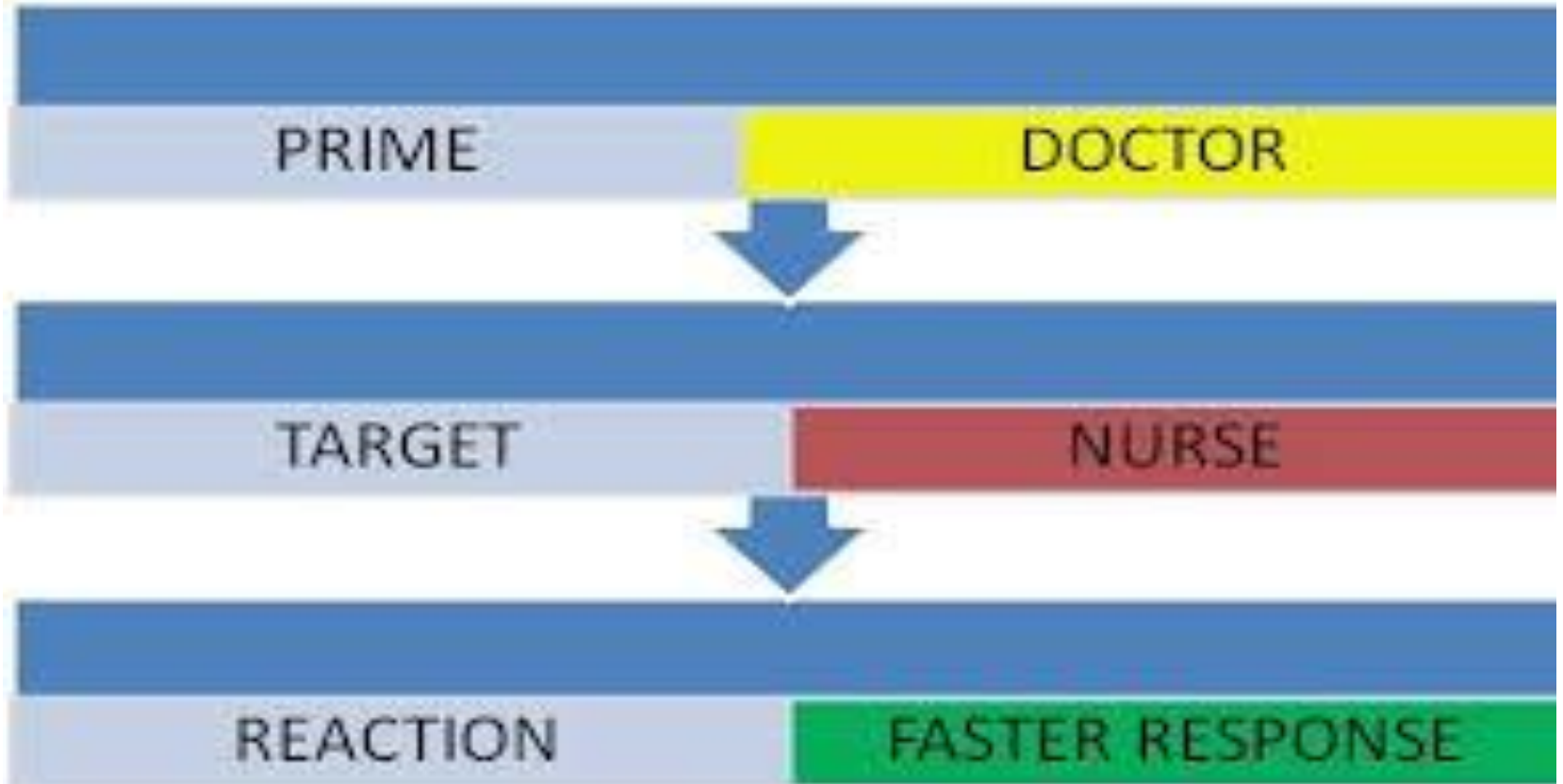
Spreading Activation Model

(Collins & Loftus, 1975)

- Length codes typicality
- Link codes type of rela
- Some redundancy



Semantic priming



семантик прайминг Т- тестийн дүн

М-1 бүлгийн гүйцэтгэсэн /сэргээн санасан/ үгийн дундаж тоо нь 11,77 , **Б-1** бүлгийн дундаж 11,37 гарсан бөгөөд t-тестээр хоёр бүлгийн ялгааг тогтооход 0,670 буюу ач холбогдол бүхий ялгаа илрээгүй.

Харин М-2 бүлгийн дундаж 8,56 ба Б-2 бүлгийн дундаж 12,60 дүнтэй байна .

Бүлгүүдийн T- тест , үр дүн

- Тус хоёр бүлгийн t тестийн оноо нь 2,60 (p=0.05) дүнтэйгээр АЧ ХОЛБОГДОЛ бүхий ялгааг харуулж байгаа нь энэхүү ялгаа нь тохиолдлын бус чанартай гэдгийг харуулж байна.
- Хоёрдугаар хэл эзэмших нь танин мэдэхүйн чадварт нөлөөлөх буюу тогтноших нь “хөгжлийн мэдрэг” үеийн төгсгөлрүү бий болдог онцлогтой байж болох юм гэдгийг харуулж байна

Thank you for your attention