



European Federation of Psychology Teachers' Associations







EFPTA

Russia Moscow State Pedagogical University, Rostov-on-Don Southern Federal University

> Brain functions and psychopedagogical support of cognitive activity in preschoolers

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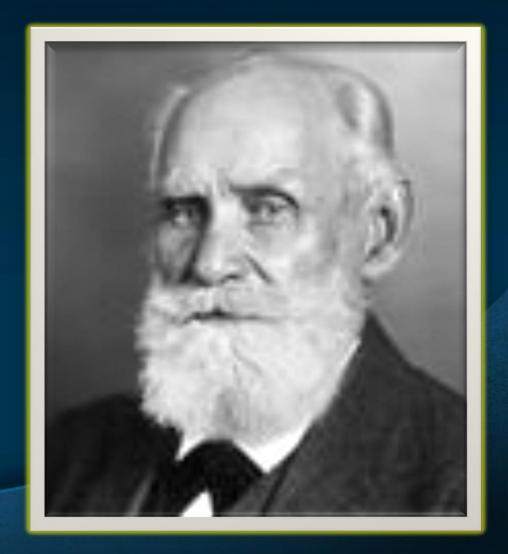
MAIN POINTS



- Study brain functions from the Russian perspective
- The problem of study of mental activity in the Russian psychological science
- Psycho-pedagogical support of mental activity in Preschoolers
- Exercises in the development of cognitive activity

WHAT IS THE BASIS? I. P. Pavlov on conditioned reflex

- investigated conditioned reflexes.
- -proved that conditional ties are closed in the cortex of the big hemisphere.
- -there are the basis of mental activity.
- called the brain "an organ of adaptation to the environment", it provides relationship of the organism with the surrounding external world.



HOW HAS SCIENCE ADVANCED TODAY?



Natalia Bekhtereva.

Her Grandfather was the great Vladimir Michailovich Bechterev, whose contribution in the Experimental and Clinical Psychophysiology and Human Brain Sciences has been invaluable.

Natalia Bekhtereva "Magic brain and labyrinths of life".



- Principles and mechanisms of brain activity
- The relationship of the brain to the psyche
- The relationship of the human brain to the strategy of the society
- The interrelationship of emotions and thinking activity, the brain and learning

Let's consider it in detail.



Principles and mechanisms of brain activity

- Implementation of brain activity is provided by the systemic mechanism.
- The mechanisms of self-preservation and self-protection of the brain are involved.
- Memory and brain function are linked, creating a matrix of long-term memory.
- The concept of a bug detector is introduced, which occurs when there is mismatch between the intellectual activity of the memory matrix, which captures the stereotyped situation and makes life easier.
- Memory and brain function are related, memory impairment is due to impaired functioning of the brain.



THE RELATIONSHIP OF THE HUMAN BRAIN TO THE STRATEGY OF SOCIETY

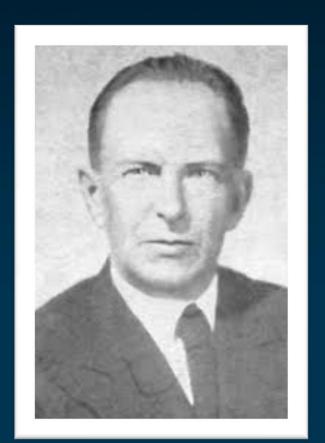
Natalia Bekhtereva
 compares the brain model
 activity and the social
 model.

The interrelationship of emotions and thinking activity, the brain and learning

 The concepts of the "stereotype thinking" as a mental operation and "unconventional thinking" is creativity, intertwined with emotion and thought were determined.



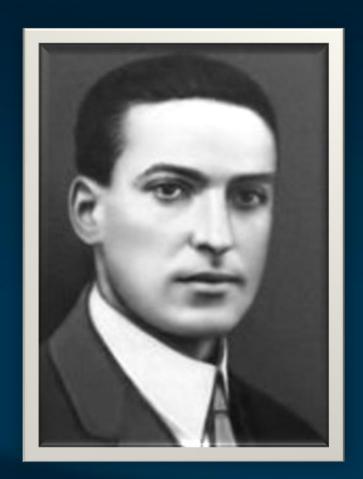
N.Chelovanov



Identified a consistent pattern: the external impressions are needed Young children need to communicate, to move and to have external impressions.







L. S. Vygotsky 1896-1934 гг.

Psychological knowledge about the cognitive activity of the child developing.

The basic paradigm for the development of mental activity is the cultural-historical concept

All mental processes are not given to us in finished form from birth, and only set in the cultural and historical forms.

learning should lead development, training consistent with the level of development of the child;

L. S. VYGOTSKY INTRODUCES SCIENCE CONCEPTS:

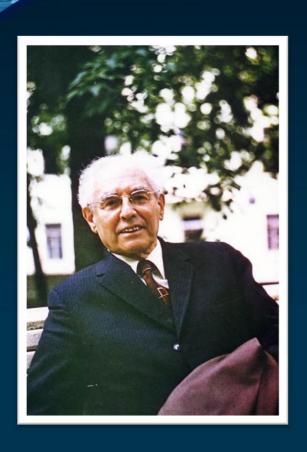
A zone of "proximal development":

- •is what a child does originally together with an adult or peer and then independently.
- is a "Space of opportunities"





A. R. LURIA: THE MAIN PROVISIONS OF THE THEORY

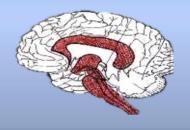


- psyche— is the function of the brain, which is associated with such activities as writing and reading, score and the comprehension, understanding, the ability to make calculations, etc.;
- with the defeat of several parts of the brain it can be interrupted several forms of mental activity;
- different parts of the brain develop at its pace.



A MODEL OF THE BRAIN BY A. R. LURIA

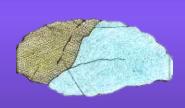
The brain consists of the following blocks:



Energy block (includes non-specific mid brain structures);

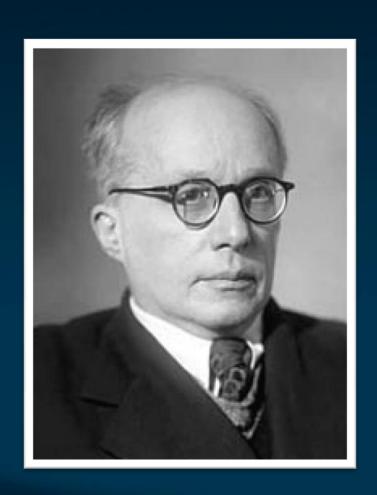


The block of mental activity programming and controlling (which includes all structures that are located in special part of the brain);



The implementation of higher mental functions, which is carried out with the participation of all the described above blocks.

Sergei Rubinstein

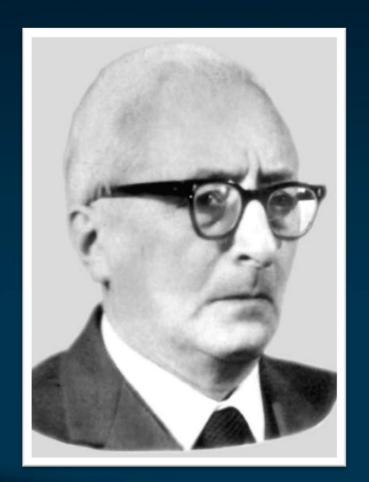


Defined:

- -the concept of "mental abilities",
- the quality of analysis, synthesis,
- generalization relations,
- -the thought as internal condition that mediates any kinds of external conditions.



P. Galperin



Investigated the correlation of activities and actions.

These defined the emergence of the development of mental actions theory.

Actions are materialized through the speech to actual "pure thought" (this is a "psychological phenomenon").

A. Zaporozets

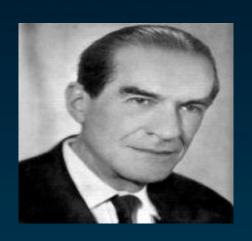


Developed the theory of amplification (enrichment) – expanding the boundaries of personality development in children through the optimal use of specific children's activities.

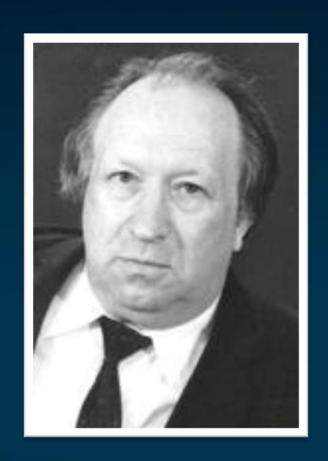
Described the new formation of preschool children's mental, activity: cognitive motives, intellectual games,

A. A. LEONTIEV

- Components of activity are realized through functioning of action plans, emotions, perception, imagination, thinking, attention, will.
- Emphasized the socio-historical context of activity as a process of mastering spiritual culture by means of actions and operations that ensure the activity of the child in the knowledge of the outside world.
- Introduced the psychological structure of activity: the need, motive, goal, task, result.







V. Davydov

- Created the theory of educational activity, which ensures the development of personality, her intelligence and mental activity.
- Determined the content of the activity theoretical knowledge (the unity of the abstractions and generalizations) that form the skills and abilities, develop consciousness and thinking, creative personality level.



- the sequence of organizational forms of activity of the teacher and psychologist
- the process of the interesting observation, counseling, personal involvement
- help a child in his personal growth, installation empathic understanding





- special planned activities of the teacher, aimed at introducing the children to the socio-cultural and moral values,
- the process of awakening of sprouts autonomy
- the opportunities for personal growth, help a person to get into the development zone,
- creating social and pedagogical conditions for successful learning and personal development of the child,
- creating conditions for positive child development with a focus on the zone of proximate development.





KEW WORDS

personal growth

empathic understanding

help

 successful learning and personal development of the child

zone of proximal development





THE TASKS OF PSYCHO-PEDAGOGICAL SUPPORT:



to preserve and support the child's identity



to ensure equal opportunities for the full development of each child



formation of general culture of pupils, development of their moral, intellectual, physical, aesthetic qualities, initiative, independence and responsibility:

THE FORMS OF ORGANIZATION OF PSYCHO-PEDAGOGICAL SUPPORT

Individual job

The interaction of adults and children

The collective work of children

The process of cognition near someone else





THE IMPLEMENTATION OF EVERY CHILD OF HIS TASKS WITHIN THE SAME GROUP OF CHILDREN







- Talks, art reading of fairy tales and short stories, folklore,
- Looking at pictures,
- View computer-based presentations, etc.,
- Presentation of the problem situation,
- The interaction between children
- Communication
- The interaction of the teacher with each child separately

LOGO

Game methods





THE EFFECTIVENESS OF THE SUPPORT IS PROVIDED BY

the need for a substantial improvement of information support of the parents

a comprehensive, integrative approach in addressing the problems of the child

the requirement to solve the problems of the child subject to the interest of all active partners of interaction the recognition of the need to accompany, not to direct the child's development

What position should take the psychologist, the teacher in the learning process?

- To be a producer of child's mental activity.
- Make the learning process as a continuous movement from success to success, strengthening a child's confidence in themselves and ability to overcome obstacles on the way to achieving the goal.
- Accompany the process of development and learning the child,
- Provide assistance and support to the child, taking into account its individual peculiarities of development.
- Maintain emotional balance, eliminating the predominance of negative emotions over positive.
- Learn how to create their image and to control themselves
- To give birth to a child's belief in their abilities and to develop curiosity as a love of knowledge of the world.

The Practical Part





THE LEFT HEMISPHERE

- In the left hemisphere are the mechanisms of visual abstraction.
- Treatment of the parts to the whole (synthesis)
- Parts of speech
- Semantics, syntax
- Letters, printing, the pronunciation of the letters
- Number
- Finding differences
- Control of senses
- Focus on language
- Planning, structuring
- Sequential thinking
- Focus on the future
- The sense of time
- Focus on social structure



LOGO

THE RIGHT HEMISPHERE

- Treatment of the whole to the parts (analysis)
- Understanding of the language
- Metaphors, emotions, values
- The rhythm, the dialect, the use of
- Calculation, application
- Similarity search
- The freedom of feelings
- Preference drawing,
- Manual manipulation
- The spontaneity, fluidity
- Concurrent thinking
- Focus on the present
- No time
- Focus on people







You have a sheet of paper with 2 columns:

in the second column write operation, which are performed by the right hemisphere (Gestalt).

In the first column write operation, which is performed by the left hemisphere (logical







How many coincidences did you find in the column – the left hemisphere?

How many matches are in the column in the right hemisphere?



Task 2.

What happens to the left and right hemisphere, when they are in stress?







Answer: The left hemisphere (Logical) under stress

- Spends a lot of effort to understand the task
- Does not achieve results and success in activities
- Does not understand the learning task
- The missing the joy of learning
- No understanding of the way activities
- You may receive the machinery in performing the task, tension.



- Well the loss of the ability to think logically
- Acts without thinking
- Feels overload
- A terrible expression of emotions
- Can't remember the detail of the educational task
- May exhibit inappropriate emotional rough action

THE TASK № 3

Do you know of any such movements that allow you to balance the activity of the left and right hemispheres?

Name them, please.

Look at the slide, please (video motion).

Let's try to do some movement (Performed by students).



The Task №3

- 1. Writing the number 8 with your pen, with your finger, with your nose, please. (Fist, edge, palm paced, changing instructions, performing with closed eyes).
- 2. Cross movement by feet. (cross steps)
- 3. video



JUDGMENT OF THE SPEAKERS

generally accepted point of view of scientists: mental activity depends on cross-interactions between the two hemispheres of the brain.



