Modern American Journal of Linguistics, Education, and Pedagogy
ISSN (E): 3067-7874
Volume 01, Issue 03, June, 2025
Website: usajournals.org
This work is Licensed under CC BY 4.0 a Creative Commons Attribution 4.0 International License.

OPTIMIZATION OF THE EDUCATIONAL PROCESS BASED ON REPRESENTATIVE SYSTEMS

Jasmina Abdualiyeva
Chirchik State Pedagogical University
3rd Year Student of Pedagogy

Abstract
This article analyzes the issue of optimizing the educational process based on the concept of representational systems from the point of view of neuropedagogical approaches. Representational systems — that is, individual perception methods based on visual, auditory, kinesthetic and other sensory types — directly affect the process of students' assimilation of knowledge. This article examines the possibilities of increasing educational effectiveness by identifying the dominant representational system of students, selecting appropriate educational strategies for it, and organizing the educational process in a person-oriented manner. Based on the theoretical foundations of neuropedagogical science and the scientific views presented in the framework of modern research, the importance of an individual approach to education is highlighted and practical recommendations are given.

Keywords: Neuropedagogy, representational systems, visual, auditory, kinesthetic methods, individual approach, educational process, educational effectiveness, sensory systems, learning strategies, person-centered education, knowledge acquisition.

Introduction

The modern education system requires a person-centered approach, adapted to the personal needs and individual characteristics of students. Neuropedagogy is a new approach formed on the basis of the integration of neuroscience and pedagogy, which deeply studies how students' brains work, how they perceive

Modern American Journal of Linguistics, Education, and Pedagogy
ISSN (E): 3067-7874
Volume 01, Issue 03, June, 2025
Website: usajournals.org
This work is Licensed under CC BY 4.0 a Creative Commons Attribution 4.0 International License.

information and how they effectively assimilate it. In particular, the use of representational systems in education, that is, identifying the main sensory channels of each student in receiving information and applying appropriate methods, significantly increases the quality of the educational process. Neuropedagogy aims to achieve efficiency by taking into account neurophysiological processes in the brain in the learning process. In this approach, the role of attention, memory, emotional state and sensory perception mechanisms is of particular importance. Taking these factors into account, it allows students to form an individual approach and stimulate their natural methods of acquiring knowledge.

The following cognitive channels of students' reception of information are classified:

- Visual: Learns best through pictures, graphics, color presentations, videos.
- Auditory: Learns effectively through sound, verbal explanations, music, or auditory materials.
- Kinesthetic: Learns through practical actions, experiments, role-playing, and sensory activities.
- Discrete: Systematically perceives each piece of information and stores it in systematic memory.

Various diagnostic tests and observation techniques can be used to determine the representative system.

Lesson planning based on a representative system:

- For visual learners - graphic organizers, drawings, pictures, charts;
- For auditory learners - discussions, conversations, oral explanations;
- For kinesthetic learners - experiments, laboratory work, movement games.
- For discrete learners - systematic presentation of information in a consistent sequence.

Such adaptation increases the effectiveness of education, increases the activity and motivation of students, and also helps to consolidate knowledge.

Neuropedagogical studies conducted in recent years show that the results of teaching using methods that are appropriate for the dominant representational system of students are higher than those of traditional methods. For example, it

Modern American Journal of Linguistics, Education, and Pedagogy
ISSN (E): 3067-7874
Volume 01, Issue 03, June, 2025
Website: usajournals.org
This work is Licensed under CC BY 4.0 a Creative Commons Attribution 4.0 International License.

was observed that the test results increased by 20% in the group using kinesthetic methods.

Jensen E. emphasizes: "Neuropedagogy provides effective management of the learning process by organizing education based on the characteristics of the individual's neural activity."

Each person receives information mainly through three main channels: visual, auditory or kinesthetic. The system in which this reception channel predominates is called the representational system" - Bandler, R., & Grinder, J. (1979). Frogs into Princes.

Narmetova Y., studying the development of the fields of neuropedagogy and neuropsychology, emphasizes the following: "As a result of scientific research carried out in the field of neuropedagogy and neuropsychology, the study of pedagogical and psychological processes from the perspective of neurological changes occurring in the human brain, that is, the synergism of neurology with pedagogy and psychology, emerged as a separate discipline in 1997."

Umarov S.B., studying the importance of representational systems in human activity and ways to identify them, emphasizes the following: "Determining the methods of receiving information by students through representational systems allows organizing the educational process on the basis of an individual approach."

Representational systems are cognitive (cognitive) mechanisms of a person for receiving information from the external environment, processing it and expressing it. This concept is widely used, mainly, in the fields of neurolinguistic programming (NLP) and neuropedagogy. Umarov S.B. in his research draws attention to the pedagogical importance of identifying the characteristics of these systems specific to the student's personality and using them in education.

Umarov noted that the determination of the priority representational system of students is carried out through the following methods:

• Observation: through the actions of students in the lesson, facial expressions, directions of gaze.

• Questions and answers: depending on how the student describes the information. (For example, "I saw this topic" - visual; "I heard" - auditory; "I felt" - kinesthetic.)

Modern American Journal of Linguistics, Education, and Pedagogy
ISSN (E): 3067-7874
Volume 01, Issue 03, June, 2025
Website: usajournals.org
This work is Licensed under CC BY 4.0 a Creative Commons Attribution 4.0 International License.

• Tests and psychodiagnostic questionnaires: through these tests, cognitive priorities are clearly determined.

Umarov's scientific views are especially relevant for the education system of Uzbekistan. They help to design education taking into account the psychological and cognitive characteristics of students. Through these methods, we can develop the following in students and pupils:

• activates students' learning activities,
• establishes effective communication between the teacher and the student,
• as a result, increases the quality and efficiency of the educational process.

References

1. Narmetova Y. (2022). Neyropedagogika va neyropsixologiya rivojlanib kelayotgan yangi fan sohasi sifatida. Jamiyat va innovatsiyalar, 3(2), 103–109. https://scienceweb.uz/publication/2035.
2. Umarov S.B. (2020). Reprezentativ tizimlarning inson faoliyatidagi ahamiyati hamda ularni aniqlash yo‘llari. TDPU ochiq dars materiali. https://reja.tdpu.uz.
3. G‘ulomov J.R., Anvarova V.J. (2014). Bolalarning neyropedagogik xususiyatlarini innovatsion ta’lim muhiti sharoitida rivojlantirish. Uzluksiz ta’lim tizimida hamkorlik pedagogikasi. Xalqaro konferensiya materiallari. Toshkent, 192–193.
4. Xodjaev B.X. (2010). Neyropedagogik bilimlardan foydalanish orqali ta’lim sifatini oshirish. Uzluksiz ta’lim sifat va samaradorligini oshirishning nazariy-uslubiy muammolari. Respublika ilmiy-amaliy anjumani materiallari. Samarqand, 174–175.
5. Jamoldinova, S. N. (2023). O’qituvchining konfliktologik tayyorgarligining kasbiy faoliyatdagi ahamiyati. “Mug‘allim hem uzliksiz bilimlendirio‘”,1(1), 224-228.
6. Jamoldinova, S. N. (2024).O’qituvchining konfliktologik tayyorgarligining kasbiy faoliyatidagi ahamiyati.TA’LIM VA TARAQQIYOT Ilmiy-uslubiy jurnal,1(6),44-50.
7. Jamoldinova, S. N. (2024). The role of the teacher’s professional competence in conflict situations. European Journal of Pedagogical Initiatives and Educational Practices, 2(11),15-18.

Modern American Journal of Linguistics, Education, and Pedagogy
ISSN (E): 3067-7874
Volume 01, Issue 03, June, 2025
Website: usajournals.org
This work is Licensed under CC BY 4.0 a Creative Commons Attribution 4.0 International License.

8. Jamoldinova S.N., Abdualiyeva J.A. Yan Amos Komenskiy - pedagogika nazariyasining asoschisi sifatida. “Global makonda talabalarning ma’naviy, ma’rifiy va axloqiy dunyoqarashi: tahlillar, takliflar, tavsiyalar” mavzusidagi ilmiy-amaliy anjuman materiallari to‘plami. Namangan davlat pedagogika instituti 2025-yil, 22-aprel, 219-222 betlar.
9. Jamoldinova S.N., Yo‘ldoshboyev M.J. O‘quvchilarni nutqiy qobiliyatlarini rivojlantirishning neyropedagogik xususiyatlari. CONGRESS ON MODERN SCIENCES-IV "GLOBAL PROSPECTS FOR MULTIDISCIPLINARY RESEARCH AND EDUCATION", Chirchik State Pedagogical University April 08-10, 2025 / Chirchik, Uzbekistan, 202-206 betlar.
10. Jamoldinova S.N. Neyropedagogikada neyrodidaktik yondashuvlarning ahamiyati. “Global makonda talabalarning ma’naviy, ma’rifiy va axloqiy dunyoqarashi: tahlillar, takliflar, tavsiyalar” mavzusidagi ilmiy-amaliy anjuman materiallari to‘plami. Namangan davlat pedagogika instituti 2025-yil, 22-aprel, 138-140 betlar.