

## **SPECIFIC ASPECTS OF TEACHING INFECTIOUS DISEASES BASED ON THE VAK (VISUAL, AUDITORY, KINESTHETIC) MODEL**

*Qayumov Avazbek Mutalibovich  
Nosirov Muzaffar Madaminovich  
Andijan State Medical Institute*

**Abstract:** This article examines the specific aspects of applying the VAK (Visual, Auditory, Kinesthetic) model in teaching the subject of infectious diseases in medical education. It provides a scientific basis for integrating sensory-based learning modalities to enhance students' clinical reasoning, diagnostic thinking, and practical decision-making skills.

**Keywords:** Medical education, infectious diseases, VAK model, clinical competence, visual learning, auditory learning, kinesthetic learning, clinical thinking, interactive methods.

### **Introduction**

In contemporary medical education, the development of students' clinical competence demands personalized and multisensory instructional strategies. The VAK (Visual, Auditory, Kinesthetic) model presents a structured and inclusive pedagogical framework that considers individual learning preferences and cognitive engagement styles. Within the context of teaching infectious diseases—a subject that requires deep clinical understanding and rapid decision-making—the use of the VAK model enables instructors to transform theoretical knowledge into active, experiential learning. The development of practical-clinical competencies in this subject is now closely linked to universal competencies such as student engagement, independence, and critical thinking. Thus, the main professional goal is to enable the student to think freely, express thoughts logically, and adapt to various practical-clinical situations through the lens of infectious diseases.

### **Methods**

The VAK model is a pedagogical approach that categorizes learners based on their preferred learning styles to enhance the effectiveness of education. It includes three core modalities:

- **Visual** – learning through images, diagrams, charts, and visual content.
- **Auditory** – learning through listening, discussions, lectures, and audio materials.
- **Kinesthetic** – learning through movement, hands-on activities, clinical practice, and real-life simulations.

The discipline of infectious diseases is complex and demands a deep understanding of pathophysiology, diagnostics, and emergency care. Teaching this subject effectively requires a multi-sensory strategy, making the VAK model highly applicable. Specific strategies employed under this model include:

- **Visual strategies:** Use of pathogenesis charts and infection progression diagrams, infographics for disease cycles, clinical case videos or animated demonstrations, and diagnostic flowcharts for differential diagnosis.
- **Auditory strategies:** Case-based audio recordings, teacher-student diagnostic dialogues and debriefings, podcasts on infectious disease outbreaks, and patient scenario discussions to develop clinical reasoning.

- **Kinesthetic strategies:** Simulation-based infection control practices , patient examination training such as history taking and physical exams , emergency care simulations for conditions like sepsis or meningitis , and role-playing to practice diagnosis and communication.

## Results

The application of the VAK model yields specific cognitive and practical outcomes. Visual elements such as infographics and diagnostic algorithms help students to conceptualize complex topics. Auditory inputs, including expert case discussions and problem-based audio cases, promote the retention and interpretation of key ideas. Kinesthetic practices like mannequin simulations and bedside examinations allow students to bridge knowledge with action.

Through the application of this model, students enhance their motivation for learning the subject, develop readiness for clinical reasoning, cultivate logical and clinical thinking, and consciously organize their practical-clinical competence. This method also contributes to enhancing students' skills in professional activity and understanding how to apply linguistic phenomena in context. By integrating VAK strategies, students are better prepared for real-world clinical environments.

## Discussion and Conclusion

Integrating the VAK model into the teaching of infectious diseases significantly enhances students' practical-clinical competencies. It is not only an instructional approach but also a catalyst for deeper clinical immersion. This multisensory approach respects individual learning styles and mirrors real clinical encounters, where doctors must simultaneously integrate observation, communication, and action. By aligning visual, auditory, and kinesthetic inputs with learning outcomes, the model supports the cultivation of clinical reasoning, diagnostic precision, and professional decision-making.

In conclusion, applying the VAK model plays a crucial role in developing students' practical-clinical competencies in modern medical education. This model promotes a learner-centered approach that enhances clinical thinking and problem-solving abilities. It supports the formation of reflective, communicative, and diagnostic skills necessary for future physicians. Therefore, the VAK model proves to be a strategic methodology that bridges theory with practice and cultivates the holistic clinical competence required in the field of infectious diseases.

## REFERENCES:

1. Fleming, N.D. (2021). Teaching and Learning Styles: VARK Strategies. – Christchurch: Neil Fleming Publications, 2001. – 128 p.
2. Fleming, N.D., & Mills, C. (2022). Not Another Inventory, Rather a Catalyst for Reflection. To Improve the Academy, 11, 137–155.
3. Djalilova, S.D. VAK modelining yuqumli kasalliklar ta'limidagi o'rni // Tibbiy ta'lim jurnali. – 2023. – №4. – B. 45–53.
4. Komilov Nodirbek. Modern tendencies of teaching history of medicine in higher medical educational institutions and their analysis // Solution of social problems in management and economy. International scientific online conference. <https://doi.org/10.5281/zenodo.8154487> . - Spain, 2023. – P. 17–21.
5. Komilov Nodirbek. The role of the history of medicine in the development of general trends and patterns of higher medical education // Scientific Bulletin of Namangan State University, 2023, No. 9. – P.770–774.