

# Fostering Inclusive Competence in Medical Students Through the Teaching of Human Anatomy and Physiology

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**Abstract:** This article is dedicated to exploring the development of inclusive competence among medical students, which is of great importance for their future professional activities. It highlights the relevant aspects of shaping inclusive skills in students during the teaching of human anatomy and physiology. The article details the modern definition of inclusive competence, its constituent parts, and its role in medical education. Practical recommendations, methodological approaches, and pedagogical technologies aimed at effectively developing students' inclusive competence in the teaching of human anatomy and physiology in medical higher education institutions have also been developed. We hope that the results of this research will contribute to the further development of inclusiveness in the medical education system.

**Keywords:** Inclusive education, inclusive competence, human anatomy, human physiology, medical education, methodological recommendations, students with special needs, pedagogical technologies.

## Развитие Инклюзивной Компетентности Студентов-Медиков Посредством Преподавания Анатомии и Физиологии Человека

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**Аннотация:** Данная статья посвящена изучению вопросов развития инклюзивной компетентности студентов медицинских вузов, что имеет важное значение для их будущей профессиональной деятельности. В ней освещаются актуальные аспекты формирования инклюзивных навыков у студентов в процессе преподавания анатомии и физиологии человека. В статье подробно раскрываются современное определение инклюзивной компетентности, ее составные части и роль в медицинском образовании. Также разработаны практические рекомендации, методические подходы и педагогические технологии, направленные на эффективное развитие инклюзивной компетентности студентов при преподавании анатомии и физиологии человека в медицинских вузах. Мы надеемся, что результаты этого исследования внесут свой вклад в дальнейшее развитие инклюзивности в системе медицинского образования.

**Ключевые слова:** Инклюзивное образование, инклюзивная компетентность, анатомия человека, физиология человека, медицинское образование, методические рекомендации, студенты с особыми потребностями, педагогические технологии.

## **Odam Anatomiyasi va Fiziologiyasini O'qitish orqali Tibbiyot Talablarini Inklyuziv Kompetensiyalarini Rivojlantirish**

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**Annotatsiya:** Ushbu maqola tibbiyot sohasida tahsil olayotgan talabalarning kelajakdagi kasbiy faoliyatida muhim ahamiyatga ega bo'lgan inklyuziv kompetentligini rivojlantirish masalalarini o'rganishga qaratilgan. Unda odam anatomiyasi va fiziologiyasi fanini o'qitish jarayonida talabalarda inklyuzivlik qobiliyatini shakllantirishning dolzarb jihatlari yoritiladi. Maqolada inklyuziv kompetentlikning zamonaviy ta'rifi, uning tarkibiy qismlari va tibbiyot ta'limidagi o'rni batafsil ochib berilgan. Shuningdek, tibbiyot oliy o'quv yurtlarida odam anatomiyasi va fiziologiyasi fanini o'qitishda talabalarning inklyuziv kompetentligini samarali rivojlantirishga qaratilgan amaliy tavsiyalar, metodik yondashuvlar va pedagogik texnologiyalar ishlab chiqilgan. Ushbu tadqiqot natijalari tibbiyot ta'limi tizimida inklyuzivlikni yanada rivojlantirishga o'z hissasini qo'shadi degan umiddamiz.

**Kalit so'zlar:** Inklyuziv ta'lim, inklyuziv kompetentlik, odam anatomiyasi, odam fiziologiyasi, tibbiyot ta'limi, metodik tavsiyalar, maxsus ehtiyojli talabalar, pedagogik texnologiyalar.

### **INTRODUCTION**

Today, every specialist working in the medical field bears a tremendous responsibility. This responsibility lies not only in preserving and improving people's health, but also in providing qualified medical care to every patient, including those who need special assistance. In other words, a doctor must understand the unique needs of each individual, approach them with care, and provide the best possible assistance. It is from this point of view that the inclusive competence of future doctors is of great importance. Inclusive competence refers to the ability of students to provide medical care, taking into account the individual characteristics of each patient, their physical condition, emotional experiences, and social circumstances. To develop this ability, medical higher education institutions need not only to provide students with medical knowledge but also to educate them in the spirit of humanism. In this article, we will consider how to develop the inclusive competence of students in the process of teaching human anatomy and physiology. Our goal is to provide practical assistance in this area, to contribute to the further development of inclusiveness in medical education. We want doctors in the future to value every individual and treat them with love and attention.

### **LITERATURE REVIEW**

In recent years, the number of scientific studies on inclusive education has been increasing. Uzbek scientists are also paying great attention to this issue. In particular, the studies by R. G. Safarova and I. D. Yuldasheva (2023) examine the issues of improving the professional inclusive competence of teachers.[1] I. D. Yuldasheva (2025) analyzed the theoretical foundations for the development of inclusive competence in future biology teachers. The results of these studies may also

be useful for the development of inclusive competence of students in medical education.[2] Also, the works of A. K. Rakhimov and I. D. Yuldasheva (2024) indicate the necessary conditions for the implementation of inclusive education.[3] J. Abdurasulov (2024) studied the relationship between military pedagogy and other sciences and revealed the possibilities of integrating inclusive education into various fields.[4] An analysis of this literature shows that the issues of inclusive education have not lost their relevance and there is a need for new research in this area.

## METHODS

In conducting this study, we utilized the following scientific methods:

- **Analysis of scientific literature:** By examining scientific articles, dissertations, monographs, and other publications on inclusive education, medical pedagogy, and human anatomy and physiology, we identified the theoretical foundations of the topic and gathered the necessary information for the research. This enabled us to study best practices and identify problems in this field.
- **Analysis of regulatory documents:** By analyzing the laws, government decrees, ministerial orders, and other normative legal acts of the Republic of Uzbekistan, we determined the state policy aimed at the development of inclusive education. This was necessary to establish the legal basis of the research and apply the results in practice.
- **Pedagogical observation:** We observed the students' progress in the process of teaching human anatomy and physiology, the teaching methods of the instructors, and their actions aimed at creating an inclusive environment. This allowed us to assess the real situation in the educational process and identify problems.
- **Interviews:** By conducting interviews with experienced teachers from medical universities, we obtained information about the difficulties, achievements, and prospects of implementing inclusive education. This helped us to take into account the opinions of the teachers and develop practical suggestions.
- **Survey:** By conducting an anonymous survey among medical university students, we identified their attitude towards inclusive education, their assessment of their own inclusive competence, and their suggestions for improving the educational process. This was important for learning the opinions of the students and taking their needs into account.

In this study, students and teachers from medical universities participated. A sufficient number of students was ensured, as was the participation of students from different courses and with different social backgrounds. A diverse composition of teachers was also ensured, with the participation of experienced and young teachers, men and women. This helped to ensure the reliability and objectivity of the research results. By using these methods, we tried to comprehensively study the problem of developing students' inclusive competence and to draw conclusions of practical significance.

## RESULTS

The results of the study showed that the inclusive competence of students in medical universities is not sufficiently developed. Most students do not have adequate knowledge about the essence and principles of inclusive education. Also, their communication skills with patients with special needs are not sufficiently developed.

At the same time, the study developed a number of practical proposals aimed at developing the inclusive competence of students. In particular:

1. Include topics related to inclusive education in the curriculum of human anatomy and physiology.
2. Widely use interactive methods (case studies, role-playing games, simulations) in the learning process.
3. Involve students in practical training in medical institutions specializing in special education.
4. Organize advanced training courses on inclusive education for teachers.

## DISCUSSION

The obtained results show that the development of inclusive competence of students in medical universities is a relevant problem. To solve this problem, it is necessary to introduce the above-mentioned practical suggestions into the educational process. It is also strongly recommended to take the following measures to address the problems identified during the studied research:

- Develop a strategy aimed at the development of inclusive education in medical universities.
- Include more practical exercises on inclusive education in the curricula.
- Develop criteria for evaluating the inclusive competence of students.
- Support scientific research on inclusive education.

## CONCLUSION

The development of inclusive competence among students in medical higher education institutions is an important task. We hope that the practical suggestions and recommendations presented in this article will help to further develop inclusiveness in the medical education system.

## LIST OF USED LITERATURE

1. 2. Safarova, R. G., & Yo'ldosheva, I. D. (2023). Pedagoglarning kasbiy inklyuziv kompetentligini takomillashtirish. *SCIENCE AND INNOVATION INTERNATIONAL SCIENTIFIC JOURNAL*, × 2 ×(12), 343-346. <https://doi.org/10528/zenodo.10365033>
2. Yo'ldosheva, I. D. (2025). Bo'lajak biologiya o'qituvchilarining inklyuziv kompetentligini rivojlantirishning nazariy tahlili. A. Qodiriy nomidagi Jizzax davlat pedagogika universiteti "Maxsus ta'lim muammolari :innovatsiya va istiqbollar" Respublika ilmiy-texnik anjumani materiallar to'plami, 22-24.
3. Rahimov, A. Q., & Yo'ldosheva, I. D. (2024). Inklyuziv ta'lim tushunchasi va inklyuziv ta'limni joriy etishda zaruriy shart-sharoitlar. Nizomiy nomidagi Toshkent davlat pedagogika universiteti "Gospital pedagogika sohasidagi dolzarb masalalar, ilg'or tajribalar va istiqbollar" Xalqaro miqyosidagi ilmiy-amaliy anjuman materiallari, 43-49.
4. . Abdurasulov, J. (2024). Harbiy pedagogikaning boshqa fanlar bilan aloqasi. *Yosh olimlar*, × 2 ×(6), 48–52. <https://inacademy.uz/index.php/yo/article/view/28164>