УДК 721.012

MODERN INCLUSIVITY STANDARDS IN ARCHITECTURAL ENVIRONMENTS AS A FOCUS IN THE EDUCATION OF CONSTRUCTION STUDENTS

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This essay examines the crucial role of incorporating accessibility and universal design principles in architectural education, particularly for students in associated fields. It underscores the importance of assimilating cutting-edge developments in building materials, technologies, and Building Information Modeling (BIM) into the curriculum. The essay underscores the importance of these elements and the beneficial impact they can have on society, promoting sustainable development.

Keywords: concept of inclusivity, universal design, sustainable development interdisciplinary approach, axiological approach.

СОВРЕМЕННЫЕ СТАНДАРТЫ ИНКЛЮЗИВНОСТИ В АРХИТЕКТУРНОЙ СРЕДЕ КАК ОСНОВНОЕ НАПРАВЛЕНИЕ ОБРАЗОВАНИЯ СТУДЕНТОВ-СТРОИТЕЛЕЙ

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В представленной статье рассматривается важность преподавания принципов универсального дизайна для студентов строительных специальностей и, особенно для будущих архитекторов, и также подчеркивается необходимость интеграции последних достижений в области строительных материалов, технологий и информационного моделирования зданий (BIM) в образовательный процесс. В статье подчеркивается значимость концепции инклюзии, направленной на необходимость создания комфортной среды для всех людей и обеспечивающей устойчивое развитие общества.

Ключевые слова: универсальный дизайн, инклюзивная среда, междисциплинарный подход, устойчивое развитие, аксиологический подход.

Introduction In the 21st century, architectural discourse on inclusivity has evolved beyond mere physical access, embracing a wider array of human experiences. It's not just about meeting accessibility standards but about designing environments that cater to everyone's unique needs, regardless of physical, sensory, or cognitive abilities. Accessibility and universal design play a critical role in contemporary architecture by removing barriers and integrating principles that enhance the quality of life for everyone. This holistic approach aspires to create a more inclusive and equitable society with equal access to the built environment [1].

Discussion Teaching future architects now involves innovative methods that blend theoretical knowledge with practical applications using modern technologies. This interdisciplinary approach combines engineering, art, ecology, and more, fostering complex thinking and a comprehensive design strategy. Future architects and engineers must master both traditional principles and the creation of accessible spaces. By studying universal design (UD) principles and applying them in practice, professionals can design inclusive common spaces and environments. Courses should delve into contemporary strategies for designing comfortable environments, including eco-friendly materials, advanced HVAC (*Heating, Ventilation, and Air Conditioning*) systems, and smart building automation. Understanding and integrating these technologies are crucial for creating sustainable, comfortable, and cost-effective spaces. Practical experience in using these tools is essential, emphasizing sustainability and energy efficiency to develop green buildings and resilient infrastructure. This training prepares students to meet the evolving demands of the construction industry and improve occupants' quality of life.

Learning to use eco-friendly insulation, recycled metals, and renewable resources, helps reduce buildings' carbon footprints and create healthier indoor environments. It's about merging innovation with responsibility to design cutting-edge spaces that are also kind to the planet. Curricula should include the latest advancements in building materials, technologies, and design principles. Students need to learn about sustainable materials, energy-efficient systems, and smart building technologies to enhance environmental comfort. Practical training should focus on ergonomic and human-centric design, ensuring that spaces are functional, promote well-being, and are accessible. Understanding the impacts of design elements like lighting, acoustics, and spatial arrangement is crucial. By incorporating these modern approaches, students can develop innovative solutions for today's diverse built environments, ultimately improving occupants' quality of life [2]

Developing technical skills is crucial for architecture and construction students. Mastering BIM (Building Information Modeling) software like AutoCAD, Revit, and SketchUp is essential for efficient planning, designing, constructing, and managing buildings or infrastructure. BIM technology has become indispensable in building design, enabling architects, engineers, and construction managers to collaborate effectively. This technology is vital for visualizing concepts and transforming abstract ideas into concrete reality. Advanced topics such as Virtual Reality (VR) and Augmented Reality (AR) tools are also becoming pivotal. Once considered novelties, VR/AR solutions are now transforming how professionals in the Architecture, Engineering, and Construction industry communicate, create, and experience content. These tools provide an immersive experience of architectural designs and related spaces, allowing visualization and assessment of the comfort and alignment of created spaces with universal design principles.

An axiological approach, which serves as the foundation for integrating universal design principles into modern architectural standards, emphasizes professional values and moral stability. This approach incorporates ethical standards into professional activities, guiding individuals in shaping their identities and navigating the world. Coupled with modern technologies, this method equips future architects with the necessary skills and creativity for contemporary practice [3].

Conclusion The education of architecture students should encompass modern techniques for designing comfortable environments. This training must include hands-on experience with the latest technologies, such as smart building systems and sustainable materials. Additionally, the curriculum should cover ergonomic and aesthetic principles to ensure that students can create spaces that are both functional and visually appealing. It's essential for future architects to understand how to blend innovation with comfort to meet the needs of today's diverse and dynamic population.

REFERENCES

- Klaus R. Kunzmann, SMART CITIES: A NEW PARADIGM OF URBAN DEVELOPMEN, [Электронный ресурс] URL: (56) SMART CITIES: A NEW PARADIGM OF URBAN DEVELOPMENT | Klaus R. Kunzmann - Academia.edu (дата обращения: 10.07.2024).
- 2. CABE (2006) "The principles of inclusive design. (They include you.)", London, UK. [электронный pecypc] URL; <u>The principles of inclusive design: they include you</u> [дата обращения 19.10.2024]
- 3. Natalie Perre, Designing for Inclusion: Accessibility and Universal Design in Architecture; Apr 4, 2023; [Электронный ресурс] URL: <u>Designing for Inclusion: Accessibility and Universal Design in Architecture</u> (дата обращения: 10.09.2024).