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VISION FOR THE CLASSROOM OF THE FUTURE
(FUTURE EDUCATION SPACE)¹

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Abstract: *The paper will describe a vision for the classroom of the future in which innovative educational technologies are tested, adapted and used in the learning process. The classroom of the future will be described as futuristic educational environment with high-tech technological solutions for an innovative educational process based on modern educational methods. Traditional (passive) classrooms have to be replaced with learner-centered flexible learning environments – called active learning spaces.*

Keywords: *interactive whiteboard, interactive monitor, interactive table, 3D scanner & 3D printer, virtual reality, augmented reality, holograms, video conferencing*

JEL Codes: *I20*

REFERENCES

Kozov, V., Ivanova, G., & Ivanov, A. (2019). Flipped Classroom Model and Immersive Learning in The Mechanical Engineering Education. *2019 18th International Conference on Information Technology Based Higher Education and Training (ITHET)*, IEEE, 1-5.

Aliev, Y., Kozov, V., Ivanova, G., & Ivanov, A. (2017). 3D augmented reality software solution for mechanical engineering education. *Proceedings of the 18th International Conference on Computer Systems and Technologies*, 318-325.

Ivanova, G., Kozov, V., & Zlatarov, P. (2019). Gamification in Software Engineering Education. *2019 42nd International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO)*, IEEE, 1445-1450.

Videnov, K., Stoykova, V., & Kazlacheva, Z. (2018). Application of Augmented Reality in Higher Education. *ARTTE Applied Researches in Technics, Technologies and Education*, 6, 1-9.

Zlatarov, P., Ivanova, G., Ibryamova, E., & Baeva, D. (2018). A user-centered software system for admission optimization and education process management for Ph. D. students. In *The International Scientific Conference eLearning and Software for Education*, Carol I "National Defence University, 144-151.

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AbouHashem, Y., Dayal, M., Savanah, S., & Štrkalj, G. (2015). The application of 3D printing in anatomy education. *Medical education online*, 20(1), 29847.

Szulzyk-Cieplak, J., Duda, A., & Sidor, B. (2014). 3D printers–new possibilities in education. *Advances in Science and Technology Research Journal*, 8(24), 96-101.

Short, D. B. (2015). Use of 3D printing by museums: Educational exhibits, artifact education, and artifact restoration. *3D Printing and Additive Manufacturing*, 2(4), 209-215.

Chang, F. C., Chen, D. K., & Huang, H. C. (2015). Future Classroom with the Internet of Things A Service-Oriented Framework. *J. Inf. Hiding Multimed. Signal Process*, 6, 869-881.

Wang, W., Qiao, R., & Qing, Y. E. (2017). Application of 3D scanning system in medical education technology. *Chinese Medical Equipment Journal*, 38(4), 131-133.

Smrikarov, A, H. Beloev (Editors), 2018, Handbook of innovative educational technologies (**Оригинално заглавие:** Смрикаров, А., Х. Белоев (редактори), 2108, Ръководство по иновационни образователни технологии. Издателство на Русенския университет)