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COMPARISON OF METHODS FOR ATTENDANCE TRACKING FOR OFFLINE AND ONLINE EVENTS IN EDUCATIONAL ORGANIZATIONS^{3 4}

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Abstract: The paper compares the common approaches to track and store information on attendance for different type of events (online, offline, mixed). The parameters used in the comparison include relative complexity, cost, usage of the system for online and offline events. The parameters are chosen by the author, but they take into account other parameters on assessing similar systems by other authors. Educational organizations may need to cover different types of events (i.e. for online lessons, in-room lessons, councils, organizational events etc.). Each type of event requires different set of features, included in the tracking system. Keeping one feature often provoke inability to provide other features (i.e. providing both authorized and anonymous entries, both online and offline modes, both registered and unplanned visitors). In order to cover different case one organization may apply several attendance tracking systems. This paper treats such practice neither good or bad, but provides a scale system to choose the efficient approaches for attendance tracking based on the requirements of each event type.

Keywords: Attendance tracking system, Educational organizations, e-learning

JEL Codes: 120, D73, M15.

REFERENCES

Avireddy, S., Veerapandian, P., Ganapati, S., Venkat, M., Ranganathan, P., & Perumal, V. (2013). MITSAT — An automated student attendance tracking system using Bluetooth and EyeOS. 2013 International Mutli-Conference on Automation, Computing, Communication, Control and Compressed Sensing (IMac4s), 547–552. https://doi.org/10.1109/iMac4s.2013.6526472

Bhattacharya, S., G. S. Nainala, P. Das and A. Routray. (2018). "Smart Attendance Monitoring System (SAMS): A Face Recognition Based Attendance System for Classroom Environment," 2018 IEEE 18th International Conference on Advanced Learning Technologies (ICALT), 2018, pp. 358-360, https://doi.org/10.1109/ICALT.2018.00090

Charles Childress, (2018). The Influence of an Electronic Attendance Monitoring System on The Influence of an Electronic Attendance Monitoring System on Undergraduate Academic Success Undergraduate Academic Success, University of Southern Mississippi

German, R. L., and K. S. Barber, *Current Biometric Adoption and Trends*, 2018, https://identity.utexas.edu/assets/uploads/publications/Current-Biometric-Adoption-and-Trends.pdf

Honglei, Ren & Song, You & Yang, Siyu. (2016). An automated student attendance tracking system based on voiceprint and location. https://doi.org/10.1109/ICCSE.2016.7581583

Hoo, S. C., & Ibrahim, H. (2019). Biometric-based attendance tracking system for education sectors: A literature survey on hardware requirements. *Journal of Sensors*, 2019. https://doi.org/10.1155/2019/7410478

Koshyk, C. (2020). Education in Pandemic Crisis Implementation via ICT Online Technologies. *International Symposium on Computer Science, Computer Engineering and*

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Educational Technology, 21–24. https://www.ibs-laubusch.de/wp-content/uploads/2021/03/IBS_Band10.pdf#page=20

- Nikolov, B., Ivanova G. (2011). Research of Systems for Virtual Meetings. Ruse: Scientific Student Session SSS'11 (*Оригинално заглавие:* Николов, Б., Иванова, Г., 2011. Изследване на системи за неприсъствени заседания. Русе: Студентска научна сесия CHC'11.)
- Pakhomova, T. O., Komova, O. S., Belia, V. V, Yivzhenko, Y. V, & Demidko, E. V. (2021). Transformation of the pedagogical process in higher education during the quarantine. *Linguistics and Culture Review*, 5(S2), 215–230.
- Perrotta, C., Kalervo N. Gulson, Ben Williamson & Kevin Witzenberger (2021) Automation, APIs and the distributed labour of platform pedagogies in Google Classroom, Critical Studies in Education, 62:1, 97-113, https://doi.org/10.1080/17508487.2020.1855597
- Rjeib, H. D., Ali, N. S., Al Farawn, A., Al-Sadawi, B., & Alsharqi, H. (2018). Attendance and information system using RFID and web-based application for academic sector. *International Journal of Advanced Computer Science and Applications*, *9*(1), 266–274. https://doi.org/10.14569/IJACSA.2018.090137