International Journal of Industrial Engineering and Management

Model of Human Error Probability based on dual-phase approach for learning process in cognitive-oriented tasks

F. Facchini, S. Digiesi, G. Mummolo

Department of Mechanics, Mathematics and Management, Polytechnic University of Bari, Bari, Italy

References

[1] S.P. Whalley, "Minimising the cause of Human Error," in 10th Advances in Reliability Technology Symposium, 1988, pp. 114-128, doi: 10.1007/978-94-009-1355-4_11.

[2] M. Gattullo, A. Evangelista, A.E. Uva, M. Fiorentino, A. Boccaccio, V.M. Manghisi, "Exploiting Augmented Reality to Enhance Piping and Instrumentation Diagrams for Information Retrieval Tasks in Industry 4.0 Maintenance," in Virtual Reality and Augmented Reality. EuroVR 2019, vol 11883, doi: 10.1007/978-3-030-31908-3_11.

[3] A. Kujawińska, and K. Vogt, "Human factors in visual quality control," Management and Production Engineering Review, vol. 6, no. 2, pp. 25-31, Jun. 2015, doi: 10.1515/mper-2015-0013.

[4] R. Carli, M. Dotoli, N. Epicoco, B. Angelico, B, and A. Vinciullo, "Automated evaluation of urban traffic congestion using bus as a probe," IEEE International Conference on Automation Science and Engineering (CASE), 2015, doi: 10.1109/CoASE.2015.7294224.

[5] P. Purpura "The History of Security and Loss Prevention: A Critical Perspective," Security and Loss Prevention, pp. 3-20, 2008, doi:10.1016/B978-0-08-055400-6.50007-8.

[6] International Air Transport Association, "Safety Report 2017 – 54th edition." [Online]. Available: https://aviation-safety.net/airlinesafety/industry/reports/IATA-safety-report-2017.pdf [Accessed: 8-March-2019].

[7] IChemE, "Loss Preventio Bulletin." [Online]. Available: https://www.icheme.org/media/1278/lpb251_digimag.pdf. [Accessed: 14-March-2019].

[8] R. Carli, M. Dotoli, and R. Pellegrino, "Multi-criteria decision-making for sustainable metropolitan cities assessment," Journal of Environmental Management, vol. 226, no. 15, pp. 46-61, Nov. 2018, doi: 10.1016/j.jenvman.2018.07.075.

[9] I.M. Dragan, and A. ISaic-Maniu, "The reliability of the human factor," Procedia Economics and Finance, vol. 15, pp. 1486-1494, 2014 doi: 10.1016/S2212-5671(14)00615-7.

[10] A. E. Uva, M. Fiorentino, V.M. Manghisi, A. Boccaccio, S. Debernardis, M. Gattullo, G. Monno, "A User-Centered Framework for Designing Midair Gesture Interfaces," IEEE Transactions on Human-Machine Systems, vol. 49, no. 5, pp. 421-429, 2019, doi: 10.1109/THMS.2019.2919719.

[11] G. Intranuovo, N. Schiavulli, D. Cavone, F. Birtolo, P. Cocco, L. Vimercati, L. Macinagrossa, A. Giordano, T. Perrone, G. Ingravallo, P. Mazza, M. Strusi, C. Spinosa, G. Specchia, and G.M. Ferri, "Assessment of DNA damages in lymphocytes of agricultural workers exposed to pesticides by comet assay in a cross-section al study," Biomarkers, vol. 23, no. 5, pp. 462-473, 2018, doi: 10.1080/1354750X.2018.1443513.

[12] E. Calixto, G.B.A. Lima, and R.A. Firmino, "Comparing SLIM, SPAR-H and Bayesian Network Methodologies," Open Journal of Safety Science and Technology, vol. 3, no. 2, Jun. 2013, doi:10.4236/ojsst.2013.32004.

[13] M. Bevilacqua, and F.E. Ciarapica, "Human factor risk management in the process industry: A case study, "Reliability Engineering and System Safety, vol. 169, no. C, pp. 149-159, 2018, doi: 10.1016/j.ress.2017.08.013.

[14] Health and safety executive, "Review of human reliability assessment methods." [Online]. Available: http://www.hse.gov.uk/research/rrhtm/rr679.htm.[Accessed: 14-May-2019].

[15] P. Trucco, and M.C. Leva, "A probabilistic cognitive simulator for HRA studies (PROCOS)," Reliability Engineering and System Safety, vol. 92, no. 8, pp. 1117-1130, Aug. 2007, doi: 10.1016/j.ress.2006.06.003.

[16] S. Zhang, W. He, D. Chen, J. Chu, and H. Fan, "A dynamic human reliability assessment approach for manned submersibles using PMV-CREAM," International Journal of Naval Architecture and Ocean Engineering, vol. 11, no. 2, pp. 782-795, Jul. 2019, doi: 10.1016/j.ijnaoe.2019.03.002.

[17] G.A. Shirali, T. Hosseinzadeh, K.A. Angali, and S.R.N. Kalhori, "Modifying a method for human reliability assessment based on CREAM-BN: A case study in control room of a petrochemical plant," MethodsX, vol. 6, pp. 300-315, 2019, doi: 10.1016/j.mex.2019.02.008.
[18] S. Rangra, M. Sallak, W. Schön, and F. Vanderhaegen, "Human reliability assessment under uncertainty - towards a formal method," Procedia Manufacturing, vol. 3, pp. 3230-3237, 2015, doi: 10.1016/j.promfg.2015.07.874.
[19] S. Hosseini, R. Carli, and M. Dotoli, "Robust Day-Ahead Energy Scheduling of a Smart Residential User Under Uncertainty," 18th European Control Conference (ECC), 2018, doi: 10.23919/ECC.2019.8796182.
[20] N. Margiotta, G. Avitabile, G. and G. Coviello, "A wearable wireless system for gait analysis for early diagnosis of Alzheimer and Parkinson disease" 5th International Conference on Electronic Devices, 2016, Systems and Applications (ICEDSA), doi: 10.1109/ICEDSA.2016.7818553.
[21] M.M. Abaei, R. Abbassi, V. Garaniya, E. Arzaghi, and A.B. Toroody "A dynamic human reliability model for marine and offshore operations in harsh environments," Ocean Engineering, vol. 173, no. 1, pp. 90-97, Feb. 2019, doi: 10.1016/j.oceaneng.2018.12.032.
[22] R. Islam, R. Abbassi, V. Garaniya, and F. Khan, "Development of a human reliability assessment technique for the maintenance procedures of marine and offshore operations," Journal of Loss Prevention in the Process Industries, vol. 50, pp. 416-428, Nov. 2017, doi: 10.1016/j.jlp.2017.10.015.
[23] D. Falcone, F. De Felice, A. Petrillo, and A. Silvestri, "An Experimental Study on Developing a Cognitive Model for Human Reliability Analysis," in Theory and Application on Cognitive Factors and Risk Management, IntechOpen, 2017, doi: 10.5772/intechopen.69230.
[24] W.H. Elmaraghy, O.A. Nada, and H.A. Elmaraghy, "Quality prediction for reconfigurable manufacturing systems via human error modelling," International Journal of Computer Integrated Manufacturing, vol. 21, no. 5, pp. 584-598, Jun. 2008, doi: 10.1080/09511920701233464.
[25] Z.S. Givi, M.Y. Jaber, and W.P. Neumann, "Modelling worker reliability with learning and fatigue," Applied Mathematical Modelling, vol. 39, no. 17, pp. 5186-5199, 2015, doi: 10.1016/j.apm.2015.03.038.
[26] T.P. Wright, "Factors affecting the cost of airplanes", Journal of Aeronautical Sciences, vol. 3, pp. 122–128, 1936.
[27] E.M. Dar-El, K. Ayas, and I. Gilad, "A dual-phase model for the individual learning process in industrial tasks," IIE Transactions, vol. 27, no. 3, pp. 265-271, Apr. 2007, doi: 10.1080/07408179508936740.
[28] E.M. Dar-El, "HUMAN LEARNING: From Learning Curves to Learning Organizations," Springer Science & Business Media.
[29] H. Zacher, H.A. Brailsford, and S.L. Parker, "Micro-breaks matter: A diary study on the effects of energy management strategies on occupational well-being," Journal of Vocational Behavior, vol. 85, no. 3, pp. 287-297, Dec. 2014, doi: 10.1016/j.jvb.2014.08.005.