Curriculum Vita: Ahmed Ewais

Personal Details

Name	Ewais, Ahmed
Place & Date of birth	Saudi Arabia, 20-May-1982
Nationality	Palestinian
Email	aewais@aaup.edu aewais@gmail.com

Academic Qualifications

2004	Bachelor of Science (BSc) in Computer Science, Arab American University, Jenin Palestine
2008	Master of Science (MSc) in Computer Science, Vrije Universiteit Brussel, Belgium. (Master Thesis)
2013	PhD of Computer Science, Vrije Universiteit Brussel, Belgium. (Ph.D Thesis)

Employments

- September 2004 – April 2008
  Teaching Assistant
  Department of Computer Science, University of Arab American University, Jenin, Palestine.
- April 2009- December 2013
  PhD Candidate (PhD scholarship)
  Web & Information System Engineering
  Vrije Universiteit Brussel, Belgium
- February 2014- February 2021
  Assistant Professor
  Computer Science Department
  Arab American University-Jenin
- September 2014- September 2016
  Head of Computer Science Department, Master of Computer Science Program Coordinator
  Computer Science Department in EIT Faculty, Graduate Studies Faculty
- April 2015 –September 2018
  Post-Doc Researcher
  Web & Information System Engineering (WISE)
  Vrije Universiteit Brussel, Belgium
- May 2019 till 2024
  Researcher
  Web & Information System Engineering (WISE)

Vrije Universiteit Brussel, Belgium

- March 2020 till present
  Head of e-learning Center
  Academic Affairs Office, Arab American University
- March 2021 till present
  Associate Professor
  Computer Science Department
  Arab American University-Jenin

Academic Activities

- **Taught Courses:**
  Virtual Reality, Multimedia Design for Innovative Learning, Human Computer Interaction, Virtual Reality Principles and Practice, Special Topics I in Computer Science, Special Topics II in Computer Science (advanced UX & UI), Systems Analysis and Design, Computer Graphics, Python, Programming Fundamentals I (C++), Programming Fundamentals II (C++), Game Programming, Mobile Programming (Android, Flutter), Social Media and Mobile Applications Development (Android). Introduction to Information Technology, Introduction to Computers. Fundamentals of Research Methods.
- **Supervising and Examiner:**
  - a number of PhD /Master Theses in: Computer Science Program, Data Science Program, Innovative in Education Program, and Nursing Program.
  - Bachelor Senior Projects for Computer Science, Multimedia Technology and Computer Information Technology, Computer Systems Engineering Students.
- **Committee Member:**
  - Master Program in Computer Science Committee.
  - Engineering and Information Technology Faculty Council at Arab American University-Jenin Palestine.
  - ACM competition Committee Engineering and Information Technology Faculty Council at Arab American University-Jenin Palestine.
  - Organizing the ACM Palestinian Collegiate Programming Contest (PCPC), The Arab American University.
  - Organizing the First Lego League (FLL), The Arab American University.
  - Educational Outcomes of Courses, The Arab American University.
  - ABET Accreditation.

Research Interest

- Extended Reality XR in educational domains (Virtual Reality/Augmented Reality)
- Massive Online Open Courses (MOOCs)
- Adaptive 3D Virtual Learning Environments (3D VLE)

- E-learning, Enhanced Learning Technology, ICT for Education
- Serious Game & Educational Game
- E-learning and Mobile Learning (M-learning)
- Usability, UX&UI
- Machine Learning, Artificial Intelligence, Generative AI, LLM.

Projects

- **Sustainable partnerships between U.S. and Palestinian universities to advance the use of innovative technologies in professional medical training [**IIE Sustainable U.S. – Palestinian Higher Education Partnerships (SUPHEP) Program**]** (2022-2024)
  Shenandoah University partnered with Arab American University of Palestine (AAUP) and the Department of State Office of Palestinian Affairs (OPA) to implement activities to further cultivate and sustain a long-lasting partnership between SU and AAUP. This allows both institutions to further build and expand capacity in fostering innovation and leveraging virtual reality (VR) technology as a supplemental pedagogy to advance medical education, while also expanding the partnership to include other institutional programs and initiatives. This will further internationalize both institutions and better prepare students to become globally empowered citizens.
- **Augmented Reality for A Sustainable Learning Experience** (**EDUTAIN**) [Swedish foundation for International Cooperation in Research and Higher Education] (2022-2023)
  This project's goal is to initiate cross-institutional and multiple-stakeholder collaboration that can eventually lead to an increase in interest to investigate needs for the development of an AR-based application which is directly accessible for the use in science courses (such as Chemistry, Physics, Biology, etc.) in elementary schools without special equipment or hardware in.

- **Equip Palestine with E-Learning (E-Pal) [**Norwegian Agency for Development Cooperation (NORAD) through the Norwegian Program for Capacity Development in Higher Education and Research for Development (NORHED**]** (2021-2026)
  The project a new initiative to strengthen digital teaching approaches in the Palestinian higher education sector, where employees at the Centre for Learning, Innovation and Academic Development collaborate with Palestinian colleagues at Palestine Polytechnic University in the West Bank and University College of Applied Sciences in Gaza to develop new technological, pedagogical and organizational approaches to digitally mediated teaching and learning. In addition, the project will strengthen ICT and education as a research field in Palestine.

- **Collaborative Multi-Institutional Research and Innovation in Medical Simulation [**IIE Sustainable U.S. – Palestinian Higher Education Partnerships (SUPHEP) Program**]** (2021-2022)

The main goal of this project is to cultivate a long lasting partnership that will initially allow both institutions to build capacity in fostering innovation and leveraging virtual reality (VR) technology as a supplemental pedagogy to advance Medical education, with a longer term goal of expanding the partnership to include other institutional programs and initiatives.

- **Virtual Reality as an Innovative and Immersive Learning Tools for HEIs in Palestine / TESLA** [Erasmus+]: (2017-2020)
  The project will focus on developing different modules in Virtual Reality in educational context for a number of courses such as Physics lab, Chemistry, Topology, and Geology. The project is funded by Erasmus+.

- **Improving Governance Practices at Palestinian Higher Education Institutions Unigov** [Erasmus+]: (2016-2019)
  The project will initially seek to address weaknesses in the existing governance systems across HEIs in Palestine. By establishing a comparative study with European benchmark universities, we seek to establish a governance framework and then adopt innovative practicies to improve existing structures. The partnerships between European universities and Palestinian universities is expected to continue effectively over 36 months.

- **Investigating the possible adaptation techniques for Multimedia Learning Resources inside 3D virtual Learning Environment [**AAUP SRC Deanship**]** (2015-2016)
  This research aimed at investigating the different adaptation techniques that can be applied to the audio and video learning resources which are considered as one of the important components of the 3D Virtual Learning Environments. As a result, such adaptation techniques can be used to improve the learning outcomes from a 3D Virtual Learning Environment. The project is funded by Scientific Research Department in Arab American University.

- **Generic Responsive Adaptive Personalized Learning Environment (GRAPPLE)** [EU FP7 STREP Project]: (2009-2011)
  The GRAPPLE project aims at delivering to learners a technology-enhanced learning (TEL) environment that guides them through a life-long learning experience, automatically adapting to personal preferences, prior knowledge, skills and competences, learning goals and the personal or social context in which the learning takes place. The same TEL environment can be used/accessed at home, school, work or on the move (using mobile/handheld devices). More information could be found in the following link: http://grapple.win.tue.nl/home.html.

Selected Publications

1. Obeid, M. F., **Ewais, A.,** & Asia, M. R. (2025). NursingXR: Advancing Nursing Education Through Virtual Reality-Based Training. Applied Sciences, 15(6), 2949. https://doi.org/10.3390/app15062949

2.**Ewais, A.,** Dalipi, F., Abualrob, M., Ferati, M., & Kurti, A. (2025). Assessing the Teachers' Readiness for Integrating Augmented Reality in K-12 Education: A Comparative Analysis. International Journal of Interactive Mobile Technologies (iJIM), 19(05), pp. 22–44. https://doi.org/10.3991/ijim.v19i05.51505

3.**Ewais, A**., & Obeid, M. F. (2024). Analyzing and Designing the Utility of Virtual Reality for Nursing Fundamentals Lab. International Journal of Online and Biomedical Engineering (iJOE), 20(16), pp. 27–51. https://doi.org/10.3991/ijoe.v20i16.51721

4.**Ewais, A**., Asia, M., Herndon, C., Tighe, O., Ulbrich, J., Obeid, M.F. (2024). Using HTA and UML in Analysis and Design Phases for a VR-Based Nursing Lab. In: De Paolis, L.T., Arpaia, P., Sacco, M. (eds) Extended Reality. XR Salento 2024. Lecture Notes in Computer Science, vol 15028. Springer, Cham. https://doi.org/10.1007/978-3-031-71704-8_26

5.M. F. Obeid, **A. Ewais** and M. Asia, "Development of an Immersive Learning Environment for Fundamentals of Nursing Labs," 2024 10th International Conference on Virtual Reality (ICVR), Bournemouth, United Kingdom, 2024, pp. 213-217, doi: 10.1109/ICVR62393.2024.10868517.

6.Noora Shawareb, **Ahmed Ewais**, and Fisnik Dalipi. 2024. Utilizing Data Mining Techniques to Predict Students Performance using Data Log from MOODLE. KSII Transactions on Internet and Information Systems, 18, 9, (2024), 2564-2588. DOI: 10.3837/tiis.2024.09.006.

7.**Ewais, A**.; Mystakidis, S.; Khalilia, W.; Diab, S.; Christopoulos, A.; Khasib, S.; Yahya, B.; Hatzilygeroudis, I. Virtual Reality Immersive Simulations for a Forensic Molecular Biology Course—A Quantitative Comparative Study. *Appl. Sci.* **2024**, *14*, 7513. https://doi.org/10.3390/app14177513

8.M. Abualrob, **A. Ewais**, F. Dalipi and T. Awaad, "Utilizing Augmented Reality to Enhance Twenty-First Century Skills in Chemistry Education," *2023 IEEE Global Engineering Education Conference (EDUCON)*, Kuwait, Kuwait, 2023, pp. 1-6, doi: 10.1109/EDUCON54358.2023.10125271.

9.**Ewais**, A., Salah, Z., & Hamed, G. (2022). Need Analysis for Higher Educational Institutions for using Virtual Reality-TESLA Project: Staff Willingness and Readiness for Using VR in Teaching . International Journal of Emerging Technologies in Learning (iJET), 17(22), pp. 216–231. https://doi.org/10.3991/ijet.v17i22.34355

10.Sajjadia, P., **Ewais, A.,** De Troyer, O.(2022). Individualization in Serious Games: A Systematic Review of the Literature on the Aspects of the Players to Adapt To. In Entertainment Computing, Volume 41, 2021, 100468, ISSN 1875-9521

https://doi.org/10.1016/j.entcom.2021.100468

11.**Ewais, A**., Hodrob, R., Maree, M., & Jaradat, S. (2021). Mobile Learning Application for Helping Pupils in Learning Chemistry. *International Journal Of Interactive Mobile Technologies (IJIM), 15*(01), pp. 105-118. doi: http://dx.doi.org/10.3991/ijim.v15i01.11897

12. M. Fragkaki, S. Mystakidis, I. Hatzilygeroudis, K. Kovas, Z. Palkova, Z. Salah, G. Hamed, W.M. Khalilia, **A. Ewais** (2020) Tpack Instructional Design Model In Virtual Reality For Deeper Learning In Science And Higher Education: From "Apathy" To "Empathy", EDULEARN20 Proceedings, pp. 3286-3292.

13. Salameh, B., **Ewais, A**., & Salameh, O. (2020). Integrating M-Learning in Teaching ECG Reading and Arrhythmia Management for Undergraduate Nursing Students. *International Journal of Interactive Mobile Technologies (IJIM), 14*(01), pp. 82-95. doi:http://dx.doi.org/10.3991/ijim.v14i01.11417

14. **Ewais, A.,** & Troyer, O. D. (2019). A Usability and Acceptance Evaluation of the Use of Augmented Reality for Learning Atoms and Molecules Reaction by Primary School Female Students in Palestine. Journal of Educational Computing Research, 57(7), 1643–1670. https://doi.org/10.1177/0735633119855609

15. **Ewais A.,** De Troyer O., Arra M.A., Romi M. (2019) A Study on Female Students' Attitude Towards the Use of Augmented Reality to Learn Atoms and Molecules Reactions in Palestinian Schools. In: De Paolis L., Bourdot P. (eds) Augmented Reality, Virtual Reality, and Computer Graphics. AVR 2019. Lecture Notes in Computer Science, vol 11614. Springer, Cham. https://doi.org/10.1007/978-3-030-25999-0_26

16. **Ewais**, A., Jaradat, S., Rabaya, K., and De Troyer, O. (2019). Usability Aspects Related to the Use of M-Learning in Elementary Schools in Palestine. International Journal of Innovative Technology and Exploring Engineering (IJITEE) 9:2, pp. 2339-2347. ISSN: 2278-3075.

17. **Ahmed Ewais**, Duaa Abu Samara. (2020), Adaptive MOOCs Based on Intended Learning Outcomes Using Naïve Bayesian Technique. International Journal of Emerging Technologies in Learning (iJET), 15(4), 4-21. Kassel, Germany: International Journal of Emerging Technology in Learning.

18. **Ahmed Ewais,** Mohammed Awad, Khetam AbuHadieh. (2020), Aligning Learning Materials and Assessment with Course Learning Outcomes in MOOCs Using Data Mining Techniques. In: Hatzilygeroudis, I., Perikos, I., Grivokostopoulou, F. (eds) Advances in Integrations of Intelligent Methods. Smart Innovation, Systems and Technologies, vol 170. Springer, Singapore. https://doi.org/10.1007/978-981-15-1918-5_1

19. Rami Hodrob, **Ahmed Ewais,** Mohammed Maree. (2019), On Developing A Framework For Knowledge-Based Learning Indicator System In The Context Of Learning Analytics, Intelligent Decision Technologies, 27-37. https://doi.org/10.1007/978-981-13-8311-3_3

20. Awad, M., **Ewais, A.** (2018). Prediction of General High School Exam Result Level Using Multilayer Perceptron Neural Networks. International Journal of Applied Engineering Research 13(10), 7621-7630

21. Ashraf Amiraia, **Ahmed Ewais**, Rami Hodrob (2018), A Framework For Automatic Exam Generation Based On Intended Learning Outcomes, In Proceedings of the 10th International Conference on Computer Supported

Education - Volume 1: CSEDU, ISBN 978-989-758-291-2, pages 474-480. DOI: 10.5220/0006795104740480.

22. **Ewais, A.,** Samra, D.A. (2017). Adaptive MOOCs: A Framework for Adaptive Course based on Intended Learning Outcomes. In Proceeding of the 2nd International Conference on Knowledge Engineering and Applications (ICKEA 2017), IEEE, p.204-209.
23. **Ahmed Ewais**, Mohammed Maree, Olga De Troyer, Bayan Kharraz.(2017) "Audio and Video Adaptation Inside 3D Virtual Learning Environments", The 8th International Conference on eLearning (eLearning-2017), 28 - 29 September 2017, Belgrade, Serbia.
24. Mohammed Maree, Mohammed Belkhatir, Fariza Fauzi, Aseel Kmail, **Ahmad Ewais**, Muath Sabha. (2016) "Multiple Ontology-based Indexing of Multimedia Documents on the World Wide Web.", 8th International KES-Intelligent Decision Technologies - KES-IDT16 conference, Volume 57, pp 51-62.
25. **Ewais, A.,** De Troyer, O, (2014) "Authoring Adaptive 3D Virtual Learning Environments". International Journal of Virtual and Personal Learning Environments (IJVPLE), volume 5, issue 1, 1-19.
26. **Ewais, A.,** De Troyer, O, (2013)."Usability Evaluation of an Adaptive 3D Virtual Learning Environment ". International Journal of Virtual and Personal Learning Environments (IJVPLE), volume 4, issue 1. 16-31.
27. **Ewais, A**., De Troyer, O.: (2014)."A Usability Evaluation of Graphical Modelling Languages for Authoring Adaptive 3D Virtual Learning Environments", Proceedings of the 6th International Conference on Computer Supported Education (CSEDU 2014), pp. 459-466, Barcelona, Spain, published by SciTePress.
28. **Ewais, A.,** De Troyer O.:" (2013). Authoring Story-based Adaptive 3D Virtual Learning Environments", Proceedings of the 5th International Conference on Computer Supported Education 2013 (CSEDU 2013), Aachen, Germany, published by SciTePress.
29. De Troyer, O., Kleinermann, F., **Ewais, A.** (2010). "Enhancing Virtual Reality Learning Environments with Adaptivity: Lessons Learned, HCI in Work and Learning, Life and Leisure" , In proceedings of 6th Symposium of the Workgroup Human-Computer Interaction and Usability Engineering, USAB, Lecture Notes in Computer Science 6389,pp. 244-265, Eds. Leitner. G. et al, Publ. Springer, ISBN 978-3-642-16606-8, Klagenfurt, Austria.
30. De Troyer, O., Kleinermann, F., Pellens, B., **Ewais, A.**(2009)."Supporting Virtual Reality in an Adaptive Web-based Learning Environment, Learning in the Synergy of Multiple Disciplines", In proceedings of the 4th European Conference on Technology Enhanced Learning (EC-TEL), LNCS 5794, pp. 627-632, Eds. Cress. U. et al, Publ. Springer, ISBN 978-3-642-04635-3, Nice, France.