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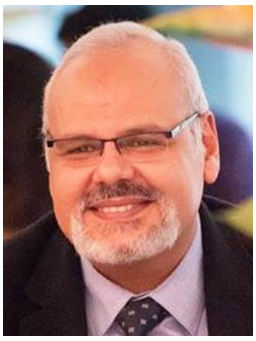
Education 4.0 and Digital Transformation



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Abstract:

We are living in a highly dynamic world; all aspects of life are changing rapidly. Despite that, the change in the higher education sector is not matching the advances in the other fields.

Due to the COVID-19 situation, the delivery of higher education has significantly changed, with most institutions having to change their teaching and assessment to online mode. But this is not really the required change, change should be bigger than that, not shifting from reading from books to reading from computer or tablet screens, or having virtual classes instead of the traditional classes. The required change should have wider scope not just using more tools, the change should cover the whole teaching and learning process to introduce a well-

designed and pedagogically effective educational system that will meet the needs of learners and the future employers' requirements.

As the education system should be designed to meet the learners' skills and the employers' requirements, and because we are moving now towards the fourth industrial revolution (Industry 4.0), recent research has proposed the fourth educational revolution (Education 4.0). Education 4.0 is still a vague term and does not have a fixed definition yet. Education 4.0 is more a general concept to readying a future workforce for Industry 4.0 than an individual intervention.

Bio:

Dr. Abdel-Hamid has over 32 years of experience in the academic and industrial fields. He has a multi-disciplinary academic/research experience in digital signal processing including image/video processing, telecommunications, and data acquisition systems, wireless sensor networks (WSN), Internet of Things (IoT) and Fiber Optics communication. He is working to harness and integrate different technologies towards implementing smart systems to contribute to smart cities and real-life applications. His research activities are not limited to the national level within the United Kingdom but are internationally extended to many partner Universities in various countries. His research has produced over 70 refereed papers on highly rated journals/conferences.

In addition to his research activities, he is involved in several enterprise projects and consultancy activities for national and international companies. He has secured and been leading and involved in several externally funded projects on national, European and international levels, totaling £19M.

Dr. Soliman's work has been recognized through several awards such as: Lord Stafford award "Impact through Innovation", for Designing and developing a smart monitoring and controlling system for diabetic people. The AWM ICT Excellence awards for "Best Knowledge Transfer project" category, for Designing and developing an electronic bladder diary, and UHNS "Clinical Innovation" award, for Designing and developing an online multimedia-based training system for surgeons.