

Preface

The idea behind this first book stemmed from a combination of ideas about e-learning and personalisation together with adopted concepts from a research initiative about crowdsourcing. E-learning has long been a domain which attracted my attention as I professionally chose to work within the areas of education at the outset of my career and eventually switched to computer science as personal computers made their public appearance in the late 80s. Applying information technology to education brought together both interests into one focussed domain that turned out to be a vibrant and flourishing domain that required further research, experimentation and development.

What started as an undergraduate assignment at the University of Malta in 2014 resulted in a number of prototypes that explored the notion of combining a number of complementary techniques, that have been successfully employed in a variety of domains, in an attempt to enhance the effectiveness of e-learning. The project took a major twist in 2015 when a decision was taken of blending three practices or approaches to potentially take e-learning to the next level by effectively adding value through the process of customisation. In the Summer of that same year, a fully fledged empirical study was held in collaboration with the national education authority in Malta to thoroughly test and collect numerous results from a mixture of data collection methods. The final outcome helped shed light on the techniques employed, the methodologies adopted and the philosophical reasoning behind it that have now been captured in this book.

Apart from the expected build-up to the proposed e-learning model whereby numerous subject matters from education and computer science are tackled, I wanted the reader to understand and appreciate how all these fit in and how e-learning has come a long way since its inception. Understanding how the parallel evolutions of technology and e-learning came about is a key to better position this work and comprehend the need for the next generation of online learning to materialise. The concepts, reasoning and rationale behind the model is, what is being presented with the knowledge that this has been tangibly deployed and tested in real life with higher education learners as part of their continuous professional development. The book is intended to lead e-learning researchers to further their

efforts and work to improve e-learning effectiveness as they attempt to develop next-generation platforms in line with the needs of a modern twenty-first century connected society.

During the actual writing of the book, I had numerous occasions to look back at the empirical study and extract further insights into the model especially during discussions held with colleagues, peers and interested academics that I met at numerous conferences, where I presented my ideas and the rationale behind it all. The feedback I got was outstanding as the model presented a different perspective and fresh outlook on the evolution of how we perform online education. This positive response and constructive criticism helped me further refine the model and present a much more coherent and stable version of how I envisage the future of e-learning to be.

This experience helped me to look within and switch my role from an AI academic, researcher and educator to a raconteur and remote reporter looking for the most effective way to relay back the thinking process without integrating too much technical details that would otherwise over-complicate the pedagogical and philosophical reasoning behind the concepts presented, while maintaining my own personal epistemological beliefs to weigh in on my thoughts and writing.

The urge to pursue further detail in both the development aspect and the AI algorithms was a recurring challenge that, as a technical person I continuously was aware of but which avoided ensuring the proposed model stood up on its own merit away from the programming language or the specific machine learning technique employed when profiling the learner. The concepts and techniques can now be deployed independently from the specific technicalities that were employed during the empirical study.

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Matthew Montebello



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Montebello, M.

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