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| C:\Users\CESA\Downloads\image002.jpg | **COMMERCIAL EDUCATION SOCIETY OF AUSTRALIA****PERIODIC DISCUSSION PAPER No.56[[1]](#footnote-1)\*** | **November****2023** |

**Book Review by Emeritus Professor A.G. (Tony) Shannon *AM***

***Optimising AI Technologies:***

***A practical guide to transform higher education***

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**Introductory Comments**

As one who has been active in research and development in the computational technology of artificial intelligence for more than a decade[[2]](#footnote-2), I viewed the current text through more than one critical lens. Even so, I found the Digital Assessment Framework and the Glossary of terms to be very useful in my reading of this text.

The authors themselves state that “The book is designed to stimulate and advance discussion and debate” (p.21). I shall try to explain briefly why I believe the book under review has achieved its goal.

Other reviewers will, no doubt, highlight different emphases, but two reasons, among many others which l like, and which have been well-treated in their integration, understanding and incorporation of AI in assessment for learning as well as a measure of performance are

* its over-arching theme of not just accepting that AI exists, but of ways of capitalising on AI to assist us in adding further value to our various roles in higher education,
* particularly through continuing professional development (CPD), including scholarly activity which informs our teaching.

The latter seem to me to be too often honoured in their breach, rather than as essential components of striving for improvement and excellence in all facets of the higher education enterprise. “The intention is not, at this early stage in the introduction of AI generative technologies, to provide an in-depth and comprehensive review of research literature on the impact of AI on the learner, learning experience and learning outcomes. Rather it reflects some of the current murmurings and anticipates some of the obvious risks, as well opportunities for learning, within the higher education sector” (p.31).

**General Comments**

Among the opportunities is the use of AI to ensure that first year students have familiarity with the essential foundational assumed knowledge for the course in question. This is particularly important for international students who may have language problems as well as gaps in their pertinent conceptual frameworks which are assumed for that course. “The ability to track and identify students who are struggling academically, through the use of an AI algorithm, was presented as an advantage, in terms of being able to provide early intervention to support student learning. However, there is a darker side to this practice which relates to misuse of the algorithm for general surveillance and invasion of student privacy” (p.102).

“The more practical part of each chapter contains a series of interactive activities, designed to foster further engagement and participation in deeper and more robust discussions on the preferred application of AI technologies within higher education” (p.21). It achieves this apparently impossible aim by weaving insights within three current meanings in English of the ‘AI’ acronym, namely,

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|  | $$AI \left\{\begin{array}{c}Artificial Intelligence\\Academic Integrity\\Alignment \&and Innovation\end{array}\right.$$ |  |

which are inter-related in different ways within teaching, research and administration at all levels of higher education, particularly with implications for the continuing professional development obligations for all roles, including Governing Councils and Faculty Boards. The knowledgeable response of academic leaders to the integration of AI technologies is crucial to their success.

Thus, each chapter includes ‘ice-breakers’ and related professional development and capacity-building activities with team project suggestions and critical questions to contemplate (and space for comments and feedback), so that templates for CPD are ready-made for Deans to implement now within the context of each institution.

These could lead to further commentary and questions for serious consideration at Academic Board meetings in the sense of governing the learning environment of an institution, and for Teaching and Learning Committees to ensure that the students are engaged with AI for active learning, rather than “jug to mug” preaching: “But, though they wrote it all by rote, they did not write it right”![[3]](#footnote-3) Hence, the sections on taxonomies of teaching and learning are a gtimely reminder for all of us who are active in teaching and learning!

**Concluding Comments**

In fact, the concluding chapter, sub-titled “Harmony of Minds: Navigating the New Intelligence” summarises, with gentle humour, what can be done now, and also looks ahead to what needs to be done: “As long as we get SOMEWHERE, will not be an acceptable journey destination for the necessary reform required in the higher education sector... It will be critical that all stakeholders are engaged in the reform process, so that the appropriate curriculum, learning and teaching frameworks, governance and funding models and operational structures can be put in place to serve the needs of future learners and future societies” (p.118).

In my opinion, the book is very, very practical. It is appropriately illustrated, and the text has a whimsical humour with supporting early research evidence. I would have liked to have seen an index, but the book does cover and interweave all the main facets; these are packed into a mere one hundred and thirty-six pages of positive and comprehensive AI expository challenges for today’s teachers, as suggested by the following table of the chapter contents:

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| CONTENTS OF THE TEN CHAPTERS |
| 1 | INTRODUCTION  | 6 | AI FOR RESEARCH AND RESEARCH TRAINING |
| 2 | IMPACT OF AI ON THE LEARNER, LEARNER EXPERIENCE AND LEARNING OUTCOMES | 7 | AI GOVERNANCE AND POLICY |
| 3 | RETHINKING CURRICULUM IN AN AI ENVIRONMENT | 8 | ETHICS AND ACADEMIC HONESTY IN THE AGE ODASH C21 F AI  |
| 4 | FROM TRADITIONAL TO TECH-SAVVY PEDAGOGY  | 9 | RECONCEPTUALISING HIGHER EDUCATION FOR THE FUTURE |
| 5 | ASSESSMENT AUTHENTICITY, INNOVATION AND ALIGNMENT  | 10 | CONCLUSION |

1. **\* These papers are for internal discussion within CESA on topics related to the CESA Mission.** [↑](#footnote-ref-1)
2. E.g., Roeva, O., T. Pencheva, A. Shannon and K. Atanassov. 2013. *Generalized Nets in Artificial Intelligence, Vol. 7: Generalized Nets and Genetic Algorithms.* Sofia: Prof. M. Drinov Academic Publishing House of the Bulgarian Academy of Sciences. [↑](#footnote-ref-2)
3. Edgcumbe, Robert P. (ed.). 1902. *The works of Arthur Clement Hilton*. Cambridge: Macmillan: section on Louisa Caroline. [↑](#footnote-ref-3)