



Book review. Rajaram, Kumaran (Ed., 2023). *Learning intelligence: Innovative and digital transformative learning strategies. Cultural and social engineering perspectives*. Springer.

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DOI: <https://doi.org/10.37074/jalt.2023.6.2.3>

Introduction: the future of learning

Learning intelligence: Innovative and digital transformative learning strategies aims to provide guidance and frameworks for navigating complex learning environments in the context of digital transformation and innovation. The term "learning intelligence" pertains to an institution's ability to innovate, transform, and enhance its learning capabilities. This includes its ability to establish and articulate learning objectives, understand the rapidly changing learning demands and practices, and measure learning outcomes effectively.

Unusually, the book has one editor and only two authors: Kumaran Rajaram (the editor) and Samson Tan. The duo addresses the challenges and opportunities of nurturing future knowledge workers in higher education. They advocate a shift in the learning culture across different contexts and disciplines. Their book proposes that we ask ourselves: "Why are we teaching people, what we are teaching, and why do we value our current system of educating human beings as the best, and as the most wholesome, accurate way of assessing the intelligence of a human being?" (p. 14).

Learning intelligence aims to address four key trends. (1) There is a significant rise in cooperative learning approaches, where students actively participate in shaping their own educational journey. This is crucial for preparing students for future challenges, enabling them to take control of their learning process throughout their lives. (2) Technology is becoming a crucial tool that allows learning to take place without the constraints of time or location. (3) Teachers are beginning to adopt more tailored and personalised learning strategies for each student. (4) The objective of evaluations is shifting from merely achieving high grades to a more comprehensive understanding of learning.

The book consists of ten chapters, organised into four main sections: Future of learning, cultural and social engineering of learning, innovation and transformation in learning, and digital transformation and data analytics in learning. Each chapter covers a specific topic related to learning intelligence, such as teaching and learning strategies, cultural intelligence, social-psychological intervention, disruptive innovation, blended learning, authentic learning,

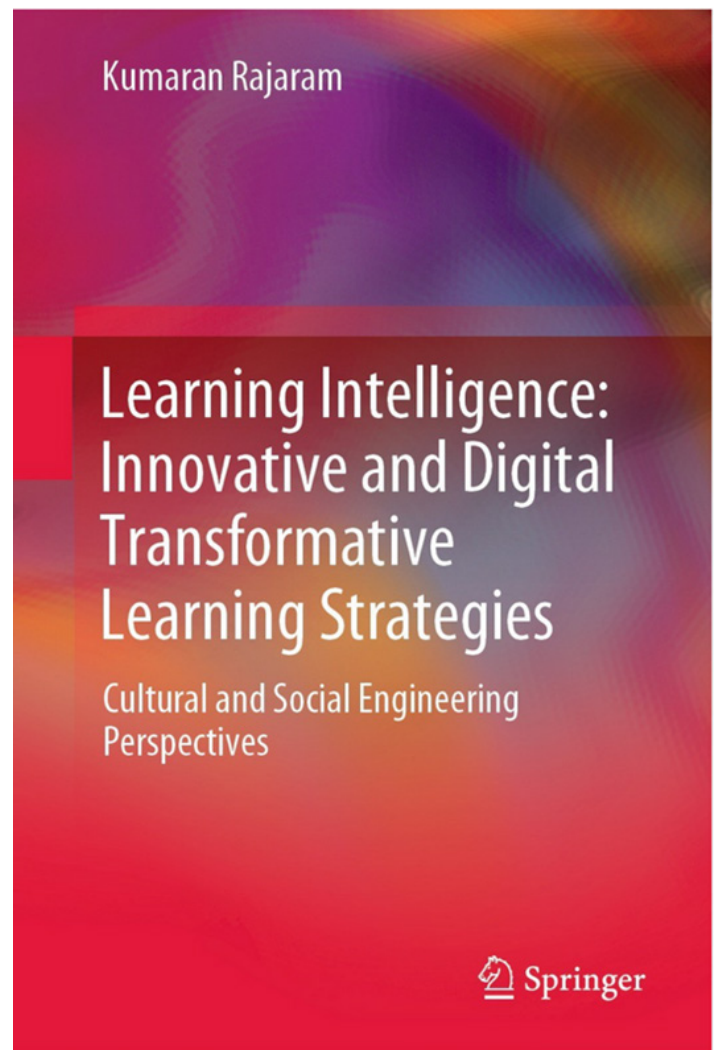


Figure 1: Book cover.

immersive technologies, artificial intelligence, assessment and feedback, and concluding thoughts.

Rajaram and Tan's book draws on a wide variety of theories, models, concepts, and examples from different fields and domains to illustrate the key ideas and principles of learning intelligence. It also provides practical suggestions and recommendations for implementing effective learning

interventions and designing engaging learning experiences. The book is intended for a wide range of readers, such as academics, senior management of higher education institutions, corporate leaders, policy makers, researchers, students, and lifelong learners.

The beautiful hard-cover book has a whopping 481 pages. The detailed contents page alone spreads over nine pages and the book contains numerous figures and tables. The book comes at a hefty price of €109.99 (the e-book is available at €93.08). This is a rich tome and it constitutes a rather heroic effort by Kumaran Rajaram and Samson Tan. There are impressive reference lists at the end of each chapter. The breadth and ambition of this book are certainly admirable, and a brief review cannot do justice to the book's many fascinating aspects, hence forcing me to be selective, especially in my discussion.

A brief introduction of the authors is in order. Dr Kumaran Rajaram is a Senior Lecturer with the Leadership, Management and Organization Division at the Nanyang Business School, Nanyang Technological University, in Singapore. Dr Samson Tan is Director of Regional Strategy & Operations (Singapore) of Civica Asia Pacific; he was previously Head, Centre for Innovation in Learning, of the renowned National Institute of Education, Singapore. I should disclose that Samson and I have co-authored two articles on generative AI and higher education (Rudolph et al., 2023a, b).

The book comprises ten comprehensive chapters that are organised in six parts, laden with concrete evidence and presenting pragmatic approaches for individuals engaged in promoting transformative and forward-thinking educational strategies within socio-cultural environments. I recommend this book to anyone curious about the possible future of higher education trajectories.

Overview

The first chapter, "Future of learning: Teaching and learning strategies", introduces the book's aim – to offer guidance for navigating the complexities of learning environments amid digital innovation. This introductory chapter addresses the current obstacles and opportunities in cultivating future global leaders in higher education, advocating a learning culture shift across various contexts. It outlines the need for change, driven by innovative strategies relating to digital transformation and cultural and social engineering. It identifies research gaps to be covered in subsequent chapters and concludes by underscoring the book's value to various stakeholders while outlining its structure.

The book's second part is about "Cultural and social engineering of learning". It comprises a chapter on cultural intelligence in teaching and learning, while the third chapter focuses on the development of cognitive empathy. The second chapter, "Cultural intelligence in teaching and learning", investigates the role and significance of cultural intelligence (CQ) within higher education. The chapter asserts that CQ is a pivotal skill for effective cross-cultural interaction and collaboration among educators and learners, discussing both challenges and advantages of

nurturing CQ. It describes CQ as the adaptability to varied cultural scenarios, introducing a four-dimensional model for its development. The importance of CQ in creating inclusive, engaging learning experiences for diverse groups is emphasised, providing suggestions for its integration into curriculum and pedagogy. It concludes by summarising CQ's implications and identifying future research directions. I found the discussion of Western pedagogical techniques in Asian contexts and the learning styles of Confucian Heritage Cultures (CHC) in this chapter particularly useful.

Chapter three, "Social-psychological intervention: Development of cognitive empathy", delves into the role of cognitive empathy and its significance in higher education. The chapter asserts that cognitive empathy, an ability to comprehend others' thoughts and feelings without necessarily agreeing with them, is integral for effective interaction among diverse learners and educators. Rajaram highlights the role of cognitive empathy in establishing positive educational relationships and fostering active participation in multicultural settings. He provides suggestions for embedding cognitive empathy into educational frameworks.

This chapter reminds us why Goleman, the father of emotional intelligence, considered empathy particularly important. In addition, it highlights the importance of design thinking: "Design thinking is an iterative process that seeks to comprehend the user, challenge assumptions and redefine problems in an attempt to identify alternative strategies and solutions that might not be instantly apparent with our initial level of understanding" (p. 128). The authors of *Learning intelligence* are very good at design thinking themselves, demonstrated by the many helpful figures and tables in their text.

The book's third part focuses on the innovation and transformation of learning and has three chapters devoted to it. The fourth chapter is Samson Tan's first chapter contribution (out of three) to the book. Titled "Exploiting disruptive innovation in learning and teaching", Tan (2023a) discusses the role of disruptive innovation in the realm of higher education. He asserts that such innovation is fundamental for maintaining value and impact in the education sector, discussing the related challenges and opportunities. Disruptive innovation is defined as a process leading to new products or services that outperform and eventually supplant existing ones. The chapter presents a four-stage model of disruptive innovation, explaining each stage's distinct activities and challenges. Tan underscores the necessity for educators and learners to embody disruptive innovation, offering practical recommendations for its implementation. Chapter four brims with intriguing concepts that Tan effortlessly synergises. For instance, the Gartner Hype Cycle is discussed in conjunction with the diffusion of innovation model (p. 170).

The fifth chapter, "Blended learning", examines the significance of blended learning in higher education. It proposes that blended learning enhances educational quality and outcomes when conducted as an effective approach that synergises face-to-face and online learning. The chapter underscores the necessity for educators to

design diverse, creative, blended learning experiences and for learners to be self-regulated and collaborative. I found Table 5.1 particularly instructive. The table describes and exemplifies various types of blended learning (such as rotation, station rotation, lab-rotation, individual rotation, flipped classroom, flex, a la carte a.k.a. self-blend, enriched virtual, and low-, medium-, and high-impact blends) and discusses their impact on students' learning.

Chapter six, "Authentic learning digital transformation and innovations", investigates the significance of authentic learning in higher education. It posits that authentic learning, a learner-centred approach facilitating real-world knowledge application, can be effectively implemented through digital transformation and innovations. Rajaram underscores the need for educators to devise diverse, creative, authentic learning experiences and for learners to actively participate. Chapter six features another great table (6.1) that discusses the primary functions of educational technology tools such as K[hat sign]m Alive, Kahoot, Quizizz, Slack, Trello, Google Classroom, Tiki-Tokio, Hypothes.is, and Socrative.

Part four concentrates on digital transformation and data analytics in learning. It contains two excellent chapters by Samson Tan, one on immersive technologies and another on the currently super-hot topic of AI in education. Chapter seven, "Harnessing immersive technologies for innovation in teaching and learning", delves into the role of immersive technologies in higher education. Tan (2023b) posits that these technologies, which create or augment a virtual or augmented reality environment, are potent tools for generating immersive, interactive learning experiences that enhance educational outcomes. Tan highlights the need for educators to design engaging immersive learning experiences and for learners to actively participate in them. Chapter eight, "Harnessing Artificial Intelligence for innovation in education", examines the relevance of AI in higher education. Tan (2023c) asserts that AI offers intelligent, personalised learning experiences, thereby improving educational outcomes. He emphasises the necessity for educators to design engaging AI-based learning experiences and for learners to actively participate.

Part five on assessment and feedback for learning contains a single chapter. The ninth chapter, "Assessment, assessment rubrics and feedback", addresses the critical roles these elements play in enhancing education quality within higher education. The chapter defines assessment as a process for evaluating student progress, introducing a model based on purpose, method, criteria, and quality. It highlights the importance of proficiently designed and facilitated assessment rubrics and feedback, stressing the necessity for learner participation and self-regulation.

The concluding chapter forms the sixth and final part of *Learning intelligence*. Rajaram revisits the book's central themes and their implications for stakeholders like academics, institutional leaders, and students. He re-emphasises the need for learner-centric, real-world approaches and a shift in learning culture. The chapter summarises key points from each chapter, spotlighting concepts, strategies, and models of learning intelligence. Rajaram also provides suggestions to incorporate learning intelligence into curricula, pedagogy,

and assessment.

Miscellanea

Tan begins chapter 4 with an important insight:

With the dawn of the twenty-first century, the world has been in chaos, turmoil and a changing environment that is chaotic and difficult to predict. In the midst of rapid technological advancements, geopolitical shifts, dramatic demographic changes, ecological disasters and immigration, lives are being disrupted at a level of severity and frequency that seems to only increase (Tan, 2023a, p. 149).

Thomas Friedman's (2005) optimistic popularization of the 'flat world' metaphor may have been influenced by him being a billionaire (Sirota, 2006). Piketty's *Capital in the twenty-first century* (2015) and Susskind's *A world without work* (2021) show that an unsustainable global inequality is in the ascendancy. With the recent pandemic, there was also at least a temporary trend toward de-globalisation, which, if were to continue, would lead to decreased diversity.

One of Rajaram's examples for the globalisation of higher education is the cooperation between Yale and the National University of Singapore (NUS) (p. 69). This is a great example of the writer's curse: you give an example and shortly after that, it becomes obsolete. As widely reported, the Yale-NUS partnership has ended (Bloom, 2021).

Rajaram describes social engineering, a term oftentimes used pejoratively, in surprisingly positive terms as the "science of masterfully directing human beings to take action in some aspects of their lives" (p. 226). He relates social engineering to the 'nudge theory' of Nobel-prize-winning authors Thaler and Sunstein. The theory posits that positive reinforcement and indirect suggestions can influence the behaviour and decision-making of groups or individuals more effectively than direct instruction, enforcement, or prohibition. Thaler and Sunstein's (2008) theory's central tenet is that by understanding how people think, we can design choices that help them make better decisions. "Social engineering" is a term often used in the context of manipulating people into performing actions or divulging confidential information, for instance, in the context of malicious activities like scams or cyberattacks. Critics of social engineering argue that it can be seen as manipulative and infringing on individual autonomy, particularly when used without transparency or consent (Mitnick & Simon, 2002). Furthermore, it raises ethical questions about who gets to decide what behaviours should be promoted (Sunstein, 2014).

The authors do an admirable job by ploughing through a plethora of journal articles and other academic literature. Every reader has their own biases and preferences. In my case, I kept thinking of Stephen Brookfield's and Stephen Preskill's work when reading about critical thinking, discussion, and leadership (Brookfield, 1987, 2012; Brookfield & Preskill, 2005, 2016; Preskill & Brookfield, 2009; Brookfield et al., 2019, 2022; Preskill et al., 2023).

We could discuss many small things in the spirit of 'agreeable disagreement'. For instance, was Covid-19 a black swan or a grey rhino event (Rudolph et al., 2021)? Or, to use another example, is the late Clayton Christensen's concept of disruptive innovation so useful for higher education (Rudolph, 2014)? That the book raises many questions plainly shows how rich and admirable Rajaram's and Tan's tour de force is.

Style matters

I could not help but notice the differences in style between the two authors, Kumaran Rajaram and Samson Tan. The Singaporean communication style has occasionally been described as succinct. In my view, however, such a statement is always an over-generalisation, as it does not consider Singapore's main ethnic groups – Chinese, Malays, and Indians – and individual differences. In my 30-year experience in the island nation, there is a statistical tendency for the Chinese to be more succinct and for Indians to be more elaborate. A succinct style is characterised by brevity and conciseness. Individuals who use this style tend to get straight to the point and use fewer words to express their thoughts or ideas.

On the other hand, an elaborate style is characterised by detailed and complex expressions. Individuals who use this style tend to provide more context, use more words, and include more details in their communication. These communication styles are associated with direct and informal versus indirect and formal cultural norms (Gudykunst & Ting-Toomey, 1988). Neither style is inherently better or worse than the other. Style is, by and large, a matter of taste. It was amusing to me that these styles also seem to apply to Rajaram and Tan. Upon reflection, my preference tends toward succinctness, which may be one reason I enjoyed Tan's writings more than Rajaram's.

When observing the style of the book, there are very minor things that many readers may not even notice: for instance, the issue of personal pronouns. Rajaram uses "I", and "we" and occasionally also talks about himself in the third person (e.g. "research scholar Rajaram"). I found Sword's (2012, p. 18) research on academic journal styles in different disciplines fascinating in this context:

"The high percentages in medicine, evolutionary biology and computer science... confound the commonly held assumption that scientists shun the pronouns I and we in their research writing. By contrast, only 54 percent of the higher education researchers in my data sample and only 40 percent of the historians use first-person pronouns" (Sword, 2012, p. 18).

In academic writing, a single author using 'we' can imply a pluralis majestatis (majestic plural) or a pluralis modestatis (modest plural). If in daily life, somebody spoke about themselves in the third person (he/she/they), we could easily suspect some psychological issues. Perhaps it is time to put such academic conventions to bed and unabashedly use 'I'?

Conclusion

I do not want to appear overly critical, as I like the book, and to state it clearly, I am happy to recommend it. It is the very fact that the book stimulates so many of these questions that its authors deserve much credit for. Rajaram makes this excellent point in the book's preface: "The one true goal of education is to leave a person asking questions". I highly commend the authors of this educative book, as it covers a large ground and helps us rethink learning, teaching and assessment in the light of rapidly evolving technologies. Students with teachers like Kumaran Rajaram and Samson Tan can count themselves lucky, as they will help them learn through their domain expertise, teaching, and technological mastery.

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