

# Book Review:

## *Learning Analytics Explained* by Niall Sclater

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Learning analytics implementation, ontology, learning analytics adoption

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Sclater's book *Learning Analytics Explained* is not unique in its goal to present a practitioner audience with a synopsis of the "what and how" of learning analytics. Throughout LA's brief history, studies and guides have been produced recommending models and approaches for learning analytics "deployment," as well as other short commentaries providing an overview of what exactly learning analytics is (Colvin et al., 2015; Gašević, Kovanović, & Joksimović, 2017; Rienties, Cross, & Zdrahal, 2016; West, Heath, & Huijser, 2015). These resources have been intended to increase awareness of the field across research and practice, and to facilitate sustainable uptake. Yet, and in spite of the high profile of these guides, the learning analytics community still finds itself lamenting a perceived low uptake of learning analytics within the higher education sector (Colvin, Wade, Dawson, & Gašević, 2017; Dix & Leavesley, 2015; Knobbout & van der Stappen, 2018). Sclater, himself a prominent scholar and consultant in the field of learning analytics implementations, is mindful of this present juncture in learning analytics. His observations of the education sector's rapidly growing interest in learning analytics, alongside a concomitant lack of understanding of what learning analytics actually is and could be, acted as motivations for him to write what he hopes is "a readable and informative summary of the area."

Overall, Sclater achieves his objective. I found *Learning Analytics Explained* to be a pragmatic and relevant account of learning analytics practice across the higher education sector. The reader, guided by the book's well-considered structure and Sclater's engaging and accessible writing style, is navigated through content grouped into six sections: background (including what learning analytics is), applications, logistics, technologies, deployment, and future directions. In each of these sections, Sclater provides a comprehensive account of what is happening in the field, identifying the affordances, motivations, and challenges for each identified practice, and the implications of each development for the practitioner sitting in their institutional context. The range of topics discussed in the book is vast, and the reader is introduced to current thinking, literature, and practice regarding how learning analytics is applied (for instance to support the identification and contact of vulnerable cohorts of students, facilitate adaptive or personalized learning, and aid curriculum design), through to informative and instructive accounts of the data, technical, and analytical affordances required to build learning analytics capability. The practical focus on vendor products, architecture, and data standards was, for me, refreshing in its balance and clarity, and consistent with Sclater's objective to equip practitioners and readers with the insight and understanding required to engage in conversations surrounding their operationalization in their institution's context. The chapters on ethics, transparency and consent, and privacy deserve particular accolade. The essence of these constructs is communicated simply, yet cogently, reflecting Sclater's strong research and advisory background in these areas.

Case studies pepper the book, providing authentic examples of current practice that practitioners can draw from. The range and currency of these case studies is impressive, and the value they contribute to enhancing explanations and understandings of key concepts and learnings surrounding learning analytics implementations is significant. Examples include the use of predictive algorithms to identify students at risk, the development of recommender engines to offer personal course advice to students on course selection, student-facing analytics advising students on effective study behaviour, and learning design enhancements informed by learning analytics. Sclater ensures that for each construct, a number of examples are included, each employing slightly different data or methods, thus equipping the reader with insight into different possibilities.

Perhaps one of the most powerful and original elements in the book's design is its inclusion of expert voices and insights at the end of each of the book's six sections. As part preparation for the writing the book, Sclater conducted a series of unstructured interviews with twenty leaders in the learning analytics community to solicit their opinions, reflections, advice, and projections regarding current and future learning analytics practice. Experts cited in the book represent both practitioner and researcher roles, and include Josh Baron, Simon Buckingham Shum, Shane Dawson, Rebecca Ferguson, Dragan Gašević, Bart Rienties, Stephanie Teasley, John Whitmer, and Alyssa Wise. Sclater cleverly weaves experts' informal, at times quasi-anecdotal observations and reflections into the book's narrative, contrasting them against the researched content that forms the majority of the text. The fusion of informal and formal, and practically informed and research-based content provides a layer of authenticity and accessibility lacking in many comparable books.

In addition to the practical utility afforded by the inclusion of experts' comments, the diversity of views captured in their insights illustrates the dynamic, contextual, negotiated nature of learning analytics, reminding the reader that operationalizing learning analytics is not a "one size fits all" proposition. As a book focused on communicating what learning analytics is, and how it should be done, such nuance and divergence in perspective is critical, protecting against essentialized, linear, reified framings of learning analytics (and learning analytics implementations). Indeed, Sclater's acknowledgement and recognition of learning analytics' "multifaceted makeup" is consistent with calls in recent literature for framings of learning analytics (and their implementations) as complex and ultimately emergent, with a suggestion that such understandings may more accurately capture the reality of operationalizing LA across large institutions (Colvin et al., 2017; Dawson et al., 2018; Macfadyen, Dawson, Pardo, & Gašević, 2014).

While applauding Sclater's decision to include expert opinion, it was difficult to overlook the privileging of Western, English-speaking representation within this cohort. This observation is not intended to diminish the significant impact that the experts cited in the book have had in learning analytics practice and research. However, a concern is that Sclater's focus on perspectives from North America, Europe, and Australia denies the reader a more global account of learning analytics practice, and the possible learnings, knowledge, and synergies that could be generated from such insight. Given recent burgeoning in learning analytics practice and research across Asian, South American, and African nations, overlooking these developments, and their contextual affordances, is unfortunate, and may inadvertently reinforce a "Western" interpretation and performance of learning analytics.

Sclater's foci throughout the book in many respects capture dominant practice in learning analytics performance and research, highlighting key learnings the sector has made to date. However, meaningful critique of current practices, and their underlying framings, could aid the sector in its pursuit of learning analytics that has the capability and sophistication to understand learning as a complex, situated activity. As such, the key constructs in the book — learning analytics and learning — could be more clearly operationalized, with an exploration of their structuring effects on each other. Sclater's succinct and informative account of the genesis and development of learning analytics over time draws on established work; however, this focus omits critical interrogation of the ontological, epistemological, praxeological nature of the field. Through examples and descriptive accounts, there is an emphasis on established approaches in learning analytics. However, this focuses on dominant positions, inadvertently (and implicitly) privileging behaviourist and instrumental perspectives of learning analytics, and leaving relatively unexplored the affective, cognitive, and neuroscientific, and the potential of learning analytics to reveal how contextual elements (including pedagogical and sociocultural) mediate student learning.

Readers might go beyond the content of the book by further problematizing learning analytics, its hypotheses, and its relationship with learning and the broader sociopolitical and academic contexts in which it is situated. Without this, the true complexity of learning and learning analytics will not be captured, thus potentially militating against learning analytics affordances for understanding learning to be fully realized.

However, on the whole, *Learning Analytics Explained* is a comprehensive yet accessible introduction and guide to learning analytics and its current "state of play." While its examples draw largely from the higher education sector, the book's focus on explaining the key tenets of learning analytics implementation and practice will have resonance with pre-tertiary education sectors. The book is timely and highly relevant. Presently institutions across the education sector, buoyed by the potential of LA for enhanced learning, teaching, and retention outcomes, are expending energy and resourcing on fostering the "take up" or "adoption" of learning analytics in practice. Yet, for many institutions and their leaders, the urgency and resourcing driving the analytics agenda is at variance with actual adoption by staff and other key end users. "Doing it" is challenging.

Sclater's *Learning Analytics Explained* speaks strongly to a sector wanting to make sense of learning analytics and "how to do it." Through its engaging and broad account of current practice in what is being done in the field of learning analytics, *Learning Analytics Explained* impressively meets Sclater's charge — "What is learning analytics and how can we make the most of it?" It is highly recommended to staff, managers, and practitioners in the field focused on the use of learning analytics in education.

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## References

- Colvin, C., Rogers, T., Wade, A., Dawson, S., Gašević, D., Buckingham Shum, S., . . . Fisher, J. (2015). Student retention and learning analytics: A snapshot of Australian practices and a framework for advancement. Sydney: Australian Government Office for Learning and Teaching.
- Colvin, C., Wade, A., Dawson, S., & Gašević, D. (2017). Addressing the challenges of institutional adoption In C. Lang, G. Siemens, A. Wise, & D. Gašević (Eds.), *The Handbook of Learning Analytics* (1st ed., pp. 281–289): SOLAR: Society for Learning Analytics Research. <http://doi.org/10.18608/hla17.024>
- Dawson, S., Poquet, O., Colvin, C., Rogers, T., Pardo, A., & Gašević, D. (2018). Rethinking learning analytics adoption through complexity leadership theory. *Proceedings of the 8<sup>th</sup> International Conference on Learning Analytics and Knowledge (LAK '18)*, 5–9 March 2018, Sydney, NSW, Australia (pp. 236–244). New York: ACM. <http://doi.org/10.1145/3170358.3170375>
- Dix, A., & Leavesley, J. (2015). Learning analytics for the academic: An action perspective. *Journal of Universal Computer Science*, 21(1), 48–65.
- Gašević, D., Kovanović, V., & Joksimović, S. (2017). Piecing the learning analytics puzzle: A consolidated model of a field of research and practice. *Learning: Research and Practice*, 3(1), 63–78. <http://doi.org/10.1080/23735082.2017.1286142>
- Knobbout, J., & van der Stappen, E. (2018). Where is the learning in learning analytics? *Proceedings of the 13<sup>th</sup> European Conference on Technology Enhanced Learning (EC-TEL 2018)*, 3–5 September 2018, Leeds, UK (pp. 88–100). Lecture Notes in Computer Science, Springer.
- Macfadyen, L., Dawson, S., Pardo, A., & Gašević, D. (2014). Embracing big data in complex educational systems: The learning analytics imperative and the policy challenge. *Research & Practice in Assessment*, 9(2), 17–28.
- Rienties, B., Cross, S., & Zdrahal, Z. (2016). Implementing a learning analytics intervention and evaluation framework: What works? In Daniel, B. (Ed.), *Big data and learning analytics in higher education: Current theory and practice* (pp. 147–166). Springer. <http://doi.org/10.1007/978-3-319-06520-5>
- West, D., Heath, D., & Huijser, H. (2015). Let's talk learning analytics: A framework for implementation in relation to student retention. *Online Learning Journal*, 20(2). <http://doi.org/10.24059/olj.v20i2.792>