Legend -- recurring themes
- stakeholders and CA tool development
- modelling study trajectories and progression for various purposes
- benefits of CA tools
- deriving insights from data
- curriculum metrics and quantitative assessment
- success factor for CA adoption
- student voice
- definitions

CA definition

lack of skills may prevent teacher from making senses of the data

unclear how such collected evidence can be turned into insights

to develop an understanding of what is meant by "actionable insight"

the importance of the feedback loop between data, action capabilities, and end goals in relation to actionable insights

Jørnø, R. L., & Gynther, K. (2018). What constitutes an 'actionable insight' in learning analytics?. Journal of Learning Analytics, 5(3), 198-221

Ochoa, X. (2016, April). Simple metrics for curricular analytics. In Proceedings of the 1st learning analytics for curriculum and program quality improvement workshop, CEUR Workshop Proceedings (Vol. 1590, pp. 20-26).

Dennehy, D., Conboy, K., & Babu, J. (2023). Adopting learning analytics to inform postgraduate curriculum design: Recommendations and research agenda. Information Systems Frontiers, 25(4), 1315-1331

Hilliger, I., Aguirre, C., Miranda, C., Celis, S., & Pérez-Sanagustín, M. (2022). Lessons learned from designing a curriculum analytics tool for improving student learning and program quality. Journal of computing in higher education, 34(3), 633-657

need to improve institutional capacity

success factors for CA adoption

Wong, W. Y., & Lavrencic, M. (2016). Using a Risk Management Approach in Analytics for Curriculum and Program Quality Improvement. In PCLA@ LAK, 10-14

simple curriculum metrics can be extracted from academic records, which allow an objective analysis of curriculum

pressure on HEIs to demonstrate their teaching quality

metrics to analyse curriculum at programme level

risk management framework for quality appraisal of curriculum

use of 'sentiment analytics' to inform curriculum design and improve students' learning experience

capturing student sentiments on their learning can help understand the quality of their experience and inform teacher inquiry

student sentiments could be used to inform curriculum improvement

encouraging students to be active participants and knowledge creators

Hilliger, I., Miranda, C., Celis, S. and Pérez-Sanagustín, M., (2023). Curriculum analytics adoption in higher education: A multiple case study engaging stakeholders in different phases of design. British Journal of Educational Technology. 00,1–17

how stakeholders can contribute effectively to the design process and adoption strategies

mechanisms for engaging stakeholders at various CA tool development stages

importance of involving key stakeholders in development

McEneaney, J., & Morsink, P. (2022). Curriculum Modelling and Learner Simulation as a Tool in Curriculum (Re) Design. Journal of Learning Analytics, 9(2), 161-178

simulation method to support curriculum designer

dashboards to provide useful, actionable, and timely information at multiple instructional levels to promote positive change

continuous curriculum improvement (CCI)

how CA tools can support stakeholders' reflection within a continuous curriculum improvement processes

analytics tools to support continuous curriculum improvement

to foster a culture of inquiry and scholarship about continuous program improvements

curriculum leaders often lack sufficient and timely data, tailored to relevant questions with potential impact on student outcomes

CA can bring together a great and wider variety of documentary evidence

student performance should ultimately be related to its curriculum context to effect impactful change: CA can help to do this

Ribbon Tool (based on Sankey diagrams) to provide an interactive visualisation of student flows through academic programs

simulation method to explore the possible causal effects of curriculum design before implementation

opportunity to investigate the assessment undertaken and the learning outcomes achieved by an individual student on their degree pathway

Coloured Petri Nets simulations based on curriculum and learners characteristics , in relation to learning outcomes, curriculum sequencing and learning progression

to develop a CA approach to analyse late dropouts

The establishment of a curriculum network provides the potential to map, analyse and visualise individual student learning pathways as they progress through a program.

process mining to study students' educational trajectories to understand which lead to late dropout

social network analysis

to visualise student flows through academic programs, progressing over time to either successful completion (graduation) or attrition

Salazar-Fernandez, J. P., Sepúlveda, M., Munoz-Gama, J., & Nussbaum, M. (2021). Curricular analytics to characterize educational trajectories in high-failure rate courses that lead to late dropout. Applied Sciences, 11(4), 1436

Dawson, S., & Hubball, H. (2014). Curriculum analytics: Application of social network analysis for improving strategic curriculum decision-making in a research-intensive university. Teaching and Learning Inquiry, 2(2), 59-74.

Greer, J. E., Thompson, C., Banow, R., & Frost, S. (2016). Data-Driven Programmatic Change at Universities: What Works and How. In proceedings of PCLA @ LAK, 32-35

Molinaro, M., Steinwachs, M., Li, Q., & Guzman-Alvarez, A. (2016). Promoting Instructor and Department Action via Simple, Actionable Tools and Analyses. In PCLA@ LAK, pp. 36-40