



Learning Analytics and Education Data Use

Course: Dashboards and Early Warning



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Introduction:

Learning analytics and education data use, with dashboards and early warning, is the subject of this 5-day course for school leadership teams, university quality units and institutional research staff that ends with a Learning Analytics and Data Use Plan for a case school or university. Many education providers collect attendance, assessment and platform activity data that never reaches a decision, so struggling learners surface late and improvement plans rest on opinion. Nominees already read performance reports and learn through case studies built on anonymised enrolment, grade and engagement datasets. CoreConcept Training Center delivers this learning analytics course.

Course Objectives:

- Map the education data sources, analytics types and stakeholders across a school or university and rate its data maturity
- Build a learning analytics metric dictionary with data quality rules and governance roles for owners, stewards and users
- Design role-based dashboards and cohort analyses that expose attainment gaps and progression trends by subgroup
- Select early warning indicators and interpret risk scores to flag learners for timely support
- Review analytics uses against the DELICATE checklist and code of practice principles, including bias and consent checks
- Produce a Learning Analytics and Data Use Plan with improvement cycles for a case school or university

Target Audience:

- School leadership teams responsible for attainment targets and improvement planning
 - University quality assurance units responsible for programme review evidence and performance reporting
 - Institutional research offices responsible for enrolment, progression and completion statistics
 - Academic department heads responsible for acting on cohort and course results
 - Data and assessment coordination teams responsible for school or faculty reporting systems
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Course Outline:

Day 1: Education Data Landscape and Current-State Review

- Descriptive, Diagnostic, Predictive and Prescriptive Analytics Distinctions
- Student Information System Enrolment and Attendance Data Inventory
- Platform Activity Logs and Assessment Results as Evidence Sources
- Chatti Reference Model Mapping What, Who, Why and How
- Data Maturity Self-Assessment of a School or Faculty

Day 2: Learning Analytics Frameworks, Metrics and Data Governance

- Greller and Drachsler Six Critical Dimensions Framework Review
- Learning Analytics Metric Dictionary with Engagement and Attainment Indicators
- Data Quality Rules for Completeness, Accuracy and Timeliness
- Data-Informed Instruction Practice Guide Recommendations for Schools
- Data Governance Roles Matrix for Owners, Stewards and Users

Day 3: Dashboards, Cohort Analysis and Early Warning Models

- Dashboard Wireframe Design for Leaders, Teachers and Advisers
- Cohort Progression and Attainment Gap Analysis by Subgroup
- Early Warning Indicator Selection Using Attendance, Behaviour and Coursework
- Engagement and Performance Risk Quadrant Classification of Learners
- Logistic Regression Risk Score Interpretation for At-Risk Flags

Day 4: Ethics, Bias, Model Validity and Intervention Design

- DELICATE Checklist Review of a Proposed Analytics Use
- Code of Practice Principles for Consent, Transparency and Access
- Algorithmic Bias and False Positive Checks on Risk Models
- Intervention Protocol Linking Risk Flags to Named Responders
- Plan-Do-Study-Act Improvement Cycle on an Analytics Finding

Day 5: Case Study and the Learning Analytics and Data Use Plan

- Case Institution Data Pack Review and Question Framing
 - Case Dashboard Prototype from the Metric Dictionary
 - Case Early Warning Rule Set and Intervention Routing
 - Case Ethics and Data Protection Impact Screening
 - Learning Analytics and Data Use Plan Completion and Panel Defence
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Skills You Will Gain:

- Education Data Inventory
- Learning Metric Definition
- Education Data Governance
- Dashboard Wireframing
- Cohort Gap Analysis
- Early Warning Indicator Design
- Risk Model Validation
- Ethical Analytics Review

Why Attend This Course:

- Deliver a Learning Analytics and Data Use Plan for a case school or university to the principal, dean or quality committee
- Decide which early warning indicators and dashboard views each leadership level should act on
- Avoid late identification of struggling learners, biased risk flags and dashboards that nobody reads
- Share the metric dictionary, wireframe templates and ethics checklist with colleagues in other units

Conclusion:

Back at work, the participant presents the Learning Analytics and Data Use Plan to the principal or dean, the quality committee and the heads of academic departments. They use it to agree which metrics are reported, which dashboards each leadership level receives, which early warning indicators trigger support and who responds to each flag. After the first full term under the plan, the unit should check whether flagged learners received timely support, test the risk rules for false positives and bias, and revise the metric dictionary where data quality fell short.

Frequently Asked Questions FAQ:

What should participants know before a learning analytics and education data use course?

Participants should already read attainment or attendance reports and be comfortable with averages, percentages and simple charts. Bringing an anonymised report, a dashboard screenshot or a list of the data systems used at their school or university makes the case work more useful.

How does a learning analytics and education data use course differ from a learning platform design course?

This course turns data already collected into metrics, dashboards, risk flags and improvement decisions for leaders. A learning platform design course builds digital content, configures tracking and publishes modules; it produces data rather than interpreting it for institutional decisions.

Why does learning analytics and education data use need an ethics review before early warning flags are used?

Risk flags label learners, so a weak or biased model can steer support away from those who need it. An ethics review checks purpose, consent, transparency, data minimisation and false positives before flags reach staff, and keeps a human responder accountable for every intervention.

What do participants take back from the learning analytics and education data use course?

Participants take back a Learning Analytics and Data Use Plan, plus a metric dictionary, a dashboard wireframe, an early warning rule set, an intervention protocol and an ethics screening checklist adaptable to their own school or university.