Guideline document for the Ethical Interpretation of Learning Analytics (LA) Dashboards

The document's purpose is to provide a framework for all stakeholders involved in interpreting, reporting and making decisions based on the LA dashboards. The aim is to ensure responsible, transparent and fair use of data to promote trust, accurate conclusions and ethical decision making.

Core ethical principles for data interpretation:

- **Transparency:** openness to how data is defined, calculated, and presented.
- **Fairness:** actively identify and mitigate biases in data and algorithms.
- **Context:** outline related background to understand what data represents and what it does not.
- **Accuracy:** honest data presentation, acknowledging limitations.
- **Accountability:** take full responsibility for the interpretations and decisions obtained from the data.

Ethical Interpretation Checklist:

Applicable when creating, reviewing, interpreting, or presenting a dashboard.

Before interpretation			
Sections	**Questions to consider**	**Best practice**	**Template examples**
Clearly define metrics	Is there a common definition for each metric? Where is the definition documented?	Create a data dictionary & add a tap on the dashboard.	The (metric name) is defined as (provide full description)
Outline source and context.	Where did the data come from? What time period does it cover? What was the goal of collecting data?	Include a methodology section on the dashboard.	This data is sourced from (state system) and covers the period (start date) to (end date). The aim of the data was to measure (state the goal).
Acknowledge known limitations	What are the known gaps, assumptions or potential errors in the data? Did you exclude any data points, and why?	List key limitations on the dashboard.	Limitations: the data does not include (explain) or the records for (explain) were excluded due to (provide reason).

During Interpretation			
Sections	**Questions to consider**	**Best practice**	**Template examples**
Avoid misrepresentation	Does the chosen chart type accurately present the trend, or does it exaggerate or minimise the trend? Are comparisons being made fairly, e.g., using the same scale or time period?	Use standard and clear chart types.	
Highlight context, not just numbers.	What external factors might influence the trend? Is the data point good, bad or expected?	Use annotations, benchmarks or targets on the graph.	The increase in (metric) in (month) aligns with (describe-e.g., our annual performance target). The dotted line represents the annual target.
Actively look for bias.	Could the way we segmented the data reinforce stereotypes or exclude some groups? Are algorithms fair? Have they been tested for biased outcomes?	Review segments with a diverse team. Use clustering to uncover hidden biases.	The student segments are based on clustering algorithms, and we are continuously reviewing these segments for fairness and accuracy. Include a report on any other concerns.

After Interpretation: Reporting and action			
Sections	**Questions to consider**	**Best practice**	**Template examples**
State conclusions cautiously	Does the data show correlation or causation? Are we overstating the certainty of our findings?	Use language that reflects evidence.	The data suggests a relationship between X and Y, or there appears to be a contributing factor. Do not- This proves X causes Y.
Document decisions and rationale	Why did we choose to highlight a specific insight? What alternative interpretations did	Keep brief notes on key interpretation.	The following were analysed (metric) and concluded (insight), and an alternative view (alternative

	we consider and reject?		insight) was considered and dismissed because (state the reason).
Promote a culture of questioning.	Are we encouraging stakeholders to ask questions on how a metric is defined? Do we have a process for challenging assumptions?	Train users on dashboard interpretation and its limitations. Gather feedback from users.	Questions/Feedback? Please refer to 'contact us' or contact Eli Nimy.

About this dashboard & ethical use guidelines

Purpose:

Data source: (Primary database/system name)

Last updated: (Date)

Period covered: (start date) to (end date)

Key definitions and limitations:

Metric 1 (e.g., campus resource usage- tracking students' use of academic support services, library and health and wellness on campus and showing their impact and engagement)

Metric 2 (e.g., facilitation and tutor attendance- assess student participation in tutorship support and SCOR facilitation sessions).

Limitation: Note that data for X is incomplete for 2024.

Our Ethical Principles

- **Transparency:** openness to how data is defined, calculated, and presented.
- **Fairness:** actively identify and mitigate biases in data and algorithms.
- **Context:** outline related background to understand what data represents and what it does not.
- **Accuracy:** honest data presentation, acknowledging limitations.
- **Accountability:** take full responsibility for the interpretations and decisions obtained from the data.

Your Responsibility:

Reflect: Understand the definitions and limitations before drawing conclusions.

Contextualise: consider the external factors that may affect data.

Report: if you suspect any bias or error, please contact Eli Nimy at…

Full methodology and data dictionary (click here)