AI-Resilient Learning Experience Design Toolkit

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Course/Module/Session: Data Analytics for Business Decisions

Date: Spring 2024

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1. Learners

Start your design process by thinking about your students and their context.

- What program are they enrolled in?
- Are there any prerequisites for this learning experience?
- What prior knowledge and skills do they have?
- What are their career goals?
- What's their prior experience with generative AI?
- What access to generative AI will they have during the learning experience?
- How might they use generative AI in their future professional roles?

Students are first-year MBA students enrolled in a required core course on data analytics. They have completed prerequisite statistics and spreadsheet modeling courses. Most students intend to pursue careers in consulting, finance, marketing, or technology where they expect to work extensively with business data.

In a survey, 60% of students reported using AI tools daily. All students have devices available during class sessions. They aim to build skills for leveraging data and analytics effectively as future business leaders in an age of expanding AI capabilities.

2. Learning Outcomes

Now that you've thought about where your students are starting from, it's time to define the destination—the learning outcomes.

- By the time your students complete this learning experience...
    - What should they be able to **do**?
    - What should they **know** and **understand**?
    - What should their **opinions** be about these topics?
- Are there topics that you'd like to 1) retire or 2) promote given AI's capabilities?

Write your learning outcomes by completing this prompt: **By the time students finish the learning experience, they should be able to [ACTIVE VERB]...**

By the end of this course, students will be able to:

- Interpret statistical analysis outputs to inform business decisions and strategy based on data insights.
- Assess analytics models and reports to evaluate reliability, limitations, and implications of findings.
- Design analytics workflows by selecting appropriate data sources, tools, techniques, and visualizations to gain insights that address business questions.
- Communicate data-driven recommendations clearly to non-technical stakeholders with relevant visualizations.

3. Assessments

Now it's time to decide what evidence students will produce to show that they've achieved the learning outcomes. Consider filling out the table below to plan your assessment:

- **Aligned Learning Outcome(s)**: Copy/paste a learning outcome from *2. Learning Outcomes*. The assessment will measure whether your students have achieved that specific learning outcome.
- **Assessment Task(s)**: Fill in this column by completing the prompt, "*Students will show that they've achieved the learning outcome(s) by...*"
- **AI Use**: Decide whether to require, allow, or ban AI use for the assessment.

Aligned Learning Outcome(s)	Assessment Task(s)	AI Use
Assess analytics models and reports to evaluate	In-class analysis of flawed analytics sample. Orally	Do not allow devices in class. Assessment measures ability

reliability, limitations, and implications of findings.	present 2-3 potential concerns to the professor based on principles learned.	to identify limitations based on human judgment in real-time without access to AI.
Communicate data-driven recommendations clearly to non-technical stakeholders with relevant visualizations.	Mock client meeting to present recommendations from data analysis and convince stakeholders to take action. Professor role-plays as client.	Do not allow devices in meeting. Assessment focuses on interpersonal communication and persuasion skills rather than perfect visuals.

4. Activities

Now it's time to think about how you'll make the best possible use of in-person class time. We recommend "flipping" your class. In a flipped classroom, students build core knowledge on their own schedule. Then in-person class time goes to the kinds of learning experiences that benefit most from face-to-face interaction and faculty guidance. Consider filling out the table below to plan your activities.

- **Aligned Learning Outcome(s):** Copy/paste a learning outcome from *2. Learning Outcomes*. The activity will help your students build towards achieving that specific learning outcome.
- **Prework:** Identify the pre-class activities and resources through which students will gain the foundational knowledge to participate in in-class activities. Consider allowing or encouraging AI-use for outside-of-class prework.
- **Activities:** Plan the in-class activities through which students will engage with the learning outcomes for that class session.
- **AI Use:** Decide whether to require, allow, or ban AI use for the prework and in-class activity.

Aligned Learning Outcome(s)	Prework	Activities	AI Use
Interpret statistical analysis outputs to inform business decisions and	Review statistical techniques introduced in prerequisite course.	In small groups, analyze a sample dataset by applying various statistical	Allow AI for assistance interpreting sample analysis outputs to

strategy based on data insights.	Take 5-question self-check quiz.	analysis techniques and interpret outputs. Compare techniques.	provide all students a baseline ability to participate.
Assess analytics models and reports to evaluate reliability, limitations, and implications of findings.	Read article critically analyzing a flawed analytics report sample. Document 2 concerns about its quality.	Facilitated discussion analyzing flawed analytics report sample. Break into pairs to further scrutinize its data sources, analytics methodology, visualizations and interpretation.	Do not allow AI so students build skills assessing analytics critically based on their own growing judgment vs. relying on AI evaluations.