

Prompting with Purpose: Building AI Literacy in Marketing Education

Artificial intelligence tools are rapidly reshaping how marketing professionals work. Routine tasks – such as writing copy, mining consumer data, and creating visuals – that once took hours can now be completed in minutes (Davenport et al., 2020). But the stakes have grown beyond routine. Marketers are increasingly turning to AI for consequential decisions, such as deriving actionable insights from complex data, accelerating revenue growth, and unlocking strategic value from marketing activities that once required significant human judgment (Campbell et al., 2020). The very power that makes AI so attractive also makes it dangerous if not used appropriately. Yet business curricula have been slow to address a more fundamental question: not whether students should use AI, but how to use it well. AI is only as smart as its prompter (Raisch & Krakowski, 2021). Specifically, AI lacks domain expertise, depends on the quality of input data, cannot automatically control or correct mistakes, and lacks originality and principled reasoning (Kim et al., 2023). Marketing jobs will not be replaced by AI; they will be replaced by marketers who know how to use it. This paper describes the design and implementation of a two-assignment sequence developed for an upper-division undergraduate marketing metrics and performance course, built around the proposition that effective AI use is constrained by domain expertise – and that this expertise can be taught through structured, scaffolded engagement with AI tools.

The sequence unfolds in two stages. The first assignment, the AI Analyst Audit, places students in the role of a marketing analyst responding to a manager's request for insights from a customer satisfaction dataset. Students use ChatGPT freely to generate an initial analysis, then independently verify that analysis by calculating descriptive statistics and net promoter scores in

Excel and identifying data quality issues the AI missed. The assignment is intentionally seeded with errors likely to escape AI detection, such as negative delivery day values and satisfaction scores outside the valid range. Students then reflect on what the AI got right, what it missed, and what the experience implies about when AI outputs can be trusted versus when human verification is essential. A review of assignment submissions revealed consistent patterns in both AI and student behavior. ChatGPT often failed to detect embedded data errors or, when it did, failed to incorporate them into subsequent calculations, leading to inaccurate insights. Notably, many students similarly overlooked these errors, and even when discrepancies were identified, some continued to rely on AI-generated outputs without independently verifying the calculations. The design is deliberate: students enter the second assignment having experienced firsthand that AI produces confident, plausible-sounding analysis that is not always accurate.

The second assignment – the Prompt Engineering Challenge – builds directly on that experience. Specifically, students practiced constructing effective prompts, collaborating with AI as a decision-support tool rather than a substitute for judgment, and evaluating trade-offs between performance optimization and ethical marketing decisions. The assignment provided an Instagram campaign dataset with performance data across sixteen demographic segments, varying by age, gender, and interest category, and asked students to produce three versions of a prompt for the same analytical task: a basic prompt, a good prompt, and an expert prompt. Each successive version requires students to layer in more business context, more specific analytical requests, and more nuanced strategic framing based on an internal understanding of business goals. Critically, the expert prompt also requires students to grapple with an ethical dimension. The dataset reflects real demographic tradeoffs, and pure return-on-ad-spend optimization would systematically deprioritize spending on underrepresented audience segments. Students must

articulate how they would balance profit optimization with responsible and inclusive marketing practice.

Analysis of Assignment 2 submissions indicates a meaningful shift in how students engaged with AI. Rather than relying on AI-generated outputs, many students approached the task with an initial perspective and used AI to validate, refine, and challenge their thinking. Higher-quality submissions demonstrated a transition from descriptive, AI-generated outputs to decision-oriented recommendations shaped by the student's own analysis, including explicit consideration of ethical tradeoffs and business implications. These patterns suggest that structured, scaffolded assignments can effectively shift students from passive reliance on AI to more deliberate, collaborative use, in which the student remains the primary decision-maker.

Together, the two assignments operationalize the focal idea that AI literacy must be included as a critical component of marketing education. The quality of what students extract from AI tools is bounded by the quality of their domain knowledge: which metrics matter, what business context is relevant, and what ethical considerations are at stake. A student unfamiliar with return on ad spend, click-through rates, or demographic targeting cannot write an expert prompt, regardless of how comfortable they are with the technology. Conversely, a student with strong marketing fundamentals can leverage AI for outputs that are genuinely useful for real business decisions. This approach contributes to emerging conversations on AI in business education by demonstrating how structured assignments can shift students from passive AI reliance to active, judgment-driven use.

References

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