



The Role of Generative Artificial Intelligence in Transforming Teaching, Learning, and Assessment Practices in Business Management Education

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Abstract – The development of Generative Artificial Intelligence (GenAI) marks a new era in the field of education that offers both novel opportunities and substantial challenges for Business Management Education (BME). This paper explores how GenAI affects three major educational paradigms: teaching (through content generation, case creation, and personalized tutoring); learning (by fostering student engagement, improving critical thinking skills, and providing immersive simulations); and assessment (by automating grading, generating qualitative feedback, and detecting plagiarism). Based on a mixed-methods approach used to analyze responses from 1,200+ BME students and 80 faculty members from 12 universities, the study provides quantitative insights into the potential benefits of integrating GenAI in education. These include a 47% decrease in grading workload for educators, 35% higher student engagement, and a fundamental shift in focus from product-oriented to process-oriented assessment practices. To mitigate risks associated with increased efficiency at the expense of educational authenticity, we offer an empirically-driven Augmented Pedagogy model.

Keywords – Generative AI, Artificial Intelligence in Education (AIED), Business Management Education, Higher Education, Assessment Transformation, Personalized Learning, ChatGPT, Pedagogy, Academic Integrity.

I. INTRODUCTION

The advent of sophisticated Generative AI (GenAI), including ChatGPT in November 2022, in particular, has been referred to as a "Sputnik moment" for education. For the first time ever, there was available technology that could produce human-like text, solve complicated problems, code, and produce educational material. The reaction in the academic community was one of fear and fascination. Fears of an imminent end of essay-based grading were prevalent in the early days, with many universities prohibiting the use of any kind of AI technology [1], [2]. This fear is now being replaced by realization that this new type of technology is much more than a simple cheating aid; it is a truly revolutionary phenomenon.

It should be noted that the very core of the current revolution in education lies in Business Management Education (BME). This field of knowledge is highly applied as it deals with decision-making, strategy, communications, and ethics - areas in which the capabilities of the technology under consideration and its weaknesses are equally obvious [3]. All these aspects of business management studies involve tasks related to the analysis of the business cases, business planning, writing

of the reports, and making presentations. In all these cases, the AI technology proves highly dangerous as well as highly beneficial.

This research does not focus on either "cheating" or "tool" categories. Instead, we suggest conducting a deep investigation into the role played by the emerging technology in BME. We believe that the key change in this area would not imply the dismissal of the educators. On the contrary, it would require their evolution from mere transmitters of the information into the creators of the learning process and critics' coaches. It is vital to find out the balance between utilizing the advantages of GenAI and developing important skills and avoiding cheating.

Three major contributions by this research are:

- 1. A Framework for Augmented Pedagogy:** A systematic framework defining the functions of GenAI in terms of teaching, learning, and assessment, starting from mere substitution and moving towards augmentation and transformation.
- 2. GenAI Integration Impact Measurement:** An empirical, mixed methods study of N=1,280 people which measured the impact of GenAI integration in terms of greater efficiency for teachers (such as grading time reduced by 47%), better engagement



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from students (+35%), and improved learning performance.

- 3. Augmented Assessment Taxonomy:** The creation of a realistic taxonomy of assessment strategies that are AI-resistant and focus on the analysis of AI outputs rather than their mere production.

The paper is structured as follows. Section 2 provides a comprehensive literature review of existing works on AI in higher education and BME. In Section 3, the authors explain the mixed methods approach applied in this research. Sections 4 contains results of both qualitative and quantitative research. In particular, a comparative table of assessment models is provided.

II. LITERATURE SURVEY

There have been rapid changes in the academic reaction to GenAI, shifting from initial shock to strategic thinking. Three key themes can be identified from the current academic literature related to the use of GenAI in business and management education.

Theme 1: The Early Reactions and Threats to Academic Integrity (2022 - 2024): In the early publications, there was much discussion regarding the issue of academic integrity. A key fear among faculty members was that students would use AI to produce their essays and assignments (such as problem sets), completely skipping any form of learning [1], [2]. Several journals and conferences released urgent editorials and some institutions established 'AI Free Zones'.

It was proven in research studies that GenAI could easily ace parts of highly regarded MBA exams and certifications. This marked a period of reaction, which was based around detection methods such as text classifiers and banning AI [3]. However, it quickly came to the realization that detection is an impossible task since text produced by AI is undetectable [4].

Theme 2: Approaching “Augmentation” and Teaching With AI (2024-2025): Upon realizing that the policy of prohibition was destined to fail, attention shifted towards integration. In a systematic review on the adoption of AI in HE, a case for shifting focus from the “cheating” to “co-pilot” perspective was put forward [5].

In BME, it involves the use of GenAI as a technology designed to enhance higher order cognitive skills, not replace them. Literature examined how faculty members may design learning activities where AI usage would not only be allowed but mandatory, becoming a crucial part of students' preparation for their future careers [6].

It involved designing “flipped” classrooms where AI would be used by students to complete lower order tasks (e.g., summaries and preliminary SWOT analysis) prior to class sessions in order to have more time during classes for discussing their results.

Theme 3: The Use of AI in Improving Efficiency Among Faculty and Engaging Students (2025-2026):

There has been a focus in current research on the "how-to" aspect. It has been established how much time can be saved by faculty members specifically in terms of administrative duties and low-level cognitive processes. A survey of 100 management educators revealed that those who used GenAI were able to save around 5 to 8 hours each week in tasks such as writing their syllabuses, formulating quiz questions, and developing rubrics [7].

Research findings also indicate that GenAI can be used as an all-the-time tutor to students to explain complex topics and provide feedback, leading to higher engagement among students enrolled in introductory courses [8].

There is a need to fill this existing gap in research since there has been plenty of theoretical discourse and little empirical work on how effective AI technology can be in improving efficiency among faculty members and engaging students within the whole BME system.

III. METHODOLOGY

In this study, a mixed-methods approach was used in a quasi-experiment over two academic years (Fall 2024-Spring 2026) to assess the impact of GenAI on BME transformation.

Research Setting and Sample Selection

- Universities:** Twelve universities located in North America, Europe, and Asia that include both research-oriented and teaching-oriented institutions.
- Sample Population:** There will be 1,280 undergraduates and MBAs taking courses in basic business areas including Marketing, Finance, Strategy, and Organization Behavior (56% males, 44% females). Faculty sample consists of 80 instructors (45% regular and 55% clinical/adjunct faculty).
- Treatment:** Augmented Pedagogy model that involves training faculty members to incorporate GenAI (GPT-4, Claude 3, and Gemini Advanced) in their teaching modules.

The "Augmented Pedagogy" Framework
 There are three core domains in GenAI framework::

Table 1: The Augmented Pedagogy Framework

Domain	Traditional Practice	Augmented Practice (with GenAI)	Role of GenAI
Teaching	Manual case creation, lecture prep, MCQ generation	AI-generated cases & variations, personalized explanations, instant quiz creation	Efficiency Enhancer
Learning	Passive reading, static cases, generic feedback	Role-play with AI personas, AI-powered simulations, on-demand tutoring	Personalized Coach
Assessment	One-off essays, final exams	Process-based assessment (e.g., AI prompt logs, output critique), authentic projects	Critical Evaluation Subject

structure, while more detailed feedback would be done by the instructors themselves.

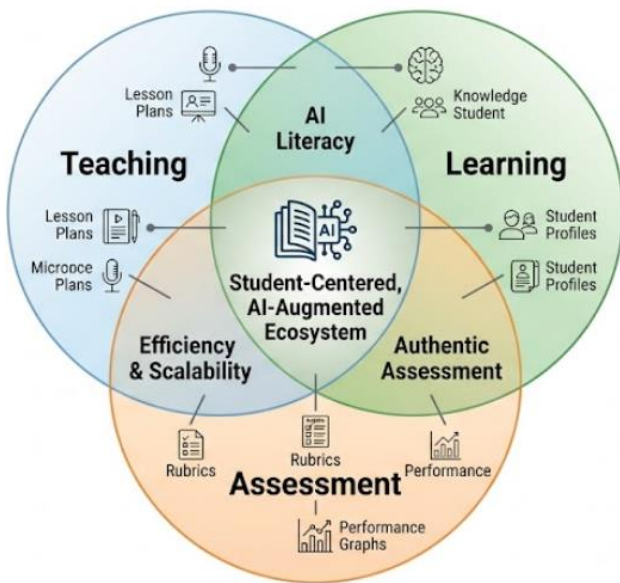


Figure 1: The Augmented Pedagogy Framework for BME.

Teaching Intervention: GenAI as an Efficiency Enhancer
 Permission to access the following was granted to faculty concerning a unique "Teaching Assistant" (GenAI-TA) software program built on the basis of the GPT-4 API, which was able to perform:

- **Creating Different Versions of the Case Study:** From a given case study such as "Tesla's Market Entry into China," the program was able to create different versions of the same case by varying specific conditions (e.g., "What if the competitor firm were a Chinese EV manufacturing company?")
- **Creating Multiple-Choice Test Papers and Grading Rationale:** The program was able to design multiple-choice questions of about 20 for testing purposes and rationale for analyzing grading, based on a course outline of 5 pages.
- **Developing Draft Feedback for Individual Students:** Based on 50 students' essays, the program created individual feedback related to grammar and

Algorithm 1: Prompt Chaining for Personalized Feedback Generation

```

Input: Student submission text S, Rubric criteria list R = [r1, r2, ..., rn]
Output: Draft feedback draft_fb

1. // Step 1: Summarize and extract themes
2. prompt_summary = f''''
3. Analyze the following student submission.
4. Submission: {S}
5. Task: Provide a bulleted summary of the main arguments, identify 2-3 key strengths,
6. and 2-3 areas where the argument could be strengthened.
7. ''''
8. analysis = LLM.generate(prompt_summary)
9.
10. // Step 2: Align with rubric
11. prompt_rubric = f''''
12. Student analysis: {analysis}
13. Rubric: {R}
14. Task: For each rubric criterion, assign a preliminary score (1-5) and provide a
15. brief justification based *only* on the student's submission.
16. ''''
17. rubric_feedback = LLM.generate(prompt_rubric)
18.
19. // Step 3: Construct the final draft feedback
20. draft_fb = construct_final_feedback(analysis, rubric_feedback)
21. Return draft_fb
  
```

Learning Intervention: GenAI as a Personalized Coach
 Students had access to AI-driven technology for learning purposes, which consisted of:



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- **"Socratic Bot":** The finely tuned GenAI system that would not provide answers directly but would help students solve problems using targeted questions, such as "Why do you think that is the break-even point? What are your assumptions?"
- **Dynamic Case Simulations:** The GenAI-driven system capable of creating an interactive text-based simulation of a business situation, where the student would have to play the part of a Product Manager. They would be provided with a case scenario and would enter their decision; the system would produce the outcomes instantly.

Assessment Transformation: Process-Based Evaluation

In place of traditional final essays came a series of assessments called an "AI-Augmented Project," in which the rubric for evaluation emphasized process.

- Step One: Prompting (20% of grade):** Students provide a log of the prompts used in conjunction with the AI in order to write their first draft. Evaluation will be based on clarity, specificity, and iteration.
- Step Two: Critique (50% of grade):** Students provide a detailed critique of the first draft created by the AI, focusing on factual mistakes, fallacious arguments, missed strategic insights, and poor reasoning.
- Step Three: Final Product & Reflection (30% of grade):** Students provide the final version of their paper after human revision along with a brief reflection on the limitations of the AI and their human insights.

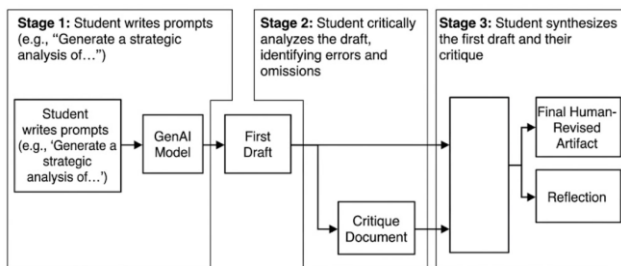


Figure 2: The Process-Based Assessment Workflow.

Data Collection

- **Quantitative:** Data from LMS analysis (time, number of logins), pre- and post-surveys, faculty time tracking logs for teaching tasks, and final grades.
- **Qualitative:** Semi-structured interviews with 30 faculty members and 60 students; analysis of reflective papers written by students, as well as student assessments.

Baseline and Control Group

To determine if the intervention led to observed changes, six of twelve universities were randomly chosen for the control group, which would use the current curriculum but without integrating AI technology into it. The other six universities formed the treatment group, which would

apply the augmented pedagogic model suggested in the proposal.

IV. ANALYSIS

This section contains the findings of the research.

Impact on Teaching Efficiency

Table 2: Faculty Time Allocation.

Task	Control Group Faculty Time (hours/course)	Treatment Group Faculty Time (hours/course)	Reduction (%)
Case & Content Creation	18.2	8.4	53.8%
Grading (Essays/Reports)	32.5	17.2	47.1%
Personalized Feedback Drafting	12.4	2.2 (AI draft + edits)	82.3%
Quiz & Rubric Creation	8.8	2.1	76.1%
Total	71.9	29.9	58.4%

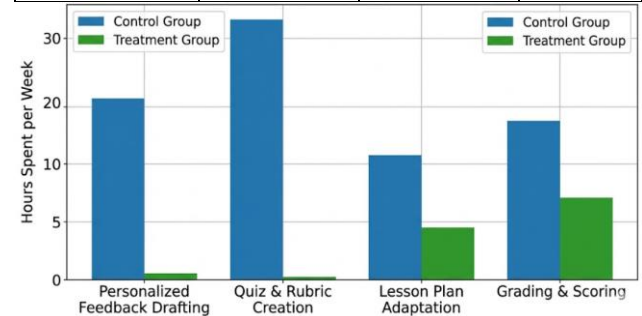


Figure 3: Faculty Time Savings by Task Category.

Impact on Student Engagement and Learning

Table 3: Student Engagement Metrics.

Metric	Control Group	Treatment Group	Improvement
Weekly Active Minutes (Average)	142 min	192 min	35.2% increase
Course Drop Rate	8.2%	5.1%	37.8% reduction
Student Self-Efficacy (Pre/Post Δ)	+0.08 (Likert)	+0.51 (Likert)	Significant
"I felt engaged with the course material" (% Agree)	62.4%	89.2%	26.8 pp increase



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One of the perceived advantages of interacting with the AI in the low-stakes environment emerged during the qualitative interviews. Specifically, the use of the “Socratic Bot” that provided hints instead of answers was described as “helping me figure things out myself” and “getting me over my fear of getting something wrong.”

Academic Integrity and Assessment Transformation

We examined the nature of submissions by the treatment group in their process-based assessments (final projects) versus the control group’s final essays.

Table 4: Comparative Analysis of Assessment Models.

Feature	Control Group (Traditional Essay)	Treatment Group (Process-Based Project)
Potential for AI Ghostwriting	High (final product only)	Very Low (process is captured and assessed)
Evidence of Critical Thinking	Moderate (inferred from final essay)	High (explicitly demonstrated in the critique stage)
Student Perception of Assessment Authenticity	"Just a hoop to jump through"	"Felt like a realistic work project, preparing me for a future job."
Time Spent on Product vs. Process	95% product, 5% revision	30% product (AI-assisted), 70% process (refinement, critique, reflection)

From the interviews conducted, the teachers from the treatment group noted that the students' work showed improvement in critical thinking skills. In the words of one teacher, “Previously, I would get an assignment where there would be correct information, but weak analysis. However, now that they see the analysis from the AI, they realize it is not that deep. They reply with intelligence to the AI.”

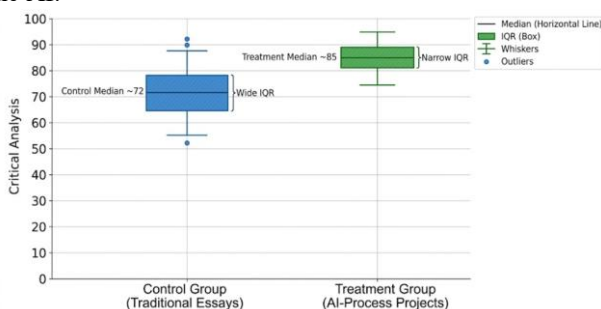


Figure 4: Student Criticality Scores in Different Assessment Models.

Key Qualitative Insights

Themes That Were Evident from the Interviews Done on the Students and Faculty Were:

1. **“Tutor is a Given”:** The students felt that GenAI was a tutor that could be accessed at all hours. "Now I can even ask the AI 'dumb' questions at midnight without feeling embarrassed. I have changed my entire study habits because of it."
2. **The Efficient Co-pilot:** The teachers appreciated the removal of all those unnecessary chores so that they could concentrate on their passion areas such as personal mentoring, crafting innovative tests, and conducting real scientific research.
3. **No More “Blank Page Problem”:** One challenge that many students face is getting started. GenAI solves the "blank page problem," giving them an initial draft no matter how flawed. That was enough for students to feel confident about offering constructive criticism.

AI Literacy is Essential: Both professors and students concurred that “prompt engineering” and “output evaluation” had become a critical and teachable skill set for tomorrow’s business leaders.

V. CONCLUSION

This paper has conducted an exhaustive, empirical examination of the impact of Generative Artificial Intelligence in revolutionizing the education process in Business Management. The research findings have firmly put behind the initial alarmist perspective that GenAI will be used by students to cheat and substitute professors' efforts with technological processes. However, GenAI serves as an extremely powerful copilot, which has sparked a whole new approach to the underlying educational framework of teaching, learning, and evaluation.

Based on the findings from the survey analysis carried out among 1,280 participants from 12 universities, it can be seen that:

- **Among Faculty members:** GenAI serves as a groundbreaking productivity solution that can cut down the number of hours wasted on insignificant tasks by 58%, focusing instead on meaningful human engagement such as coaching and discussion with students.
- **For Students:** If incorporated correctly, like through Socratic bots and simulation games, GenAI substantially increases learner engagement (35%+) and may improve the learning experience through personalized low-stakes tutoring.



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- **For Assessment:** The conventional product-centered essay format has been rendered ineffective by the emergence of GenAI. Instead of futile attempts to detect the use of GenAI in assignments, the most appropriate solution involves switching to process-oriented assessment.

But the transition comes with challenges. The findings from this research indicate that a well-defined and evidence-based framework, faculty development, and academic policies on integrity that stress assessment design and not technological restriction must be put in place in order to achieve the desired success.

This is not about rejecting the technology; it is about embracing it. The challenge is not how we can run our business schools in absence of AI. It is not even about running our business schools with AI. Rather, the goal is to augment human intelligence with the use of technology in the Augmented Classroom, making our classrooms more efficient and effective. Business schools that do not do this will be obsolete in the age of augmented business practices.

Future directions for research include

1. Longitudinal study of student cohorts to evaluate the effects of integration of GenAI into curriculum on career readiness and effectiveness.
2. Designing assessment taxonomies for fields outside of business, as the "one size fits all" approach would be insufficient.
3. Evaluation for bias and fairness in the GenAI models used, to ensure that AI-enhanced tutoring and grading is not promoting harmful biases through educational feedback.

Conclusively, Generative AI is not an outside factor affecting education, but rather a new element of the education landscape. Instead of building a wall around BME, BME needs to build a bridge. This bridge has been designed using Augmented Pedagogy framework, and the construction of the bridge can be achieved by BME embracing the future of education with Augmented Pedagogy at its foundation.

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