

Research Article

Embedding an AI-aided Faculty Mentoring Guidance to Enhance Online Marketing Education

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The integration of AI-aided, instructor-driven mentoring into online marketing education offers a promising solution to the challenges of fostering engagement, perceived connectedness, learning, and career readiness in asynchronous learning environments. This study introduces Caring Mentoring Guidance (CMG)—a blended method of combining instructor expertise with AI-aided insights to provide personalized and scalable career coaching within course materials. Across two studies, students exposed to course content augmented with CMG, reported higher engagement, satisfaction, connection, performance, and career confidence compared to control groups. The effects persisted throughout the course. Findings highlight CMG as a scalable, low-cost strategy leveraging the integration of AI and human mentorship in marketing education.

Introduction

Passion for student success during their years at university is one of the tools of the professorate. Many professors have equal or similar passion for their alumni's sense of fulfillment in their chosen career after graduation. Communicating and leveraging these passions in the classroom are seen by many in higher ed as essential elements of faculty success. Yet, how to leverage such passions to equal effectiveness in asynchronous, online educating is less clear; although the need remains crystal clear.

This research evaluates an intervention designed to bridge the gap between academic theory and career application in online marketing education. The tool, a simple, personalized mentoring narrative, supplied repeatedly and routinely in online course materials, was authored by the instructor; the commentary was then enhanced using Chat GPT. Rich, human guidance from the professor was augmented by adding the reach and efficiency of Artificial Intelligence (AI). We exhibit how AI-aided instructor feedback can personalize career guidance, mitigate transactional distance, and provide students with both career-specific knowledge and a sense of mentorship and belonging (Zepke et al., 2014). By embedding AI-aided instructor insights into slides, assignments, and course communications, we aimed to increase student engagement, satisfaction, learning, and career readiness beyond what AI alone could achieve. While the professor supplies more personal insights to the mentoring narrative, AI aug-

ments it by extending an educator's potentially limited knowledge of every available field within the marketing function.

Career readiness is a fundamental goal of most business programs, yet many students struggle to translate classroom learning into clear career trajectories (Buff & O'Connor, 2012; Kleine et al., 2021). In marketing education, the task is exacerbated by the broad range of potential career paths and the difficulty of accessing timely and personalized career guidance (Weeks et al., 2014). This challenge is now compounded by the rapid rise of generative AI, which has introduced significant uncertainty regarding future job roles and necessary skill sets (World Economic Forum, 2025). As students question the longevity and relevance of traditional marketing skills in an AI-driven landscape (Dwivedi et al., 2023), the need for explicit, instructor-led guidance that connects coursework to evolving career realities becomes paramount. And yet, while the need expands, the velocity of change is so rapid that without the assistance of AI, most faculty struggle to keep pace and provide relevant, up-to-date direction regarding the shifting landscape of marketing careers. On the flip side, Fink et al. (2024) acknowledge that AI-driven responses, while useful, lack the nuanced mentorship, emotional intelligence, and tailored career narratives that human instructors provide.

Human mentorship and connection have been identified as critical for college graduates' sense of satisfaction with college and fulfillment in their careers (Seymour & Lopez,

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2015). Generative AI coupled with asynchronous remote learning create a lack of physical and psychological proximity between students and instructors, removing the connection that leads to mentorship. Recognizing the importance of building connections to bridge temporal and proximal gaps and supplying students with personalized, yet scalable guidance, and to enhance their learning experience while studying online, we embarked on this study of Caring Mentoring Guidance (CMG) intervention.

In this study, we distinguish between AI-driven and AI-aided approaches. We define AI-driven as autonomous interventions where the student interacts primarily or exclusively with generative AI (e.g., asking ChatGPT for career advice directly). In contrast, we define AI-aided as a blended approach where the instructor retains full authorship and editorial control but utilizes generative AI as a productivity and knowledge-scaling tool to draft, refine, or expand content. The CMG intervention is strictly AI-aided: the instructor prompts the AI to generate career-specific connections, curates the output for accuracy and tone, and embeds it within a broader human-mentoring narrative.

To test our hypotheses that CMG would benefit online marketing students we conducted field experiments comparing the impact of exposure to CMG across two similar groups of marketing students at a midwestern, regional comprehensive university. Would students exposed to CMG register more positive outcomes of their college experience: greater engagement in and satisfaction with their learning, more connection with instructors, and improved sense of career readiness? Validated single-item measures were administered and the impact of CMG intervention was tested against the control group. A discussion of the analysis and results follow. Marketing faculty who, when teaching online, have felt the lack of engagement and connection with students and who value student career readiness as an outcome of the work they do are offered an intervention that promises impact. Limitations and future research suggestions are explored at the conclusion of the work.

Literature Review and Hypothesis Development

Asynchronous classes present challenges, for all participants, that are unique to this mode of delivery. Knowing that physical and temporal distance, innate to this type of instruction, serve as barriers to learning is perhaps at the base of the challenge. The Transactional Distance Theory (Moore, 1997) found that the lack of proximity can create psychological and communication gaps, known as transactional distance, which can hinder engagement, effective learning, and student satisfaction. However, interventions that increase perceived instructor presence and relevance of course content can increase student engagement and mitigate the effects of transactional distance (Fink et al., 2024). From a psychological perspective, the effectiveness of CMG can be understood through Self-Determination Theory (SDT), which posits that relatedness (i.e., the feeling of being connected to and cared for by others) is a fundamental psychological need (Ryan & Deci, 2000). In asynchronous environments, the absence of social cues often thwarts this need, leading to disengagement. By embedding

‘caring’ narratives that explicitly express support and mentorship, CMG satisfies the need for relatedness, thereby influencing intrinsic motivation and engagement. The effectiveness of one such intervention, the integration of CMG in the form of AI-aided, instructor narratives into online learning materials, is tested in this research. Specifically, we hypothesize:

H1: Integration of CMG narratives into online learning materials increases student engagement.

H2: Integration of CMG narratives into online learning materials increases student perception of instructor presence.

Reduced transactional distance is expected to impact student outcomes including engagement, satisfaction, performance, and perceptions of instructor support. As such, it is reasonable to predict that the integration of CMG in the form of AI-aided, instructor narratives into online learning materials will positively impact student outcomes. Specifically, students exposed to these interventions are expected to report higher levels of satisfaction with their learning experience and increased engagement. Furthermore, Broaden-and-Build Theory (Fredrickson, 2001) suggests that positive emotions elicited by supportive and humorous interactions broaden an individual’s momentary thought-action repertoire. By reducing stress and inducing positive affect through warm mentorship, CMG likely expands students’ cognitive capacity for learning, leading to improved academic performance.

H3: Students exposed to CMG will demonstrate better academic performance.

H4: Students exposed to CMG will feel more supported and encouraged by their faculty member.

Students study business to prepare for careers in fields such as marketing, yet many struggle to connect classroom learning with career trajectories (Buff & O’Connor, 2012; Kleine et al., 2021). In marketing education, this challenge is exacerbated by the broad range of potential career paths leading from the marketing discipline. Students notoriously do not utilize available career services but find in-class, required career activities beneficial (Buff & O’Connor, 2012). The variety of marketing career paths available to students in this major compound career services’ and many faculty’s ability to provide students with timely and personalized career guidance (Weeks et al., 2014).

In recent years, AI has been increasingly explored as a tool for career guidance in marketing education. Fink et al. (2024) highlight the potential of generative AI, particularly ChatGPT, in assisting students with career exploration, job alignment, and interview preparation. Their findings suggest that AI can enhance students’ career readiness by offering immediate, customized guidance, helping them understand industry expectations, and boosting their confidence in job-related tasks. AI-driven tools allow students to practice career-oriented exercises, such as resume tailoring and mock interviews, without the constraints of human availability. This aligns with prior research emphasizing the role of technology in career coaching (Guha et

al., 2024; Milovic et al., 2024). However, while AI-driven coaching enhances accessibility, Fink et al. (2024) and McCallister et al. (2024) acknowledge that AI lacks the emotional intelligence, tailored mentorship, and long-term engagement that human instructors provide.

Studies have also demonstrated that AI-driven learning interventions can increase self-efficacy and job preparedness (Milovic et al., 2024). Specifically, AI-driven exercises in sales and marketing education, such as role-playing and simulated interviews, improve student confidence and performance in career-related tasks. While these studies suggest that AI can positively impact marketing education, the absence of personalized instructor engagement remains a limitation, as described in the Transactional Distance Theory (Moore, 1997). As Guha et al. (2024) argue, AI should not be used as a standalone tool, but rather in tandem with human instruction to maximize learning outcomes. This underscores the need for a blended approach that integrates AI capabilities with instructor-driven career mentoring, bridging transactional distance and improving student engagement. By combining AI-aided insights with human mentoring, instructors can provide more personalized and contextually relevant guidance—an approach that has been shown to enhance student motivation, engagement, and career self-efficacy (Buff & O'Connor, 2012; Weeks et al., 2014).

The expectancy-value model, developed by Eccles and colleagues (Eccles & Wigfield, 2002; Wigfield & Eccles, 1992), posits that perceived expectancies of success and preference for an undertaking contribute to achievement choices and task performance. Expectancies for success are defined as individuals' beliefs about how well they will perform on an upcoming task. When applied to learning, this suggests that students who believe they can do well on a task are more likely to be motivated, engaged, and persistent (Bandura, 1977, 2001; Pintrich, 2003). AI-driven career guidance, as demonstrated by Fink et al. (2024), has already been shown to increase students' confidence in their ability to identify career pathways. However, expectancy beliefs are strengthened further when students receive direct mentoring and reassurance from human instructors, reinforcing their belief in their ability to succeed (Fredricks et al., 2004; Wang et al., 2011).

Building on this conceptual framework, Hulleman et al. (2010) introduced the Utility Value Intervention, which suggests that perceived relevance of learning materials to personal interests and future goals increases engagement and motivation. Fink et al. (2024) provide evidence that AI-driven career insights help students see the relevance of their coursework to real-world opportunities, improving their career readiness. However, the effectiveness of AI-alone interventions is limited when students lack emotional engagement or instructor validation. Integrating CMG into course materials ensures that students not only receive career guidance but also feel supported and encouraged by instructors, reinforcing the relevance and value of their coursework. Buff & O'Connor (2012) also emphasize that structured career-focused interventions improve student engagement and job preparedness. In their study, a

marketing career speed networking event increased student awareness of job opportunities and confidence in career choices. This supports the rationale for embedding CMG into online learning materials, as it ensures that students receive continuous, structured career guidance beyond AI-driven suggestions.

H5: Students, when exposed to CMG, will have greater understanding of career options available to them upon graduation and a more positive perception of their personal career readiness.

By incorporating CMG in the form of instructor narratives into workbooks, slides, and student feedback, educators can create a direct link between the course content, marketing careers, and job readiness. Mentoring comments serve as relevance cues that highlight the applicability and usefulness of course material in real-world marketing, enhancing students' perceptions of the material's value to their personal goals. Furthermore, the instructor narratives and personal tone of CMG help reduce perceived transactional distance, increasing student engagement and satisfaction (Zepke et al., 2014).

The combination of increased relevance perceptions through utility value intervention and reduced transactional distance is expected to have a synergistic effect on student outcomes, including engagement, satisfaction, performance, perception of instructor support, and feelings of career readiness. When students perceive course content as highly relevant to their aspirations and feel a stronger connection with their instructor, they may experience higher motivation, improved academic performance, and greater career confidence (Eccles & Harold, 1991; Eccles & Wigfield, 1995). As such, it is reasonable to predict that the integration of CMG in the form of AI-aided, instructor narratives into online learning materials will positively impact student outcomes. Specifically, students exposed to these interventions are expected to report higher levels of satisfaction with their learning experience, increased engagement, and stronger career readiness. Additionally, they are anticipated to demonstrate better academic performance and feel more supported, encouraged, and job-ready compared to those who do not receive CMG intervention.

Study 1

Methodology

Design and Data Collection

The exploratory investigation of the CMG intervention was conducted through an exploratory field experiment with students enrolled in two seven-week, asynchronous online marketing courses taught by the same instructor: Consumer Insights (N = 33, 54% female) and Strategic Marketing (N = 23, 74% female) at a midwestern university. All participants were undergraduate marketing majors. There was no student overlap between the two courses. The courses represented different academic levels; Consumer Insights is typically taken by juniors, whereas Strategic Marketing is a capstone course taken primarily by seniors.

While student GPA data was not available for analysis due to privacy restrictions, baseline comparisons (see Study 2, [Table 3](#)) indicated no significant pre-existing differences in student attitudes or perceived support between the groups. While the use of different course levels (Junior vs. Senior) introduces a nonequivalent group limitation (Campbell & Stanley, 1963), this design was chosen to strictly control for instructor variance—a primary confounder in educational research (Nye et al., 2004). By utilizing the same instructor during the same academic term, we ensured that teaching style, availability, and external environmental factors remained constant across both conditions.

The primary goal of this study was to explore the effect of exposure to CMG on students' satisfaction and engagement with their learning experience when measured early in the term, immediately following a brief refresher module. Given that engagement and instructor presence are critical for mitigating transactional distance in online education (Moore, 1997; Zepke et al., 2014), this cross-sectional analysis examined whether CMG-enhanced materials at the beginning of the course would lead to higher levels of engagement and satisfaction, including satisfaction with the instructor.

The courses were managed and delivered through Canvas, and the field experiment took place during the first full week of class. Students in both courses were required to complete an identical "Marketing Refresher" module, which ensured that they had a common baseline of marketing knowledge before progressing into course-specific topics. The refresher module consisted of three main tasks: Training workbook & test – A workbook followed by a 25-question multiple-choice test (worth 40 points, 4% of the final grade), client project (worth 100 points, 10% of the final grade), and a self-reported student survey assessing engagement and learning experience (worth 10 points, 1% of the final grade).

The experimental group (Strategic Marketing students) was exposed to the same refresher module training workbook as the control group (Consumer Insights students), with one key difference: each section of the experimental group's training workbook began with an instructor-led, AI-aided CMG introduction.

These personalized introductions included: A photo of the instructor, instructor's hand signature, a short narrative explaining what students were about to learn, a justification for why the material matters for marketers, and a brief AI-aided explanation (generated via ChatGPT) of how the content relates to various entry-level marketing career paths. For example, the section dedicated to Target Marketing Refresher was introduced as follows:

"How's it going? Do you feel like you're getting the hang of marketing and how situation analysis helps us understand customer needs? If not, don't worry! You can always go back or ask me! Now that you know marketers—aka magicians—discover needs through situation analysis, let's explore target marketing. Imagine walking into Starbucks. Each person in line orders something different—a black coffee, a pumpkin spice latte, an oat milk caramel macchiato. It's as if Starbucks knows exactly what each customer wants, right?"

*That's **target marketing** in action! Instead of trying to target everyone (and appeal to no one), businesses identify specific customer groups and tailor their offerings accordingly. This saves time, increases efficiency, and creates loyal customers who feel like a brand "gets them."*

***What does this mean for you and your career?** Target marketing isn't just theory—it's a career-essential skill! Whether you're in branding, digital marketing, or product development, knowing how to define and engage the right audience will help you build brands people love, create content that drives engagement, and develop products that improve lives. And here's a secret—these skills also help in job interviews! After all, knowing how to tailor your message to engage your audience (aka, the interviewer) can set you apart and, possibly, be even more memorable!*

Enjoy diving into my favorite part of marketing—where strategy meets emotional intelligence!

This intervention was designed to increase students' perception of instructor presence and course relevance, which aligns with prior research emphasizing the importance of personalized instructor feedback and AI-driven career mentoring (Fink et al., 2024; Guha et al., 2024). In the example shown above, the opening two paragraphs were instructor-led whereas the last paragraph was primarily AI-aided. The control group, in contrast, did not receive these personalized introductions during the refresher module and engaged with the standard training workbook alone.

Measures

To assess the immediate impact of CMG while minimizing respondent burden during the active course week, we utilized validated single-item measures (Wanous et al., 1997). Students rated their perceived stress using the Single Item Stress Question (Elo et al., 2003) and their engagement and satisfaction using global single-item indicators on a five-point Likert scale (1 = Not at all, 5 = A great deal). Single-item measures were chosen to ensure high response rates in a field setting where lengthy surveys could disrupt learning. In addition, student performance was tracked using "refresher" test scores and project grades to determine whether CMG had any immediate effect on measurable academic outcomes.

Analysis and Results

To evaluate the impact of early exposure to CMG, independent samples t-tests were conducted to compare students in the experimental and control groups across the measured variables. In support of *H1* (i.e., *Integration of CMG narratives into online learning materials increases student engagement*) and *H2* (i.e., *Integration of CMG narratives into online learning materials increases student perception of instructor presence*), students in the CMG-enhanced group reported significantly higher levels of engagement and satisfaction with the instructor, training workbook, and overall early-learning experience compared to the control group ([Table 1](#)). CMG students reported lower stress levels, suggesting that instructor-led mentoring narratives might help ease students' worries ([Table 1](#)). Additionally, CMG stu-

Table 1. T-tests results

	Experimental (n = 23)	Control (n = 33)	t	p- value	Cohen's d
How stressed do you feel these days?	3.65 (.98)	4.15 (.80)	-2.1	0.041	-0.57
How happy are you with your "Experience 2: Training - Refreshing basic marketing concepts"?	4.22 (.80)	3.27 (1.18)	3.34	0.002	0.91
How happy are you with your instructor's performance during "Experience 2: Training - Refreshing basic marketing concepts"?	4.65 (.57)	4.16 (1.03)	2.1	0.040	0.57
How much did you like our training workbook for "Experience 2: Training - Refreshing basic marketing concepts"?	4.13 (.76)	3.58 (1.00)	2.25	0.029	0.61
How engaged did you feel throughout "Experience 2: Training - Refreshing basic marketing concepts"?	4.35 (.71)	3.79 (1.17)	2.05	0.045	0.56
If you were rating "Experience 2: Training - Refreshing basic marketing concepts" on Yelp, how many stars would you give it?	4.39 (.58)	3.79 (1.08)	2.24	0.018	0.66

Table 2. T-tests results (Performance)

	Experimental (n = 23)	Control (n = 33)	t	p-value	Cohen's d
Refresher Test Grade	36.87 (4.40)	32.82 (4.21)	3.48	0.001	0.95
Refresher Project Grade	90.83 (5.83)	85.55 (7.02)	2.96	0.005	0.81

dents scored higher on both their refresher test and project assignments than the control group (Table 2); thus, supporting *H3* (i.e., *Students exposed to CMG will demonstrate better academic performance*). Given the small sample sizes, we calculated Cohen's *d* effect sizes for all reported measures. The effects ranged from 0.56 to 0.95, indicating medium-to-large effects, which provides evidence for the robustness of the findings.

The results of this study reinforce prior research (Fink et al., 2024; McCallister et al., 2024) that suggests AI-driven career interventions should be complemented by instructor-led guidance to maximize engagement and perceived relevance. Consistent with expectancy-value model (Eccles & Wigfield, 2002; Wigfield & Eccles, 1992), the study suggests that instructor presence and personalized narratives—augmented by AI-aided insights—can enhance student engagement and satisfaction in online learning settings. These findings indicate that CMG successfully increases engagement as well as satisfaction. These results support theoretical claims that blended AI-human pedagogical strategies help mitigate transactional distance and enhance student learning experiences (Eccles & Wigfield, 2002; Moore, 1997). However, this study does not assess career readiness outcomes, which will be the focus of Study 2, where we examine the impact of CMG applied over time on students' career confidence and job preparation behaviors.

Study 2

Methodology

Design and Data Collection

This study followed the same cohort of students described in Study 1 over the duration of the seven-week course to assess the impact of the CMG intervention when it was employed over an extended period of time. While Study 1 focused on a single 'snapshot' during the first week (the Marketing Refresher module), Study 2 analyzed longitudinal data collected via entry (Pre) and exit (Post) assessments. The instructor used a longer pre- and post-survey focused more broadly on a variety of personal and career development outcomes for the students (different than the shorter survey which focused on specific issues in the refresher).

The sample consisted of the same undergraduate marketing majors from the Consumer Insights (Control) and Strategic Marketing (Experimental) courses. Sample sizes varied slightly between time points due to voluntary survey completion rates:

- Pre-Intervention (Week 1): Experimental (N=24), Control (N=40).
- Post-Intervention (Week 7): Experimental (N=20), Control (N=32).

The reduction in sample size (attrition) from pre- to post-intervention was due solely to students opting not to complete the final voluntary exit survey, rather than course withdrawal.

The intervention procedure mirrored Study 1 but was extended across the entire term. Students in the experimental condition received weekly CMG-enhanced introductions in their course modules (covering topics such as Branding and Marketing Strategy) throughout the seven-week semester. The control group continued to receive standard, course materials, not enhanced by CMG, for the same duration (covering topics such as Secondary Data Research, Observations, and Experience Interviews).

Measures

First, the instrument contained measures of perceived support adopted from Gallup's Big Six Experiences. According to Gallup studies (Crabtree, 2019; Seymour & Lopez, 2015), these six experiences are strongly related to whether students felt their colleges prepared them well for life and that they might have bettered their chances of receiving their degrees on time. Three of these experiences are experiential (e.g., "I worked on a project that took a semester or more to complete") and not directly related to the current study. The other three are focused on support network: "I had at least one professor/teacher at [name of the university] who made me excited about learning," "My professors/teachers at [name of the university] care about me as a person," and "I have a mentor who encourages me to pursue my goals and dreams." Thus, we used these to measure students' perception of support as a surrogate for caring.

Furthermore, four additional measures of perceived support were adapted from the Gallup-Purdue Index (2014) support constructs to assess students' broader support networks outside the immediate classroom context. Namely, the following measures were included: "I have people who care about me on personal level and are always there for me when I need them," "I have people who keep me excited about learning and personal growth and I can reach them anytime I want," "I have people who encourage me to pursue my dreams and goals," and "I have people who can help me with my career choices and provide career advice." All items were measured on a five-point Likert scale (5-Strongly agree/1-Strongly disagree).

Finally, the post-survey also included measures specific to the course experience that allowed the instructor to obtain feedback on whether or not the established learning and experience objectives were met. These measures were developed for this particular course (e.g., "Prepared me for Consumer Insights Analyst") and were study-specific measures. Expressly, students were asked to indicate how much they agreed with a series of statements about their course experience such as: "[name of the instructor] was important part of my personal development in this course," "The course prepared me well for a position of a Consumer Insights Analyst/Marketing Associate," "The course helped me gain a mentor or mentors," "The course provided me with career coaching," and "The instructor was more like my mentor who cared about me and wanted me to learn." Again, all items were measured on a five-point Likert scale (5-Strongly agree/1-Strongly disagree).

Independent Sample T-Tests

Student responses to the "pre-survey" were analyzed using a series of t-tests, establishing a baseline of students' perception of support before they were exposed to the intervention. As shown in the first two columns of Table 3 and 4 differences between the control and experimental groups were not significant, with one exception. Students in the experimental group were more likely to agree that they had a mentor who encouraged them to pursue their goals and dreams ($M = 4.04$, $SD = .91$) than students in control group ($M = 3.18$, $SD = 1.38$, $t = 2.75$, $p < .01$). No other significant effects were detected, suggesting no major differences between the groups existed prior to the intervention. While the experimental group reported higher baseline mentorship levels from outside sources, the significant post-intervention differences in instructor-specific care (Table 3) and course-specific mentorship outcomes (Table 5) indicate that the CMG intervention provided unique value independent of students' pre-existing networks.

Indeed, post-survey analysis revealed that while groups were largely similar at baseline, significant gaps emerged after the intervention. Specifically, differences in students' perception became statistically significant in five of seven items (Tables 3 and 4). Students in the experimental condition reported significantly higher levels of perceived instructor care and support than the control group, providing strong support for H4 (i.e., *Students exposed to CMG will feel more supported and encouraged by their faculty member*).

Finally, we tested the effect of the intervention on students' perceived career and personal development. As summarized in Table 5, students in the experimental condition believed that the instructor was an important part of their personal development and was more of a mentor who cared about them and wanted them to learn than students in control condition; providing evidence of bridging the transactional distance through increased student engagement. In addition, students believed the course helped them gain a mentor, provided them with career coaching, and prepared them for marketing jobs related to the course materials. These results suggest that CMG in the form of instructor-driven narratives focused on helping students to understand how what they are learning is related to marketing careers not only improves students' engagement, course satisfaction, and performance but also perceived support and job readiness. To address the concern regarding small sample sizes and robustness, we calculated Cohen's d effect sizes for the significant findings. The results demonstrated that the intervention had a practical, substantive impact beyond mere statistical significance. The effect sizes ranged from small-to-medium ($d = 0.58$) to large ($d = 0.95$). Given that educational interventions often yield effect sizes between 0.20 and 0.40 (Kraft, 2020), these findings suggest the CMG intervention produced robust and practically meaningful outcomes for students, supporting the validity of the study despite the sample size constraints.

The results of Study 2 reinforce and extend the findings from Study 1, indicating that CMG can be effective peda-

Table 3. Big Three College Experiences

	Before intervention			After intervention		
	Experimental (N = 24)	Control (n = 40)	Cohen's d	Experimental (N = 20)	Control (n = 32)	Cohen's d
I had at least one professor/teacher at [name of the university] who made me excited about learning.	4.58 (.72)	4.60 (.71)	-0.023	4.95 (.22)	4.75 (.51)	0.47
My professors/teachers at [name of the university] care about me as a person.	4.04 (.69)	3.98 (.83)	0.085	4.80 (.41)*	4.41 (.67)*	0.68
I have a mentor who encourages me to pursue my goals and dreams.	4.04 (.91)*	3.18 (1.38)*	0.71	4.70 (.57)*	4.03 (.93)*	0.82

* p < .05. Means are based on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Independent samples t-tests were used to compare groups at each time point.

Table 4. Perceived Support

	Before intervention			After intervention		
	Experimental (N = 24)	Control (n = 40)	Cohen's d	Experimental (N = 20)	Control (n = 32)	Cohen's d
I have people who care about me on personal level and are always there for me when I need them.	4.79 (.42)	4.65 (.86)	0.19	4.95 (.22)*	4.63 (.55)*	0.71
I have people who keep me excited about learning and personal growth and I can reach them anytime I want.	4.54 (.51)	4.13 (1.09)	0.45	4.85 (.37)*	4.41 (.62)*	0.83
I have people who encourage me to pursue my dreams and goals.	4.71 (.46)	4.45 (.93)	0.33	4.85 (.37)	4.69 (.54)	0.34
I have people who can help me with my career choices and provide career advice.	4.54 (.59)	4.28 (.93)	0.32	4.80 (.41)*	4.22 (.91)*	0.77

* p < .05. Means are based on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Independent samples t-tests were used to compare groups at each time point.

gological tool for enhancing perceptions of mentorship, career confidence, and job readiness in online classes. The study provides further support for AI-aided but instructor-driven career interventions, showing that personalized, instructor-led narratives improve engagement, perception of career preparedness, understanding of career options, and

student-instructor relationships over time. These findings support *H5* (i.e., *Students, when exposed to CMG, will have greater understanding of career options available to them upon graduation and a more positive perception of their personal career readiness*), align with prior research on AI-driven career coaching (Fink et al., 2024; Guha et al., 2024),

Table 5. Direct course outcomes

	Experimental (n = 20)	Control (n = 32)	t	p- value	Cohen's d
[name of the instructor] was important part of my personal development in this course.	4.95 (.22)	4.59 (.76)	2.05	0.046	0.58
The course prepared me well for a position of a Consumer Insights Analyst/Marketing Associate.	4.75 (.55)	4.10 (1.00)	2.70	0.010	0.77
The course helped me gain a mentor or mentors.	4.40 (.75)	3.47 (1.40)	2.75	0.008	0.78
The course provided me with career coaching.	4.35 (.75)	3.66 (1.18)	2.35	0.023	0.67
The instructor was more like my mentor who cared about me and wanted me to learn.	4.80 (.41)	4.44 (.72)	2.06	0.045	0.59

and suggest that blended AI-human mentorship models are essential in online education. While AI can provide scalable career guidance, the human component remains critical for fostering mentorship, engagement, and deeper learning experiences. By integrating CMG-driven engagement strategies, marketing educators can create a more personalized, supportive, and career-relevant learning experience, equipping students with both the knowledge and the confidence to transition into the workforce.

Results and Conclusion

This work indicates that a simple instructor-driven, AI-aided intervention for improving student engagement, learning, satisfaction, career preparedness, and perception of being supported and connected to faculty, even in online marketing courses, has promise. Student engagement remains a critical challenge in higher education, despite its well-documented links to student retention (Kuh et al., 2008), satisfaction (Crabtree, 2019; Seymour & Lopez, 2015), and academic performance (Pascarella et al., 2010; Thomas, 2012). Many students express the need for engaging pedagogy that is content-driven, blended, and designed to clarify the real-world applicability of their learning (Horstmannshof & Zimitat, 2007). In marketing education, where career relevance is paramount, fostering engagement requires connecting coursework to professional pathways (Parsons & Taylor, 2011). Effective engagement strategies must balance behavioral, emotional, and cognitive commitment (Chapman, 2003; Finn, 1989; Fisher et al., 2021; Fredricks et al., 2004; Ryan et al., 1994; Wang et al., 2011), while also providing autonomy and control over learning (Hagel et al., 2011). However, engagement alone is insufficient—students also need guidance in setting and achieving personal and career goals (Steele, 2015; Yorke, 2006). While educators can help students identify and establish career pathways, traditional online learning environments often lack the mentorship and personalized support needed to facilitate this process (Hockings et al., 2008).

To address this challenge, this paper explored the impact of CMG, an approach that integrates personalized, instructor-driven, AI-aided narratives into course materials to create a stronger connection between academic content and career readiness. CMG is designed to enhance engagement, foster instructor presence, and support career goal-setting

through a structured, AI-aided intervention. CMG helps to overcome deficits in the online delivery mode relative to utility value intervention theory and transactional distance theory, by tailoring career insights within learning materials, reinforcing students' perceived relevance of coursework, and strengthening their sense of mentorship and support.

The findings across two studies indicate that students exposed to CMG-enhanced content report higher engagement, greater satisfaction with their instructor, enhanced perceptions of support, and increased career confidence. In addition, students exposed to CMG also showed better academic performance in subject matter content. Moreover, these effects persist throughout the course, indicating that CMG represents a scalable, low-cost, durable strategy for improving online education outcomes. As AI-powered tools continue to expand, marketing educators have a unique opportunity to integrate CMG into their curricula, ensuring that students receive the valuable, personalized, career-relevant mentorship described here. Of equal importance to the viability of this invention, instructors' cost of supplying detailed, quality career guidance is kept at a manageable level that would not be possible except for the inclusion of AI.

Contribution and Practical Implications

This research makes several key contributions to marketing education and pedagogical research. First, our study highlights the synergistic benefits of AI-aided but instructor-led career guidance, reinforcing findings from Fink et al. (2024) that AI tools alone are insufficient for fostering deep mentorship. Second, CMG provides a practical solution for reducing perceived instructor distance in asynchronous learning environments, supporting previous literature on student engagement in online education (Moore, 1997; Zepke et al., 2014). Furthermore, by linking course content to job applications, CMG enhances students' perceived utility of coursework, reinforcing expectancy-value models of motivation (Eccles & Wigfield, 2002; Hulleman et al., 2010). Finally, the AI-aided nature of CMG makes it feasible for instructors to implement personalized career guidance at scale, providing a low-cost, high-impact intervention for online education. Indeed, as noted by Fink et al. (2024), while university career centers play an essential role in helping students navigate the job market, they often pro-

vide broad guidance that may not fully align with an individual student's unique career exploration needs. These centers act as critical intermediaries between students and potential employers but may lack the capacity to offer tailored assistance for identifying specific job opportunities and aligning them with a student's interests and skills. CMG addresses this gap by embedding personalized, AI-aided career narratives directly into coursework, ensuring students receive individualized career insights that complement traditional career center resources.

Limitations and Future Research

While the results are promising, several limitations inherent to the quasi-experimental design should be considered. First, the use of intact classes resulted in non-random group assignment. While we selected this design to control for instructor variance, it introduces the possibility of selection bias. Second, although baseline surveys suggest the groups were psychometrically comparable, we could not fully control for external factors influencing student outcomes, such as variations in students' outside workloads, personal career activities, or external mentorship networks. Third, due to the cross-sectional nature of the data and the lack of random assignment, causality cannot be definitively established. While the results indicate strong associations between the CMG intervention and improved student outcomes, future research utilizing randomized control trials would be necessary to confirm causal links.

Furthermore, future research should examine CMG across more balanced samples and in other disciplines to

improve generalizability. Second, each course had unique job preparation objectives, potentially influencing students' career readiness perceptions differently. Future studies should explore CMG's effects across multiple marketing courses to better understand its domain specificity. Additionally, while our study tracked short-term engagement and career confidence, future research should examine long-term impacts, such as job attainment, retention, and professional development outcomes. Finally, investigating student individual differences (e.g., prior career knowledge, learning preferences) and course characteristics (e.g., synchronous vs. asynchronous formats) or ensuring a random sampling of students could help identify contexts where CMG is most effective.

In an era marked by rapid technological disruption, students increasingly face uncertainty regarding the relevance of their education to an AI-influenced job market (Dwivedi et al., 2023). In this context, AI-aided CMG exemplifies a capability-building approach that addresses the dual challenges of engagement and career readiness. This study demonstrates that by fostering human connections through personal narratives—scaled via AI productivity tools—educators can bridge transactional distance and enhance perceived utility. As the findings indicate, even simple steps toward caring mentorship can significantly elevate the online learning experience, improving academic performance and instilling the confidence students need to transition from the classroom to careers that deliver satisfaction.

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References

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1–26. <https://doi.org/10.1146/annurev.psych.52.1.1>
- Buff, C. L., & O'Connor, S. (2012). Marketing career speed networking: A classroom event to foster career awareness. *Marketing Education Review*, 22(1), 77–82. <https://doi.org/10.2753/MER1052-8008220113>
- Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Houghton Mifflin.
- Chapman, E. (2003). Alternative approaches to assessing student engagement rates. *Practical Assessment, Research, and Evaluation*, 8(13), 1–9.
- Crabtree, S. (2019, January 22). *Six college experiences linked to student confidence on jobs*. Gallup. <https://news.gallup.com/poll/246170/six-college-experiences-linked-student-confidence-jobs.aspx>
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., ... Wright, R. (2023). "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>
- Eccles, J. S., & Harold, R. D. (1991). Gender differences in sport involvement: Applying the Eccles' expectancy-value model. *Journal of Applied Sport Psychology*, 3(1), 7–35. <https://doi.org/10.1080/10413209108406432>
- Eccles, J. S., & Wigfield, A. (1995). In the mind of the actor: The structure of adolescents' achievement task values and expectancy-related beliefs. *Personality and Social Psychology Bulletin*, 21(3), 215–225. <https://doi.org/10.1177/0146167295213003>
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53(1), 109–132. <https://doi.org/10.1146/annurev.psych.53.100901.135153>
- Elo, A. L., Leppänen, A., & Jahkola, A. (2003). Validity of a single-item measure of stress symptoms. *Scandinavian Journal of Work, Environment & Health*, 444–451. <https://doi.org/10.5271/sjweh.752>
- Fink, N. A., Black, H. G., & Dingus, R. (2024). Explore, identify, and align: Utilizing generative AI as a career coach. *Marketing Education Review*, 1–11.
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, 59(2), 117–142. <https://doi.org/10.3102/00346543059002117>
- Fisher, R., Perényi, Á., & Birdthistle, N. (2021). The positive relationship between flipped and blended learning and student engagement, performance and satisfaction. *Active Learning in Higher Education*, 22(2), 97–113. <https://doi.org/10.1177/1469787418801702>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218–226. <https://doi.org/10.1037/0003-066X.56.3.218>
- Gallup-Purdue Index. (2014). *Great jobs, great lives: The 2014 Gallup-Purdue Index report*. Gallup. <https://www.gallup.com/services/176768/2014-gallup-purdue-index-report.aspx>
- Guha, S., Grewal, D., & Atlas, S. (2024). Generative AI and marketing education: What the future holds. *Journal of Marketing Education*, 46(1), 1–20. <https://doi.org/10.1177/02734753231215436>
- Hagel, P., Carr, R., & Devlin, M. (2011). Conceptualising and measuring student engagement through the Australasian Survey of Student Engagement (AUSSE): A Critique. *Assessment and Evaluation in Higher Education*, 37(4), 475–486.
- Hockings, C., Cooke, S., Yamashita, H., McGinty, S., & Bowl, M. (2008). Switched off? A study of disengagement among computing students at two universities. *Research Papers in Education*, 23(2), 191–201. <https://doi.org/10.1080/02671520802048729>
- Horstmanshof, L., & Zimitat, C. (2007). Future time orientation predicts engagement in learning. *British Journal of Educational Psychology*, 77(3), 703–718. <https://doi.org/10.1348/000709906X160778>
- Hulleman, C. S., Godes, O., Hendricks, B. L., & Harackiewicz, J. M. (2010). Enhancing interest and performance with a utility-value intervention. *Journal of Educational Psychology*, 102(4), 880–895. <https://doi.org/10.1037/a0019506>
- Kraft, M. A. (2020). Interpreting effect sizes of education interventions. *Educational Researcher*, 49(4), 241–253. <https://doi.org/10.3102/0013189X20912798>
- Kuh, G. D., Cruce, T. M., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education*, 79(5), 540–563. <https://doi.org/10.1080/00221546.2008.11772116>
- McCallister, A., Alhabash, S., & Yang, Y. (2024). Artificial intelligence and ChatGPT: Exploring current and potential future roles in marketing education. *Journal of Marketing Communications*, 30(2), 166–187. <https://doi.org/10.1080/13527266.2023.2289034>

- Milovic, M., Das Gyomlai, J., Spaid, B. I., & Dingus, R. (2024). Sell me this artificial pen: Using ChatGPT to enhance sales role plays. *Journal of Marketing Education*, 34(2), 137–143.
- Moore, M. (1997). Theory of transactional distance. In D. Keegan (Ed.), *Theoretical principles of distance education* (pp. 22–38). Routledge.
- Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis*, 26(3), 237–257. <https://doi.org/10.3102/01623737026003237>
- Parsons, J., & Taylor, L. (2011). *Student engagement: What do we know and what should we do?* University of Alberta.
- Pascarella, E. T., Seifert, T. A., & Blaich, C. (2010). How effective are the NSSE benchmarks in predicting important educational outcomes? *Change: The Magazine of Higher Learning*, 42(1), 16–22. <https://doi.org/10.1080/00091380903449060>
- Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology*, 95(4), 667–686. <https://doi.org/10.1037/0022-0663.95.4.667>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Ryan, R. M., Stiller, J. D., & Lynch, J. H. (1994). Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. *The Journal of Early Adolescence*, 14(2), 226–249. <https://doi.org/10.1177/027243169401400207>
- Seymour, S., & Lopez, S. (2015, April 7). “Big Six” college experiences linked to life preparedness. Gallup. <https://news.gallup.com/poll/182306/big-six-college-experiences-linked-life-preparedness.aspx>
- Steele, G. A. (2015). New postgraduate student experience and engagement in human communication studies. *Journal of Further and Higher Education*, 39(4), 498–533. <https://doi.org/10.1080/0309877X.2013.869560>
- Thomas, L. (2012). *Building student engagement and belonging in higher education at a time of change: Final report from the what works? Student Retention and Success Programme*. Paul Hamlyn Foundation, Higher Education Funding Council for England, The Higher Education Academy and Action on Access.
- Wang, M. T., Willet, J. B., & Eccles, J. S. (2011). The assessment of school engagement: Examining dimensionality and measurement invariance by gender and race/ethnicity. *Journal of School Psychology*, 49(4), 465–480. <https://doi.org/10.1016/j.jsp.2011.04.001>
- Wanous, J. P., Reichers, A. E., & Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology*, 82(2), 247. <https://doi.org/10.1037/0021-9010.82.2.247>
- Weeks, W. A., Rutherford, B., Boles, J., & Loe, T. (2014). Factors that influence the job market decision: The role of faculty as a knowledge Broker. *Journal of Marketing Education*, 36(2), 105–119. <https://doi.org/10.1177/0273475314537496>
- Wigfield, A., & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. *Developmental Review*, 12(3), 265–310. [https://doi.org/10.1016/0273-2297\(92\)90011-P](https://doi.org/10.1016/0273-2297(92)90011-P)
- World Economic Forum. (2025). *The future of jobs report 2025*. World Economic Forum. https://reports.weforum.org/docs/WEF_Future_of_Jobs_Report_2025.pdf
- Yorke, M. (2006). *Student engagement: Deep, surface or strategic* [Paper presentation]. Keynote address to the 9th Pacific Rim Conference on the First Year in Higher Education, Griffith University, Australia.
- Zepke, N., Leach, L., & Butler, P. (2014). Student engagement: Students’ and teachers’ perceptions. *Higher Education Research & Development*, 33(2), 386–398. <https://doi.org/10.1080/07294360.2013.832160>