USING GENAI TO ASSIST WITH COURSE MATERIALS CREATION

By **David Moretti,** Director of Digital Marketing and Technology, Columbia Business School

In today's day and age of course delivery and course creation, Generative AI seems to be on the minds of many in higher education. There's a growing trend in course creation to use AI in building course materials. Using ChatGPT and other applications in the market, course builders and faculty members can get a helping hand in developing courses. At Columbia Business School, we've partnered with two other M7 business schools to take a similar approach to integrate GenAI into building courses to integrate climate and sustainability for core or elective courses. Our joint Open Climate Curriculum Initiative incorporates ChatGPT and allows registered contributors or users, mainly business school faculty members from around the world, to use the GenAI module to help them get started on building course materials.

My team, in collaboration with an esteemed faculty member and key stakeholders at Columbia Business School, built this open climate curriculum platform where we contain case studies of faculty from various business schools that have been made available by them for this initiative to serve as the basis of information for the ChatGPT GenAI tool to learn from and reference in its responses. As of this writing, we have over 600 cases related to climate change that are available for educational uses on this platform. Our GenAI learns from all the cases as well as any supplemental materials uploaded to the platform to provide quality, academically accurate, and sound materials. If you are a faculty member trying to integrate climate change and sustainability materials into a course you are currently teaching or looking to teach at your institution and you are not sure where to begin, the use of the GenAI tool in our platform will help you to create a syllabus, supplemental materials, etc. just by engaging conversationally and pointedly with the AI.

As Rob Gibson points out in his article, "AI-powered tools can help instructors automatically generate high-quality course content, such as quizzes, assessments, and simulations."

David Moretti, Director

(Gibson, 2023) The key for us was building a platform that returned quality results based on quality information rather than relying on the internet and not being certain of the results you received. Faculty are still encouraged to check and review everything. This is AI after all, it is not perfect, and there is the potential for mistakes. For the most part, it is learning from a closed system and reading through all the uploaded cases.

Another key for us is credit. When the AI returns course materials, it cites the faculty member or members to whom it pulled this information. Each output generates a proper citation giving credit to the content creators such as their institution or case study from which the GenAI sourced to answer the query. It gives credit where credit is due and bases the information it provides on quality source materials

found inside the platform. We are focusing on what it learns and controlling the access to the information that it learns so that way it provides to the user, and the faculty member, information that is relevant, quality, and academically sound. As more cases and supplemental materials are added to the platform, the AI learns.

In his article, AI in Curriculum Development: Opportunities and Challenges, Nitin Sharma gives insight into AI, very much in line with how we built our platform. "AI can help jumpstart course design and get course designers through the most challenging part of course design: coming up with lesson plans. It can provide a great starting point and initiate ideas to get a course started. It can generate a course design based on the prompt you provide and come up with an outline for a lesson." (Sharma, 2023) You can build an entire course or sections of the course all using the content that resides within the platform achieving the objective our Dean set for us.

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As with all cases in all things in AI, it is not the perfect solution to everything you are doing. It is not going to fully replace the faculty member or a course designer. It becomes a tool that the course designer, or in this case the faculty member, would use. If you're trying to add something to your course, here's your chance. You can pull all these cases but where do I begin? As a faculty member, I can sit and not have to stress over how I want to take this approach. For example, I can ask AI to help me build a course syllabus in which I want to integrate the decarbonization of steel and climate sustainability into my business economics course. The AI will generate a course syllabus giving you the starting point for your course development. The more conversational information you provide to the AI, the more it responds with quality, academically sound information. "While AI offers several benefits and opportunities, it cannot replace an educator's expertise on the subject matter. Knowledge and expertise in instructional design are still required to elaborate the content." "[The] educator would still have to add clarity in certain areas, create some in-class assignments, refine the

final project rubric, and flesh out presentation and discussion elements." (Sharma, 2023)

We launched this platform at COP28 and in that short time since then we've had over 100 faculty members from around the world register and participate. Is the use of GenAI as a course builder in the future? I would say yes. There is so much happening in this space such as helping to create courses, materials, and assessments. Our focus at CBS with our two partners in this initiative, is to help lay the groundwork for faculty to integrate climate change and sustainability information into their courses at the business school level with the help of GenAI. "The planning phase of creating curriculum may involve analyzing large volumes of data. AI can streamline the process by analyzing data sets. For example, analyzing multifaceted needs assessments can identify learner requirements and highlight learning gaps. The resulting insights help instruction designers build personalized learning paths, constructing relevant and timely lessons." (University of Cincinnati Online, 2023) As a faculty member, integrating GenAI into a closed learning environment where we can grow the source materials for its development is a key accomplishment in building out my courses. **E**T