

Scrutinizing the Synthetic Syllabus

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Abstract

In this article I explore the scenario of syllabus creation using ChatGPT as a type of Assistant Course Designer. During the early parts of 2023, one of the scenarios for LLM-based technologies, such as ChatGPT, was the creation of course materials, assignments, and syllabi for courses. The use case presented at Teaching and Learning Conferences during this time always included an adjunct instructor who was assigned a course at the last minute; or an early career academic who might have not had previous experience in syllabus creation. The scenarios always hinged upon either a lack of time to prepare, or lack of prior work that a user could adapt to the current scenario, or both. While ChatGPT passes a surface-level inspection for this scenario, a deeper analysis of the output highlights the problems with relying on such a tool for this job.

1. Introduction

This paper takes a brief peek into the use of Artificial Intelligence (AI), as popularized by tools and services such as ChatGPT, to examine the current efficacy of such tools when used as a type of *Assistant Course Designer* to faculty and instructional designers. As it currently stands, there is a mixed reaction to AI in Education (AIED). There are both bright and not-so-bright AIED futures imagined (Bozkurt et al., 2023; Haven, 2023). There is criticism of the human toll associated with the training of Large Language Models (LLM) that underlie AI (Rowe, 2023), the environmental costs of this kind of computing (Dhar, 2023), the emerging concerns over copyright (Appel et al., 2023) and creativity (Brittain, 2023); as well as the toll that false accusations can take on students when there's an industry treating every student as a potential cheater (Klee, 2023). One important aspect of the zeitgeist is that AI is presented as an inevitability (Bearman et al., 2023) when it is not. We as users have agency that is being denied to us through the use of this rhetoric. This inadvertent denial of agency could be part of the kinds of harm that are alluded to by McQuillan et al. (2023). Even though there are predictions that AI will change education, not destroy it (Haven, 2023), AI still appears like a novel solution seeking a yet undiscovered problem to solve.

Over the course of 2023, many AI-based tools have entered the consciousness of both learners and academics bringing to the fore both a kind of existential dread and a kind of joy for the potential eradication of drudgery in work. On the existential dread side of things, there are questions as to whether or not these kinds of technologies will make certain jobs obsolete, and whether students will use them to cheat in some fashion. On the more joyous side, both

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students and academics may be looking for ways to automate aspects of the work that they don't like or seem to take too long, such as discovering new academic publications, and perhaps even producing quick summaries of articles for class, a more modern-day version of *Cliff's Notes*.

In my day-to-day activities, I wear multiple hats, and different AI tools are applicable depending on the role: I manage an online master's program where tools such as Grammar.ly aids with writing and editing, or tools like Otter.ai can produce transcripts for recorded lectures. I also teach courses for graduate students and faculty, where learners are curious as to how they might be able to use such tools to increase their productivity. Exemplars in this category are tools such as ChatPDF, Scholarcy, Quillbot, and ResearchRabbit. Finally, I am an instructional designer and this is the primary lens through which I view AI for this paper.

When ChatGPT, and AI in general, gained notoriety between March and July 2023, one of the popular use cases presented at teaching and learning conferences was the creation of a course syllabus. More specifically, the use case involves faculty, who may be precarious faculty, who have been informed at the eleventh hour that they are teaching a course and need to produce a course syllabus and associated course materials. Putting aside the organizational and ethical issues around such a use case, I accept the premise for the purposes of this thought experiment.

Initially, the tool that was demonstrated at these conference sessions was ChatGPT (version 3.5) but since then additional tools such as *smartie.dev* and *gamma.ai* have become available for use in similar contexts. According to these conference presentations, instructional faculty could use AI for tasks such as:

- Identifying the learning objectives for a course.
- Suggesting topics and readings that are relevant to the learning objectives.
- Creating a schedule for the course that includes lectures, assignments, and exams.
- Generating a list of resources that students can use to learn the material.
- Suggesting course activities

Using these suggestions as my initial ideas for prompts, I decided to try this out for a class that I am familiar with. Since 2012 I've been teaching a course titled "The Design and Instruction of Online Courses" for a master's program. I chose a course that I am familiar with because it would be easier to critique the output of an AI tool. This series of prompts was completed in June 2023 using the free version of ChatGPT 3.5. I chose ChatGPT as the tool because it was the tool most promoted at conferences, and it was a tool that allowed for prompt modifications and clarifications after something had been generated by the system. I started with the following prompt and then successively refined the provided output:

Please create a course outline for a graduate course titled "Design and Instruction of Online Courses" that has the following course description "This course is for instructional designers, instructors, teachers, or trainers who want to explore the critical success factors in designing and delivering online instruction. Through readings, discussion, and various activities, students will examine the pedagogical implications of technology-mediated learning, the dynamics of the virtual classroom, the elements of effective online course design, as well as some of the tools and technologies available to create and deliver online instruction. Through group-based

and individual project work, students will design and create online modules. This course will use a range of interactive and collaborative instructional methods.

My starting prompt was the course description as it was listed in the University's Graduate Catalog. Over a series of 25 prompts (Koutropoulos, 2023a), I arrived at a synthetic syllabus for my course (Koutropoulos, 2023b). It's worthwhile noting that I went beyond the suggested prompts for creating a synthetic syllabus. I took on the persona that aligned with those presented at conferences, that of someone who is new to teaching, someone like an early career academic, who might not have developed course policies yet. With this in mind, I asked ChatGPT to also create course policies for me. Because of the field that I focused on, there are professional standards with which a course can align. Common examples include the IBSTPI standards (IBSTPI, 2012), ISPI standards (ISPI, n.d.), and ISTE standards (ISTE, 2017).

The synthetic syllabus produced (Koutropoulos, 2023b) is a 28-page single-space document that took about 90 minutes to produce. This time included both the prompting chains in ChatGPT (Koutropoulos, 2023a), as well as the copy, pasting, and minor formatting in GoogleDocs. I've adopted the use of the word *synthetic* to denote text, image, audio, or other multimedia that is produced by a large data model (Bender et al., 2021).

The section below contains excerpts of the full syllabus, the entire version of which can be viewed online (Koutropoulos, 2023b). The entire prompt history is available online (Koutropoulos, 2023a), but it has been edited here to conform to the article's space limitations.

2. AI Generated Position Short Report (Novel or Innovative Format)

Course Outline (14 Weeks):

Week 1: Introduction to Online Instruction

- Understanding the online learning environment
- Exploring the benefits and challenges of online instruction
- Analyzing the role of instructional design in online courses
- Discussing the pedagogical implications of technology-mediated learning

Week 2: Virtual Classroom Dynamics

- Building online learning communities
- Facilitating student engagement and interaction in virtual environments
- Addressing challenges and fostering collaboration in online classrooms
- Examining effective communication strategies for online instruction

Week 3: Elements of Effective Online Course Design

- Identifying learning objectives and outcomes for online courses
- Developing online course structures and content organization
- Applying principles of instructional design to online course development

Week 4: Multimedia and Interactive Elements in Online Courses

- Incorporating multimedia elements for enhanced learning
- Utilizing interactive activities and simulations in online courses

- Designing engaging and interactive online modules
- Week 5: Tools and Technologies for Online Instruction
- Exploring learning management systems (LMS) and course delivery platforms
 - Evaluating the suitability of different tools and technologies for online instruction
 - Introducing multimedia creation and editing tools for online modules
- Week 6: Assessment and Feedback in Online Courses
- Designing effective assessments and evaluations for online learning
 - Incorporating formative and summative assessments in online courses
 - Providing timely and meaningful feedback to online learners
- Week 7: Designing and Creating Online Modules
- Planning and storyboarding online modules
 - Applying instructional design principles to module development
 - Incorporating active learning strategies in online modules
- Week 8: Interactive and Collaborative Instructional Methods
- Exploring interactive activities and games for online instruction
 - Facilitating group-based learning in virtual environments
 - Utilizing synchronous and asynchronous communication tools for collaboration
- Week 9: Quality Assurance and Course Evaluation
- Assessing the effectiveness of online courses
 - Gathering and analyzing learner feedback
 - Implementing quality assurance measures in online instruction
- Week 10: Accessibility and Inclusivity in Online Instruction
- Designing online courses with accessibility considerations in mind
 - Creating inclusive learning experiences for diverse student populations Implementing accommodations and assistive technologies in online courses
- Week 11: Learner Support and Engagement Strategies
- Providing learner support in online environments
 - Strategies for fostering student engagement and motivation in online courses Promoting a sense of belonging and community in virtual classrooms
- Week 12: Copyright and Intellectual Property in Online Courses
- Understanding copyright laws and fair use in online instruction
 - Identifying and attributing online resources appropriately
 - Developing strategies to ensure compliance with intellectual property regulations
- Week 13: Emerging Trends in Online Instruction
- Exploring emerging technologies and their impact on online instruction Discussing current research and best practices in the field
 - Considering the future of online learning and its implications for course design
- Week 14: Final Project Presentations and Reflection
- Presenting and sharing the final online module projects
 - Reflecting on personal growth and development as online instructional designers Evaluating the effectiveness of the course and identifying areas for improvement

What are the prerequisite skills and knowledge for this course?

The course "Design and Instruction of Online Courses" assumes that students entering the course have a certain set of prerequisite skills and knowledge. Here are some examples of the prerequisite skills and knowledge that would be beneficial for students taking this course:

1. Basic computer literacy: Students should have a general understanding of computer operations, file management, and common software applications.
2. Internet proficiency: Familiarity with internet browsing, navigating websites, and basic online research skills are essential for accessing course materials, resources, and participating in online discussions.
3. Communication skills: Effective written communication skills are important for engaging in online discussions, submitting assignments, and providing feedback to peers. Clear and concise expression of ideas is crucial in an online learning environment.
4. Familiarity with learning management systems (LMS): Experience or basic knowledge of using an LMS, such as Canvas, Blackboard, or Moodle, would be helpful for navigating the course platform, accessing course materials, and submitting assignments.
5. Knowledge of instructional design principles: Familiarity with instructional design concepts, such as learning objectives, instructional strategies, and assessment methods, would provide a solid foundation for understanding the course content and engaging in course activities.
6. Educational technology awareness: Some familiarity with educational technologies commonly used in online instruction, such as learning management systems, multimedia tools, and collaboration platforms, would be advantageous.

What are the course objectives for this course?

Course Objectives for "Design and Instruction of Online Courses":

1. Understand the pedagogical implications of technology-mediated learning:
 - a. Explore the theories and principles underlying effective online instruction.
 - b. Examine how technology can enhance learning experiences and engagement.
2. Analyze the dynamics of the virtual classroom:
 - a. Evaluate the unique characteristics and challenges of online learning environments.
 - b. Investigate strategies to foster a sense of community, interaction, and collaboration in virtual classrooms.
3. Apply effective online course design principles:
 - a. Identify the key components of online course design, including learning objectives, assessments, and content delivery.
 - b. Utilize instructional design models and frameworks to create engaging and learner-centered online courses.
4. Familiarize with tools and technologies for online instruction:
 - a. Explore a range of instructional technologies and tools suitable for online course delivery.

- b. Evaluate their potential to enhance learning experiences, promote interactivity, and support learner engagement.
- 5. Design and create online modules:
 - a. Apply instructional design principles to develop online modules aligned with specific learning goals.
 - b. Integrate multimedia elements, interactive activities, and assessments into online modules.
- 6. Engage in interactive and collaborative instructional methods:
 - a. Participate in group-based activities, discussions, and peer feedback to enhance learning outcomes.
 - b. Collaborate with classmates to explore innovative approaches to online instruction.
- 7. Develop an understanding of ethical considerations in online course design:
 - a. Consider issues such as accessibility, privacy, and intellectual property rights in the design and delivery of online courses.
 - b. Promote inclusive and equitable learning experiences for diverse learners.
- 8. Reflect on best practices and emerging trends in online instruction:
 - a. Stay abreast of current research, trends, and developments in online learning.
 - b. Reflect on the implications of these findings for instructional design and teaching practices.

By the end of the course, students should have gained a comprehensive understanding of the critical success factors in designing and delivering online instruction and be able to apply their knowledge and skills to develop effective and engaging online courses.

Please create four major assignments for this course

Here are four major assignments for the "Design and Instruction of Online Courses" course:

1. 1. Online Course Design Proposal: For this assignment, students will create a comprehensive online course design proposal. The proposal should include the following components:
 - a. Course description and learning outcomes.
 - b. Detailed module structure with learning objectives, topics, and activities.
 - c. Assessment methods and criteria for evaluating student learning.
 - d. Strategies for promoting learner engagement and interaction.
 - e. Multimedia and interactive elements to enhance the learning experience.
 - f. Consideration of accessibility and inclusivity principles.
 - g. A rationale for the instructional design choices made.
2. 2. Online Module Development: In this assignment, students will design and develop a complete online module for a specific topic or subject area. The module should include the following elements:
 - a. Clear learning objectives aligned with the course outcomes.
 - b. Organized content with multimedia elements (videos, presentations, etc.).
 - c. Interactive activities that engage learners and promote active learning.
 - d. Formative and summative assessments with clear grading criteria.

- e. Opportunities for learner engagement, such as discussion forums or group projects.
 - f. A well-structured and visually appealing course layout within a learning management system (LMS) or other online platform.
3. 3. Evaluation and Reflection on an Existing Online Course: For this assignment, students will select an existing online course and evaluate its effectiveness based on established criteria. The evaluation should cover aspects such as:
- a. Alignment of learning objectives, assessments, and activities.
 - b. Engagement and interaction opportunities for learners.
 - c. Usability and accessibility considerations.
 - d. Multimedia and interactive elements used.
 - e. Instructor presence and support.
 - f. Learner feedback and assessment of course satisfaction. Based on the evaluation, students will provide constructive feedback and recommendations for improvement, supported by evidence and rationale.
4. 4. Online Instructional Design Project: In this culminating assignment, students will work individually or in groups to design and develop a complete online instructional design project. The project could involve creating an entire online course, a series of interconnected modules, or a comprehensive resource repository. Students will need to:
- a. Identify a specific target audience and learning context.
 - b. Develop clear learning objectives and outcomes.
 - c. Design a well-structured and engaging instructional plan.
 - d. Create multimedia and interactive elements.
 - e. Incorporate appropriate assessments and evaluation strategies.
 - f. Implement accessibility and inclusivity principles.
 - g. Provide a rationale and reflection on the instructional choices made.

Can you please create activities for each week of this course?

Here are suggested activities for each week of the "Design and Instruction of Online Courses" course:

- Week 1: Introduction to Online Instruction
 - Activity 1: Reflective Journal: Write a journal entry discussing your prior experiences and perceptions of online instruction. Share your expectations and goals for this course.
 - Activity 2: Discussion Forum: Participate in an online discussion forum to introduce yourself and engage with your peers. Share your motivations for taking this course and any initial questions you have about online instruction.
- Week 2: Virtual Classroom Dynamics
 - Activity 1: Virtual Classroom Simulation: Engage in a virtual classroom simulation activity where you assume the role of an instructor or student. Experience the dynamics and challenges of virtual interaction and reflect on effective strategies for fostering engagement and collaboration.

- Activity 2: Case Study Analysis: Analyze a real-world case study of a successful online learning community. Identify the key factors that contributed to its success and discuss how these can be applied in your own instructional design.
- Week 3: Elements of Effective Online Course Design
 - Activity 1: Course Evaluation Analysis: Evaluate and analyze an existing online course based on predefined criteria. Identify strengths and areas for improvement in terms of course structure, content organization, and alignment with learning objectives.
 - Activity 2: Design Challenge: Working in small groups, design a sample module for an online course. Define learning objectives, outline content, and propose interactive activities to engage learners.
- Week 4: Multimedia and Interactive Elements in Online Courses
 - Activity 1: Multimedia Exploration: Explore various multimedia elements, such as videos, podcasts, infographics, and interactive simulations. Discuss the benefits and challenges of incorporating these elements into online courses.
 - Activity 2: Media Creation Workshop: Choose a topic related to your online module and create a short video or interactive presentation using multimedia creation tools. Share your creation with the class and provide feedback to your peers.
- Week 5: Tools and Technologies for Online Instruction
 - Activity 1: Learning Management System (LMS) Evaluation: Research and evaluate different LMS platforms used for online instruction. Compare their features, user-friendliness, and suitability for different instructional contexts.
 - Activity 2: Technology Showcase: Present a brief overview of a specific educational technology tool or application that can enhance online instruction. Demonstrate its functionality and discuss potential benefits and considerations.
- Week 6: Assessment and Feedback in Online Courses
 - Activity 1: Assessment Design: Design a formative and summative assessment strategy for your online module. Choose appropriate assessment methods (e.g., quizzes, discussions, projects) and develop grading rubrics.
 - Activity 2: Peer Feedback Exchange: Exchange draft assessments and provide constructive feedback to your peers. Discuss strategies for providing effective and timely feedback in an online learning environment.
- Week 7: Designing and Creating Online Modules
 - Activity 1: Storyboarding Exercise: Develop a storyboard for your online module, outlining the sequence of activities, content, and assessments. Share your storyboard with a partner and provide feedback to each other.
 - Activity 2: Content Creation: Create multimedia content (e.g., videos, interactive presentations) for your online module. Apply principles of instructional design and engage in peer review to enhance the quality of your content.
- Week 8: Interactive and Collaborative Instructional Methods

- Activity 1: Collaborative Learning Project: Collaborate with a group of classmates to design and facilitate a synchronous online group activity. Reflect on the challenges and benefits of promoting collaboration in a virtual environment.
- Activity 2: Gamification Discussion: Participate in a discussion forum exploring the use of gamification elements in online instruction. Share examples of effective gamification strategies and discuss their potential impact on learner engagement.
- Week 9: Quality Assurance and Course Evaluation
 - Activity 1: Quality Assurance Checklist: Develop a quality assurance checklist for online courses. Identify key elements and standards that should be met to ensure the effectiveness and quality of online instruction.
 - Activity 2: Course Evaluation Survey: Design a course evaluation survey to gather feedback from learners about the online course experience. Discuss strategies for incorporating learner feedback to improve future iterations of the course.
- Week 10: Accessibility and Inclusivity in Online Instruction
 - Activity 1: Accessibility Audit: Conduct an accessibility audit of your online module, considering aspects such as screen reader compatibility, alternative text for images, and keyboard navigation. Propose improvements to enhance accessibility.
 - Activity 2: Inclusive Design Discussion: Engage in a discussion forum on inclusive design principles for online instruction. Share strategies for creating an inclusive learning environment and addressing diverse learner needs.
- Week 11: Social Presence and Instructor Support
 - Activity 1: Online Discussion Facilitation: Take turns facilitating an online discussion forum on a designated topic. Apply strategies to foster social presence, encourage meaningful interactions, and provide timely support as an instructor.
 - Activity 2: Instructor Support Plan: Develop a plan outlining the various forms of support and resources you would provide as an instructor in an online course. Consider strategies for proactive communication and addressing learner concerns.
- Week 12: Continuous Improvement and Professional Development
 - Activity 1: Reflection and Action Plan: Reflect on your learning journey throughout the course and develop an action plan for continuous improvement as an online instructor or instructional designer. Identify areas for further professional development.
 - Activity 2: Peer Feedback Exchange: Share your action plan with a partner and provide feedback. Discuss opportunities for collaboration and ongoing support in your professional development as online educators.
- Week 13: Final Project Development
 - Activity: Final Project Development: Allocate time to work on your final project, which involves applying the concepts, strategies, and skills learned

throughout the course to design and develop a complete online course module. Seek guidance and feedback from the instructor as needed.

- Week 14: Final Project Presentation and Reflection
 - Activity 1: Final Project Presentation: Present your final project to the class, showcasing your online module design, key features, and rationale behind your instructional decisions. Receive feedback and engage in a class discussion.
 - Activity 2: Course Reflection: Write a final reflective essay on your overall learning experience in the course. Discuss the insights gained, challenges faced, and how you plan to apply your knowledge and skills in future online instructional design endeavors.

Please provide me with course policies for this course

Course Policies:

1. Attendance and Participation:
 - a. Regular attendance and active participation in all course activities, including readings, discussions, and group projects, are expected.
 - b. Notify the instructor in advance if you are unable to attend a synchronous online session.
 - c. Engage respectfully with peers and contribute constructively to discussions.
2. Assignments and Deadlines:
 - a. All assignments and projects must be submitted by the designated deadlines. Late submissions may be subject to a penalty, unless prior arrangements have been made with the instructor.
 - b. Extensions will be considered in exceptional circumstances, provided that the request is made in advance and supported by valid reasons.
 - c. It is your responsibility to keep track of assignment deadlines and manage your time effectively.
3. Academic Integrity:
 - a. All work submitted must be your original work. Plagiarism, cheating, or any form of academic dishonesty will not be tolerated and may result in disciplinary action.
 - b. Properly cite and reference all sources used in your assignments, following the preferred citation style specified by the instructor.
 - c. Familiarize yourself with the university's academic integrity policy and guidelines.
4. Technology Requirements:
 - a. Ensure that you have access to the necessary technology and reliable internet connection to participate in online activities, discussions, and complete assignments.
 - b. Inform the instructor promptly if you encounter any technical difficulties that may affect your participation in the course.
5. Respectful Online Communication:

- a. Communicate respectfully and professionally with your peers and the instructor during online discussions and group work.
 - b. Avoid using offensive or discriminatory language or engaging in any form of harassment or disruptive behavior.
 - c. Foster a supportive and inclusive learning environment for all participants. 6.
6. Confidentiality:
- a. Respect the privacy and confidentiality of fellow students.
 - b. Do not share or distribute any personal information or course-related materials without proper authorization.
7. Course Materials:
- a. Respect the copyright and intellectual property rights of all course materials. Do not distribute or share copyrighted materials without permission.
 - b. Use course materials solely for educational purposes within the context of the course.
8. Accommodations for Students with Disabilities:
- a. Students with disabilities requiring accommodations should contact the instructor as early as possible to discuss their needs and make appropriate arrangements.
 - b. The instructor will work with the appropriate campus office to ensure reasonable accommodations are provided.
9. Evaluation and Grading:
- a. Clear grading criteria and rubrics will be provided for all assignments and projects.
 - b. Grades will be based on your demonstrated understanding of the course material, participation, assignments, and project work.
10. Feedback and Communication:
- a. The instructor will provide timely feedback on assignments and projects to support your learning progress.
 - b. Use professional and respectful language when communicating with the instructor, and allow a reasonable response time for inquiries.

3. Critical Reflection

When I started this process, I was interested in how long this process would take to complete. I kept an eye on my computer's clock as I was working to get a rough estimate. The creation of this synthetic syllabus took about 90 minutes, from prompt to a basic formatted GoogleDoc. It's important to mention that, while I tried to embody the persona of an adjunct instructor who was just hired and is teaching this course at the eleventh hour, that sense of urgency or panic that someone might experience in this situation was not present. Furthermore, I already had most of the important sections of the syllabus in mind; I already knew the course description of the course so there was no wasted time trying to find that, and I had some idea of the kinds of elements that I wanted to include in my syllabus. In the past, assuming subject-matter expertise, the creation of a typical course syllabus would take the same amount of time.

One of my first observations is that ChatGPT defaulted to an 8-week course schedule, whereas my institution operates on a standard semester which is approximately 14 weeks. This is a curious assumption, and due to the inability of an LLM to exhibit communicative intent (Bender & Koller, 2020) it is unknown whether course was an intensive 8-week semester course. ChatGPT *converted* that 8-week course schedule to a 14-week course schedule. When comparing the two schedules, it appears that the 14-week course is the 8-week course, for the most part, with some additional content to round out the additional weeks.

The course prerequisites generated were not all that flawed. However, there were two major issues. First, they lacked the specificity of how this course fits into an MEd program curriculum. In most curricula, there is a connection across courses that determines what is included in a course and how subsequent courses connect to what has come before. If this course were a one-off, disconnected, professional development course the generated objectives may have been passable for the scenario presented, however, they don't compare favourably to course objectives that were intentionally designed. The second issue is that the course objectives list seemed rather lengthy and certain outputs weren't really well-formed objectives. For instance, the objective that states "collaborate with classmates to explore innovative approaches to online instruction" seems more like one particular approach to exploring innovative approaches to online instruction, but the collaboration component may not be the preferred pedagogical approach in that instance. Ultimately, since we don't know where the training data came from for this ChatGPT (The Radical AI Podcast, 2023), and since LLMs take data from past examples and reproduce them (GRAILE AI, 2023) we neither know if the training data is any good (The Radical AI Podcast, 2023), nor if it was polluted by bad data (GRAILE AI, 2023). In this case, polluted data may be course objectives in the LLM training corpus that aren't really course objectives.

The required textbooks section seemed a bit like a scattershot. My observation is that there is most likely a fair overlap between these texts when it comes to the content of these texts. The total cost of textbooks in this synthetic syllabus would be \$246 USD. While this cost may not be exorbitant, it might be unnecessary. In addition to the issue of cost, one of the textbooks, while real, had authorship misattribution. Another issue is that when I prompted ChatGPT to provide a bibliography for the weekly readings it mostly ignored the required texts for the course and it provided me with different texts each week. Furthermore, it assigned full books for each week which makes the course feel like it's suffering from the course-and-a-half syndrome (Kaleta et al., 2005). Some texts in the weekly bibliography breakdown of the course also appear to be made up, which is to be expected as LLMs are designed to produce plausible strings of text rather than compare your query to a model of the real world (GRAILE AI, 2023).

Finally, I wanted to examine the activities and assessments that ChatGPT produced for this course. As a broad list of ideas of what someone might pick from for their course, the list isn't that bad. However, if you want to have the system produce something that's a bit more of a "turn-key solution" (a popular marketing term prevalent in educational technology) the results aren't satisfactory. At a high level, there is an alignment issue between course activities, assessments, course objectives, and course materials. In some instances, there's no discernible alignment, and in other instances, it's close enough to pass a quick inspection, but not sustained scrutiny. There also appear to be too many activities to engage with in the course, however, there is a lack of follow-through and some of the activities seem to only connect to some superficial level. For example, the *design challenge* group activity in Week

3 connects to some extent with the assessment due in Week 3 for the course design proposal, but as presented these two elements look to be separate, and as such create busy work for learners.

Looking back at this experiment, the process of producing *something* felt rather easy, and it wasn't all that time-consuming. However, given the issues that lie underneath the surface, I return to the question "is this a resource-efficient way to do this?" (The Radical AI Podcast, 2023), and to that, my answer is *no*. The tool that is producing this synthetic text output enters the conversation of course creation without being accountable for what it produces (GRAILE AI, 2023). If I were creating this with one or more human co-designers and co-authors, their claims and ideas can be easily discussed and verified before they go into the product. An LLM does not have that capability. Synthetic media is hollow because it lacks a connection (The Radical AI Podcast, 2023), which brings me back to a statement I've heard many times about instructional design: *It is the art and science of helping people learn what they want to (or need to) learn*. Art and Science both require a heart, a mind, and - as hard as it is to quantify - a soul. LLMs simply produce plausible strings of text, whether true or not, without any communicative intent. Despite the hype that such tools reduce the costs and time by 70% in lesson writing (an unsubstantiated claim as of this writing), there are major issues associated with these tools, the most germane of which to this scenario, is the quality of the synthetic medium output. While LLMs are trained on a huge amount of data, size guarantees neither quality nor diversity (Bender et al., 2021), and we run the risk of perpetuating a kind of digital colonialism and a continued marginalizing of underrepresented people in our professions (Bender et al., 2021; Kwet, 2019). I think that more can be gained through a critical engagement between peers in syllabus creation as compared to something produced by an LLM. Synthetic text looks to the past to uncritically produce more of the same, whereas critical engagement with peers charts potential new directions as our respective fields evolve. If I needed a syllabus for a course that starts tomorrow, I'd be better off asking a colleague if I could use theirs.

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