

# Introducing QuizBot an Innovative AI-Assisted Assessment in Legal Education

*Sean A. Harrington\**

## **Abstract:**

This Article explores an innovative approach to assessment in legal education: an AI-assisted quiz system implemented in an AI & the Practice of Law course. The system employs a Socratic method-inspired chatbot to engage students in substantive conversations about course materials, providing a novel method for evaluating student learning and engagement. The Article examines the structure and implementation of this system, including its grading methodology and rubric, and discusses its benefits and challenges. The Socratic quizbot effectively allows you to use AI to scale cold-calling to the entire class.

Key advantages of the AI-assisted quiz system include enhanced student engagement with course materials, practical experience in AI interaction for future legal practice, immediate feedback and assessment, and alignment with the Socratic method tradition in law schools. The system also presents challenges, particularly in ensuring fairness and consistency in AI-generated questions, maintaining academic integrity, and balancing AI assistance with human oversight in grading.

The Article further explores the pedagogical implications of this innovation, including a shift from memorization to conceptual understanding, the encouragement of critical thinking through AI interaction, and the preparation of students for AI-integrated legal practice. It also considers future directions for this technology, such as integration with other law school courses, potential for longitudinal assessment of student progress, and implications for bar exam preparation and continuing legal education.

Ultimately, this Article argues that AI-assisted assessment systems can revolutionize legal education by providing more frequent, targeted, and effective evaluation of student learning. While challenges remain, the benefits of such systems align closely with the evolving needs of the legal profession. The Article concludes with a call for further research and broader implementation of AI-assisted assessment in law schools to fully understand its impact and potential in preparing the next generation of legal professionals for an AI-integrated legal landscape.

**Keywords:** Legal Education; Artificial Intelligence; Assessment; Socratic Method; Chatbot; Law School Innovation; Educational Technology; Legal Pedagogy; AI-Assisted Learning; Legal Technology; Student Engagement; Formative Assessment; Critical Thinking; Legal Practice; Educational Assessment; Law School Curriculum; Bar Exam Preparation; Continuing Legal Education; Legal Ethics; Educational Analytics

Sean A. Harrington is the Director of Technology Innovation at the University of Oklahoma College of Law <https://law.ou.edu/faculty-and-staff/sean-harrington>. This article is a work in progress to gain feedback prior to publication and has not been submitted to any journals. Appendix A has instructions for implementation and has been updated December 2024.

## I. Introduction

### A. The challenge of engaging students in AI and law courses

The integration of artificial intelligence (AI) into legal practice has rapidly accelerated in recent years, presenting both opportunities and challenges for legal education.<sup>1</sup> Law schools are increasingly recognizing the need to prepare students for a future where AI tools are commonplace in legal work.<sup>2</sup> However, engaging students effectively in courses that combine law and AI can be challenging, as these subjects often require a blend of technical knowledge and legal acumen that is not typically emphasized in traditional legal curricula.<sup>3</sup>

### B. The need for innovative assessment methods in legal education

Traditional assessment methods in legal education, such as essays and multiple-choice exams, may not adequately capture students' understanding of AI concepts or their ability to interact with AI systems in a legal context.<sup>4</sup> Moreover, the rise of large language models like ChatGPT has called into question the viability of take-home essays as a reliable form of assessment.<sup>5</sup> As I note in my article on AI-integrated legal education, "The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School," there is a growing need for assessment techniques that not only test knowledge but also provide students with practical experience in using AI tools.<sup>6</sup>

### C. Thesis: AI-assisted quizzes offer a novel approach to assessment that enhances student engagement and learning outcomes

This article proposes that AI-assisted quizzes, implemented through a Socratic method-inspired chatbot, offer a novel and effective approach to assessing student learning in AI and law courses. By combining the traditional Socratic method with cutting-edge AI technology, this assessment technique provides several key benefits:

1. It engages students in active learning by requiring them to interact with an AI system, mirroring the skills they will need in future legal practice.<sup>7</sup>
2. It offers personalized learning experiences, adapting to each student's knowledge level and learning style.<sup>8</sup>

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<sup>1</sup> John O. McGinnis & Russell G. Pearce, *The Great Disruption: How Machine Intelligence Will Transform the Role of Lawyers in the Delivery of Legal Services*, 82 *FORDHAM L. REV.* 3041, 3043 (2014).

<sup>2</sup> Daniel Martin Katz, *Artificial Intelligence and the Future of Legal Education*, 90 *U. DET. MERCY L. REV.* 1, 3-5 (2012).

<sup>3</sup> Drew Simshaw, *Ethical Issues in Robo-Lawyering: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law*, 70 *HASTINGS L.J.* 173, 189 (2018).

<sup>4</sup> Marjan Ajevski et al., *ChatGPT and the Future of Legal Education and Practice*, 57 *LAW TCHR.* 352, 354 (2023).

<sup>5</sup> John Bliss, *Teaching Law in the Age of Generative AI*, 64 *JURIMETRICS J.* 111, 113 (2024).

<sup>6</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>7</sup> *Id.* at 4.

<sup>8</sup> Jürgen Rudolph et al., *ChatGPT: Bullshit Spewer or the End of Traditional Assessments in Higher Education?*, 6 *J. APPLIED LEARNING & TEACHING* 342, 355 (2023).

3. It provides immediate feedback, allowing for rapid identification of areas where students may be struggling.<sup>9</sup>
4. It aligns with the pedagogical goals of legal education by encouraging critical thinking and application of legal concepts in dynamic scenarios.<sup>10</sup>
5. It gives the students badly needed “reps” with AI so that they can begin to master engaging with these systems.

As legal education evolves in response to technological advancements, innovative assessment methods like AI-assisted quizzes can significantly enhance student engagement and learning outcomes. This article will explore the implementation, benefits, and challenges of this novel assessment technique, drawing on recent experiments and research in the field of AI and legal education. I can happily report that we are 3 quizzes into the semester and I have been pleasantly surprised by the students’ willingness to engage with the system and the relative ease of implementing something like this into our course.

## II. Background

### A. The rise of AI in legal practice

The legal profession is experiencing a significant transformation due to the rapid advancement and integration of artificial intelligence (AI) technologies.<sup>11</sup> AI systems are now being deployed across various aspects of legal practice, from document review and contract analysis to legal research and predictive analytics.<sup>12</sup> As noted by Alarie et al., "AI is not just another technology that lawyers need to understand; it is a transformative force that is reshaping the nature of legal work itself."<sup>13</sup>

In recent years, we have witnessed the emergence of sophisticated AI tools specifically designed for legal applications. For instance, platforms like Westlaw's CoCounsel 2.0, powered by OpenAI's GPT models, can now perform legal research and draft memos at a level comparable to junior associates.<sup>14</sup> Similarly, contract analysis tools using machine learning algorithms can review hundreds of documents in a fraction of the time it would take human lawyers.<sup>15</sup> These developments underscore the growing importance of AI literacy in the legal profession.

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<sup>9</sup> Kostka & Toncelli, Exploring Applications of ChatGPT to English Language Teaching: Opportunities, Challenges, and Recommendations, *ELEC. J. FOR ENG. AS SECOND LANGUAGE*, Nov. 2023, at 1, 4–5.

<sup>10</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 *LAW TCHR.* 352, 355 (2023).

<sup>11</sup> Richard Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* 184 (2d ed. 2017).

<sup>12</sup> Benjamin Alarie et al., How Artificial Intelligence Will Affect the Practice of Law, 68 *U. TORONTO L.J.* 106, 108 (2018).

<sup>13</sup> *Id.* at 107.

<sup>14</sup> Sean Harrington, The Case for Large Language Model Optimism in Legal Research from a Law & Technology Librarian, *SSRN* (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4492121](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4492121).

<sup>15</sup> Dana Remus & Frank Levy, Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law, 30 *GEO. J. LEGAL ETHICS* 501, 508 (2017).

## **B. The importance of AI literacy for future lawyers**

As AI continues to permeate legal practice, it becomes increasingly crucial for law students to develop a strong foundation in AI literacy. This necessity is reflected in the curriculum of forward-thinking law schools, including the course on AI & the Practice of Law that I am currently co-teaching. This course aims to equip students with the knowledge and skills necessary to navigate the AI-enhanced legal landscape they will encounter upon graduation.

AI literacy for lawyers goes beyond mere familiarity with AI tools. It encompasses understanding the underlying principles of AI, its capabilities and limitations, and the ethical considerations surrounding its use in legal contexts.<sup>16</sup> As Simshaw argues, "Lawyers must be prepared to competently use AI tools, critically evaluate their outputs, and advise clients on the legal and ethical implications of AI use."<sup>17</sup>

Moreover, AI literacy is becoming a competitive advantage in the legal job market. Law firms and corporate legal departments increasingly value candidates who can effectively leverage AI technologies to enhance efficiency and provide innovative solutions to legal problems.<sup>18</sup>

## **C. Traditional assessment methods in law schools and their limitations**

Despite the growing importance of AI literacy, many law schools continue to rely on traditional assessment methods that may not adequately measure students' competence in this area.

Conventional law school assessments typically include:

1. Essay exams: Students write long-form responses to hypothetical legal scenarios or theoretical questions.
2. Multiple-choice tests: Students select the best answer from a set of options, often testing recall of legal principles.
3. Research papers: Students produce in-depth analyses of specific legal topics.
4. Moot court exercises: Students engage in simulated oral arguments.

While these methods have long been staples of legal education, they present several limitations in the context of assessing AI literacy and practical skills:

1. Lack of hands-on interaction with AI tools: Traditional assessments often fail to evaluate students' ability to use AI systems effectively in legal contexts.<sup>19</sup>
2. Limited assessment of adaptability: The rapidly evolving nature of AI technology requires lawyers to be adaptable, a skill not easily measured by static exams.<sup>20</sup>

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<sup>16</sup> Drew Simshaw, Ethical Issues in Robo-Lawyering: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law, 70 HASTINGS L.J. 173, 189 (2018).

<sup>17</sup> Id. at 190.

<sup>18</sup> Daniel Martin Katz, Artificial Intelligence and the Future of Legal Education, 90 U. DET. MERCY L. REV. 1, 3-5 (2012).

<sup>19</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 115 (2024).

<sup>20</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 355 (2023).

3. Insufficient evaluation of critical thinking about AI outputs: Traditional assessments rarely require students to critically evaluate and improve upon AI-generated content, a crucial skill in the modern legal landscape.<sup>21</sup>
4. Vulnerability to AI-assisted cheating: With the advent of large language models like ChatGPT, traditional take-home essays and research papers have become susceptible to AI-generated content, potentially compromising their validity as assessment tools.<sup>22</sup>
5. Even multiple-choice exams are under threat unless they are taken in a monitored classroom setting since now multimodal plugins are available for web browsers that can read the question and then provide the correct answer to students.<sup>23</sup>

These limitations underscore the need for innovative assessment methods that can effectively evaluate students' AI literacy and practical skills while maintaining academic integrity. As we continue to prepare law students for a profession increasingly influenced by AI, it is crucial to develop assessment techniques that align with the realities of modern legal practice.

### III. The AI-Assisted Quiz System: An Overview

#### A. Structure and implementation

The AI-assisted quiz system implemented in the AI & the Practice of Law course represents a novel approach to assessing student learning and engagement. This system leverages artificial intelligence to create a dynamic, interactive assessment environment that aligns with the evolving needs of legal education in the age of AI.<sup>24</sup>

The structure of the system is as follows:

1. Timing: Quizzes are conducted at the beginning of each class session and last approximately 10 minutes.<sup>25</sup>
2. Format: Students engage in a one-on-one conversation with an AI chatbot through a text-based interface.<sup>26</sup>
3. Content: The chatbot's knowledge base is populated with information from the assigned readings for the previous week.<sup>27</sup>
4. Submission: Upon completion, students upload a transcript of their conversation to the course management system (Canvas).<sup>28</sup>

This structure allows for a consistent, yet flexible assessment process that can be easily integrated into the course's regular flow. The implementation of this system required careful

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<sup>21</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN 4-5 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>22</sup> John Bliss, *Teaching Law in the Age of Generative AI*, 64 *JURIMETRICS J.* 111, 113 (2024).

<sup>23</sup> *Canvashack.com* is a browser plugin that bypasses Canvas's test security features and allows an LLM to read the question and suggest the correct answer to students. <https://canvashack.com/>

<sup>24</sup> John Bliss, *Teaching Law in the Age of Generative AI*, 64 *JURIMETRICS J.* 111, 116 (2024).

<sup>25</sup> Based on the provided course description.

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

consideration of technological infrastructure, data privacy, and accessibility concerns to ensure a fair and equitable assessment experience for all students.<sup>29</sup>

## **B. The Socratic method-inspired chatbot**

The heart of this assessment system is a chatbot designed to emulate the Socratic method, a cornerstone of traditional legal education.<sup>30</sup> This AI-powered chatbot engages students in a substantive conversation about the course material, posing questions and follow-ups that encourage critical thinking and deep engagement with the readings.

Key features of the Socratic method-inspired chatbot include:

1. **Dynamic questioning:** The chatbot adapts its questions based on student responses, creating a unique conversational path for each student.<sup>31</sup>
2. **Focus on broad concepts:** Rather than testing rote memorization, the chatbot emphasizes key concepts and encourages students to apply their understanding to various scenarios.
3. **Personalization:** Students can request the chatbot to adjust its communication style, such as rephrasing questions or providing analogies, to better suit their learning preferences.<sup>32</sup>
4. **Accessibility features:** The chatbot can accommodate various learning needs, including translation for non-native English speakers and text formatting for neurodivergent students.<sup>33</sup>

This approach not only assesses student knowledge but also provides valuable practice in interacting with AI systems, a skill increasingly relevant in modern legal practice.<sup>34</sup>

## **C. Grading methodology and rubric**

The grading process for the AI-assisted quizzes employs a combination of AI analysis and human oversight, ensuring a fair and comprehensive evaluation of student performance. The grading methodology consists of two main components:

1. **AI-powered initial assessment:** A second AI bot analyzes the conversation transcript, comparing student responses against its knowledge base of the assigned readings.<sup>35</sup>
2. **Human review:** The course instructor reviews the AI's assessment, particularly in cases where points have been deducted, to ensure accuracy and fairness.<sup>36</sup>

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<sup>29</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN 7-8 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>30</sup> Jamie R. Abrams, *Legal Education's Curricular Tipping Point toward Inclusive Socratic Teaching*, 49 HOFSTRA L. REV. 897, 900 (2020).

<sup>31</sup> Based on provided course description.

<sup>32</sup> *Id.*

<sup>33</sup> *Id.*

<sup>34</sup> Drew Simshaw, *Ethical Issues in Robo-Lawyering: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law*, 70 HASTINGS L.J. 173, 189 (2018).

<sup>35</sup> Based on the provided course description.

<sup>36</sup> *Id.*

The grading rubric for these quizzes is designed to assess both the students' understanding of the course material and their level of engagement with the AI system. The rubric consists of three categories:

1. Clearly Did Not Do the Readings (0 points):
  - Responses are unrelated to topics or contain factual inaccuracies.
  - Inability to engage with specific content from the readings.
  - Demonstrates a lack of preparation or superficial understanding.
2. Did the Readings but Lacks Depth or Substantive Engagement (2-3 points):
  - Basic understanding of the material is evident, but responses are general or lacking in detail.
  - The student fails to engage deeply with the content or responses suggest a lack of careful reading.
  - Provides correct answers but without any further analysis or discussion.
3. Excellent Understanding and High Engagement (4-5 points):
  - Responses are detailed and display a clear grasp of the material.
  - The student connects concepts from the readings to broader themes or discussions in the course.
  - Displays critical thinking by raising thoughtful points or asking insightful questions during the conversation.<sup>37</sup>

This rubric allows for a nuanced evaluation of student performance, rewarding both knowledge acquisition and the ability to engage critically with the material. By incorporating AI in both the assessment and grading processes, this system provides a scalable approach to frequent, in-depth evaluation of student learning, while still maintaining the crucial element of human oversight in the final grading decisions.<sup>38</sup>

## **V. Benefits of the AI-Assisted Quiz System**

The implementation of the AI-assisted quiz system in legal education offers numerous advantages that address longstanding challenges in assessment and pedagogy. This section explores four key benefits of this innovative approach.

### **A. Enhanced student engagement with course materials**

One of the AI-assisted quiz system's primary benefits is its ability to significantly enhance student engagement with course materials. Traditional assessment methods often incentivize cramming or surface-level engagement with readings. In contrast, this system encourages deeper, more consistent interaction with course content.<sup>39</sup>

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<sup>37</sup> Based on the provided rubric.

<sup>38</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 358 (2023).

<sup>39</sup> Jürgen Rudolph et al., ChatGPT: Bullshit Spewer or the End of Traditional Assessments in Higher Education?, 6 J. APPLIED LEARNING & TEACHING 342, 355 (2023).

The conversational nature of the AI chatbot creates a more dynamic and interactive learning experience. Students must actively recall and apply knowledge from their readings to respond to the chatbot's questions, promoting better retention and understanding.<sup>40</sup> This aligns with cognitive science research on the benefits of active recall in learning.<sup>41</sup>

Moreover, the system's ability to tailor questions to individual students' responses ensures that each student is challenged at an appropriate level. This personalization can increase motivation and reduce the disengagement that sometimes occurs when students find material too easy or too difficult.<sup>42</sup>

## **B. Practice in AI interaction for future legal practice**

As AI becomes increasingly prevalent in legal practice, it is crucial for law students to develop comfort and competence in interacting with AI systems.<sup>43</sup> The AI-assisted quiz system provides regular, low-stakes opportunities for students to engage with AI in a legal context.

Through these interactions, students can:

1. Develop an understanding of AI capabilities and limitations in legal contexts.<sup>44</sup>
2. Practice formulating clear and effective queries to AI systems.<sup>45</sup>
3. Gain experience in critically evaluating AI-generated responses.<sup>46</sup>
4. Cultivate adaptability in working with evolving AI technologies.<sup>47</sup>

This practical experience with AI aligns closely with the growing emphasis on technological competence in legal ethics guidelines.<sup>48</sup> By integrating AI interaction into regular assessments, the course prepares students for a future where collaboration with AI systems will likely be a routine part of legal work.<sup>49</sup>

## **C. Immediate feedback and assessment**

The AI-assisted quiz system provides immediate feedback to students, a feature that has been consistently linked to improved learning outcomes.<sup>50</sup> Unlike traditional assessments where

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<sup>40</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN 4 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>41</sup> Jeffrey D. Karpicke & Henry L. Roediger III, *The Critical Importance of Retrieval for Learning*, 319 *SCIENCE* 966, 966 (2008).

<sup>42</sup> John Bliss, *Teaching Law in the Age of Generative AI*, 64 *JURIMETRICS J.* 111, 117 (2024).

<sup>43</sup> Drew Simshaw, *Ethical Issues in Robo-Lawyering: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law*, 70 *HASTINGS L.J.* 173, 189 (2018).

<sup>44</sup> *Id.* at 190.

<sup>45</sup> Sean Harrington, *The Case for Large Language Model Optimism in Legal Research from a Law & Technology Librarian*, SSRN 5 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4492121](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4492121).

<sup>46</sup> Marjan Ajevski et al., *ChatGPT and the Future of Legal Education and Practice*, 57 *LAW TCHR.* 352, 356 (2023).

<sup>47</sup> Daniel Martin Katz, *Artificial Intelligence and the Future of Legal Education*, 90 *U. DET. MERCY L. REV.* 1, 3-5 (2012).

<sup>48</sup> *Model Rules of Prof'l Conduct r. 1.1 cmt. 8* (Am. Bar Ass'n 2020).

<sup>49</sup> Richard Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* 184 (2d ed. 2017).

<sup>50</sup> John Hattie & Helen Timperley, *The Power of Feedback*, 77 *REV. EDUC. RES.* 81, 81 (2007).

feedback may be delayed by days or weeks, this system allows students to gauge their understanding in real-time.

The immediacy of feedback serves several important functions:

1. It allows students to identify and correct misunderstandings quickly.<sup>51</sup>
2. It reinforces correct understanding and application of concepts.<sup>52</sup>
3. It provides opportunities for metacognitive reflection on learning progress.<sup>53</sup>

Furthermore, the system's ability to provide detailed, individualized feedback for each student addresses a common challenge in large law school classes where providing frequent, personalized feedback can be logistically difficult.<sup>54</sup> From a personal standpoint, I have greatly enjoyed reading the quiz transcripts because I feel much more connected to my students and find that I get to learn aspects of their personalities that would be hard to scale depending on the size of the class.

#### **D. Alignment with the Socratic method tradition in law schools**

The AI-assisted quiz system represents a modern evolution of the Socratic method, a pedagogical approach deeply ingrained in legal education.<sup>55</sup> By emulating the question-and-answer format of the Socratic method, the system maintains continuity with this legal education tradition while leveraging technology to enhance its effectiveness.

Key alignments with the Socratic method include:

1. Emphasis on critical thinking and analytical reasoning.<sup>56</sup>
2. Encouragement of precise and articulate communication.<sup>57</sup>
3. Development of the ability to "think on one's feet" in response to unexpected questions.<sup>58</sup>

However, the AI system also addresses some criticisms of the traditional Socratic method. It eliminates the potential for student embarrassment in front of peers, provides a more equitable distribution of "cold calling," and allows for a pace of questioning tailored to each student's needs.<sup>59</sup>

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<sup>51</sup> Kostka & Toncelli, Exploring Applications of ChatGPT to English Language Teaching: Opportunities, Challenges, and Recommendations, *ELEC. J. FOR ENG. AS SECOND LANGUAGE*, Nov. 2023, at 1, 4–5.

<sup>52</sup> *Id.* at 5.

<sup>53</sup> Sean A. Harrington, The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School, *SSRN* 6 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>54</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 *JURIMETRICS J.* 111, 118 (2024).

<sup>55</sup> Jamie R. Abrams, Legal Education's Curricular Tipping Point toward Inclusive Socratic Teaching, 49 *HOFSTRA L. REV.* 897, 900 (2020).

<sup>56</sup> *Id.* at 901.

<sup>57</sup> Orin S. Kerr, The Decline of the Socratic Method at Harvard, 78 *NEB. L. REV.* 113, 116-117 (1999).

<sup>58</sup> *Id.* at 118.

<sup>59</sup> Jamie R. Abrams, Legal Education's Curricular Tipping Point toward Inclusive Socratic Teaching, 49 *HOFSTRA L. REV.* 897, 903-904 (2020).

By combining the pedagogical strengths of the Socratic method with the technological capabilities of AI, this assessment system offers a powerful tool for legal education that is both rooted in tradition and responsive to the demands of modern legal practice.

## **VI. Challenges and Considerations**

While the AI-assisted quiz system offers numerous benefits, its implementation is not without challenges. This section explores three key areas of concern that must be addressed to ensure the system's effectiveness and integrity.

### **A. Ensuring fairness and consistency in AI-generated questions**

One of the primary challenges in implementing an AI-based assessment system is ensuring that the questions generated are fair and consistent across all students. Unlike traditional exams where all students receive identical questions, AI-generated questions may vary significantly from one student to another.<sup>60</sup>

Several issues arise from this variability:

1. **Difficulty calibration:** Ensuring that the questions are of comparable difficulty across different conversations is crucial for fair assessment.<sup>61</sup>
2. **Content coverage:** The system must be designed to cover all relevant course material equitably, despite the personalized nature of each interaction.<sup>62</sup>
3. **Bias mitigation:** AI systems can inadvertently perpetuate biases present in their training data, potentially disadvantaging certain groups of students.<sup>63</sup>

To address these concerns, rigorous testing and continuous monitoring of the AI system are necessary. This may involve regular audits of the questions generated, statistical analysis of student performance across different question sets, and ongoing refinement of the AI's question generation algorithms.<sup>64</sup>

### **B. Maintaining academic integrity in an AI-assisted environment**

The use of AI in assessment raises new challenges for maintaining academic integrity. While the in-class, real-time nature of the quizzes mitigates some traditional forms of cheating, new concerns emerge:

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<sup>60</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 120 (2024).

<sup>61</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 357 (2023).

<sup>62</sup> Sean A. Harrington, The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School, SSRN 9 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>63</sup> Ifeoma Ajunwa, The Paradox of Automation as Anti-Bias Intervention, 41 CARDOZO L. REV. 1671, 1682 (2020).

<sup>64</sup> Daniel Martin Katz, Artificial Intelligence and the Future of Legal Education, 90 U. DET. MERCY L. REV. 1, 10-12 (2012).

1. Gaming the system: Students might learn to exploit patterns or weaknesses in the AI's questioning strategy.<sup>65</sup>
2. Tech-savvy students (or fast typers) having an advantage over students who are less tech-savvy.

Addressing these concerns requires a multi-faceted approach:

1. Designing assessments that prioritize higher-order thinking skills, which are more difficult to replicate with unauthorized AI assistance.<sup>66</sup>
2. Providing access to multi-modal models that can engage with the students orally if necessary (and then providing an environment where possible in a classroom).

### **C. Balancing AI assistance with human oversight in grading**

While AI can significantly streamline the grading process, relying too heavily on automated grading poses risks to the validity and fairness of assessments. Striking the right balance between AI assistance and human oversight is crucial.<sup>67</sup>

Key considerations include:

1. Transparency: Students should understand how their responses are being evaluated and the role AI plays in the grading process.<sup>68</sup>
2. Appeals process: A clear mechanism for students to challenge AI-generated grades is necessary to maintain fairness and accountability.<sup>69</sup>
3. Qualitative assessment: Ensuring that the grading process can adequately capture nuanced or creative responses that might not fit pre-programmed patterns.<sup>70</sup>
4. Continuous calibration: Regular comparison of AI-generated grades with human-graded samples to ensure alignment and identify areas for improvement.<sup>71</sup>

The "human-in-the-loop" approach described in the course implementation, where the AI provides initial grading which is then reviewed by the instructor, offers a promising model for addressing these concerns.<sup>72</sup> This approach leverages the efficiency of AI while maintaining the nuanced judgment that human graders can provide.

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<sup>65</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 122 (2024).

<sup>66</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 123 (2024).

<sup>67</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 360 (2023).

<sup>68</sup> Id. at 361.

<sup>69</sup> Sean A. Harrington, The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School, SSRN 12 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>70</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 124 (2024).

<sup>71</sup> Id. at 125.

<sup>72</sup> Based on the provided course description.

However, as the scale of implementation grows, maintaining this level of human oversight may become challenging. Developing strategies for efficient and effective human review of AI-generated grades will be crucial for the long-term viability of this assessment method.<sup>73</sup>

In conclusion, while the AI-assisted quiz system presents significant opportunities for enhancing legal education, careful consideration of these challenges is necessary. Addressing issues of fairness, academic integrity, and the appropriate balance of AI and human involvement will be crucial in realizing the full potential of this innovative assessment approach.

## VII. Pedagogical Implications

The implementation of AI-assisted quizzes in legal education represents more than just a novel assessment tool; it signals a significant shift in pedagogical approach. This section explores three key pedagogical implications of this innovation.

### A. Shift from memorization to conceptual understanding

Traditionally, legal education has placed a heavy emphasis on memorization, particularly of case law and statutes.<sup>74</sup> However, the AI-assisted quiz system encourages a shift towards deeper conceptual understanding. This aligns with contemporary learning theories that emphasize the importance of constructing knowledge rather than merely absorbing information.<sup>75</sup>

The AI chatbot's ability to engage in dynamic, contextual questioning encourages students to apply their knowledge flexibly across different scenarios. This approach:

1. Promotes deeper learning: Students are required to understand principles well enough to apply them in varied contexts, rather than simply recalling facts.<sup>76</sup>
2. Enhances retention: By regularly engaging with course concepts in an interactive manner, students are more likely to retain information long-term.<sup>77</sup>
3. Develops transferable skills: The focus on conceptual understanding prepares students to tackle novel legal problems, a crucial skill in legal practice.<sup>78</sup>

This shift aligns with calls for reform in legal education to better prepare students for the complexities of modern legal practice.<sup>79</sup> It also acknowledges the reality that in an age of

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<sup>73</sup> Daniel Martin Katz, *Artificial Intelligence and the Future of Legal Education*, 90 U. DET. MERCY L. REV. 1, 15 (2012).

<sup>74</sup> Jamie R. Abrams, *Legal Education's Curricular Tipping Point toward Inclusive Socratic Teaching*, 49 HOFSTRA L. REV. 897, 905 (2020).

<sup>75</sup> Susan A. Ambrose et al., *How Learning Works: Seven Research-Based Principles for Smart Teaching 3-4* (2010).

<sup>76</sup> John Bliss, *Teaching Law in the Age of Generative AI*, 64 JURIMETRICS J. 111, 126 (2024).

<sup>77</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN 5 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>78</sup> Marjan Ajevski et al., *ChatGPT and the Future of Legal Education and Practice*, 57 LAW TCHR. 352, 362 (2023).

<sup>79</sup> William M. Sullivan et al., *Educating Lawyers: Preparation for the Profession of Law* 8 (2007).

ubiquitous information access, the ability to apply and synthesize knowledge is more valuable than mere recall.<sup>80</sup>

## **B. Encouraging critical thinking through AI interaction**

Interaction with the AI chatbot provides a unique opportunity to develop and refine critical thinking skills, a cornerstone of legal education.<sup>81</sup> The system's ability to generate follow-up questions and present counterarguments mimics the intellectual rigor of legal discourse.

Key aspects of critical thinking encouraged by this system include:

1. Analytical reasoning: Students must analyze the AI's questions and formulate logically sound responses.<sup>82</sup>
2. Evaluation of AI-generated content: Students gain experience in critically assessing the relevance and accuracy of AI-produced information, a crucial skill in an increasingly AI-integrated legal landscape.<sup>83</sup>
3. Metacognition: The immediate feedback provided by the system encourages students to reflect on their own thinking processes and knowledge gaps.<sup>84</sup>

This approach aligns with the American Bar Association's emphasis on developing law students' critical thinking skills.<sup>85</sup> Moreover, it prepares students for a future where they will need to critically evaluate AI-generated legal analysis and argumentation.<sup>86</sup>

## **C. Preparing students for AI-integrated legal practice**

As AI becomes increasingly prevalent in legal practice, law schools have a responsibility to prepare students for this new reality.<sup>87</sup> The AI-assisted quiz system provides a controlled environment for students to develop comfort and competence in AI interaction within a legal context.

This preparation includes:

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<sup>80</sup> Richard Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* 185 (2d ed. 2017).

<sup>81</sup> Larry O. Natt Gantt, II, *Deconstructing Thinking Like a Lawyer: Analyzing the Cognitive Components of the Analytical Mind*, 29 *CAMPBELL L. REV.* 413, 437 (2007).

<sup>82</sup> John Bliss, *Teaching Law in the Age of Generative AI*, 64 *JURIMETRICS J.* 111, 127 (2024).

<sup>83</sup> Drew Simshaw, *Ethical Issues in Robo-Lawyering: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law*, 70 *HASTINGS L.J.* 173, 196 (2018).

<sup>84</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN 6 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>85</sup> AM. BAR ASS'N SECTION OF LEGAL EDUC. & ADMISSIONS TO THE BAR, *ABA STANDARDS AND RULES OF PROCEDURE FOR APPROVAL OF LAW SCHOOLS 2020-2021*, at 17 (2020).

<sup>86</sup> Daniel Martin Katz, *Artificial Intelligence and the Future of Legal Education*, 90 *U. DET. MERCY L. REV.* 1, 13 (2012).

<sup>87</sup> *Id.* at 3.

1. Familiarity with AI capabilities: Regular interaction with the AI system helps students understand both the potential and limitations of AI in legal applications.<sup>88</sup>
2. Development of AI collaboration skills: Students learn to formulate effective queries and interpret AI responses, skills that will be crucial in future legal research and analysis.<sup>89</sup>
3. Ethical considerations: Through guided use of AI in their studies, students can begin to grapple with the ethical implications of AI in legal practice.<sup>90</sup>
4. Adaptability: As the AI system evolves, students develop the flexibility to adapt to new technological tools, a key skill in the rapidly changing legal technology landscape.<sup>91</sup>

This approach responds to calls from legal scholars and practitioners for law schools to more actively prepare students for technological changes in the legal profession.<sup>92</sup> By integrating AI into the core learning process, rather than treating it as a separate subject, this system helps normalize AI as a tool in legal practice.<sup>93</sup>

In conclusion, the pedagogical implications of the AI-assisted quiz system extend far beyond assessment. This innovation has the potential to reshape legal education, shifting focus towards conceptual understanding, enhancing critical thinking skills, and better preparing students for the realities of modern legal practice. As legal education continues to evolve, such AI-integrated approaches may become increasingly central to preparing the next generation of legal professionals.

## VIII. Future Directions and Potential Expansions

As the AI-assisted quiz system demonstrates its value in the AI & the Practice of Law course, several avenues for expansion and further development emerge. This section explores three promising directions for the future of this innovative assessment approach.

### A. Integration with other law school courses

While initially implemented in a specialized course on AI and law, the principles and technology underlying this assessment system have broad applicability across the law school curriculum.<sup>94</sup> Potential areas for expansion include:

1. Doctrinal courses: Adapting the system to quiz students on case law, statutes, and legal principles in core subjects like Contracts, Torts, and Constitutional Law.<sup>95</sup>

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<sup>88</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 363 (2023).

<sup>89</sup> Sean Harrington, The Case for Large Language Model Optimism in Legal Research from a Law & Technology Librarian, SSRN 7 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4492121](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4492121).

<sup>90</sup> Drew Simshaw, Ethical Issues in Robo-Lawyering: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law, 70 HASTINGS L.J. 173, 197 (2018).

<sup>91</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 128 (2024).

<sup>92</sup> Richard Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* 186 (2d ed. 2017).

<sup>93</sup> Daniel Martin Katz, Artificial Intelligence and the Future of Legal Education, 90 U. DET. MERCY L. REV. 1, 16 (2012).

<sup>94</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 130 (2024).

<sup>95</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 364 (2023).

2. Legal writing and research: Using AI to provide immediate feedback on legal writing exercises and research strategies.<sup>96</sup>
3. Clinical education: Implementing AI-assisted simulations to prepare students for client interactions and case management.<sup>97</sup>

This broader integration could lead to a more cohesive and technologically advanced curriculum, better preparing students for the realities of modern legal practice.<sup>98</sup>

## **B. Potential for longitudinal assessment of student progress**

The data generated by regular AI-assisted quizzes offers unprecedented opportunities for tracking student progress over time.<sup>99</sup> This longitudinal assessment could:

1. Identify learning trends: Analyze patterns in student performance to inform curriculum design and teaching strategies.<sup>100</sup>
2. Provide personalized learning paths: Tailor coursework and additional resources to address individual student needs.<sup>101</sup>
3. Early intervention: Flag struggling students for additional support before they fall behind.<sup>102</sup>

Such data-driven approaches align with broader trends in educational analytics and personalized learning,<sup>103</sup> offering the potential for more targeted and effective legal education.

## **C. Implications for bar exam preparation and continuing legal education**

The AI-assisted quiz system has potential applications beyond law school, particularly in bar exam preparation and continuing legal education (CLE).<sup>104</sup>

For bar exam preparation:

1. Customized study plans: AI could analyze a student's performance across different subjects to create tailored study schedules.<sup>105</sup>

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<sup>96</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN 13 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>97</sup> Deborah J. Merritt, *Legal Education in the Age of Artificial Intelligence*, 88 *UMKC L. REV.* 663, 675 (2020).

<sup>98</sup> Daniel Martin Katz, *Artificial Intelligence and the Future of Legal Education*, 90 *U. DET. MERCY L. REV.* 1, 17 (2012).

<sup>99</sup> John Bliss, *Teaching Law in the Age of Generative AI*, 64 *JURIMETRICS J.* 111, 131 (2024).

<sup>100</sup> *Id.* at 132.

<sup>101</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN 14 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>102</sup> Marjan Ajevski et al., *ChatGPT and the Future of Legal Education and Practice*, 57 *LAW TCHR.* 352, 365 (2023).

<sup>103</sup> Daniel Martin Katz, *Artificial Intelligence and the Future of Legal Education*, 90 *U. DET. MERCY L. REV.* 1, 18 (2012).

<sup>104</sup> John Bliss, *Teaching Law in the Age of Generative AI*, 64 *JURIMETRICS J.* 111, 133 (2024).

<sup>105</sup> Sean A. Harrington, *The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School*, SSRN 15 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

2. Simulated exam conditions: The system could be adapted to mimic the pressure and time constraints of the bar exam.<sup>106</sup>

For continuing legal education:

1. Personalized CLE courses: Lawyers could engage with AI-powered systems to fulfill CLE requirements in a more interactive and personalized manner.<sup>107</sup>
2. Just-in-time learning: AI could provide targeted information and quizzes on specific legal topics as needed in practice.<sup>108</sup>

These applications could significantly enhance the efficiency and effectiveness of both bar preparation and ongoing professional development in the legal field.<sup>109</sup>

## IX. Conclusion

### A. Recap of the benefits and challenges of AI-assisted quizzes

The AI-assisted quiz system represents a significant innovation in legal education assessment. Its key benefits include enhanced student engagement, practical experience with AI interaction, immediate feedback, and alignment with the Socratic method tradition.<sup>110</sup> However, challenges remain, particularly in ensuring fairness and consistency in AI-generated questions, maintaining academic integrity, and balancing AI assistance with human oversight in grading.<sup>111</sup>

### B. The potential for AI to revolutionize legal education assessment

The implementation of this AI-assisted quiz system signals a broader shift in legal education towards more adaptive, personalized, and technology-integrated approaches.<sup>112</sup> By focusing on conceptual understanding rather than rote memorization, encouraging critical thinking through AI interaction, and preparing students for AI-integrated legal practice, this system aligns closely with the evolving needs of the legal profession.<sup>113</sup>

The potential for AI to revolutionize legal education assessment extends beyond a single course or institution. As these technologies continue to develop, they offer the promise of more frequent, more targeted, and more effective assessment across the entire law school

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<sup>106</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 366 (2023).

<sup>107</sup> Deborah J. Merritt, Legal Education in the Age of Artificial Intelligence, 88 UMKC L. REV. 663, 676 (2020).

<sup>108</sup> Daniel Martin Katz, Artificial Intelligence and the Future of Legal Education, 90 U. DET. MERCY L. REV. 1, 19 (2012).

<sup>109</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 134 (2024).

<sup>110</sup> Id. at 135.

<sup>111</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 367 (2023).

<sup>112</sup> Daniel Martin Katz, Artificial Intelligence and the Future of Legal Education, 90 U. DET. MERCY L. REV. 1, 20 (2012).

<sup>113</sup> Sean A. Harrington, The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School, SSRN 16 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

curriculum.<sup>114</sup> This could lead to better-prepared graduates, more efficient use of faculty time, and ultimately, improved legal services for clients.<sup>115</sup>

### C. Call for further research and implementation in law schools

While the initial results from the AI & the Practice of Law course are promising, further research and broader implementation are necessary to fully understand the impact and potential of AI-assisted assessment in legal education.<sup>116</sup> Key areas for future investigation include:

1. Long-term impact on student learning outcomes and bar passage rates.<sup>117</sup>
2. Best practices for integrating AI-assisted assessment across different types of law courses.<sup>118</sup>
3. Ethical considerations and policy implications of increased AI use in legal education.<sup>119</sup>
4. Strategies for ensuring equity and accessibility in AI-assisted educational tools.<sup>120</sup>

As AI continues to transform the legal profession, it is crucial that legal education keeps pace. Law schools have a responsibility to prepare students not just for the practice of law as it exists today, but for the rapidly evolving landscape of tomorrow.<sup>121</sup> The AI-assisted quiz system represents a step in this direction, offering a model for how technology can be leveraged to enhance, rather than replace, traditional legal pedagogy.<sup>122</sup>

In conclusion, while challenges remain, the potential benefits of AI-assisted assessment in legal education are substantial. As we continue to refine and expand these systems, we can create a more responsive, effective, and forward-looking legal education – one that prepares the next generation of lawyers not just to navigate, but to lead in an AI-integrated legal landscape.<sup>123</sup>

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<sup>114</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 136 (2024).

<sup>115</sup> Richard Susskind, Tomorrow's Lawyers: An Introduction to Your Future 187 (2d ed. 2017).

<sup>116</sup> Marjan Ajevski et al., ChatGPT and the Future of Legal Education and Practice, 57 LAW TCHR. 352, 368 (2023).

<sup>117</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 137 (2024).

<sup>118</sup> Sean A. Harrington, The Ultimate Study Partner: Using a Custom Chatbot to Optimize Student Studying During Law School, SSRN 17 (2023), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4457287](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4457287).

<sup>119</sup> Drew Simshaw, Ethical Issues in Robo-Lawyer: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law, 70 HASTINGS L.J. 173, 198 (2018).

<sup>120</sup> Deborah J. Merritt, Legal Education in the Age of Artificial Intelligence, 88 UMKC L. REV. 663, 677 (2020).

<sup>121</sup> Daniel Martin Katz, Artificial Intelligence and the Future of Legal Education, 90 U. DET. MERCY L. REV. 1, 21 (2012).

<sup>122</sup> John Bliss, Teaching Law in the Age of Generative AI, 64 JURIMETRICS J. 111, 138 (2024).

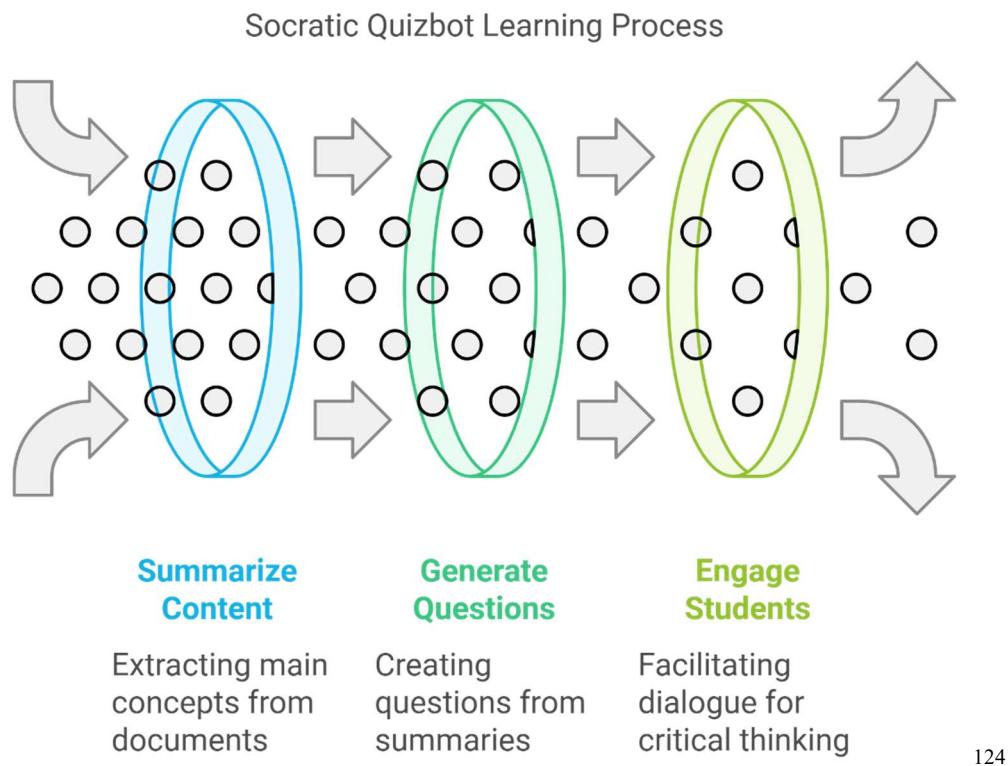
<sup>123</sup> Richard Susskind, Tomorrow's Lawyers: An Introduction to Your Future 188 (2d ed. 2017).

## Appendix A

The most common feedback that I received from the pre-print of the article was “how?” I’m going to give you two ways that you can implement the Socratic Quizbot in your classroom today if you are interested. First, I’m going to explain how it works and give some anecdotal feedback from my students who were my (very gracious and patient) guinea pigs.

### A. How it Works

The overall structure of this project isn’t that hard to recreate if you have access to either ChatGPT Teams or have worked a little bit with Github and Ollama. The basic flow of the project is this:



The bot ingests PDF documents, summarizes their main concepts, generates questions based on these summaries, and engages students in a dialogue that encourages critical thinking without directly revealing the content of the readings.

At the end of the dialogue (we did 10 minutes per quiz), students can download a transcript of the chat which can then be uploaded into Canvas or sent to the professor.

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<sup>124</sup> Diagram made with Napkin.AI if you are interested.

## B. Student Feedback, Potential Improvements, and Common Questions

### i. Student Feedback

In general, students seemed to really enjoy the process (compared to something like an essay or multiple-choice quiz – which I realize is a low bar). Based on their feedback, this was largely because of the flexibility and control they had over the process. Want the question restated in a way that suits your learning style? No problem. Need a topic broken down into smaller parts? No problem. Terrified of looking foolish in front of your peers? Non-issue.

### ii. Potential Improvements

I was fairly concerned that students would try to trick the Quizbot into giving them the answers, this ended up being basically a non-issue because the students all knew that I was going to read the transcript of their conversation. That said, there were students (who clearly didn't do the readings) who tried to game the process by flipping the questions back on the bot. This was dealt with by the grading rubric so it wasn't a "problem" (they just got lower grades). That said, I think I would have tried to make the bot a little more tenacious and myopic – acknowledging what the student is trying to do and pressing them to answer the questions. There is lots of literature<sup>125</sup> out there about jailbreaking LLMs and I should have read more guidance on how to lock my bot down and keep it focused (there are even video<sup>126</sup> games<sup>127</sup> you can play to test your jailbreaking skills). Quizbot 2.0 will hopefully see improvements in this area.

The other area is something that will probably either excite or repulse you because it has become a buzzword in academia: gamification. Adding easter eggs, making the quizzes themed around certain pop culture topics or holidays, responding to certain trigger phrases or words that the students might use, etc. all become trivially easy once you have the quizbot in place. A few lines of instruction could make the quizzing process substantially more fun for the students. I will be playing with all of these in coming semesters.

### iii. Common Questions

The most common question that I received (besides "how?") was "couldn't you use a very similar AI to grade their answers (since it had already ingested the readings)." You absolutely can, friend! I was just being ultra-cautious since this was a prototype and students' grades hung in the balance. While that would be a very attractive option to many people, I do not think that I personally will do it in the context of this class. Frankly, it didn't take that long to grade the conversations since the rubric was so simple. Also, I learned **a ton** about my students by reading the transcripts. It helped me gain a deeper understanding of their perspectives and concerns, which ultimately changed the trajectory of the course. We chose to give extra time to the philosophy of regulating new technologies and copyright because it was clear that the students

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<sup>125</sup> Matheus Valentim, et al., Hacc-Man: An Arcade Game for Jailbreaking LLMs, arXiv (2024)

<sup>126</sup> <https://glitchgame.sabrina.dev/>

<sup>127</sup> <https://gandalf.lakera.ai/baseline>

cared deeply about these issues. It also highlighted areas where I had not done a good job teaching, which allowed me to circle-back on topics when necessary. In sum, it was so useful to read the transcripts that I will not be automating grading any time soon.

“Can’t the students cheat?”

No. Because of the way the summaries are created, I almost never heard of students getting the same prompt so cheating off of someone else’s computer screen is basically a non-issue. Additionally, we did the quizzes live during the first 10 minutes of class and the students were not allowed to leave the quiz interface. An obvious way to cheat on something like this would be to feed the questions into another AI that also had the readings ingested. The live deployment of the tests in class prevented this. This would not be well-suited for online education (without substantial anti-cheating precautions). While these are possible, we chose to simply host the quiz during the first 10 minutes of class and found it not to be cumbersome or disruptive.

### **C. Option 1: No Code**

When we started the course we (through the generosity of the Donald E. Pray Law Library) were fortunate enough to have 25 seats to [ChatGPT Teams](#). Before you start yelling at me about FERPA data, please take a look at their [security profile](#). A Teams account gives you two very important things: 1) they will not train on your data and they have all of the cybersecurity clearances that you could want (SOC2, AES-256 - encrypts all data at rest and in transit, etc.) 2) You have the ability to privately share CustomGPTs among the users in your team space.

How to create a quizbot:

- Create custom instructions.
- Upload the readings into the Knowledge of the CustomGPT.
- Share with students.
- Once the quiz is complete, have the students “share” the conversation with you through OpenAI’s platform.

If you are new to CustomGPTs, I have linked to a few handy guides on creating custom instructions in the footnotes.<sup>128129</sup>

### **D. Option 2: Code**

<https://github.com/Digital-Initiative-OU-Law/SocraticQuizbot>

If subscribing to ChatGPT Teams for your entire class is too costly or if you have concerns about platform security, you can host Quizbot locally. I have put all of the code for the quizbot up on Github. It is on an MIT license so feel free to fork it and modify/improve to your heart’s desire.

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<sup>128</sup> Key Guidelines for Writing Instructions for Custom GPTs, OpenAI <https://help.openai.com/en/articles/9358033-key-guidelines-for-writing-instructions-for-custom-gpts>

<sup>129</sup> How to create a custom GPT: A beginner's guide, Zapier <https://zapier.com/blog/custom-chatgpt/>

Here's a basic view of what's going on in the background if you want to dive in and host this thing locally (OpenAI & Claude API key versions coming soon in a future update!):

### **What you need to start:**

- [Ollama](#)
- A locally downloaded model (like [Mistral7b](#), Llama 7b, etc.)
- [PostgreSQL](#) (this manages user accounts for you)
- PDF versions of your readings (put them in the /Readings/ folder)

### **Technical Infrastructure**

The system is built on a modern technology stack:

- Python-based backend with PostgreSQL database
- Streamlit web framework for the user interface
- Integration with OpenAI's GPT-4 (or alternative local LLMs)
- Robust PDF processing capabilities

### **Core Components and Architecture**

- 1. Document Processing System**
  - Handles PDF materials with support for complex legal documents
  - Preserves formatting, tables, images, and footnotes
  - Automatically processes educational materials placed in a designated readings folder
- 2. Dialogue Generation Engine**
  - Implements Socratic methodology through AI-driven questioning
  - Utilizes context-aware prompting to generate relevant follow-up questions
  - Maintains conversation coherence through sophisticated prompt engineering
- 3. Analytics and Assessment Framework**
  - Tracks student engagement on a 1-3 grade scale
  - Monitors interaction levels and response quality
  - Provides instructors with quantitative feedback on student participation
- 4. Security and Privacy Features**
  - Role-based access control system
  - Multi-user support with separate conversation tracking
  - Optional local LLM deployment for privacy-sensitive environments

### **Educational Implementation**

The system operates through several key processes:

- 1. Content Integration**
  - Instructors upload reading materials in PDF format
  - System automatically processes and indexes the content

- Maintains document structure and legal citations
2. **Interactive Learning Sessions**
    - Initiates Socratic dialogues based on uploaded materials
    - Generates contextually relevant questions
    - Adapts follow-up questions based on student responses
  3. **Assessment and Feedback**
    - Records complete conversation transcripts
    - Provides analytics on student engagement
    - Enables instructor review of student interactions

If this is all just computer science jibberish to you – don't worry. I'm building a version that can be deployed in a single click on Github codespaces or Google Collab and only requires you to enter your API key and the PDF readings. Alternatively, I'm currently in talks with [CALLI.org](https://www.calli.org/) and they may wrap a version of the Socratic Quizbot into their coming update. This would also be a no-code way for you to implement the quizbot in your law school classrooms.

If you have any questions or want to help me with this project, please don't hesitate to reach out. My goal is to have a free, open-source version of this for any law faculty who is interested in finding alternative methods of assessment in law school classrooms. That said, I am only one guy with mediocre skills and I'm sure that there are people out there who could dramatically improve the quizbot. I look forward to any input you have.