



Exploring Capable Citizenship in the Age of GenAI: A Character-Driven Approach

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ABSTRACT

As “laboratories for democracy” social studies classrooms are uniquely positioned to nurture the development of not only civic knowledge and skills, but also civic virtues that undergird effective citizenship in a rapidly evolving and interconnected world (NCSS, 2023). Recognizing the intrinsic connection between character and citizenship to “keep the wellspring of civic virtue flowing” (NCSS, 1997, p. 277), we contend that social studies teachers may leverage character education to help their students articulate and reflect on their roles as responsible and conscientious digital citizens who must navigate the presence and influence of GenAI in 21st century life. As such, the purpose of this article is threefold: (1) provide teachers a basic understanding of GenAI and rationale for integrating these technology tools into social studies learning experiences to support wider citizenship education objectives; (2) share relevant pedagogical applications of GenAI technology tools in social studies grounded character education and citizenship; and (3) address practical considerations and concerns associated with using GenAI technology tools in K-12 classroom settings in general.

KEYWORDS

AI; social studies; citizenship; character education.

INTRODUCTION

Artificial intelligence (AI) is woven into the societal fabric of 21st century, reshaping many aspects of daily life with added convenience and efficiency whether we realize it or not. From facial recognition on smartphones and voice-activated personal assistants like Apple's Siri and Amazon's Alexa, to navigation apps like Google Maps and recommendation systems on streaming platforms like Netflix and Spotify, all these tools leverage data processing algorithms that identify patterns and mimic human cognition and behavior to enhance and personalize their functionality (Iman, Arabnia, & Branchinst, 2021). Beyond personal use, AI's algorithmic applications are indubitably becoming more apparent and influential across a variety of professional fields including, healthcare, agriculture, communications, manufacturing, transportation, and even education (Akgun & Greenhow, 2022; Iman et al., 2021; Yetisensoy & Rapoport, 2023).

For several years, teachers have been using AI-powered technologies in their classrooms, including the use of adaptive learning platforms (e.g., Reading Plus, DreamBox Math, Quizlet) and social media platforms (e.g., X – formerly Twitter, Facebook, Instagram, Edmodo), to foster active and personalized learning experiences for students (Akgun & Greenhow, 2022; Klopfer et al., 2024). Recent advances in generative AI (GenAI) tools, namely the development of tools like ChatGPT, DALL-e, Midjourney, and Synthesia, have spurred mixed reactions among teachers and education scholars (Baidoo-Anu & Ansah, 2023; Berson & Berson, 2023). GenAI tools use large language model algorithms and natural language processing to instantaneously generate human-like text responses and other synthetic media in response to user-entered prompts and commands (Baidoo-Anu & Ansah, 2023; Elkhatat, et al., 2023). GenAI rapidly captured society's attention, with OpenAI's ChatGPT receiving over one million subscribers in the first week of its release in 2022 (Baidoo-Anu & Ansah, 2023). As the upsurge in GenAI technologies continues, this certainly raises questions concerning the potential impact of these technologies on teaching and learning moving forward (Akgun & Greenhow, 2022; Baidoo-Anu & Ansah, 2023; Elkhatat, et al., 2023).

Nascent education scholarship highlights several opportunities for leveraging GenAI to transform K-12 education, enhancing automaticity in many facets of teaching and learning and democratizing access to content creation tools that enable students to express their ideas in innovative ways (Akgun & Greenhow, 2022; Baidoo-Anu & Ansah, 2023; Berson & Berson, 2023; Klopfer, et al., 2024; Murphy, 2019). For some teachers, though, fear of endangering critical thinking and intellectual creativity and amplifying the risk of academic integrity being compromised outweigh the fervor of exploring its potential to enrich teaching and learning (Elkhatat, et al., 2023; Klopfer, et al., 2024). Regardless of personal perceptions and attitudes, teachers cannot ignore GenAI's rapid and pervasive influence on society. Berson & Berson (2023) concur with Akgun & Greenhow (2022) suggesting that teachers must consider building both their and their students' GenAI skills, exploring the potential algorithmic applications in their instruction to scaffold competencies for capable and ethical [digital] citizenship in the 21st

century. While certainly technical skills and competencies are important, Kuennen (2023) argues that priming students to navigate the ethical and civic challenges of GenAI also demands a moral foundation rooted in character.

As “laboratories for democracy” social studies classrooms are uniquely positioned to nurture the development of not only civic knowledge and skills, but also civic virtues that undergird effective citizenship in a rapidly evolving and interconnected world (NCSS, 2023). Recognizing the intrinsic connection between character and citizenship to “keep the wellspring of civic virtue flowing” (NCSS, 1997, p. 277), we contend that social studies teachers may leverage character education to help their students articulate and reflect on their roles as responsible and conscientious digital citizens who must navigate the presence and influence of GenAI in 21st century life. As such, the purpose of this article is threefold: (1) provide teachers a basic understanding of GenAI and rationale for integrating these technology tools into social studies learning experiences to support wider citizenship education objectives; (2) share relevant pedagogical applications of GenAI technology tools in social studies grounded character education and citizenship; and (3) address practical considerations and concerns associated with using GenAI technology tools in K-12 classroom settings in general.

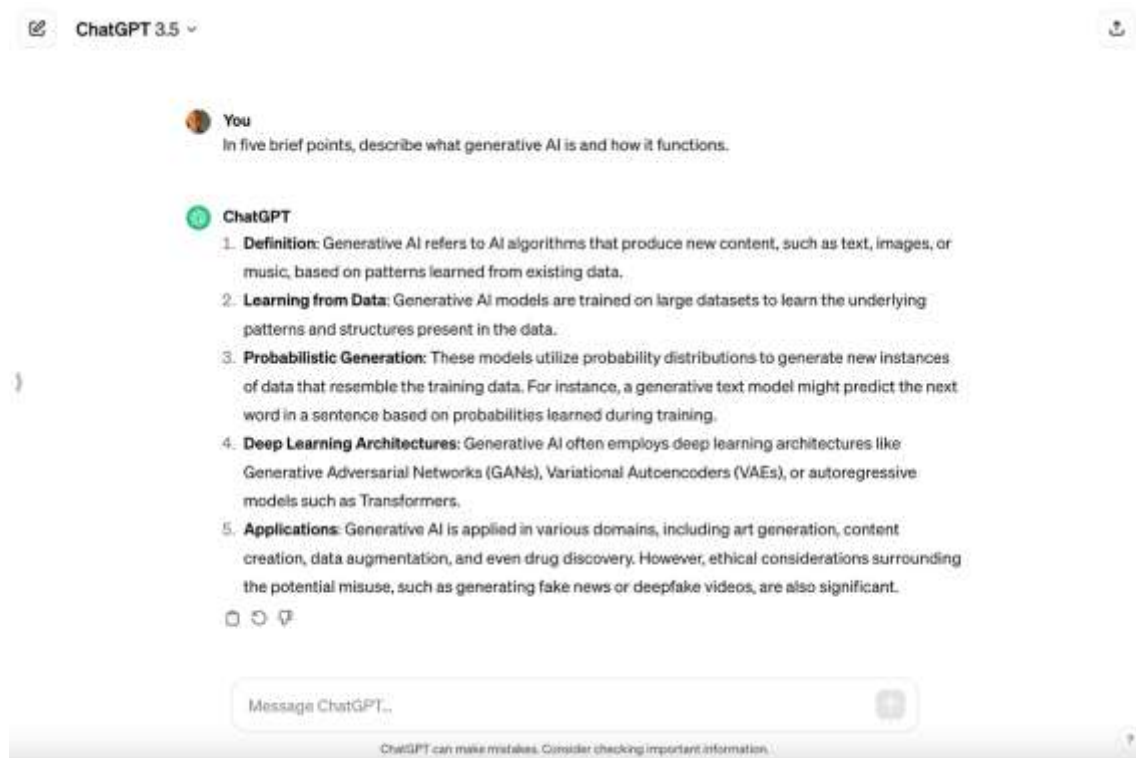
Defining Generative AI

Certainly, the complex nuances and intricacies of GenAI extends beyond the scope and purpose of this article. However, as with any technology being considered for integration into K-12 classrooms, it is important for teachers to possess a firm understanding of its functionality and how it works before engaging students in its use (Ertmer, et al., 2012; Waters & Hensley, 2020). In basic terms, GenAI technologies function by using powerful algorithms that process a user’s input (e.g., commands, prompts, or queries) and then analyze and extrapolate pre-existing data sets to generate text or synthetic media (e.g., AI-generated images, videos, and sounds) in response that is near indistinguishable from human-produced content (Baidoo-Anu & Ansah, 2023; Elkhataat, et al., 2023; Iman, Arabnia, & Branchinst, 2021). To illustrate this, Figure 1 depicts a screenshot showcasing ChatGPT generating a response to a prompt that asks for a five-point description of what generative AI is and how it functions.

While GenAI’s automaticity is impressive, these technologies are certainly not infallible (Akgun & Greenhow, 2022; Berson & Berson, 2023; Elkhataat, et al., 2023). The quality of the generated output is dependent on the quality of the data being extrapolated and synthesized by the GenAI tool’s algorithm (Akgun & Greenhow, 2022). As data processing algorithms and natural language models advance GenAI’s sophistication, these tools are certain to reshape how people learn, work, and communicate in the 21st century digital age (Akgun & Greenhow, 2022; Baidoo-Anu & Ansah, 2023; Yetisensoy & Rapoport, 2023). Thus, excluding generative AI from classrooms, particularly social studies classrooms is certainly no longer a feasible option (Berson & Berson, 2023; Yetisensoy & Rapoport, 2023).

Figure 1

Screenshot of a AI-Generated Response from ChatGPT



Social Studies, AI and Capable Citizenship in the 21st Century

Social studies' enduring commitment to citizenship education is rooted in the experimental design outlined in the 1916 Committee on Social Studies report which introduced social studies as a curriculum expression intended to prepare learners to become members of the "world community" (Dunn, 1916). For over a century now, NCSS has upheld this commitment, maintaining that the fundamental purpose of social studies is to cultivate civic competence (NCSS, 1994, 2013, 2016, 2023). In 2023, NCSS released a revised definition of social studies further echoing this commitment, defining social studies as, "the study of individuals, communities, systems, and their interactions across time and place that prepares students for local, national, and global civic life (NCSS, 2023). Social studies teachers have a responsibility to afford hands-on learning experiences that empower learners as capable citizens in the digital age, honing relevant 21st-century skills including collaboration, communication, critical thinking, and creation to navigate and meaningfully contribute to our rapidly evolving society (Hannon, 2012; Varier, et al., 2017). In fact, the National Council for the Social Studies (NCSS) affirms this asserting,

"...technology integration into student learning requires remaining sensitive not only to existing but also to emerging technologies so as to ensure that a learning environment is in place which best enables students to make rich use of those technologies as they become reasoned, deliberative, and action-oriented digital citizens (NCSS, 2022)."

As GenAI tools pervade all domains of civic life, exposure to and engagement with these technologies in social studies classrooms is imperative to prime students for capable citizenship empowered to navigate the (Akgun & Greenhow, 2022; Ali, et al., 2021; Berson & Berson, 2023; Yetienoy & Rapoport, 2023).

Extant education scholarship addressing the pedagogical potential of generative AI in augmenting teaching and learning highlights its role in supporting personalized learning, automated assessment, and student-teacher interaction (see Akgun & Greenhow, 2021). Other organizations, like AI4K12, offer curriculum resources and progression charts for building K-12 learners' conceptual understanding of generative AI. Scholarship highlighting the specific use of generative AI in social studies contexts is still nascent (Yetienoy & Rapoport, 2023). Berson and Berson (2023) describe the benefit of leveraging generative AI tools to support teaching and learning with primary sources, including transcription, summarization, translation, image captioning, and interactive visualization. While certainly these instructional strategies expand their students' repertoire 21st of century skills related to using this GenAI, Akgun & Greenhow (2022) posit that an ethics-based curriculum is necessary to prepare learners for the civic challenges and implications associated with these technologies.

Developing Capable Citizens of Character in an AI-Driven 21st Century

Advances in generative AI are outpacing society's ability to fully grasp the societal, political, and economic implications of these technologies, widening gaps in ethical standards and social norms related to what constitutes responsible use (Akgun & Greenhow 2022; Iman, et al., 2021; Kuennen, 2023; Yetisenoy & Rapoport, 2023). Character education offers a systematic framework for teachers to guide their students through processes of values exploration and moral reasoning (Berkowitz, 2011; Berkowitz & Bier, 2005), instilling universal civic virtues like responsibility, integrity, and empathy (Hoge, 2010). Like social studies, a core objective of character education is to prepare students to become responsible decision-makers and citizens in society (Hoge, 2012; Lu, 2024). With this in mind, social studies teachers might consider framing generative AI use as an extension of [digital] citizenship, leveraging character education to deepen students' understanding of their roles as active stewards in shaping its use through ethical decision-making, rather than passive consumers of these technologies.

Through purposeful social studies lessons that incorporate character-building activities Waters, Russell, and Hensley (2020), teachers may provide authentic learning experiences that incorporate generative AI and enable students to articulate and reflect on civic virtues in applied contexts. For example, students might examine scenarios where generative AI has influenced democratic processes or equity and justice or engage in activities that simulate or model AI usage for civic engagement. As a starting point, social studies teachers should facilitate a discussion with their students, defining citizenship in the digital age of the 21st century. Next, the teacher might pose the following questions, "How has digital technology impacted traditional conceptualizations of citizenship?" "What qualities does a 'good' citizen have?" These types of open-ended questions allow the teacher to guide students toward making

connections that character traits and civic virtues are just as valuable in digital contexts as they are in person.

From there, teachers can transition and introduce common generative AI tools like chatbots (e.g., ChatGPT) and image generators (e.g., DALL-e) and provide a basic understanding of their functionality and purpose without steeping too deeply into the technical computer science properties. For instance, teachers can help students understand how generative AI tools use algorithms (e.g., rules or processes to complete a task or solve a problem) to analyze large data sets and generate information, content, and other synthetic media from the user input (e.g., questions or commands). However, teachers should explain that like humans, generative AI tools can also make errors and that their data sets they pull from and analyze may contain biases and inaccuracies. Thus, generative AI outputs should be critically evaluated like any other source of information. Through these discussions, social studies teachers can promote the value of character traits such as trustworthiness and responsibility, connecting civic virtues to both the technical and societal implications of generative AI use.

Character-Building Activities & Generative AI: Practical Applications in Social Studies

The following section highlights practical applications of generative AI tools in social studies through character-building activities that provide opportunities for students exercise digital citizenship through the application and discussion of civic virtues. These activities have been teacher-tested in middle school and high school social studies classrooms.

Analyzing AI-Generated Historical Narratives

Moral Dilemma: Is it ethical to use AI-generated biographies in place of human-researched content?

GenAI Tool: Chatbots

Activity Description: In this activity, the teacher task their students with using a chatbot like Chat GPT or Gemini to generate a brief biographical summary or short story of a significant figure (e.g., President Woodrow Wilson) or event (e.g., or the establishment of the National Park Service) from the past. To begin, the teacher should model how to craft a clear and detailed prompt into the chatbot, such as: “Draft a news article about the establishment of the National Park Service from the perspective of Woodrow Wilson.” After reading the AI-generated output, the teacher may instruct their students to corroborate the AI-generated narrative to primary sources and other reputable historical accounts, challenging them to identify any potential missing context, inaccuracies, or biases. To guide students as they begin grappling with the moral dilemma, the teacher may pose the following questions:

- How do chatbots decide what to include or exclude in generated outputs?
- What assumptions did the chatbot make in its output regarding your topic?
- How can we verify historical information before accepting it as fact?
- Should we rely on generative AI tools for historical content, even if they don’t always produce accurate outputs?

- How might we adjust our input or prompts to mitigate inaccurate or bias outputs?

These questions allow students to grapple with the moral dilemma, encouraging students to consider the responsibility historians have in presenting historically accurate narratives while also learning to question information rather than accepting AI-generated content at face value. From there, the teacher may extend the discussion to help students recognize how this activity applies to their daily interactions with generative AI tools and their outputs, emphasizing the importance of civic virtues like trustworthiness and accountability when producing and consuming AI-generated information and media.

Creating AI-Generated PSAs

Moral Dilemma: Is it ethical to use generative AI media to shape public opinion?

AI Tool: Chatbots, Image Generators, Video Generators

Activity Description: For this activity, the teacher will explain the role of public service announcements (PSAs) is supporting advocacy and awareness for various social movements or causes (e.g., safety, anti-bullying, or civic engagement). The teacher may assign students to small groups and instruct them to identify a social movement or cause and use generative AI tools like image generators (e.g., DALL-E), video generators (e.g., Synthesia), and chatbots to create a PSA in the form of either a digital poster or video. For example, the students might input the following prompt into an image generator: “Create a compelling image that communicates a PSA about the importance standing up against bullying in middle school.” After each group generates their campaign advertisement, students will come together as a whole group where the teacher will then guide them in analyzing their AI-created PSAs for accuracy, potential biases, and ethical concerns. A few questions to drive the discussion might include:

- What did the generative AI tools choose to emphasize in each PSA? How do you think the tool decides what to emphasize?
- Did the AI-generated images or text include any stereotypes or misleading information?
- What responsibility do we have as digital citizens when sharing AI-generated content in public spaces or online?
- How does this activity relate to the ethical use of AI in social media, marketing, or news reporting?

These discussion questions prompt students to consider civic virtues fairness and caring emerge in media literacy, considering issues like the spread of misinformation, trust in digitally mediated content online, and the role and power of generative AI in shaping public opinion. To extend this activity, the teacher might pose the following prompt to foster reflection, “How do we balance generative AI’s creative potential with ethical responsibility as digital citizens?”

Practical Considerations

While certainly generative AI technologies have great potential as pedagogical tools to support students’ development as digital citizens, there are practical considerations that teachers should be aware of as they endeavor to use these tools in their classrooms. These include, but are not

limited to, district policies and guidelines, data privacy, and technology access (Akgun & Greenhow, 2022; Klopfer, et al., 2024). We offer the following recommendations can help teachers navigate potential barriers associated with integrating GenAI in the classroom with confidence and purpose:

1. Familiarize yourself with your school/district policies regarding the use of GenAI tools in the classroom to ensure compliance with guidelines on ethical use and data privacy. If your school or district does not have published guidelines for AI use, consult your school and district level administrators and stay informed about any existing or evolving policies before integrating GenAI tools in the classroom.
2. Communicate the purpose and parameters for using generative AI in your course syllabi and communications with parents/guardians, informing them of the generative AI tools you intend to use and the purpose for using them.
3. Craft learning activities that involve generative AI tools with clear objectives that align the use of generative AI with the learning outcomes and assessments, emphasizing social studies skills and practices like critical thinking, media literacy, and digital citizenship.
4. Establish classroom guidelines and expectations for using generative AI tools with your students, encouraging responsible and transparent use of these tools for learning activities and other assignments.
5. Seek professional development opportunities to learn about various approaches to integrating generative AI technology. If your school district does not offer specific training, consider exploring reputable online learning resources available online.

CONCLUSION

The adage, "To educate a man in mind and not in morals is to educate a menace to society," highlights the need to balance knowledge with character. As GenAI continues to transform how we access, process, and create information, this is certain to present both challenges and opportunities, and how we respond will shape the future of digital citizenship. Rather than fearing this shift, social studies should view it as a chance to guide students in using GenAI effectively as an extension of their citizenship. As laboratories for democracy, social studies classrooms offer a space to explore AI while developing moral reasoning to understand the impact of their choices. Even without technical expertise, social studies teachers can still encourage students to analyze AI-generated content, question biases, and think critically about technology's ethical dimensions. Leveraging character education as an anchor, this approach strengthens their media literacy and prepares them for active participation as capable citizens of character in a democratic society.

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