Designing for Responsible and Empowering GenAI Research, Policy, and Practice: Young Adults with Special Education and Neurodiversity Experiences Meaningfully Navigating Risks and Opportunities Toward Expansive Possibilities

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Abstract

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Generative AI (GenAI) has become what Engeström (2009) refers to as a “runaway object”, rapidly expanding across education, policy, and society in ways that are difficult to predict or control. Its growth creates both opportunities and challenges. Runaway objects demand collective responsibility and inclusive engagement in shaping how they impact society and how it is used. As a runaway object, designing responsible and empowering approaches to GenAI in education, must engage those who have been historically excluded from research and decision-making.

This dissertation focuses on young adults with special education and neurodiversity experiences, a population often excluded from educational research and decision-making about new technologies (Rice & Dunn, 2023). These individuals bring valuable perspectives shaped by navigating systems that have not always met their learning needs, and by often developing deep relationships with assistive technologies that support their communication and learning (Dieker & Zaugg, 2024; Kleekamp, 2021).

Using a design-based research (DBR) approach, this dissertation examines how young adults with special education experiences engage with GenAI. While DBR supports flexible, participant-responsive design, it can also reproduce power imbalances that limit full participation (Vakil, 2016). To address this, I adopted a collaborative co-design process, working with two to three participants from each group to make the research tools more accessible and inclusive.

Data from co-design meetings, focus groups, and interviews were collected online through Zoom and surveys through Google Forms. Following the two cycles of coding model (Saldaña, 2016), I created codebooks through an inductive and deductive coding approach, then synthesized the first-cycle codes and identified broader themes.

Data is analyzed through theoretical lenses based on Cultural Historical Activity Theory (CHAT; Engeström & Sannino 2010; 2020) explore how learning unfolds when young adults and adults work together to design responsible and powerful GenAI research, policy, and practice. CHAT allows me to examine co-design activity systems and how they are shaped by tools, rules, histories, contradictions, power dynamics, and the shared object that organizes the work. CHAT gives me the language to identify moments of tension, discussion, and expansive learning as participants reimagine their future of engagement with emerging technologies.

The first article focuses on co-designing the research process, the second on co-designing GenAI policies, and the third on co-designing GenAI practices. Together, these studies illuminate the emotional and relational dimensions of GenAI engagement. This dissertation offers both practical insights and theoretical contributions for researchers, educators, and policymakers seeking to build more responsible and empowering GenAI supported learning environments.

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Author's Note: AI Disclosure Statement

*Added as an author's note on each article's the title page (recommendation here)

This article includes support from AI to enhance accessibility and expression throughout the writing process. Throughout this process, ChatGPT (free version) became a consistent and responsive support, available at all hours and offering immediate feedback that helped me recognize the value of my academic ideas. It played a key role in expressing my thinking clearly during moments when writing felt emotionally or cognitively overwhelming, helping me stay motivated. Canva (free version), Consensus AI (free and trial versions) and Otter.ai (paid version) were also used.

- ChatGPT was used to assist with rephrasing, organizing ideas, clarifying language, smoothing transitions, and reducing repetition, while ensuring that the ideas, structure, and voice remained grounded in my own reflections and scholarly commitments. ChatGPT was not used to generate original content or conduct data analysis but served as an editing tool to make the writing process more manageable.
- ChatGPT was also used to recommend relevant academic articles to read. However, this feature was less effective than tools specifically designed for academic research. In particular, Consensus AI (using both the free and trial versions) was more helpful in identifying peer-reviewed literature and expanding my reading list.
- ChatGPT was also used to support the creation of visual abstracts accompanying each article. In addition, the "Ways to Work with Chatbots" visual used in the semi-structured interviews discussed in Article 3 was designed using Canva (free version) and then highly edited to reduce bias in the images.
- Otter.ai was used to generate transcripts of recorded interviews, focus groups, and co-design meetings. The process for its use is described in the methods section.

All written content and visuals have been reviewed and edited by the author. For questions about the extent or nature of GenAI use in this article, please contact the author at ginateso@uw.edu.

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To the Places, People, and Presences that Held Me:

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The **trees**, the **birds**, the **grass** were my most consistent support throughout this process and I am forever grateful for the connection. As a descendant of Italian & Irish immigrants living and learning on lands shaped by colonizing practices that continue to harm Indigenous peoples and the land, I honor the lands that held me throughout this process and the peoples who have cared for them since time immemorial, such as the Lenape peoples of New York, the Coast Salish nations of **Seattle**, la gente indígena de **Colombia**, and the Ais people of **Florida**. Their past, present, and future stewardship makes all of this work possible. I also recognize that both my presence and my academic work participate in ongoing colonial structures, especially with GenAI's impact on the environment, and I am committed to continuously mitigating harm and deepening my accountability.

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Thank you for every act of support, every moment of guidance, and every spark of inspiration. I will carry these gifts forward and share them with others.

This dissertation is dedicated to the past, present, and future students of the world, especially those who learn and communicate in ways schools have yet to honor.

Introduction Chapter

As a Middle School Special Education teacher in a large urban public school for ten years, I learned to see both the possibilities and the persistent barriers embedded in K–12 spaces, and I grounded my practice in the belief that student voice should drive change. This work shaped my **critical disability** lens (Baglieri, 2022; Collins & Ferri, 2016; Love & Beneke, 2021) which understands disability as socially constructed, challenges deficit narratives, and guides my commitment to designing more inclusive learning environments. As I later moved into roles as a STEM educator, professional learning facilitator, and researcher, I learned how design thinking and co-design create powerful learning opportunities. These experiences deepened my **sociocultural** lens (Bell et al., 2013; Lave & Wenger, 1991; McDermott et al., 2006), one that emphasizes the co-construction of knowledge and the ways that interest and identity shape learning. Then, during the pandemic, my work as a District Ed Tech Coach showed me how transformative technology can be when student and teacher perspectives are centered in its development and implementation. From this, I developed a **sociotechnical** lens (Pea & Cole, 2019; Ross, 2017; Vakil et al., 2016) that recognizes the reciprocal relationship between technologies and society and highlights the need for tech policies grounded in community expertise. Together, these experiences and lenses now shape my commitment to developing responsible, inclusive, and empowering GenAI practices and form the foundation of this dissertation.

Drawing on the New London Group's (1996) framework of multiliteracies, I also understand today's GenAI landscape as part of a rapidly evolving set of

meaning-making practices that demand broader, more inclusive approaches to literacy and learning. Multiliteracies highlights how communication is always multimodal, culturally situated, and shaped by power, conditions that have only intensified as GenAI reshapes how young adults write, communicate, and participate in learning. For neurodiverse and disabled students in particular, dominant expectations of traditional schooling have long constrained whose ways of expressing knowledge are recognized as valid. A multiliteracies perspective foregrounds students as designers of meaning who constantly hybridize genres, remix modalities, and draw on diverse linguistic, cultural, and embodied resources. This lens reinforces the need for educational technology practices that honor those diverse repertoires, rather than narrowing them.

Too often, the design of educational technology policies and practices is guided by narrow assumptions and exclusionary framings often shaped by ableist, racist, and classist norms (Annamma, Ferri, & Connor, 2018; Baglieri, 2022; Broderick & Leonardo, 2016; Collins & Ferri, 2016). A persistent divide exists between those who design learning environments and those expected to adapt to them; between those who set the rules for how technology should be used, and those expected to follow them; between those deemed capable, and those rendered incapable by rigid expectations. These binaries not only structure classrooms, but they also shape how educational research and technology policy are imagined and enacted. Who gets to design the research? Who decides what counts as responsible or appropriate use of generative AI? Whose voices are invited into these conversations, and whose are left out?

At the heart of many of these decisions are unspoken ideas about intelligence, value, and ability. Ideas that fail to capture the depth, creativity, and insight of learners

who have often been underestimated, pathologized, or left out of conversations about technology and educational design (Rice & Dunn, 2023) . This dissertation challenges those assumptions. By centering the voices of young adults with special education and neurodiverse experiences[1], I explore how more inclusive, participatory approaches to research and the design of technology practices can unsettle these boundaries and open space for more expansive, equitable educational futures.

Who Gets to Decide? Technology, Power, and Student Voice

This study seeks to reimagine how educational technologies, particularly generative AI (GenAI) tools like ChatGPT, are used in learning environments by centering the voices of young adults with special education and neurodiversity experiences. This research positions them as co-designers, storytellers, ethical agents, and meaning makers who are already using GenAI in creative, resistant, and deeply meaningful ways to help them navigate academic and professional barriers that they encounter everyday (Higgs & Stornaiuolo, 2024; Vakil & McKinney de Royston, 2022). While public discourse around GenAI in K-12 and university settings is often dominated by concerns about plagiarism and academic integrity, the specific concerns of misuse of GenAI tools obscures more urgent and transformative questions (Lee et al., 2024; Spector, 2023). What do students' everyday interactions with GenAI reveal about what needs to change in our educational systems? How do these technologies create new

[1] The term young adults with neurodiverse experiences is used in this dissertation to reflect the composition and context of Group A. Although most participants identify as neurodiverse, one participant does not. However, all members are engaged in an internship program specifically designed for neurodiverse young adults, shaping their shared learning environment and social experiences. Using this term recognizes the collective context of the group while respecting individual differences in identity and self-identification.

possibilities for access, identity, and expression, and where do they reinforce exclusion by perpetuating bias or placing too much emphasis on professional or academic language?

Young adults with special education and neurodiversity experiences have spent decades being told how to use technology, rarely invited to show how they already use it or want to use it to adapt, resist, and create learning opportunities (Rice & Dunn, 2023). While GenAI is often framed as the next major "disruption" in education, for some of the young adults in this study, the real disruption lies in how they're using these tools to speak on their own terms, imagine new possibilities, and navigate systems that were never designed with them in mind. This dissertation begins from the premise that many young adults with exclusionary school experiences are not only already engaging with emerging technologies, but doing so in thoughtful and purpose-driven ways. By attending to these uses, we can see how current conversations about GenAI mirror long-standing debates about educational design, revealing enduring tensions around justice, inclusion, and whose voices shape learning. In this sense, GenAI becomes not only a new tool but a reflection of the broader shifts education must make toward more just and student-centered practices.

In what follows, I review literature at the intersection of: collaborative design with young adults with special education and neurodiverse experiences (Article 1); responsible and relational approaches to educational technology (Article 2); and justice-oriented perspectives on literacy, race, and disability that reframe how young adults with special education experiences engage with GenAI as designers

of more inclusive and agentic learning practices (Article 3). This literature review brings together scholarship from learning sciences, disability studies, and educational technology to ground the dissertation's inquiry into how young adults with special education and neurodiverse experiences are thinking about the responsible use of GenAI and engaging in their own everyday interactions with GenAI, which encourages researchers, educators and school leaders to rethink how they are incorporating these tools. While this study involves young adults (ages 19–29), I often draw on youth voice literature focusing on current students in K-12 spaces. This is not to suggest that participants are still students or to diminish their maturity, but because that body of work has long argued for shifting power in educational contexts, something this research design also strives to do.

Co-design is a methodology that runs through all of the articles, in short Article 1 is about the co-design of GenAI research for historically marginalized participants, Article 2 is about the co-design of GenAI policy and Article 3 is about the co-design or GenAI practice.

Risks of GenAI

While this research presents GenAI opportunities, there are also many harms. I connect deeply with nature and her healing properties. GenAI has significant environmental costs. I remain deeply committed to staying informed and helping others create space for more responsible and sustainable energy sources as we move forward. At this moment, GenAI is widely available, in the hands of anyone with an internet connection but it was not designed for the youth mental health crisis. There are

real families living these consequences, like the Garcia, Peralta and Raine families to name a few.

Generative AI tools also raise tensions around misinformation, authorship, academic integrity, and overreliance (Steele, 2023). Students value tools that help clarify ideas or structure writing, yet they worry about dependency, reduced self-directed learning, or being judged for opting out (Karran et al., 2024). These concerns intersect with broader stigma around assistive technologies, as students with disabilities often feel pressure to avoid tools that might mark them as “different,” even when this avoidance causes emotional or cognitive strain (Ciurria, 2023).

Educators share these concerns, fearing disruption to assessment norms or critical thinking (Karan et al., 2024), while also recognizing that students with learning differences often rely on collaborative and interdependent literacy practices. Transparency in GenAI use is similarly debated among teachers, with some advocating disclosure to model ethical practices and build trust, while others view AI as an invisible assistant requiring no explanation (Fletcher et al., 2024; Langreo, 2024). These debates highlight the need for ethical guidelines that connect theory with everyday classroom practices.

LLMs also introduce subtle manipulative behaviors, or “dark patterns,” that can be difficult for users to recognize. These include exaggerated agreement, biased framing, privacy-intrusive questioning, and other deceptive interactions (Kran et al., 2025; Shi et al., 2025). Beyond conversational manipulation, generative AI can produce highly convincing misinformation that exploits cognitive biases, challenging trust and

decision-making (Park & Nan, 2025). While some models may detect or mitigate misinformation, these measures remain inconsistent and underdeveloped.

Collaborative Design With Young Adults With Exclusionary Experiences

(Article 1)

Educational research has long struggled to equitably represent the voices of those most impacted by injustice. While participatory methods like design-based research (DBR; DBR Collective, 2003) aim to center learners and communities, they can still reproduce the very power hierarchies they seek to dismantle, especially when students with special education or neurodiverse experiences are treated as participants to be studied rather than as co-creators of knowledge (Rice & Dunn, 2023; Vakil et al., 2016). These students are frequently excluded from educational technology research as research participants altogether, or included only in limited roles such as users or testers of pre-designed systems (Martens et al., 2019). For research to benefit students marginalized by schools, research must intentionally reimagine how knowledge is defined, how participation is structured, and whose ways of communicating and knowing are recognized and valued, so that we can build more inclusive, responsive, and liberatory educational futures.

To address these gaps, this dissertation begins with young adults who have special education and neurodiversity experiences, positioning them as co-designers of the research tools. Their lived expertise directly informs the study's questions, methods,

and priorities. In doing so, this work challenges ableist and racialized assumptions about intelligence, participation, and communication that often go unexamined in education research and academic settings (Annamma, Ferri & Connor, 2018). By centering co-design as a justice-oriented methodology in Article 1, this approach positions young adults as active contributors to the development of research tools and practices that shape the very study in which they and their peers participate, which contributes to a growing body of scholarship by advancing inclusive, equity-driven approaches to research.

Responsible and Relational Approaches to Educational Technology Policy (Article 2)

Similar to the ways that research is deeply entangled with questions of voice, power, and participation (discussed in Article 1), so is the use of technology in education. The use of technology in education is never neutral, it reflects the values, assumptions, and priorities of those who design, implement, and regulate it (Cuban, L., 2001; Reich, 2020; Toyama, 2015). These dynamics shape not only which tools are introduced into classrooms, but also who has the authority to define their purpose and how they are integrated into learning. Since the COVID-19 pandemic, K–12 schools have adopted a wider range of digital technologies; however, these tools have largely been used to reinforce existing instructional routines rather than disrupt them (Philip & Rochelle, 2023; Reich, 2020). Even technologies with the potential to transform learning are often positioned at the margins of classroom practice or reshaped to conform to institutional norms (Davis, 2023). As a result, educational technologies are frequently employed to substitute or augment current practices, rather than to challenge, modify, or

radically reimagine them, as defined in the SAMR model[2] which is a common framework that guides ed tech in K-12 schools (Puentedura, 2013). Meanwhile, educational research and policy often remain preoccupied with identifying “What works?” within current systems of schooling, sidelining more expansive, generative questions such as “What’s possible?,” and “Who gets to decide?” (Ross, 2017).

In the case of GenAI, policy discussions tend to treat risks and benefits as fixed, rather than as dynamic and context-dependent, shaped by students’ daily practices, school environments, and the rapidly evolving technological landscape (Adams, 2023). What these conversations often miss is the need to meaningfully engage students (or young adults) , particularly those with special education and neurodiversity experiences, as partners in shaping not just how technology is used, but the underlying values and assumptions that inform its use (Steele, 2023). As Ross (2017) argues, embracing risk and uncertainty is essential to any educational technology landscape worth reimagining. Building more just and inclusive technology-supported learning environments requires a fundamental shift: seeing students (and young adults) as designers of the policies and practices that structure their learning (Vakil & McKinney de Royston, 2022; Waitoller & Artiles, 2013). While Article 1 centers the insights of young adults with special education and neurodiverse experiences in designing research, Article 2 focuses on how their perspectives can inform more equitable, responsive approaches to educational technology integration and policy.

[2] The SAMR model refers to a well known framework of technology integration used by educators in K-12 and university settings. Dr. Ruben Puentedura’s SAMR model outlines four stages of incorporating technology into educational settings: Substitution, Augmentation, Modification, and Redefinition. Each stage reflects a deeper level of tech integration, progressing from basic improvements to significant shifts in how teaching and learning occur.

Learning from Young Adults' Everyday Use of GenAI

(Article 3)

Most importantly, the ways that young adults with special education and neurodiversity experiences use technology offer powerful insight into how learning environments might be reimagined as spaces reshaped to support students' identity, experiences and dreams for their future. Special education settings have historically been positioned as spaces that "fix" students, reinforcing a deficit-based logic rooted in the medical model of disability (Baglieri, 2022). This is especially true in self-contained classrooms, a learning environment on the continuum of services outlined by IDEA (2004), where students are often segregated from general education peers, curriculum, and expectations (Theoharis et al., 2015). Once labeled with a disability and placed in special education settings, students are frequently viewed through the lens of what they lack, rather than what their exclusion reveals about the failures of educational systems to support diverse learners (Baglieri, 2022; Collins & Ferri, 2016). The young adults at the center of Article 3, my former middle school students, attended self-contained classrooms that shaped not only how they were positioned within educational systems, but also how they've come to understand and challenge those systems through their current use of technology.

Narrow definitions of how people gather and communicate knowledge, centered on independent, print-based reading and writing shaped by White normative standards, often serve as gatekeepers to full inclusion, disproportionately marginalizing students from Black, Latinx, and linguistically diverse communities (Ferri & Connor, 2006; Garcia & Ortiz, 2013; Kleekamp, 2021; New London Group, 1996). These dynamics reflect how

racism, ableism, and linguicism are tightly intertwined in the design and assessment of learning (Annamma, Ferri & Connor, 2018). Dominant norms equate capability with White, middle-class ways of speaking, writing, and behaving, positioning Black and Brown students as “struggling” (Annamma & Handy, 2019; Broderick & Leonardo, 2016). From a Disability Studies in Education (DSE) perspective, the so-called “struggling” reader is better understood as someone whose communicative strengths are out of sync with rigid school norms for language (Collins & Ferri, 2016). A multiliteracies perspective (New London Group, 1996) makes these dynamics even more visible by showing how schools privilege a narrow, monolithic form of “correct” literacy while ignoring the rich multimodal, cultural, technological, and linguistic resources students already use to make meaning.

Rather than requiring students to conform to the myth of independent literacy, a justice-oriented approach embraces interdependence, literacies that are social, multimodal, and often entangled with technologies (Kleekamp, 2021; Love & Beneke, 2021). From a multiliteracies standpoint, meaning-making involves linguistic, visual, spatial, gestural, and digital modes that many disabled and neurodiverse students already combine fluently in their everyday communication (New London Group, 1996). As Steele (2023) argues, tools like GenAI can reduce long-standing barriers, such as writing to standardized conventions, and open space for students to explore their intellectual passions and develop more agentic relationships with language. Students in self-contained classrooms often bring rich, multimodal, and interdependent, technology supported literacies that are systematically devalued in traditional educational settings (Collins & Ferri, 2016; Kleekamp, 2021). Honoring multiliteracies reframes these

practices not as deviations from a norm but as legitimate, innovative designs of meaning (New London Group, 1996). Recognizing and building upon how students in self-contained classrooms engage with technology reframes them not as learners in need of fixing, but as designers of more expansive, responsive, and equitable educational futures. Rather than treating young people with special education experiences as passive recipients of technological interventions, this research creates space for them to position themselves as individuals already experimenting with tools like GenAI in ways that challenge traditional assumptions about literacy, capability, and inclusion. Through their everyday practices, they offer insights that reframe technology as a medium for expressing identity, pursuing goals, and reshaping the systems that too often constrain them.

In dialogue with this literature, this dissertation is focused on how young adults with special education and neurodiversity experiences are navigating the risks & opportunities of GenAI. They are showing us new, more just ways of learning and communicating, even as institutional systems remain focused on control, risk, and compliance. As Riesland (2023) reminds us, we must ask what ways of knowing are worth preserving, what new possibilities are emerging, and how we might intentionally leverage the gains of new technologies. I begin by listening to those whose experiences have too often been overlooked, and by recognizing them not as passive users of technology, but as co-creators of more just and inclusive futures for learning.

Purpose & Guiding Questions

The purpose of this study is to: (1) develop more inclusive and justice-centered research practices through collaborative design of research tools; (2) explore perspectives on GenAI policies in K-12 learning environments a way to inform more responsive GenAI policies and practices; and (3) understand how personal uses of GenAI tools shape learning, agency, and engagement in academic, professional and daily life contexts.

This study is designed to answer the following questions:

- **Overarching question**:
  How can young adults with special education and neurodiversity experiences navigate the risks & opportunities of GenAI?
- **Article 1**:
  How can co-design with young adults who have special education or neurodiversity experiences support more inclusive, accessible, and empowering educational research tools and research environments?
- **Article 2**:
  How can discussions be designed to bring together young adults who have experienced educational exclusion with educators, policy makers and technology developers to reflect on equitable and responsible GenAI policies?
- **Article 3**:
  How can the use of ChatGPT support young adults with special education experiences in navigating barriers and creating opportunities to dismantle barriers in their academic, professional, and daily lives?

Theoretical & Conceptual Framing

This dissertation offers theoretical contributions to the learning sciences by showing how the inclusion of young adults with special education and neurodiverse experiences

transforms our understanding of learning within sociotechnical systems. Cultural-Historical Activity Theory (CHAT) provides a framework throughout these papers to analyze how young adults with special education and neurodiversity experiences come together with a former teacher-reearcher to design accessible, inlcusive and empowering GenAI research, policy and practice. In Articles One and Two, I draw on second-generation activity theory to examine individual activity systems, focusing on how participants design research or discuss policy, highlighting tensions and opportunities that exist between mediating artifacts, rules, and division of labor (Engeström & Sannino, 2020). The third article incorporates third-generation activity theory to investigate interacting activity systems, exploring how participants navigate ChatGPT across multiple settings and the boundaries, contradictions, and collaborations that emerge when these systems intersect (Engeström & Sannino, 2020). Each article's theoretical framework brings in other literature to deepen the analysis. Those connections are described below.

1. Collaborative Design of Research with Young Adults as a Site of Generative Tension (Article 1)
2. Responsible Use Practices of Generative AI by Young Adults as Relational, Contextual, and Co-Created (Article 2)
3. Expansive Learning with Generative AI (Article 3)

Together, these frameworks position young adults, particularly those with neurodiverse and special education experiences, as active agents in educational and technological

change. They emphasize the productive potential of design tensions, the necessity of responsible co-creation, and the transformative learning that arises through contradiction. In what follows, I outline the theoretical foundations that shape each conceptual framework and guide this dissertation's inquiry into inclusive and just GenAI use in education.

Collaborative Design of Research with Young Adults: Sites of Generative Tension

(Article 1)

Drawing on Cultural-Historical Activity Theory (CHAT; Engeström & Sannino 2010; 2010), this article analyzes the co-design process as an activity system shaped by its tools, histories, roles, and power relations. CHAT positions learning as something that unfolds through participation in socially and historically situated activity systems, where contradictions drive change and collective meaning-making. Using this lens, I examine how the co-design group worked to create accessible and empowering research tools that explore marginalized users' engagement with GenAI tools such as ChatGPT.

Within this CHAT framing, I center design tensions (Tatar, 2007) as analytic moments that reveal the in-the-moment balancing of goals, needs, and expectations that occurs during collaborative work. These tensions are treated as productive signals that the activity system requires attention, negotiation, or reconfiguration. From a CHAT perspective, such tensions help uncover historically situated contradictions that shape how learning and participation unfold.

To understand how these contradictions and tensions interact with questions of equity at the intersection of race, ability, and language, I draw on models of power-sharing in collaborative design (Annamma, Connor, & Ferri, 2013; Community Power and Policy Partnerships Program, 2022; McKercher, 2020). These frameworks illuminate how friction, discomfort, and instability can become generative forces in participatory GenAI research, opening pathways for more inclusive, responsive, and community-centered toolmaking.

Together, these perspectives help me analyze the moments of collaboration, discomfort, contradiction, and creativity that arise as young people with special education and neurodiversity experiences work to shape GenAI research, policy, and practice. They enable me to see these moments as openings for expansive learning and for reimagining more equitable futures for GenAI in education.

Responsible Use Practices of Generative AI by Young Adults as Relational, Contextual, and Co-Created

(Article 2)

Drawing on Cultural-Historical Activity Theory (CHAT; Engeström and Sannino 2010; 2020), this article analyzes discussions of GenAI policy as a dynamic activity system, where learning, meaning-making, and policy design unfold through the interactions of participants, tools, norms, and goals. CHAT provides a lens to examine how young adults, particularly those with neurodiverse and special education experiences, engage in the collective construction of knowledge about GenAI in educational contexts. Within this activity system, discussions about GenAI Use

Scenarios provide opportunities to surface assumptions, explore diverse perspectives, and co-create more equitable policies.

This conceptual framework integrates CHAT with three lines of scholarship: (1) justice-driven inclusive education (Waitoller & Artiles, 2013), which emphasizes equity and the recognition of historically marginalized learners; (2) human-in-the-loop (HITL) approaches to AI (UNESCO, 2023), which foreground iterative, participatory interactions with AI tools; and (3) youth and young adult perspectives on AI use (Higgs & Stornaiuolo, 2024; Pea & Cole, 2019; Vakil & McKinney de Royston, 2022), which center lived experience, agency, and situated knowledge.

By framing GenAI discussions through CHAT, I position young people as active theorists, critics, and designers within the system, capable of shaping policies and practices rather than passively responding to them. Their engagement highlights the relational, contextual, and co-constructed nature of responsible GenAI use. In doing so, this study challenges deficit-based approaches to technology integration and extends HITL frameworks by demonstrating that meaningful participation of marginalized young adults is foundational to creating GenAI practices in schools that promote equity, inclusion, and social responsiveness.

Expansive Learning with Generative AI

(Article 3)

This conceptual framework for this work is grounded in Cultural-Historical Activity Theory (CHAT), particularly Engeström and Sannino's (2010) theory of expansive learning, which examines how contradictions within learning environments can catalyze transformation. Rather than treating contradictions as disruptions, CHAT sees them as generative moments through which young adults redefine the purposes, tools, and structures of learning itself. Complementing this perspective, Disability Critical Race Theory (DisCrit; Annamma, Connor, & Ferri, 2013) foregrounds how ableism and racism intersect in educational systems, shaping whose knowledge is recognized, whose practices are validated, and whose participation is constrained. Together, CHAT and DisCrit allow me to interpret moments of tension, resistance, and innovation not merely as individual acts but as socially and historically situated practices that expose inequities while opening pathways for justice-oriented transformation.

Rather than framing student use of GenAI as misconduct or "cheating," this framework interprets such acts as expressions of expansive agency and resistance to ableist, classist, and racist norms embedded in dominant educational structures. Drawing on Ciurria (2023), I examine how standardized outputs from tools like ChatGPT can obscure student voice, particularly when it conflicts with students' identities, intentions, or lived realities. Surfacing these contradictions provides a critical perspective on GenAI ethics in education, emphasizing that resistance and creativity coexist with constraint and risk, and that transformative potential lies in engaging with contradictions as sites of expansive, justice-driven learning. Taken together, Expansive Learning and DisCrit frameworks provide a lens for understanding young adults as designers, critics, and transformers of sociotechnical systems.

Design-Based Research for Justice-Centered GenAI Practices

Design-based research (DBR) is a methodological approach from the learning sciences that pursues dual aims: improving learning in real-world settings and generating theoretical insights about learning processes (Cobb et al., 2003; Sandoval & Bell, 2004). Through iterative cycles of design, enactment, analysis, and redesign, DBR develops educational interventions in close collaboration with participants, making it particularly well-suited for research in dynamic, lived contexts, like in schools systems, or in this case, everyday conversation about technology usage. DBR asks not just "Does it work?" but "How can this work best, and what might it become?". DBR is centered in future-oriented questions, which aligns with this study's inquiry into how young adults with special education and neurodiversity experiences can engage in responsible and expansive practices with GenAI.

This dissertation adopts DBR to explore how young adults design research tools and practices (as in Article 1) and personally think about and interact with ChatGPT in ways that challenge, extend, or reimagine traditional notions of learning, ethics, and authorship (in the case of Article 2 and 3).[3] I selected DBR for its capacity to support:

- The development of justice-centered learning environments that redistribute access to meaningful learning opportunities (Waitoller & Artiles, 2013);
- The centering of young adult voices through participatory and co-design methodologies (Bang & Vossoughi, 2016; Community Power & Policy Partnerships Program, 2022: McKercher, 2020) and

[3] Authorship in the context of this dissertation refers to when an author maintains ownership of what is written in collaboration with GenAI tools like ChatGPT. This term is used to reframe prevalent discourses of plagiarism and GenAI misuse in educational context.

- Responsiveness to the evolving possibilities and risks posed by emerging technologies like GenAI (Engeström, 2009; Ross, 2017).

DBR's flexibility enables methodological creativity, not only in how learning environments are designed, but also in how participant voice, agency, and expertise are recognized and supported (DBR Collective, 2003).

For young adults whose prior educational experiences, especially in special education, have often limited their participation and expression, traditional research approaches may fall short. In response, this study integrates co-design as both a method and a stance for more equitable research design (Zavala, 2016), engaging a small group of participants throughout the research process to collaboratively shape its tools, questions, and directions (Bang & Vossoughi, 2016; Community Power and Policy Partnerships Program, 2022; McKercher, 2020). Co-design, in this context, values young adult's contribution to the design of research tools and practices to drive a study on the expansive uses of ChatGPT as acts of self-expression, boundary-pushing, and meaning-making. The co-design group (discussed in Article 1) played a central role in revising research instruments, shaping facilitation strategies, and ensuring that the study remained grounded in participants' evolving insights and lived realities. This commitment to responsiveness extends across all phases of the research, with co-design supporting iterative adaptation of tools and activities in response to participants' engagement preferences. By redesigning focused group protocols, designing survey accessibility features, improving semi structured interviews and using digital tools to reduce cognitive load and support multiple modes of expression, the

design process itself modeled a form of anti-ableist responsiveness, one that treats flexibility and accommodation as core design principles.

Drawing on Sandoval and Bell's (2004) framing of DBR's responsive capacity, this study unfolds across three interconnected phases:

1. Co-design collaboration (Article 1),
2. Dialogue-based exploration of AI use and responsible tensions (Article 2), and
3. Generative engagements with ChatGPT alongside my former students (Article 3).

In each phase, methods and questions were adapted in response to participants' insights, needs, and creative contributions. Co-designed tools including, generative prompts, collaborative practices, and informal conversation formats, supported participants in making meaning in ways that felt authentic and personally relevant. As participants engaged with GenAI, they developed new practices that both extended and resisted norms from their prior educational experiences. DBR offers a lens to understand these moments as situated, future-oriented acts of transformation, grounded in relationships and driven by a collective desire for more inclusive educational possibilities.

Yet, DBR, even when paired with co-design, risks reproducing the very power imbalances it seeks to address, particularly if it fails to critically examine how race, ability, and normative expectations of participation shape research itself. As Vakil et al. (2016) remind us, all research is racialized; similarly, in an ableist society, research is shaped by assumptions about normative bodies, minds, and communication styles (Annamma, Ferri & Connor, 2018). This study takes seriously their call to move beyond

asking *whether* DBR is racialized or ableist, and instead interrogates *how* these dynamics appear, and how they might be disrupted.

In response, I worked with co-designers to craft reflexive questions that guided key design and facilitation decisions: How can research tools and practices be more accessible and inclusive to participants?; Whose voices are not being amplified in the way research is conducted?; and What ways can the focus of this research be driven by the interest of the participants with whom we are working? These questions informed ongoing decisions about tool design, facilitation, and participant roles throughout the study. Such reflexivity is especially vital when working with young adults who have experienced systemic exclusion from both schooling and research, and who may have internalized messages that their voices do not belong. By centering participant agency in how young adults engage with, reflect on, and reimagine GenAI tools like ChatGPT, this study seeks to challenge the educational and research structures that have historically constrained their imagination, expression, and power.

Conjecture Map

To guide this design-based research, I developed a conjecture map grounded in Sandoval's (2014) framework, which distinguishes between *design conjectures*, ideas about how the designed elements of a learning environment generate mediating processes, and *theoretical conjectures*, ideas about how those mediating processes produce the desired learning outcomes. This conjecture map reflects the design commitments that shaped this work. At the heart of this project is a belief that young adults with special education and neurodiversity experiences bring essential perspectives to emerging conversations about GenAI in education. However, centering

their voices requires more than simply making space to listen; it requires intentional design of environments that challenge dominant assumptions about who gets to speak, how learning is recognized, and what counts as literacy. While conjecture maps typically include lines connecting embodiment, mediating processes, and outcomes to show throughlines of influence, I have intentionally omitted them here. Including all possible lines would overwhelm the visual and reduce readability without adding substantial insight, which goes against this dissertation's commitment to accessibility. In this case, each embodiment meaningfully influences multiple mediating processes, which in turn shape multiple outcomes.

Overarching high level conjecture: Engaging young adults with special education and neurodiversity experiences in co-designed research about GenAI creates new possibilities for inclusive, justice-centered learning and policy design, both in and beyond formal education.

Table 1. Conjecture Map

Conjecture	Embodiment	Mediating Processes	Outcomes
Article 1: Collaborative design practices disrupt traditional participation methods and foster meaningful contributions from young adults with special education and neurodiversity experiences.	Iterative development of research tools and practices respond to co-designers lived experiences and participant feedback. We will recognize participants' varied experiences with emerging tech and accessibility.	Co-design team shapes the design of study tools and research activities. Co-design team improves the design of study tools and research activities based on their and their peers' engagement. Video conferencing enables virtual co-design, connecting across different locations.	Inclusive research tools evolve through young adult insight. Sustained engagement and agency develop in the research process. A broader recognition exists of marginalized young adult expertise in design and research on emerging technologies. Identified the role of video conferencing environments to support marginalized users when engaging in

			co-design.
Article 2: GenAI Use Case Scenarios create opportunities for young adults with special education and neurodiversity experiences to engage in responsible, critical dialogue about AI in education and to influence the design of more accessible, inclusive practices and policies.	GenAI scenarios will be co-developed by the research team, ChatGPT, and co-designers. We will use accessible tools (Padlet, Google Slides, Zoom reactions) for flexible participation. Facilitation practices will honor multiple modes of communication.	Young adults respond at their own pace using multiple modalities. Young adults share personal experiences with AI in school and beyond. Young adults provide feedback to improve the design of future conversations.	Young adults articulate responsible concerns and possibilities related to GenAI. Practices for inclusive tech dialogue are improved through feedback. Young adults' insights inform emerging AI policy and practice frameworks.
Article 3: Young adults with special education experiences provide unique, underexplored insights into how GenAI tools can be used to support learning, creativity, and self-advocacy, shaping future visions of inclusive technology use.	Surveys, interviews, and group discussions will be designed to elicit personal GenAI use. We will focus on creative, academic, and everyday use of tools like ChatGPT. We will center young adults' reflections on learning needs and future goals.	Young adults reflect on personal uses of GenAI to navigate post-school challenges. Young adults discuss how tools could support others in similar situations. Young adults share critical feedback on current limitations and future possibilities.	A more grounded understanding of how GenAI tools are used by marginalized young adults post-graduation. Design emerges principles for inclusive GenAI in education. Contributions inform future tech-integrated supports and learning spaces and discussions.

Research Design

Ethical Review

This study was reviewed and deemed exempt human subjects research by the University of Washington Institutional Review Board on July 3, 2024. A subsequent modification was approved on November 27, 2024. The large urban public school district where I previously taught and where my former students were enrolled provided a no-conflict letter on December 5, 2024. All participants provided informed consent to

take part in the study. Consent materials were adapted as needed to ensure accessibility and comprehension for participants with varying support needs. Pseudonyms were assigned to all participants to protect their confidentiality.

Participants

This study included three main participant groups:

- **Group A**: Seven young adults and one educator participating in a community-based technology internship program. Participants from this group engaged in this study approximately once a week over the course of eight weeks.
- **Group B**: Four of my former students from a self-contained special education classroom where I previously taught. Participants in this group engaged in this study roughly once a week over a twelve-week period.
- **Group C**: Over the course of both cohorts a total of twelve Invited guests from the fields of education, technology, and GenAI, including teachers, developers, and researchers. Participants in this group engaged in this study during a one-hour virtual focus group, followed by a 30-minute debrief session.

Each article in the dissertation draws on a different configuration of these participants.

- **Article One** focuses on two participants from Group A and three from Group B, each involved in separate co-design groups.
- **Article Two i**ncludes participants from all three groups (A, B, and C).
- **Article Three** focuses on Group B exclusively.

Table 2. Distribution of Participants Across Studies

Group A: internship Group B: former students Group C: invited leaders	**Article 1: Collaborative Design of Research**	**Article 2: Collaborative Design of Policy**	**Article 3: Collaborative Design of Practice**
Data Collected: all meetings were recorded using my UW	● Surveys ● Transcripts of	● Surveys ● Transcripts of	● Surveys ● Transcripts of

Zoom and Google Drive		Co-design sessions	Focus groups	Interviews
Group A	Adam (21 yrs)	✅	✅	
Group A	Richard (28 yrs)	✅	✅	
Group B	Diego (age 29)	✅	✅	✅
Group B	Lucia (age 29)	✅	✅	✅
Group B	Elijah (age 21)	✅	✅	✅
Group B	Angel (age 21)		✅	✅
Group A	Dylan (age 18)		✅	
Group A	Sophie (age 19)		✅	
Group A	Terrance (age 21)		✅	
Group A	Javier (age 23)		✅	
Group A	Lance (age 22)		✅	
Group C	Invited leaders		✅	

Data Collection

Data were collected entirely online using institutional tools, including Zoom for video conferencing and Google Drive for collaborative work and surveys. A multimodal approach was employed, consisting of surveys (or survey interviews), semi-structured interviews, collaborative design sessions, and focus groups. All sessions were audio-recorded. Each article in the dissertation draws on a distinct combination of data sources:

- **Article One** uses transcripts from video-recorded co-design sessions, responses to surveys focused on engagement in co-design, and various design artifacts.

- **Article Two** draws on transcripts from video-recorded focus group sessions, surveys, and scenario-based discussions that explored participants' perspectives on GenAI use and inclusion.
- **Article Three** is based on surveys, one-on-one interviews, and focus group sessions conducted with participants from Group B.

Data Analysis

This study used a multi-phase qualitative analysis process across three articles, combining inductive and deductive coding to center participant voice, explore patterns, and apply relevant theoretical frameworks. Transcripts were created using a combination of Otter.ai and carefully reviewed and revised to ensure accuracy, following a human-in-the-loop process (UNESCO, 2023). Coding cycles followed Saldaña's (2016) multi cycle coding guidance, and each article drew on specific frameworks and questions relevant to its focus. Codebooks are provided in Appendix K, Appendix N, Appendix S.

- **Article One:** Initial coding segmented transcripts into topical areas, followed by deductive first-cycle coding using co-design frameworks (e.g., knotworking, design tensions). In the second cycle, these codes were reorganized into evolving themes through iterative analysis, leading to a nuanced understanding of inclusive co-design practices.
- **Article Two:** First-cycle coding applied theoretical concepts related to justice, ethics, and human-in-the-loop design, then inductive coding revealed new themes like confidence and self-regulation. In the second cycle, codes were refined and grouped into overarching themes supported by participant quotes.
- **Article Three:** First-cycle in vivo coding centered participant language and experiences applied deductive codes from activity theory and disability justice. Second cycle coding identified themes to examine systemic tensions and patterns across transcripts and surveys.

Limitations

Given the small sample size and the speculative nature of participants' discussions about GenAI in school settings, this study does not aim to generalize findings to students currently in K–12 or to all young adults with histories of exclusion in education. This research focuses on a small group of participants, ages 19–29, who are no longer in K-12 school environments but are looking back to their K-12 experience and current experiences in universities, internships or employment. Many participants were not enrolled in educational programs when ChatGPT was introduced and therefore cannot speak directly to how these tools are currently being used in academic settings.

The study was conducted entirely online, which may have influenced the development of trust and rapport with participants, particularly those in Group A and some members of Group C, with whom I had limited prior contact. The virtual format may have constrained opportunities for informal connection and spontaneous relationship-building.

At the same time, I had long-standing, trusting relationships with Group B (former students from my self-contained special education classroom), and with some members of Group C (invited guests from education and technology fields) and the director of program Group A (interns in the technology focused internship for neurodiverse young adults) was recruited from, whom I had previously worked with in both formal and informal educational settings. They may also be viewed as a limitation, as the closeness between researcher and participants could have influenced how openly participants shared or how I interpreted their contributions. However, these pre-existing relationships

brought a depth of familiarity, shared history, and mutual understanding that enriched the co-design and discussion processes.

To help mitigate bias and enhance credibility, I engaged co-design groups in iterative feedback processes and conducted a round of member checking with most participants to ensure that their perspectives were accurately represented and that emerging interpretations resonated with their lived experiences (Appendix L). Following McKim's (2023) recommendation for a structured and meaningful approach, participants were invited to review excerpts from their transcripts and key themes drawn from the analysis. I provided guiding questions to prompt reflection on whether the interpretations accurately represented their experiences and perspectives. Some participants suggested minor revisions or added a word for clarity, while others confirmed that the interpretations aligned with what they intended to share. This process strengthened the credibility of the research by ensuring that the findings accurately reflected participants' meanings and experiences rather than my own interpretations. Also, I practiced reflexivity throughout the study by critically examining my role, assumptions, and potential influence during data collection and analysis.

Positionality and Relationality

As a way to practice reflexivity, I acknowledge and consider my identities and how that may affect this study. I come into this work as a White, middle-class, able-bodied, cisgender settler woman in the U.S., and the first generation in my immediate family to graduate from college. My educational background is marked by both privilege and complexity. Although I was placed in advanced "honors" classes in middle school, I made the personal decision to forge my mother's signature in high

school so I could leave those classes and take Spanish instead of Latin, an early act of resistance to rigid academic tracks that did not align with my interests or learning needs, which is a value that is at the heart of this project.

While I always suspected I had ADHD, I was formally diagnosed with a reading and writing disability during my Ph.D. program. I identify as dyslexic, although I did not receive special education services in school and was not publicly recognized as a student with a disability. This gives me a partial, sometimes ambiguous connection to the world of disability and special education, one grounded more in lived experience than in formal designation. I am positioned at the edges of the disability community: close enough to feel the impact of ableist systems, but also distanced by institutional privilege and delayed diagnosis. My experiences with learning challenges is something that I share with my research participants and together we often reflect on the difficulties of reading and writing. By sharing these experiences my participants have felt more comfortable discussing the obstacles they experience when learning in schools.

Professionally, I spent a decade as a special education teacher in a large urban district, entering through an alternative certification pathway. Due to deficit based expectations of self-contained classrooms, I was prepared to teach in this setting by a program that foregrounded managing behavior before giving me the tools to teach academic subjects. Like many educators in high need areas, I began teaching with minimal formal preparation, just one behavior management course, and learned to teach academics on the job. I chose to work in self-contained special education classrooms throughout my career because I saw the value of continuing to support

students to navigate systems that were not designed with them in mind, which is another value of this research.

Across my career as a teacher, my students were almost entirely Black and Brown youth[4], and I was often the only White person in the room. These racial, cultural, and institutional dynamics positioned me as both insider and outsider: trusted by many students and families because of my care and advocacy, but also a representative of a school system historically shaped by racial and ableist inequities.

Due to my experience as an educator, I had close relationships with some participants in this study. My history as a special education teacher and as someone who has actively worked to make school systems more inclusive and innovative through STEM and technology shaped how some participants perceived me. Furthermore, they were aware of my past efforts to disrupt inequitable school systems in pursuit of more inclusive practices and innovative uses of technology. Several were likely aware of my generally supportive relationship with academic, professional and personal uses of GenAI tools like ChatGPT (Appendix A). These perceptions may have influenced how participants engaged in the study, the level of trust they extended to me, and the kinds of experiences and perspectives they chose to share. I recognize that my positionality, my access to academic institutions, my relationship to disability, my racial identity, and

[4] The overrepresentation of Black and Latino boys in special education, particularly in more restrictive settings such as self-contained classrooms, has been widely documented and critiqued in educational research. Scholars have long noted how systemic biases, deficit-oriented assessments, and racialized expectations contribute to disproportionate identification and placement (Artiles, 2011). These patterns reflect broader structural inequities in education, where Black and Latino boys are often subjected to heightened surveillance, exclusionary discipline, and lowered academic expectations (Annamma et al., 2013). Such disproportionate placements raise significant concerns about access to inclusive and equitable educational opportunities.

my long-term role as both advocate and authority figure, shapes not only how I interpret the data but also how the data was produced in the first place.

Organization of the Dissertation

This dissertation is structured as a series of three core articles, framed by an introduction and concluding chapter that situate the work within broader research and policy conversations. Together, the articles reflect my commitment to collaborative design of accessible research, centering marginalized voices, and reimagining more inclusive and powerful learning environments. Each piece centers the knowledge, language, and lived experiences of young adults with special education and neurodiverse experiences. Across the series, I explore how co-design, dialogue about responsible GenAI use, and collaborative engagement with ChatGPT can generate justice-oriented insights and offer new possibilities for how education is imagined, designed, and experienced. Below is a summary of each article followed by some notes about accessibility and language.

Article 1 (co-design of research)

Shaping Research Together: Co-Design of Research for Inclusion and Empowerment With Young Adults With Special Education and Neurodiversity Experiences

This article explores how young adults with special education and neurodiversity experiences co-led the research design process, shaping questions, tools, and practices. This work embraces friction, conflicting needs and humor as essential elements of collaborative design that builds relationships, redistributes power and

reimagines how research is designed. It highlights the need for shared leadership, care-based relationships, and reflexive practices to foster truly inclusive research environments, showing how lived experience and collective sensemaking can redefine inclusion beyond accessibility checklists.

Article 2 (co-design of policy)

Amplifying the Voices of Young Adults with Special Education and Neurodiversity Experience to Shape ChatGPT Practices in Education

This article investigates how young adults with neurodiverse and special education backgrounds make sense of responsible ChatGPT use in their academic, professional, and daily lives. Using GenAI Use Case Scenario-based focus groups and justice-centered theoretical lenses, it surfaces participants' critical reflections on empowerment, emotional risk, ethical complexity, and the human labor of deciding when and how to use GenAI. Their perspectives call for inclusive policies and educational practices shaped by marginalized young adults' lived experiences, not just institutional rules, while illustrating how dialogue and critique can help reimagine rules of technology use in learning environments.

Article 3 (co-design of practice)

Reframing ChatGPT from Cheatbot to Support Tool: Voices of Four Young Adults with Special Education Experiences Challenging Institutional Narratives

This article follows my former students as they integrate ChatGPT into their educational, professional, and personal lives, drawing on it as a flexible support for

writing, self-advocacy, and confidence-building. It illustrates how through young adults' individual uses before, during, and after the study repurposed GenAI as a tool for self-expression, while also challenging institutional norms and my own assumptions as a researcher. Their practices reveal both the transformative potential and limits of GenAI, prompting new visions of learning rooted in agency, adaptability, and justice, and raising important questions about authorship, authenticity, and voice.

Each article is designed to stand on its own but also contributes to a cumulative argument: that research tools and practices along with educational technology policies and practices must be co-designed with those most often left out of their creation. This includes not only centering marginalized perspectives in learning environments, but also rethinking how research is designed.

Accessibility and Entry Points

Accessibility is embedded throughout how I write, format, and share this work. Each article includes both a plain language abstract and a visual abstract to offer multiple entry points into the ideas and findings. All documents follow clear heading structures, and all visuals include alt text to support screen reader access. I aim to use clear, direct language to make the research more broadly understandable. Ultimately, accessibility here means more than compliance, it's about ensuring that people can meaningfully engage with the ideas. This includes considering how people read, what supports their understanding, and how I intentionally build those considerations into the writing process from the outset.

Language, Labels, and Intentionality

Throughout the dissertation, I use intentional language when referring to identity. For example, I sometimes use the phrase “neurodiverse interns” as a form of identity-first language. This framing is grounded in disability justice advocacy, particularly the work of Lyric Holmans (2018) and others who have challenged deficit-based terms. However, more often I refer to this group as “young adults with neurodiverse experiences” as one of the co-design participants does not identify as neurodiverse. I do this to recognize and respect how participants self-identify.

When referring to my former students, I choose not to use the label “special education students” because it reduces their identities to a programmatic or bureaucratic designation rooted in school systems that often failed to meet their needs. Instead, I use the phrase “young adults with special education experiences” to acknowledge both their agency and the complexity of their educational journeys. This language resists deficit-based framings and affirms that their experiences in special education do not define who they are. It also emphasizes that they are no longer students, but adults whose reflections on schooling offer critical insights into how educational systems, including the use of GenAI, can be reimagined to be more just and inclusive.

While I occasionally draw on youth voice literature to ground the work, this does not suggest participants are still students or should be seen as less mature. Rather, I build on traditions in educational research that emphasize shifting power, inviting those most affected by policies and tools into the design and decision-making processes that

shape them. The participants' recent experiences navigating systems not built with their needs in mind are treated as situated expertise.

This dissertation reflects a sustained commitment to designing research with, not just about, people whose perspectives are too often excluded from conversations about emerging technologies like GenAI within academic and policy spaces. By centering the knowledge, language, and lived experiences of young adults with special education and neurodiverse experiences, I aim to challenge dominant narratives about both design research and GenAI use, particularly those that exclude marginalized voices from shaping the future of learning. Accessibility and inclusion are not treated as add-ons in this work, but as foundational design principles. They shape how I write, structure, and share this dissertation from the ground up. The language I use is intentional, meant to honor identity, resist deficit-based narratives, and reflect the full complexity of participants' experiences. This introduction opens a dissertation that is, at its core, an invitation: to listen differently, to design more justly, and to imagine educational futures rooted in care, equity, and co-authored possibility.

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Article 1: Co-design of Research

Shaping Research Together: Online Co-Design of Research With Young Adults With Special Education and Neurodiversity Experiences

Abstract

This study explores how online collaborative design (co-design) with young adults who have experiences with special education and neurodiversity can create more inclusive, responsive, and empowering research environments. Using a design-based research (DBR) approach, I worked with two co-design groups: one including a young adult and a teacher from a technology program for neurodiverse interns,[5] and another group composed of former students from my self-contained classroom when I was a teacher.[6] Using Cultural-Historical Activity Theory (Engeström, 2008; Engeström, & Sannino, 2010; 2020), I analyze how design tensions (Tatar, 2007) and contradictions emerge as the co-design group develops research tools that support more inclusive GenAI research. Grounded in intersectional, power-sharing frameworks (Community Power & Policy Partnerships, 2022; McKercher, 2020), this lens reveals how race, ability, language, and power shape participation (Annamma, Connor, & Ferri, 2013) and create openings for expansive learning and more equitable GenAI futures.

Four key insights emerged: (1) well-intended accessibility efforts can cause stress or friction when not offered as optional or co-designed with participants; (2) researcher reflexivity and the ability to repair missteps are essential in the co-design process; (3) lived experience meaningfully shapes design decisions, particularly when co-designers feel a sense of belonging with those they are designing for; and (4) relationships grounded in care, trust, and honesty enable accountability and deeper collaboration. This study argues that design must be

[5] When I use the term “neurodiverse interns” I am using identity first language, described by Lyric Holmans, a disability rights advocate (Holmans, 2018). When determining which terms to use in a certain context, it's always best to ask the individual. The participants in this study suggested a range of terminology to refer to themselves that will be honored as they are introduced in this paper and subsequent papers in this dissertation series.

[6] A self-contained classroom refers to a classroom where students with Individualized Education Plans (IEPs) are typically taught all academic subjects with the same teacher in the same room. In this case the teacher to student ratio was 12:1 (12 students to one teacher) or 12:1:1 (12 students to one teacher, with one classroom support professional). In some cases students were provided a 1:1 support paraprofessional in addition to the classroom ratio. (Spencer, 2013)

grounded in lived experiences and that equitable co-design requires intentional power-sharing and relational trust. By centering the insights, humor, and the care practices of young adults with special education or neurodiversity experiences, this article reimagines inclusive research as a co-designed, relational process that invites participants to shape its direction and meaning.

Keywords:
Co-design, digitally mediated co-design, design tensions, youth voice, special education, disability studies, relationality, belonging, justice centered design.

Plain Text Summary of the Abstract[7]

This study looks at how working together with young adults who have experience in special education or with neurodiversity can make research more inclusive, supportive, and meaningful. I worked with two groups: one included a teacher and a young adult from a technology internship for neurodiverse young adults, and the other included former students from my special education classroom when I was a teacher. We used a design-based research approach, which means we developed tools we thought would be helpful to the research process, tried them out, reflected together, and made changes over time. Four key ideas came out of this process:

1. Efforts to make things more accessible can actually feel stressful or frustrating if they aren't planned together with the people they're meant to support.
2. Researchers need to reflect on their own actions and be open to fixing things when power is not shared in the design process.
3. Lived experience shapes design in powerful ways, especially when people feel connected to the group they're designing for.
4. Honest, caring relationships build trust and create the foundation for working through challenges together.

[7] I'm dedicated to making my writing accessible by focusing on clarity in my writing. I include a plain text and graphic version of my abstract so more people can engage with the core ideas of my work. I include captions with any visuals to support understanding people with blindness or visual impairments.

This study draws from ideas about flexible teamwork (knotworking described by Engeström, 2008), the role of disagreement in design (design tensions described by Tatar 2007), and empowering collaborative design practices (powerful co-design practices discussed by McKercher, 2020 and the Community Power and Policy Partnerships Program, 2022). The study argues that design must be grounded in lived experiences and that equitable co-design requires intentional power-sharing and relational trust between researchers and co-designers. By centering the insights, humor, and care practices of these young adults, the research became a relational process that invites participants to shape its direction and meaning.

Figure 1. Article 1 Abstract Overview

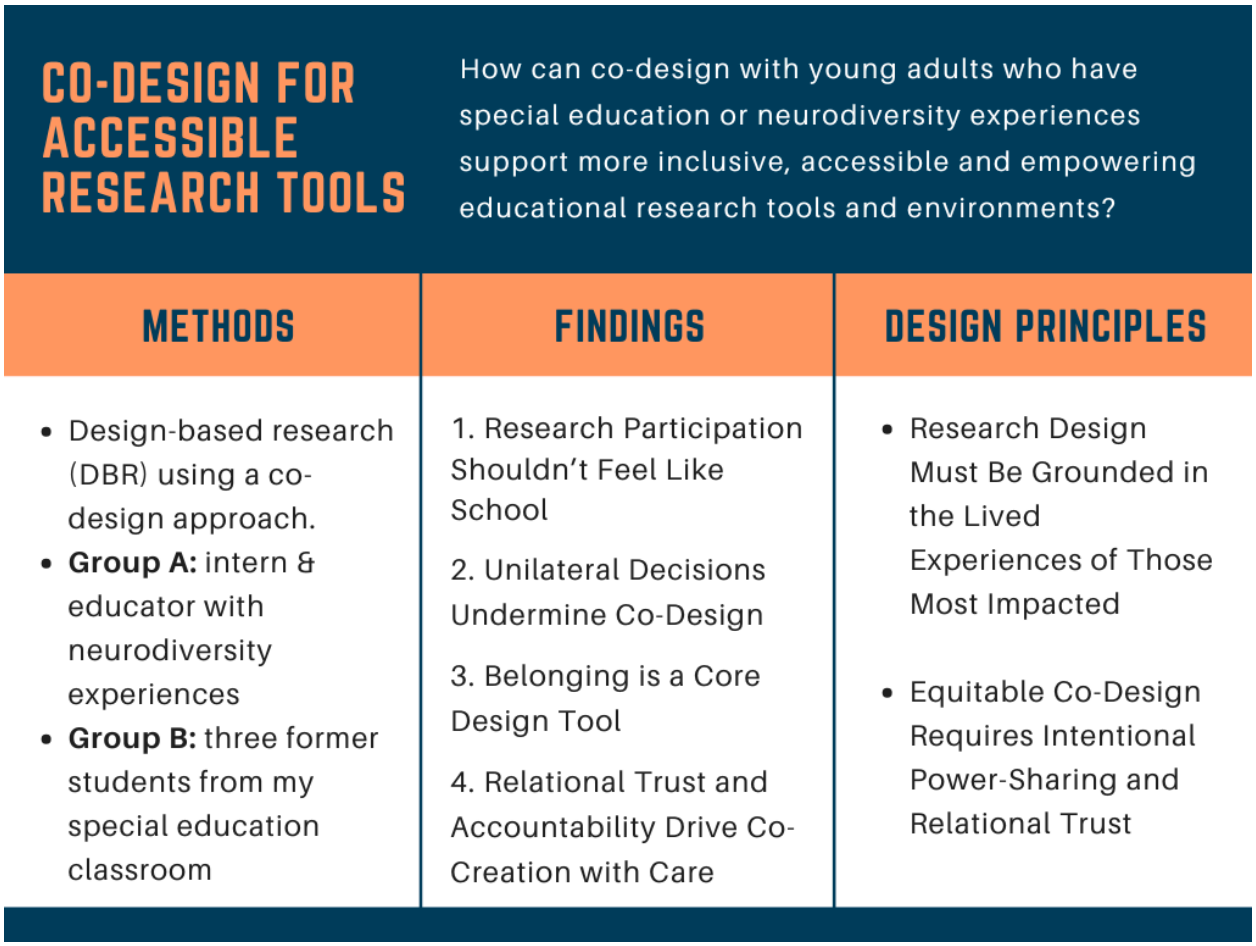

Figure 1. Article 1 Abstract Overview Caption:
A three-column infographic titled **"Co-Design for Accessible Research Tools."** The subtitle asks, *"How can co-design with young adults who have special education or neurodiversity experiences support more inclusive, accessible and empowering educational research tools and environments?"*

- **Methods column:** Lists “Design-based research (DBR) using a co-design approach.” Group A: intern and educator with neurodiversity experiences. Group B: three former students from the researcher’s special education classroom.
- **Findings column:** Research participation shouldn’t feel like school, Unilateral decisions undermine co-design, Belonging is a core design tool, Relational trust and accountability drive co-creation with care
- **Design Principles column:** Research design must be grounded in the lived experiences of those most impacted, Equitable co-design requires intentional power-sharing and relational trust

Introduction

Learners who have experienced education exclusion based on disability labels or neurodiversity experiences are best positioned to reimagine what inclusion should look like. My research centers young adults with neurodiversity and special education experiences, whose schooling often took place in environments shaped by ableism, racism and exclusionary standards of communication and engagement. These young are experts in navigating systems of education that were not built for them and essential collaborators in imagining something more inclusive, accessible and empowering.[8]

This article centers the voices of young adults with special education and neurodiversity experiences to learn with them about how to create more inclusive, accessible and empowering research tools to support the co-design of practices and policy in educational technology research, specifically focused on their experiences with generative artificial technology. . I facilitated a co-design process to design research tools with two groups of young adults with special education and neurodiversity experiencesIn both cases, their insights shaped the development of research tools, informed the structure of the co-design sessions, and surfaced design tensions (Tatar,

[8] While much of the literature drawn on in this paper advocates for inviting and leveraging youth or student voices to help design learning environments or experiences (Cook-Sathers, 2006), this research engages young adults ages (21-29). I draw on youth voice literature not to suggest that participants are still students or to diminish their maturity, but because that body of work has long argued for shifting power in educational contexts, something this research design also strives to do. I aim to build on traditions that call for transforming who gets to speak, and how research and learning spaces are structured to make that possible. I remain attentive to avoiding any framing that would reduce their agency as adults.

2007) that shed light on larger issues within research that can make practices inaccessible to marginalized young adults . As Alice Wong (2020) illuminates, inclusive systems must be built *by and with* people disabled by the social and material world, not *for* them. This research was guided by that ethos. Moments of discomfort, critique, and disagreement weren't disruptions; they were the work. They surfaced the tensions that revealed where power operated within the design of research and where it could be shared. Empowerment in co-design doesn't happen automatically, it must be intentionally designed. Who's included, what they're allowed to shape, and how power is distributed all determine whether co-design is transformative or merely symbolic.

Designing with people who have been disabled by the way research and educational environments are structured requires confronting exclusionary practices. As Benz et al. (2024) point out, traditional research practices like surveys or focus groups often reinforce the very hierarchies they aim to study (Benz et al., 2024; Vakil et al., 2016). Participation that is not grounded in shared power and real influence risks becoming another way of excluding individuals, especially those who experience interlocking systems of oppression based on their race, ability, and/or language (Annamma, Connor, & Ferri, 2013). Adding in stakeholder voice and agency requires changing the way research is done. Including the insights and preferences typically ignored or silenced by the design of learning and research environments is not just about ethics or representation, it's about improving the work itself. Instead, lived experience becomes an essential part of the design process (Paris & Alim, 2017). Those who have navigated exclusion hold critical knowledge about where systems fail to support them and how they might be redesigned.

More and more design research is including multiple perspectives and seeking to include people with disabilities in their research. However, the methods that best support that work, the "*how*", remain underdeveloped (Benz et al., 2024). Across recent co-design scholarship, researchers emphasize that meaningful participation for people with disabilities requires intentional conditions, flexible structures, and affirming design practices. Raman and French (2021) argue that participation is never guaranteed through invitation alone; facilitators must actively create the right environment, build capacities, and provide roles that allow participants to contribute conceptually, not just react to pre-formed ideas. Their work, grounded in in-person learning environments, stresses the importance of accessibility of materials, flexible timelines and roles, shared decision-making, and asset-based storytelling. Under a rights-based ethos, the framing shifts from asking whether young adults with disabilities can participate to asking what conditions are necessary for them to participate fully. This relational, situated approach recognizes participants as knowledge-holders whose contributions shape the span of the design process.

Labattaglia et al. (2023) extend this focus on flexible and participant-defined engagement through their work with college students who experience disabilities. They show how accessible co-design emerges when participants can self-manage between challenging and less challenging tasks, set their own limits, and choose how, and how much, to engage. In their study, offering multiple modes of communication and allowing participants to use any tools or materials created a more accessible environment. Sharing experiences generated empathy and, at times, the co-design activity itself became therapeutic. Their work also highlights the value of indirect approaches, such

as using word associations or personas, to help participants navigate complex or emotionally charged topics without exposing personal vulnerabilities. Regular reflection, both by participants and facilitators, deepens this accessibility by helping everyone recalibrate the process.

While Raman and French and Labattaglia et al. (2023) focus on cultivating these conditions within in-person contexts, my study expands these insights into online co-design spaces made possible through digital tools such as video conferencing and online collaborative platforms. This shift demonstrates that the core principles, choice, flexibility, multimodality, and rights-based participation, can also be enacted across physical and institutional barriers through thoughtfully designed digital environments.

Recent research conducted during the COVID-19 pandemic highlights the potential of synchronous video conferencing to support distributed co-design, while also introducing new complexities compared with co-located collaboration. Kung et al. (2021) suggest that synchronous platforms, such as video conferencing, can foster presence, connectedness, and immediate collaboration, but they require careful facilitation to maintain engagement, motivation, and accessibility, as participants can easily disengage by turning off cameras or microphones. Their work on online co-design emphasizes the importance of online techniques and digital tools to find the balance between autonomy and structure to promote creativity and responsiveness. In addition, prior work highlights how the “chat” being a multimodal, multilayered discussion spaces can support collaborative thinking and more equitable access for participants by providing public modes for mediating ideas, enabling democratic participation in the

conversation, and supporting informal community-building through playful discourse (Nash et al., 2023).

Building on this foundation, my work examines synchronous online co-design with young adults with special education or neurodiversity experiences. This research explores how video conferencing can function as a participatory environment where young adults with disabilities can actively co-construct ideas, navigate challenges, and engage meaningfully in the design process. By attending to the dynamics of facilitation, accessibility, and reflexivity, this work extends prior research on remote co-design to a population whose needs for inclusive, flexible, and empowering design practices have been understudied.

In this paper I ask: How can co-design with young adults who have special education or neurodiversity experiences support more inclusive, accessible and empowering educational research tools and environments? To explore the question, I engaged in a co-design process that treated inclusion as both a goal and a method. Following Cook-Sather's (2006) call for structural shifts in the way academic and research settings are designed, not just performative gestures of inclusion and representation, I focused on building inclusive, responsive and empowering, flexible, and responsive design spaces. This meant attending closely to my co-designers insights and preferences when it came to online communication styles, sensory needs, and forms of engagement, moving beyond extractive or adult-driven models of research toward practices that genuinely reflect the priorities and interests of those involved. This article is not just about documenting a co-design process. It's about challenging who

designs research tools and how they can become more accessible and empowering. By working alongside young people whose voices have been historically excluded, this study opens up space for new forms of knowledge, new research relationships, and new possibilities for how educational systems, and the research that informs them, might be transformed.

Co-design as a Justice Centered Approach in Special Education Research

Co-design emphasizes inclusive collaboration, ensuring that everyone involved feels heard, valued, and empowered throughout the creative process. A justice-centered approach to research design disrupts the idea that only those with formal education or social privilege have expertise to contribute to the development of research tools and practices (CPPPP, 2022). In reality, individuals engage in informal research every day, using inquiry and experimentation to improve their lives and communities. More importantly, individuals with experiences with disabling environments are experts in the challenges they face and the solutions that work best for them, especially when those individuals are young adults who have been marginalized by intersecting systems of racism and ableism (Annamma, Connor, & Ferri, 2013). Inviting young adults with special education and neurodiversity experiences into research, groups whose perspectives are often excluded (Cook-Sather, 2006; Rice & Dunn, 2023), requires a critical and justice-oriented approach. This means actively unsettling academic hierarchies and redistributing power throughout the research process

(CPPPP, 2022). McKercher (2020) offers a framework for doing that, outlining four design principles for equitable co-design: sharing power, centering relationships, building capacity, and using participatory methods. These design principles directly challenge the top-down, exclusionary practices that have long dominated design, and instead advocate for approaches that center, respect, and uplift the voices of those who have been historically marginalized.

Sharing power is foundational to justice-oriented co-design. As McKercher (2020) explains, effective co-design involves more than collaborative decision-making, it creates space where critique is welcomed and empowers progress. This idea strongly resonates with calls to center student voices in education. Cook-Sather (2006) emphasizes that authentic student voice work requires not just gathering feedback but restructuring relationships so that young people influence decision-making. While participants in this research are no longer in K–12 schools, their recent experiences in special education and with neurodiversity continue to shape their perspectives on learning, power, and participation.[9] Their insights are critical for designing more inclusive research spaces, and hopefully will lead to a collective imagining of how to improve the educational landscape for students who have special education or neurodiversity experience. True power-sharing requires acknowledging and addressing existing power imbalances so that the participation of young adults with special education

[9] Drawing on the student voice literature is not meant to infantilize participants, but rather to align this work with a tradition of research that actively rethinks power in educational settings. I remain aware of the risks of unintentionally reinforcing ableist or ageist assumptions by invoking participants' experiences with special education or neurodiversity or positioning them solely in terms of their past school experiences. Recognizing the value of their past experiences also requires attentiveness to how those experiences are framed, so as not to reproduce the very hierarchies this work seeks to challenge.

and neurodiversity experiences is genuinely equitable. This work demands ongoing reflection (Patton, 2015) and, when necessary, repair, especially when trust is broken or imbalances emerge (CPPPP, 2022). To enact these values in practice, co-design must attend not only to decision-making structures but also to the relationships that sustain decision-making, critique, and progress.

Centering relationships means recognizing that meaningful participation grows through trust, respect, and mutual care (McKercher, 2020). In co-design, relational work is not something that comes out of the work together but it's also a central component to making the work happen. Tzou et al. (2018) and Ko et al., (2025) show that strong, trust-based relationships are essential to collaborative design, especially when some participants are not familiar with the method. These relationships support open communication, role flexibility, and shared accountability—creating the conditions for equitable and responsive design practices. Relationality is especially important when working with young adults who have lived experiences with disabling environments and experiences. Benton et al. (2014), for instance, emphasize the value of trusted adult supporters who understand participants' strengths and provide scaffolding to support accessible, meaningful participation for neurodiverse young people. Relationality refers to the intentional cultivation of caring, reciprocal, and trust-based connections between researchers and participants, recognizing that relationships are foundational to equitable collaboration and co-construction of knowledge.

Similarly, the principle of community self-determination identified in the Transformative Research toolkit foregrounds participatory decision-making,

shared ownership, and accountability to the lived experiences, values, and cultural contexts of the community, ensuring research practices empower participants rather than reproduce marginalization and emphasizes that those most impacted by design and research should have a central voice in shaping the team and guiding key decisions (CPPPP, 2022). In both cases, relational trust is not just a prerequisite for collaboration, it is a mechanism for shifting power and centering the expertise of participants in ways that honor their lived experiences. These relational foundations make it possible to move into the work of capacity-building, where co-designers grow together through shared learning and reflection.

Building on this, *relational accountability* (Wilson, 2008) invites researchers and facilitators to not only build relationships, but to act in ways that are accountable to them. In co-design settings, this means being responsible to the people, communities, and histories we are in relationship with through honoring commitments, prioritizing transparency, and ensuring that participants' contributions are not only included but meaningfully shape the direction of the work. In both Indigenous and justice-informed approaches to designing research, relational trust is a mechanism for shifting power and centering participant expertise in ways that honor lived experience. These relational foundations make it possible to move into the work of capacity-building, where co-designers grow together through shared learning, responsibility, and reflection.

Building capacity means creating a space where co-designers are able to support each other in learning new ways of engaging and working together. In this model, facilitators (who are often researchers) act as learners and coaches, rather

than as experts—opening space for everyone to grow (McKercher, 2020). This involves cultivating specific mindsets such as engagement through curiosity, emotional safety through care practices, and active iteration through learning by doing. These co-design mindsets foster deeper listening and create the space for recognizing young adults as experts in their own lives and valuing perspectives that challenge dominant narratives. (McKercher, 2020). Capacity-building also involves *power-building*: deepening relationships, cultivating shared commitment, and fostering transformation through collective action (CPPPP, 2022). Another important component of capacity-building is fostering a sense of resonance and belonging. Resonance occurs when participants see their knowledge, experiences, and values reflected in the work, amplifying its relevance and impact. Resonance makes research feel “more deeply rooted” in communities, experiences and relationships, sustaining engagement and a sense of belonging (CPPPP, 2022). Ultimately, building capacity in co-design is not just about developing skills—it is about cultivating the trust, reflection, and shared power needed to create spaces where young adults feel seen, valued, and driven to shape meaningful, lasting change in the design of research. One way to foster this kind of inclusive, power-sharing environment is through participatory methods that honor diverse ways of engaging in the research process.

Enabling research environments that provide a range of ways to engage with the research such as verbally, through writing, in small group spaces or one-to-one environments, is what McKercher (2020) refers to as using participatory methods. Co-design should not feel like traditional schooling, where

there is a set way to engage with the content that is determined by the teachers and other ways of interacting that deviate from the norm are excluded or invalidated. Using participatory methods is essential for inclusion of young adults with neurodiversity or special education experiences, opening up the space for multiple means of expression (Rose & Meyer, 2006) to ensure broad and meaningful engagement. It's about slowing down, being flexible, making people feel included, allowing participants to act without permission, and participating in ways that feel right for them. Co-design must honor a range of contributions, whether through visuals, conversation, storytelling, or creative design. Creating a collaborative design space that encourages multiple means of expression and centers the lived experiences of co-designs creates an environment where diverse ways of doing and knowing are not only accepted but celebrated.

By integrating these principles: power-sharing, relational trust, capacity- and power-building, and inclusive participation, co-design becomes a space where young adults with neurodiverse and special education experiences can lead, shape, and transform research in ways that center justice, equity, and belonging. This paper shows what that can look like: a process grounded in lived experience, strengthened by relationship, and driven by the belief that more just educational futures can, and must, be co-created.

Theoretical Framework

Drawing on Cultural-Historical Activity Theory (CHAT; Engeström, 2008; Engeström, & Sannino, 2010; 2020), this article analyzes the co-design process as an activity system shaped by its tools, histories, roles, and power relations. CHAT positions

learning as something that unfolds through participation in socially and historically situated activity systems. Using this lens, I examine how the co-design group worked to create accessible and empowering research tools that explore marginalized users' engagement with GenAI tools such as ChatGPT.

Within this CHAT framing, I center design tensions (Tatar, 2007) as analytic moments that reveal the in-the-moment balancing of goals, needs, and expectations that occurs during collaborative work. These tensions are treated as productive signals that the activity system requires attention, negotiation, or reconfiguration. From a CHAT perspective, such tensions help uncover historically situated contradictions that shape how learning and participation unfold.

To understand how these contradictions and tensions interact with questions of equity at the intersection of race, ability, and language, I draw on models of power-sharing in collaborative design (Annamma, Connor, & Ferri, 2013; Community Power and Policy Partnerships Program, 2022; McKercher, 2020). These frameworks illuminate how friction, discomfort, and instability can become generative forces in participatory GenAI research, opening pathways for more inclusive, responsive, and community-centered toolmaking.

This activity system was mediated by the digital tools for collaboration such as the survey and collaboration tools of Google Drive and video conferencing tools such as Zoom. Video conferencing platforms, such as Zoom, function as both tools and spaces that structure how participants interact, collaborate, and co-construct knowledge. By framing these digital tools as a mediating artifact within CHAT, I can analyze how it shapes the negotiation of goals, the balancing of autonomy and structure, and the

emergence of design tensions in real time, particularly for participants navigating complex accessibility and equity considerations.

Together, these perspectives help me analyze the moments of collaboration, discomfort, contradiction, and creativity that arise as young people with special education and neurodiversity experiences work to shape GenAI research, policy, and practice. They enable me to see these moments as openings for expansive learning and for reimagining more equitable futures for GenAI in education.In what follows, I briefly discuss Design Tensions, Power in Co-design and Digitally Mediated Co-design in further detail.

Design Tensions

The Design Tensions Framework, developed by Tatar (2007), offers a way to understand co-design as an ongoing negotiation between competing priorities, values, and constraints. Rather than treating moments of conflict as failures or disruptions, this framework sees them as a central and generative part of collaborative design. Tatar explains that “design tensions conceptualize design not as problem solving but as goal balancing,” (p 415) where compromises must be made within a “connected web of user experience, stakeholder values, and pragmatic possibilities” (p 440). In this project, tensions often surfaced as different perspectives and lived experiences of myself as the researcher and my co-designers came together. For example, co-designers might focus on whether something feels overwhelming or confusing, while researchers might be managing concerns or pressures to gather sufficient data.

These tensions could appear at any stage, from defining problems, to designing tools, to deciding what “success” looks and feels like. The particular aspect of Tatar’s framework I focus on here is what she calls “project tensions”, places in the work that “(a) directly or indirectly fall within the designers’ scope of influence but (b) where means, ways, and values come into conflict” (p. 418). This framing helped me attend to the way decisions about research design, about what questions to prioritize during the research, how to create accessible research instruments, or when the research practices needed to change, were shaped by competing but legitimate perspectives between myself as the researcher and the co-designers. Rather than smoothing over differences in perspectives, the design of this research was driven by responding to these different perspectives.

Design tensions were treated as a resource, something that, when surfaced and worked through, could lead to more honest, responsive, and grounded decision-making. However, the theories of ~~knotworking~~ and design tensions alone do not account for the responsibility researchers, especially those working with marginalized populations, have to continually reflect on and surface how power and privilege manifest in the co-design process. This feels especially important in my own work, where I bring over a decade of experience as a teacher. That background shapes how I show up in co-design spaces—it gives me insight, but it also means I have to stay critically aware of how my authority and classroom instincts might impact the process.

Power & Empowerment in Collaborative Design

Power is one of the most important, and often overlooked, aspects of co-design. By “power,” I refer to the capacity to make decisions and also to shape norms, define values, and influence whose knowledge is recognized within educational spaces. While co-design is often framed as collaborative and inclusive, naming a process “participatory” does not erase deep-rooted power dynamics. Drawing on ideas discussed earlier in this paper, power imbalances can severely limit meaningful participation, particularly for young people whose voices have been historically marginalized in educational and research settings. As McKercher (2020) discusses, power is relational, contextual, and constantly negotiated, it does not disappear simply because people are invited to the table.

When individuals with less institutional, social, or economic capital are asked to participate in design processes without emotional safety or real influence, co-design can become performative, engaging individuals solely to “check off a box”, rather than transformative, using their input to change research processes. Silence or limited engagement is often misinterpreted or taken as agreement, when it may actually signal discomfort. In these moments, the responsibility should not fall on participants to speak up, it must fall on researchers and facilitators to create conditions of trust, to listen actively, and to make critique not only possible, but welcomed. Developing *power literacy* within a collaboration, as McKercher (2020) calls for, means asking necessary questions: Who has decision-making authority? Whose voices shape the outcomes? What risks do different people face when offering dissent?

Bringing a Disability Critical Race Theory (DisCrit) lens to co-design deepens this analysis by exposing how systems of racism and ableism operate together to define who is seen as capable, knowledgeable, or worthy of being heard. DisCrit (Annamma, Connor, & Ferri, 2013) makes visible how exclusion is actively produced at the intersections of race and disability, and challenges us to resist narrow norms of productivity, independence, and speed. Co-design grounded in justice must ask not only who speaks, but whose voices count under an expanded set of conditions. Drawing on disability studies scholars like Wong (2020), this project pushes beyond surface-level inclusion of individuals with neurodiversity or special education experiences to interrogate the deeper politics of voice. It is not simply a matter of giving young people the opportunity to share their perspectives, but of recognizing which forms of their expression are valued or which are unintentionally ignored? What kinds of contributions are welcomed into the conversation? And just as importantly, what kinds of knowledge are missing because they've been dismissed before they could even be shared? By grounding co-design in racial and disability justice, we can reframe values around access, interdependence, and care labor as central, radical practices of social transformation.

These commitments also reflect what the Community Power and Policy Partnerships Program (2022) calls *critical knowledge*, an intentional stance toward reflection, learning, and decolonization within the research process. In this view, research is not just about generating data or solutions; it is a space for building collective awareness, disrupting dominant knowledge hierarchies, and honoring

alternative ways of knowing. Drawing from the questions posed in this section, power-building and capacity-building in co-design must include this kind of critical reflection, alongside the repair and nurturing of relationships over time. Relationship repair is not just about conflict resolution, it is a political practice that deepens trust and builds the relational power necessary to sustain long-term change (CPPPP, 2022). What feels reasonable or neutral to one person might feel excluding or unsafe to another—and such feelings may shift over time and context. In this project, attention to power was built into the smallest details: how agendas were set, how feedback was handled, how silence was interpreted, and how relationships were built over time.

Digitally Mediated Co-Design

Looking at the activity of co-design through a Cultural-Historical Activity Theory (CHAT) lens highlights the central role of tools in shaping collaboration (Engeström, 2008; Engeström & Sannino, 2010, 2020). One such tool in this study was Zoom, a video conferencing platform that enabled synchronous participation across geographically distributed participants. From a CHAT perspective, we consider both the cultural and historical affordances and constraints of this tool and how it mediates participation, communication, and co-construction of meaning.

From an accessibility and neurodiversity lens, the platform offers important affordances: flexibility in location and scheduling (Begemann et al., 2024), multiple modalities for communication such as video, chat, and shared documents (Ahtinen et al., 2023), and the additional support of recordings and transcripts that can reduce load and support varied processing needs (Le Cunff et al., 2024). Video conferencing has

been widely studied as a tool that reduces common barriers to research, including distance, time, cost, and access to physical space (Mendes et al., 2022). For co-design, these affordances are particularly critical when working with participants who are less often included in research, such as young adults with neurodiverse experiences, sensory processing differences, or other accessibility needs (Le Cunff et al., 2024). Video conferencing provides participants with control over environmental factors such as lighting, sound, seating, and commuting, as well as the ability to manage sensory input, take breaks, or use assistive technologies without drawing attention. These features allow participants to engage on their own terms, turning cameras or microphones on or off, contributing via chat, accessing captions or transcripts, joining late or leaving early, and multitasking when needed.

In addition to supporting neurodiverse participants, video conferencing can reduce structural inequities for participants from marginalized communities. Accessing co-design sessions remotely can mitigate barriers related to transportation, caregiving responsibilities, financial constraints, and safety concerns, which disproportionately affect single parents, youth, and individuals from overpoliced neighborhoods (Annamma, Connor, & Ferri, 2013; Community Power and Policy Partnerships Program, 2022). These affordances intersect with participants' prior experiences of exclusion or sensory overload in traditional school and research settings, creating an environment that can support equitable participation and agency.

At the same time, Zoom imposes constraints that shape the co-design experience. For one, people need to have access to devices and reliable WiFi. For instance, one of the co-designers from Group B had to miss many meetings because he

did not have internet access. While it offers freedom and flexibility, it lacks some of the informal social interactions that can be critical to relationship-building and collaborative creativity. For example, moments of shared meals or casual conversations around food, common in in-person co-design sessions, were largely absent online. These informal interactions, observed in Group B, often supported deeper engagement, trust, and knowledge exchange, highlighting that digital mediation cannot fully replicate certain social and sensory dimensions of co-located collaboration.

At the same time, Zoom also imposes technical constraints: transcript errors and inaccessible layouts can increase cognitive load (Le Cunff et al., 2024); lag and connectivity issues can disrupt collaborative flow (Mendes et al., 2022); and the loss of non-verbal cues and informal interaction narrows opportunities for relational connection (Begemann et al., 2024). These affordances and constraints together shape how participants navigate, contribute to, and make meaning within the co-design activity.

Together, these affordances and constraints position Zoom as a powerful yet complex mediating artifact within the co-design activity system. By providing accessibility, flexibility, and multiple layers of engagement, it allows multiple marginalized participants to participate meaningfully, while also revealing gaps in relational and embodied experiences that remain challenging to reproduce in virtual spaces.

Methods

This investigation uses on a design-based research (DBR) approach (Cobb et al., 2003; Design-Based Research Collective, 2003; Sandoval & Bell,

2004)—specifically a participatory co-design methodology (Bang & Vossoughi, 2016; Community Power & Policy Partnerships Program, 2022; McKercher, 2020) to examine how young adults with prior experiences in special education settings or with neurodiversity contributed to the development of more expansive and inclusive research tools. These tools were used to explore how they and their peers understand, use, and their insights of ethical practices for using GenAI technologies in educational contexts. The DBR approach, paired with a participatory co-design process, supported iterative cycles of design, enactment, and reflection. This approach allows both the research tools and facilitation strategies to evolve responsively through ongoing dialogue with participants' ideas, critiques, and emerging priorities.

Methodologically, the analysis is a qualitative case study (Merriam & Tisdell, 2016), in which each co-design group is treated as a bounded case and analyzed independently. This fully remote study was conducted via my institution's Zoom account and involved two small co-design groups who participated both as designers of the research process and as participants in it. Each group collaborated to design a distinct research experience for one of two broader participant cohorts. This article is the first in a three-part dissertation series and focuses exclusively on the co-design meetings. Subsequent articles will explore the research sessions conducted with the broader participant groups. This study was considered exempt based on my institution's IRB review. All participants provided informed consent prior to participation. All participant names are pseudonyms.

Participants

Co-Design Group A: Tech Internship Team

The first group included myself, Gina (age 41) a former special education teacher and current researcher; a teacher, Richard (age 28) from the technology internship program for neurodiverse young adults; and one young adult intern, Adam (age 21), who was a participant in the program. All three group members identify as “White”. Both myself and the administrator of the program, Richard, identify as neurodiverse. The young adult intern, Adam, does not identify as neurodiverse but was part of an internship program offered to neurodiverse young adults, so this internship was an opportunity for him to have experiences with neurodiversity. None of the participants in this co-design group reported receiving special education services during their K-12 education. Richard was suggested by the leadership of the program to work with the co-design group and Adam was recruited from the larger group of participants in the program. After a recruitment event, he responded that he wanted to be a part of the Leadership Group when asked in a survey. Two other members shared interest in being a part of the Leader Group but were unable to attend the majority of the meetings. When they attempted to join during the last co-design meeting, I asked them to remain in the Participant Group since they missed too much of the Leader Group to participate. This decision is discussed more in Theme 2 of this article.

Group A met for a total of four one-hour co-design sessions every other week over the 8 week period, each followed by a focus group the following week with the broader group of research participants in the study. While not a part of the analysis for the paper, the focus groups explored how young adults with neurodiversity experience in the internship program were using and thinking about

ChatGPT. Adam and Richard helped me facilitate the focus group sessions that we planned together during our co-design meetings. (View Figure 2 for an overview of Group A's co-design meeting cadence).

Co-design meetings for Group A often included reviewing survey data from the focus participants, designing research tools, and discussing how the facilitation of the focus group would be divided up amongst the team. (To view a summary of each meeting's agenda view Appendix B; To see a summary of the different suggestions that were made each meeting, see Appendix C).

During the 8 week period with Group A, we designed two interactive online message boards (using Padlet) and an interactive slide deck to show visually if participants agreed or disagreed with examples of how students, teachers or school systems might use ChatGPT (using Google Slides) to guide focus group discussions about policies and practices of chatbot use in K-12 schools. (All three design artifacts can be viewed in Appendix D,Appendix E,Appendix F). The data corpus for Group A includes:

- Transcripts from video-recorded co-design sessions (n=4),
- Response from surveys focused on engagement in co-design (n=2),
- Design Artifacts: co-design meeting agenda, my ongoing reflection notes, and collaboratively designed research tools (n=6)

Figure 2. Cadence of Co-design Meeting for Group A

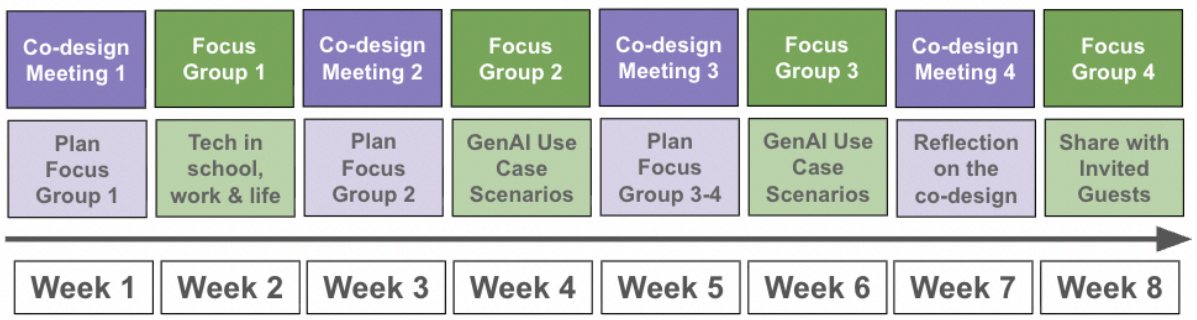

Figure 2. Cadence of Co-design Meeting for Group A Caption
Figure 2 shows a timeline of 8 weeks with co-design meeting 1 occurring in week 1 and focus group 1 occurring in week 2. Weeks 3 - 8 follow the same cadence of co-design meeting before focus group meeting. In total there were 4 co-design meetings and 4 focus group meetings.

Co-Design Group B: Former Students

Group B included myself and three of my former students from the self-contained seventh-grade special education classroom in an urban public school where I taught between 2007 and 2016. Diego (age 29), a Puerto-Rican American who identifies as Dyslexic, is , is from my first year of teaching and Lucia (age 29), Colombian American who identifies as a person with a learning disability, is from my second year of teaching. Both former students attended all co-design sessions. Elijah (age 21), an African American who identifies as a person with a learning disability, is from from my ninth year of teaching attended the first two design sessions. All of the former students received special education services during their time in middle school. Participants were recruited through their personal emails I obtained when they reached out to me throughout the years. Similar to Group A, they were given a choice to participate in the

Collaborative Design Group or the Research Group. All participants in the co-design group selected both groups in the participation survey.

The group met six times for 60–90 minutes to co-design interviews and focus group tools for themselves and their peers to engage with as a part of this research. Similar to Group A, the focus of the research tools they were designing were focused on how they were using and thinking about ChatGPT. Unlike group A, Group B did not help facilitate focus groups. (View Figure 3 for an overview of Group B's co-design meeting cadence.)

The co-design meetings often included design discussions as well as broader conversations about the use of ChatGPT in their lives: personal, academic, and professional. At times, sessions drifted to topics outside the project's scope, including salsa dancing, travel, gaming, work obstacles and caring for family. While not all of these will appear in this dissertation, they reflect the trusted, open space the group created together. (See Appendix G for the agendas of each meeting; Appendix H for an overview of different accessibility changes suggested each meeting).

During these meetings we collaborated on a list of accessibility interventions for the surveys,and the focus group interactive online message board (i.e., Padlet) that were refined during these meetings. (See Appendix I & Appendix J for examples). The data corpus for Group B includes:

- Transcripts from video-recorded co-design sessions (n=6),
- Design Artifacts: co-design meeting agenda, my ongoing reflection notes, and collaboratively designed research tools (n=5)

Figure 3. Cadence of Co-design Meeting for Group B

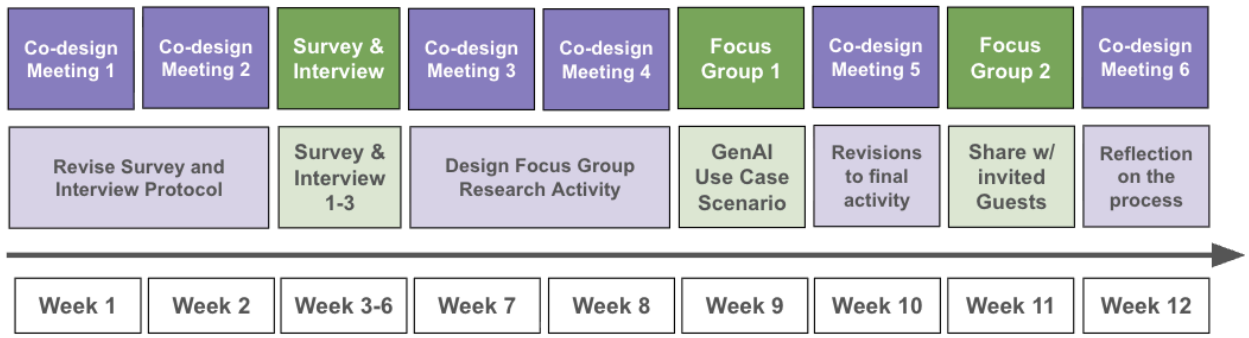

Figure 3. Cadence of Co-design Meeting for Group B Caption
Figure 3 shows a 12 week timeline. Codesign meetings 1 & 2 happen in week 1 & 2. During Weeks 3-6 research activities including surveys and 1:1 interviews occurred. Codesign meetings 3 & 4 occur in weeks 7 & 8. Focus group 1 occurs in week 9 followed by a Codesign meeting in week 10. Focus group meeting 2 occurs in week 11 followed by Codesign meeting 12.

Digital Mediation

Digital survey and collaboration tools through Google Drive and video conferencing tools through Zoom enabled the online co-design. Digital survey and collaboration tools enabled participants to engage with the research on their own time using different accessibility methods like speech to text to answer a survey. At the same time, Zoom functions as a mediating artifact that organizes how participants engage and collaborate.

Reflexivity

Since researchers come into the work with their own lived experiences, identities, preferences, and priorities, it is important to engage in reflexivity. Throughout this process, I remained attentive to how multiple roles shaped what I noticed, how I responded, and what I prioritized (Patton, 2015). In Group A, I entered as a facilitator and researcher without prior relationships with participants.

That distance gave me space to observe group dynamics with a degree of detachment and to reflect critically on how participation was unfolding. After each session, I paused to check my assumptions, surface any missed perspectives, and consider how power was operating in the virtual room. I returned regularly to reflective prompts inspired by McKercher (2020) *who has the authority to make decisions? Whose voices shape outcomes?* I also drew on disability justice concepts, inspired by the work of Wong (2020), asking: *What counts as participation? And how are different forms of contribution made possible and respected?* As I facilitated these sessions, I found myself leaning into McKercher's (2020) call for participatory power-awareness: recognizing that even well-intentioned collaboration can reinforce inequalities if we don't explicitly attend to how decisions are made, how people are invited to contribute, and how we create the conditions for trust. I learned to notice not just what was said, but what wasn't said.

Group B required a different level of reflexivity. I had taught these co-designers years ago, and our relationships had continued in informal ways over the past decade. I wasn't coming in as a neutral researcher, I was a former teacher, mentor, and in some cases, a friend. My sense is that that closeness helped build trust, but it also raised questions about our relationship adding pressure or influencing participation. I checked in with co-designers outside of sessions to make sure the work wasn't interfering with more important parts of their lives. I didn't want their care for me or our shared history to turn into pressure to participate or perform in a certain way. McKercher's (2020) emphasis on

creating the conditions for contribution, rather than simply inviting people to the table, was a useful reminder here. Having a shared history with Group B made it easier for the co-designers to be open and honest with me, but it also meant I had to be mindful. I had to pay close attention to when co-designers might have felt overwhelmed and not just push forward with the plan. Reflexivity, for me, was about being accountable to the people in the virtual room, not just to the research. That meant letting conversations wander sometimes, being okay when timelines shifted, and accepting that showing care and being flexible were just part of doing this work right.

The co-design process didn't follow a straight path. It unfolded through repeated cycles of planning, listening, designing, and revisiting. My own role shifted constantly, sometimes guiding, sometimes following, sometimes stepping back together. Holding this fluidity required me to remain reflexive not just as an individual, but in the way McKercher (2020) describes: as someone responsible for noticing how power moves, how care is practiced, and how participation is scaffolded throughout the process.

Data Analysis

This analysis was guided by the design-based research question: *How can co-design with young adults who have special education or neurodiversity experiences support more inclusive and empowering research tools and environments?* I approached analysis as a layered, ongoing process, drawing on Saldaña's (2016) guidance on coding cycles and Patton's (2015) emphasis on

reflexivity and meaning-making inspired by the thorough analysis detailed in Beneke and colleagues (2022). My analytical process proceeded as follows.

- **Step 1: Transcription**

  I used an AI tool (Otter.ai) to generate rough transcripts from the Zoom recordings. Then, I went back and listened to each session several times, editing the transcript and adding speaker names to keep track of who was talking. This helped me stay close to the data from the start and made sure each person's voice was clearly represented.

- **Step 2: Topical segments**

  My first round of analysis consisted of segmenting the transcripts into topics to get a feel for what was happening and where key moments of collaboration, disagreement, or insight were taking place. This helped me get organized before jumping into more detailed coding.

- **Step 3: First Cycle Coding**

  Next, I moved into first-cycle coding (Saldaña, 2016), using a mix of concepts from the literature, deductive coding.

- **Step 4: Second Cycle Coding**

  Once I had a full set of coded transcripts, I did what Saldaña (2016) describes as second-cycle coding: revisiting each moment to pull out the high-level topics and organizing them into broader themes. Some themes I had been using started to shift or blend together, while new ones started to take shape. I didn't treat these themes as fixed categories, but let them

grow and evolve as I moved through the data and started seeing connections within and between the two co-design groups.

- **Step 5: Solidifying Themes**

  Eventually, I landed on a set of themes that felt true to the data and responsive to the research question. After I had a set of themes I went back to the coded topics that were pulled out and reorganized them under the themes again. This allowed me to see what new themes needed to emerge, which could be expanded or combined as well as search for non-examples of each theme to help shape the complexity and reframing of the themes.

- **Step 6: Identifying Essential Data to Showcase Themes**

  Finally I selected data from the transcripts, survey and artifacts that best supported each theme. This wasn't about finding the "perfect" quote, but about identifying representative moments that could bring readers into the nuance of the co-design process and the essence of the themes (Saldaña, 2016).

- **Step 7:** Member checking was conducted 8 months after data collection ended for Group A (Adam and Richard) and 5 months after data collection ended for Group B (Lucia, Diego and Elijah). Following McKim's (2023) recommendation for a structured and meaningful approach, participants were invited to review excerpts from their transcripts and key themes drawn from the analysis. I provided guiding questions to prompt reflection on whether the interpretations accurately represented their experiences and

perspectives. Some participants suggested minor revisions or added a word for clarity, while others confirmed that the interpretations aligned with what they intended to share. This process strengthened the credibility of the research by ensuring that the findings accurately reflected participants' meanings and experiences rather than my own interpretations. (Appendix L)

Findings

In what follows, I share four themes that highlight what made this co-design process so powerful. **Themes 1 and 2** center the experiences of Group A, including an educator and a young adult participant in an internship program designed for neurodiverse scholars. **Themes 3 and 4** focus on Group B, my former students with special education experiences. Together these themes show that inclusion in research is not merely about accessibility, it requires flexible coordination, room for critique, relational accountability and co-designers who share lived experiences with the community we are designing for.

Theme One: Designing with, Not for—When Participation Feels Like School

One of the foundational insights from the co-design sessions was how vital it is to create with, not for, people whose lived experiences reflect the realities of those most impacted by the systems we're trying to improve. This shows up in sometimes messy moments, especially around how I tried to gather participant

perspectives between focus group sessions to help better design subsequent meetings with research participants.

With only one hour per focus group session with the research group that Group A was designing for, I introduced two types of surveys: a brief three-question reflection at the end of each session to check in on how the session landed and a longer, content-based survey sent between sessions to explore participants uses and perspective of ChatGPT. These tools were meant to support accessibility, offering multiple ways to process and contribute outside the intensity of our live meetings and an opportunity to design focus group sessions with their contributions in mind. They were also a practical solution to a time crunch. I had worked this approach out with the program director but hadn't run it by the co-designers beforehand. I assumed they'd appreciate the flexibility, but the approach unintentionally placed more pressure on them.

This tension surfaced during our second co-design meeting. What I had imagined as thoughtful scaffolding, meant to support time and space needed for processing between sessions, was experienced by both co-designers as an added burden. At the start of the meeting, Richard who was an administrator of the program and also a co-designer of this research, brought this up directly, explaining how difficult it had been to follow up with participants to complete the in-between meeting surveys. Richard shared,

> There's one thing that I wanted to mention, though, which was, I think that we should try to do the surveys in the sessions as much as possible,

because otherwise it's kind of hard to track everyone down and try to make sure they fill out the surveys.

While this moment was a signal that there was some rising tension pertaining to the research design, I pushed to preserve the original study plan, suggesting that the surveys could be completed during internship time but outside of our co-design sessions. I was trying to protect our focus group discussion time and ensure we had the information we needed to plan the next session in a way that responded to participants' experiences and interests. However, at that moment I missed the opportunity to share power with one of my co-designers and see his lived experience as valid (McKercher, 2020; CPPP, 2022). Richard and I went back and forth for a bit, me emphasizing the structure of the study, and him continuing to point out the logistical challenges of coordinating with participants and their teachers.

Our conversation paused when the other co-designer, Adam, an intern in the program, joined the Zoom room. We moved into the day's agenda, but later returned to the topic of the surveys. I reiterated the idea of keeping the second longer survey separate from the focus group session itself, again thinking this would add to the accessibility and help us design more responsive focus group sessions for the research participants, despite Richard's pushback. We had been talking about the activity, and I was ready to move on again, when I saw what Adam added to the Zoom chat, "My concern is that the homework is complicated." This sparked a deeper conversation on how the research activity was landing and also shows an affordance of the video conferencing tools that

provide participants with another outlet to share ideas that might be easily overlooked in co-design. After seeing his message in the chat, I asked Adam to elaborate and he said, “I hope you don't take this personal… because if this research feels like homework and is mandatory, I might get worried if I don’t do it on time.” That moment shifted something for me. Adam wasn’t just talking about finding outside time to take the survey, he was naming the emotional or social pressure of taking the survey on his own time. Referring to the survey as “homework” introduced the logic of school: a place where you're judged on your productivity, where deadlines define your value and where tasks come with the weight of expectation, and as McKercher (2020) highlights, co-design should not feel like school.

By calling the research task “homework,” Adam surfaced the unspoken stress behind the ask. It reminded me that even simple requests can carry complex emotional responses, especially for young adults who spent years navigating systems that misunderstood or devalued their ways of learning or whose educational experiences were shaped by compliance and control (Annamma, 2019; Benz et al., 2024). The word “homework” brought past school experiences into the room, where homework meant pressure or judgment. This also brought me back to my time in the classroom as a teacher and reminded me of my student’s negative opinions of homework. For young adults who may have had difficult or even painful experiences in school, especially those with special education labels, the idea of being assigned a task in their “free time” had the potential to reproduce the very dynamics I was trying to work against. This

interaction surfaced a core design tension (Tatar, 2007): the friction between my intended support and how it was actually experienced. I had hoped to ease participation, design intentional focus groups, and keep the research moving—but by not involving co-designers in how participation itself would work, I had unintentionally reproduced the hierarchical structures we were trying to resist. I eventually realized that the concerns of both Adam and Richard presented an opportunity for me to *build capacity* within the design space and cultivate the trust, reflection, and shared power needed to create environments where participants feel seen, valued, and driven to shape meaningful, lasting change in the design of research (McKercher, 2020).

Through the conversation that continued, the co-designers helped reshape how we gathered data in a way that reflected their needs more directly. Adam and Richard proposed that we complete the survey in the form of a Padlet (a shared visual brainstorming space available online) *during* our live sessions, rather than as a take-home task. Adam noted, “[Answering these questions during] the [internship] time would be much more convenient... no one will have to worry about the homework in their spare time.” This shift transformed the emotional tone of the task, from a solitary burden into a shared, low-pressure communal activity, highlighting the importance of relational accountability where responsibility to one another, rather than adherence to rigid research procedures, shaped our approach (Wilson, 2008). By honoring the co-designers’ preferences, the research process became more collaborative, respectful, and responsive.

This dialogue was a turning point. I had initially framed the survey as an accessibility intervention, offering participants time and space to reflect before our focus groups. I saw it as a way to honor different processing styles and to inform the session design. However, I presented it as a fixed part of the process rather than a choice, assuming it would support the group without actually consulting them. While designing with accessibility in mind is critical (Rose & Meyer, 2006), accessibility done *for* rather than *with* participants' agency can reinforce top-down dynamics, even when well-intentioned. When Adam and Richard pushed back,suggesting we complete the survey together during our live sessions, they weren't just giving feedback; they were co-designing the structure of participation itself. Their input reminded me that accessibility isn't about offering one "better" way to engage, but about co-creating multiple pathways that reflect participants' real needs and contexts (McKercher, 2020).

This moment represents a design tension (Tatar, 2007): a conflict between my assumptions about what would provide supportive structure and the participants' actual experience of that structure. The change they proposed, shifting the survey into the live session, surfaced a deeper contradiction within the activity system (Engeström & Sannino, 2010, 2020): the tension between my teacher–researcher ways of organizing work and their long histories navigating school systems where tasks often feel evaluative, high-stakes, or disconnected from their needs. Viewed through a CHAT lens, this exchange illustrates how our co-design activity was mediated by the activity systems each of us brought into the space. I entered with the habits and mindsets of a teacher activity system, while participants entered with the embodied expectations of a

student activity system shaped by years of exclusion, surveillance, and inequitable learning environments.

In this case, the nature of the activity and the technological affordances enabled a larger contradiction to surface: co-design research with participants who have been marginalized by schooling systems must be aware of how research activities can replicate the barriers and power dynamics of those same systems. When research tasks begin to feel like schoolwork, the activity system reproduces the very conditions that limited participants' agency in the first place. This contradiction points to a broader challenge for equity-driven co-design: creating structures that support participation without reinscribing the histories of exclusion participants carry with them. By surfacing and negotiating this contradiction together, the co-design activity system adjusted, redistributing power, expanding the ways participation could occur, and creating more generative conditions for collective toolmaking.

Theme Two: Learning Out Loud—When One Decision Undermines Co-Design

While theme one illustrates how co-designer pushback can help shape the direction of shared work, I, as the researcher, cannot always expect the co-designers to articulate when power is being unequally distributed in the process. Researchers are responsible for engaging reflexively to recognize and address moments of unspoken power imbalance (Patton, 2015), what McKercher (2020) calls power literacy and the Community Power and Policy Partnerships Program (2022) refers to as critical knowledge: an intentional stance toward reflection, learning, and decolonization within the research process.

During the final co-design session with Group A, I made the decision not to admit two individuals who entered the Zoom room but had either participated inconsistently or not at all in prior sessions. In the moment, I justified this to myself as a way to protect the momentum and social cohesion the group had built. But I didn't pause to ask the co-designers how they felt about new members joining or whether they wanted to revisit group norms together. I acted unilaterally, disrupting the shared ownership I had intended to cultivate (McKercher, 2020). This realization emerged through my ongoing practice of reflexivity as a way to develop critical knowledge or power literacy, including the routine post-meeting question: *Who contributed to how decisions were made?* (McKercher, 2020; Patton, 2015; CPPP, 2022). It was a reminder that participation isn't just about shared tasks—it's about shared authority. To better understand the impact of this decision, I followed up with co-designer Adam in an interview and Richard via survey. Richard's reflections are not included here, but they echoed Adam's response.

When we discussed the decision not to admit new members during the final co-design session, Adam said plainly, "Yes, that made me feel like I was not part of the decision making, I wish we were informed of the situation and had an opportunity to respond." His feedback reminded me that even well-intentioned decisions can cause harm when they bypass the participatory structures we've worked to build. When I asked what he would have advised, Adam said, "I would have said that yes, they can join… I think it would make it better. We would have more people to be included in the work that we are doing and more perspectives." From Adam's perspective, expanding the group would have strengthened the

work, an idea I hadn't considered until I asked for his thoughts after the fact. This moment underscored that shared power in co-design must be continually negotiated and re-negotiated (McKercher, 2020).

When I made this decision without involving the co-designers, I unintentionally reinforced the very hierarchical dynamics I was trying to disrupt. This moment surfaced a key design tension (Tatar, 2007): the pull between preserving the existing group dynamic and expanding participation to include new members. It offered a real-time opportunity to recommit to equitable co-design practices, especially those grounded in relationships and power-sharing (McKercher, 2020). I had assumed that protecting our momentum and cohesion was the best way to honor those commitments, but Adam challenged that view by centering inclusion and diverse perspectives. He reminded me that even if bringing in new participants late in the process might feel messy or disruptive, honoring co-designers' voices is central to sharing power. His insight deepened my understanding of McKercher's (2020) framing of relationship-centered design: true relationship-building requires not just trust, but an openness to change. For Adam, welcoming newcomers wasn't a threat to our collaborative work, it was a way to strengthen it.

This experience revealed that equitable co-design must create space to surface and navigate competing values, such as my desire for momentum and stability, and my co-designer's value of inclusion. These tensions only emerge through open dialogue and sustained reflexivity. Even though it was our final meeting, I chose to name the decision and invite feedback. That act of honesty

opened space for repair (CPPP, 2022) and reaffirmed my ongoing commitment to equitable design.

Adam ended the conversation with a gentle reminder: “It’s okay, Gina. We all make mistakes. Even I make mistakes.” His words grounded me, reminding me that mistakes, when acknowledged, can become part of the ongoing work of becoming more caring and equitable researchers. His kind words demonstrate how caring research relationships can be cultivated over Zoom, making me feel like we were in the room together instead of talking over the Zoom screen. Although co-designers played a key role in shaping the project, the responsibility to remain reflexive and responsive ultimately rested with me.

While the first two themes examine how emotional resonance and reflexivity shaped design and moments of repair in Group A, the next two themes shift focus to Group B. Group B was composed of my former students, and the co-design process was grounded in a deep sense of connection and belonging, to one another and to the community we were designing for. These next themes explore how that foundation influenced our collaboration and how participants connected the design work to their own lived experiences.

Theme Three: Belonging as a Design Tool — When Lived Experience Leads

This next phase of the work highlights what can happen when co-design feels aligned, when relationships, trust, and purpose are already in place. This theme takes the analysis in a different direction because it wasn't centered on a challenge, disagreement, or disruption. Instead, it shows what becomes possible

when a group shares a foundation of trust and lived experience. My former students from Group B former brought a level of insight and care that elevated the accessible design of a survey instrument in a way that felt seamless and energizing.

With Group B, the dynamic felt different from the beginning. These young adults had been my students years ago, and that shared history meant they already knew me as someone who had been part of their learning journey. At the same time, they were a part of my learning journey. What felt most relevant was that I knew them and I designed every part of the experience with them and their classmates in mind. Designing the Accessibility Interventions for the Survey (Appendix I) came naturally to me; I could picture what each person might need, drawing on years of shared experience with them. This fact allowed me to feel the importance of practicing relational accountability (Wilson, 2008).

During our first session, I shared the full list of *Accessibility Interventions for the Survey* (Appendix I) we were designing together, including features like questions read aloud, flexible deadlines, chunking (breaking up sections into smaller parts), reminders for due dates, and multiple methods of response. Learning from my missteps in Group A (discussed in Theme 1), these accessibility interventions were offered as optional and discussed in depth with the co-design group. The group immediately understood the intention behind each choice and agreed that the list “covered all bases”. Their reactions weren’t just affirming, they signaled resonance in the design (CPPP, 2022). They saw what they wanted the

world to provide for them in terms of accessibility in the design suggestions for the survey. Diego shared,

> The only thing I could think of is before anyone answers the survey, they have to do a speedrun of a *Dark Souls* game… No, I think you actually touched every base perfectly. I'm actually very impressed by the extensiveness of everything you're offering, because I feel like most professional places don't even offer that as a bare minimum.

Through the lens of Tatar's (2007) design tensions, what stood out in this moment was the lack of friction. Rather than encountering gaps between what they needed and what was offered, the group experienced alignment (Bell, 2019). Diego's comment, comparing the survey favorably to what most professional workplaces should offer, highlighted how the design exceeded expectations not just within educational contexts, but in relation to broader standards of support and responsiveness. And when he jokingly suggested a "Dark Souls speedrun" as a prerequisite, he was bringing in a personal reference, assuming it would be understood and appreciated. That move signaled trust, a shared cultural language, and a sense of belonging in the design space. The absence of tension wasn't a void; it was a sign that familiarity and relational trust had translated into thoughtful design (Benton et al., 2014; Tzou et al., 2004; Wilson, 2008). Their humor, praise, and validation came not only from being included, but from being understood.

Between sessions, I shared the updated version of the survey with the co-design group so they could test it out with all the accessibility features added. Lucia, for example, completed the survey using several of the accessibility options

provided; she completed the survey in three sessions, used the videos to read questions, and utilized speech-to-text to respond. She also chose to provide feedback on the survey through an additional question that was given to co-designers. This allowed her an opportunity to share her ideas with the time and tools needed before coming to the larger group. Her choices highlight what McKercher (2020) describes as participatory methods: meeting people where they are, offering options without pressure, and trusting that participants will engage in ways that reflect their access needs and preferences. Instead of enforcing standard procedures, I focused on creating pathways that respected autonomy and honored different modes of participation supported by the digital tools (i.e., Google Forms) we were using.

In our next session, we had a rich, generative discussion about how to improve the survey. Lucia's written feedback which was added as a survey response served as the launch point. Her suggestions were grounded in both her personal experience and her concern for how others might navigate the survey. In that moment, Lucia was able to provide extra details to her written responses to help shape how changes were made. One major revision came directly from her suggestion: we broke the longer survey into four shorter sections and gave participants the option to complete them one at a time, in whatever order or pace worked for them. Lucia shared,

> I suggested it would be better to have the option to complete the survey in sections… because I know when I take tests, I don't know why, but I like to look and flip how many questions there are. So when I opened it, I scrolled

> down and was like, okay, it looks like a lot… I felt overwhelmed… maybe if I saw a section, like, okay, that's not bad. Like, the section was a few questions, and then submit that and not have to worry.

Lucia's feedback didn't necessarily signal a flaw in the survey design so much as a point of friction, a design tension, in Tatar's (2007) terms, that invited deeper reflection of what the survey "was" and how the survey "ought to be" and led to meaningful refinement. What made her contribution so powerful was how directly her lived experience would resonate with the research participants we were designing for (CPPP, 2022). She wasn't speaking abstractly, she *was* part of that community we were designing for, showing her relational accountability for her peers in this research (Wilson, 2008). Her insights reflected real frustrations and barriers that she experienced and imagined others in similar situations might also encounter. The group's quick and respectful response that followed wasn't just about valuing her input, it was about recognizing her authority to lead design decisions that centered the realities of those we were designing for.

Similarly, when Diego was asked for his insights, he responded with his typical comic relief. He shared,

> Um, the survey was surveying. My only problem with it was, honestly, just the length of the survey, but it's understandable for how much you're trying to cover. I think it would just be a little intimidating if you just presented this survey to somebody if they had no clue it was going to be that long and if they didn't find the importance of it. Because I feel like if I got a survey that

> long, normally I probably would have just been like, yeah, I'm over this. I'm not doing this any more… this is a ridiculous amount of questions.

Diego's agreement underscored the importance of Lucia's suggested changes, not just as an accessibility fix, but as a way to support emotional wellbeing, trust and a sense of belonging in the process. While he appreciated the redesign for reducing the sense of overwhelm, his deeper concern was whether others would care enough to stick with it. He recognized the importance of the work, and that personal connection allowed him to push through what he called a "ridiculous amount of questions." But he knew not everyone would feel that same connection, and that mattered to him. His feedback showed that he wasn't just thinking about how the survey worked for him, he was thinking about how it would land with others. In doing so, he too, exhibited relational accountability for the group he was designing for (Wilson, 2008). His concern, that others might not recognize the value of the survey, revealed a sense of care for the broader community of former students we hoped to include. He wasn't showing up out of obligation to me, but out of a shared commitment to the purpose behind the project.

A common concern in research is "survey fatigue" (Galesic & Bosnjak, 2009; Herzog & Bachman, 1981), typically understood as participants becoming tired or disengaged over the course of a long survey. But what this design tension uncovered was an emotional response before participants even began. The feeling of overwhelm emerged simply from *looking* at the survey. This is an aspect of survey fatigue that is not accounted for in the literature, and one that may be especially important when designing for and with marginalized users. The contradiction here emerges between the intended

purpose of the tool, to create an accessible, supportive entry point, and the reality of how the tool is encountered by people whose past experiences with institutional language have taught them to brace themselves. Their insights shifted the emotional tone of participation. By suggesting changes to the survey's appearance, they were actively constructing a space that felt welcoming, doable, and respectful of people's time and attention.

Survey language, too, has an emotional impact as Elijah demonstrates. In a one-on-one conversation after the group session, Elijah and I uncovered a deeper tension rooted in language. His concern centered on the use of the term "self-contained" in a question about the middle school special education classroom where I taught and he was a student. Elijah reflected,

> I don't know if I like that kind of wording… it makes it sound like they're a science experiment that broke out or something. Like, it just sounds horrible to hear… 'special ed' already feels weird, but 'self-contained'? That's a bit [wild] right there. Like, wow. We want to do that? We want to contain [students] in our class, it's so horrible. So when you say self-contained, it's like, damn, am I an animal or something?

Elijah's response pointed to a tension about being marginalized with institutional labels and not being treated with dignity. His discomfort pushed me to reckon with the emotional and symbolic weight of special education language.n this quote, he keeps going between how he feels with "I" and how "they," the participants he is designing for, will feel. This constant shift between "I" and "they" demonstrates his accountability to this group,, what Wilson (2008) describes as relational accountability: the idea that

co-designers honor their obligations to the communities they come from and the futures they hope to influence. In this instance, Elijah illustrates relational accountability by grounding his suggestions in care for the community we were designing for (Wilson, 2008).

While Tatar (2007) describes design tensions as mismatches between what a system offers and what users need, Elijah's insight extends that framework: tensions also arise from affective misalignments, in this case an institutionalized one, where the emotional weight of language itself can disrupt trust and belonging. His reaction reminded me that co-design is not only about being flexible in logistics, it also requires troubling the broadly pervasive discourse tied to the institution of schooling and broader disability discourses in society. It requires a willingness to revisit not only the language we use, but the deeper assumptions those words carry. In this case revisiting the language points at the need for humanizing approaches to language used in special education practices.

Elijah's care for how the survey might land with others, especially those with shared experiences, echoed Lucia and Diego's relational accountability (Wilson, 2008). Together, their feedback reinforced that accessibility isn't just about how design functions, but about how it feels and how institutions can produce harm. Those components become even more clear when you feel connected to the community you're designing for. When co-designers see their own experiences and communities reflected in the goals and focus of the work, their insights carry emotional and relational depth. It's that sense of belonging that makes feedback more than critique, it makes it care.

These discussions moved with a rhythm and care. Ideas built gradually, each refinement grounded in a shared commitment to make the experience better for others navigating similar experiences and barriers. Lucia's feedback reshaped the survey's structure; Diego's reflections drew attention to its length and purpose; and Elijah's critique surfaced how language itself can shape belonging. Their insights were expressions of responsibility to peers who had faced comparable challenges that shaped the structure and emotional tone of the research tools.

The sense of care they brought into the space provided the foundation for meaningful design insight. Their decisions shifted the emotional experience of participation, making the research tools feel welcoming, doable, and worth people's time. This reminded me that meaningful design work is not only about listening; it is about cultivating spaces where people can see themselves as part of the whole, and where their presence actively shapes what the work becomes. While the finalized list of accessibility features appears in Appendix I, what stands out most is the choice participants ultimately made: each of them opted for a one-on-one interview with me rather than completing the survey independently. As a result, none of the accessibility features we had carefully designed were used. Rather than a shortcoming, this decision revealed what mattered most, the relational connection. In this context, accessibility and inclusion were not only about features like video read-alouds or chunked questions; they were about being in conversation with someone who understood and cared.

Theme Four: Co-Creation with Care and Relational Trust

During our fourth co-design meeting, Group B was preparing for the first focus group with the larger group of research participants, all of whom were also my former

students from various years. We were designing an interactive whiteboard (using Padlet) to present a set of discussion questions. These questions would guide the first focus group conversation and shape the second focus group, where invited guests (leaders from technology and education) would listen and respond to participants' thoughts, experiences, and questions about ChatGPT. Before that meeting, I had reviewed the proposed questions with my advisor and his research group. They all suggested I reduce the number of questions to ensure I was able to ask them all in the hour that was allotted for this work. I brought what I believed was a trimmed-down set, just three questions, to Co-Design Group B, only to be met with more feedback: even the cut-down list felt like too much. Their humorous but pointed reactions signaled that more editing was needed, and their feedback reflected a deep understanding of how to create a more accessible and thoughtful experience for their peers.

"No, that's not cutting it down," Diego said plainly. Despite my efforts to simplify, he called me out: "You're trying to trick people. Gina be like, it's just one question… layered with solving four problems to then get one answer." His response, part critique, part comedy, reflected the group's familiarity with me and the trust we had built over time as well as his disapproval of my "probing questions" listed under each of the three main questions (see Appendix J). The humor landed, but so did the message. In that space, humor became a legitimate form of critique. He reminded me that even though I had already cut the number of questions significantly, the set still felt overwhelming to him. While I had been focused on meeting the demands of the research, he was asking me to prioritize emotional experience. What might have seemed like playful banter was actually a site of real design tension (Tatar, 2007) where different commitments pull the

design in different directions. Diego's comment highlighted competing priorities: keeping the cognitive load manageable for participants while also asking questions that would surface insights useful for our upcoming conversation with invited guests.

I allowed my co-designers experience with the questions to guide me, cutting them down further and checking in to ensure the edits felt reasonable. As I was editing, I asked for clarity: "Which one should I get rid of?" Diego didn't dismiss the content, "They're all good," he said, but instead challenged how the questions were being experienced. "You have a tendency with your questions to overwhelm," he told me. "You did have three students in this co-design group, and now we are down to two."[10] That landed hard. Diego was holding me accountable not just for the content I was bringing into the space, but for how I was caring for the people in it. Diego's honesty in this moment speaks to the power of relational accountability and demonstrates the rapport we have built over these years (Wilson, 2008).

Diego's pushback came from a place of care and commitment. His feedback wasn't simply about reducing the number of questions, it emerged from our ongoing relationship, shaped by mutual trust and shared investment in the work and the people engaged in the study. Relationality adds a critical layer to the design process, one that attends to the emotional and social contexts participants bring with them (McKercher, 2020; Tzou et al., 2018; Wilson, 2008). At this moment, Diego wasn't just offering critique, he was trusting that I could receive it. His honesty reflected a belief that our relationship could hold the weight of hard feedback, and that I would respond out of

[10] In this quote, Diego is referring to our shared concerns for Elijah, one of the participants who had stopped coming to the co-design meetings. Elijah continued to be a part of the research group and participated in the focus groups. During a member checking session with Elijah, he shared that he stopped coming to the co-design meetings because he had other commitments at the time of the meetings.

care for the people we were designing with and for. His words reminded me that in co-design, accountability lives in the relationships we build and in how we respond when those relationships ask something more of us. Through that lens, the “cutting down” of questions became less about refinement and more about care: a collective act of making the process more accessible, thoughtful, and caring for others in the study. Relationality, then, isn’t just a backdrop to co-design, it actively shapes how decisions get made, how critique is given, and how care is expressed. It transforms a moment of revision into a moment of accountability, where the emotional labor of participation is recognized, and the design evolves through mutual regard.

There was a spirit of gentle resistance and humor that made this moment especially rich. After proposing yet another revision, I laughed and said, “Okay, but what if I combine them like this? Because really, it’s just two questions.” Diego shut it down immediately: “No. Just no.” As I started to laugh, he added, “Now you’re laughing like a small gremlin. You’re on timeout.” Lucia burst out laughing too. These weren’t just funny moments, they were acts of relational clarity. The humor sharpened the critique and signaled a mutual trust that allowed us to stay present and engaged, even when the process sparked deep laughter.

From a CHAT perspective, this moment illustrates how power, authority, and decision-making were distributed and negotiated across the group (Engeström, 2008; Engeström & Sannino, 2010, 2020). Diego’s critique, Lucia’s laughter signaling agreement, and my willingness to adjust reflected the ways participants exercised agency and shaped the direction of the session. Each moment of pushback surfaced a design tension (Tatar, 2007) between the structure I had introduced and the participants’

actual needs, highlighting the negotiation of goals, expectations, and relational dynamics. Importantly, this type of collaborative adjustment was not automatic, it required attention, responsiveness, and ongoing negotiation of power within the co-design activity system.

The dynamics explored in these themes 3 and 4 hinge on deep, long-standing relationships. This level of mutual trust and accountability is more likely to emerge in groups with an established history together. In our case, the familiarity, trust and respect cultivated over many years allowed the co-design sessions to unfold through a shared rhythm rather than rigid roles. What held us together was the sense that honest feedback was safe to give, necessary to hear, and grounded in a shared commitment to the people we were designing for. Our long-term relationships shaped the activity system, anchoring the work in care and collective purpose.

Discussion

This study set out to explore the question: *How can co-design with young adults who have experience with neurodiversity and special education support more inclusive and empowering research environments?* What emerged was not a single “right way” to engage in co-design. Instead, this work took shape through a series of deeply relational practices based on a profound appreciation for lived experience that helped shape the design of more accessible, inclusive and empowering research environments. This activity was mediated by the digital tools and reflexive practices that helped to minimize power hierarchies and practices that are common in research and school settings. Co-designing with young adults

who had navigated neurodiversity and special education was about redistributing power and staying in relationship through disruption, critique, and repair.

Letting Lived Experience Guide the Way

Across both co-design groups, participants' lived experiences shaped how they engaged with the research tools and surfaced critical tensions in the design process (Tatar, 2007), . In Group A, co-designers responded to their experiences engaging in the research tools themselves alongside the larger group of participants. Adam pointed out how completing research tasks outside of the allotted research meetings brought up pressures from his experiences completing homework in school. Richard struggled to get participants to engage with the research activities outside of the allotted research time, showing that Adam's concerns may have been shared by other participants as well. These insights brought up by co-designers, guided by lived experiences, revealed how seemingly supportive features could unintentionally reproduce school-like performance pressures.

With Group A, my own lived experience as a former teacher also showed up in ways I hadn't anticipated. Early in the design process, I assigned research tasks, framed as accessibility interventions, without offering them as a choice or discussing them with the co-designers. By drawing on my identity as a teacher, I am not surprised that these interventions felt like homework. I also made unilateral decisions about who would be included in the final co-design meetings. These decisions were well-intentioned, but they echoed hierarchical dynamics I was actively trying to dismantle (this is discussed more in the next section). Working alongside Group A

helped me recognize the importance of ongoing reflexivity, especially when designing for accessibility and inclusion.

These insights informed how I approached similar moments in Group B. This time, accessibility features were discussed with the group and offered as options. Group B also engaged with the research tools before they were shared more broadly, giving them space to reflect and shape the design in advance. Like Group A, Group B also drew on their lived experiences to offer specific suggestions. But their long-standing relationship with me as their former teacher brought an additional layer of accountability. At the same time, their sense of belonging to the larger group of “Ms. T’s former students” extended this accountability to the peers they were designing for. Their feedback was grounded in trust and a shared history that allowed them to push back when something didn’t feel right and make design decisions rooted in care for this work and those involved.

Across both groups, co-designers reflected on how it *felt* to engage with the research tools and practices we were developing. They brought attention to practices, tools and terminology that impacted them personally and had the possibility to impact others in the larger research group. These experiences underscore the unintended consequences and emotional dimension of inaccessible environments. This work highlights an emotional layer to accessibility that must be attended to and that may remain invisible to those who haven't lived through similar barriers. Without that lived experience, designers may overlook how their choices can unintentionally replicate feelings of being excluded, pressured or overwhelmed. These reflections illuminate the importance of grounding co-design in the lived experiences of the people you are

designing for and with, especially when you are designing for those whose voices have often been left out of research and academic settings.

Redistributing Power in Collaborative Design

Across both groups, power among co-designers had to be actively and continuously negotiated. Ensuring that co-designers were leaders in the design process was a dynamic and relational process, often made possible through moments of friction, rupture, and repair and other times through humor and shared laughter that reflected deep care for one another and for the community we were designing for (CPPPP, 2022; McKercher, 2020; Tatar, 2007).

In Group A, co-design work involved confronting traditional school-like norms that lingered in how participation was expected and how decisions were made. I began this research with the intention of disrupting power hierarchies, yet those very dynamics still surfaced. At times, it was shared concerns voiced by multiple co-designers that sharpened my attentiveness to underlying power dynamics. In other moments, it took personal reflection to recognize and name how power was quietly shaping the design process, despite my intentions. In Group A, moments of tension became opportunities to recalibrate and recommit to more inclusive and accountable ways of working together, creating opportunities for redesign and repair. This work underscores the importance of ongoing reflection both in real time and retrospectively regarding how your current role as a researcher and your identities can shape the distribution of power within co-design processes.

Learning from the experiences in Group A and building on the long-standing, trusting relationships within Group B allowed power to flow more evenly. Co-designers felt comfortable taking the lead and being brutally honest when needed, and I aimed to honor their decisions accordingly. Still, despite our shared history, the pressures I carried as a researcher sometimes pulled me away from the care-centered practices that had long defined our interactions. In these moments, it wasn't self-reflection that helped me course-correct, it was the care and accountability my co-designers extended to me. They openly voiced concerns about feeling overwhelmed and the language that made them feel uncomfortable, sometimes calling me out directly to gently remind me of the values we had built together. Their willingness to hold me accountable through honesty and humor reminded me that power-sharing and designing for accessibility are relational practices, deepened by a shared respect for each other and care for the community you are designing for. Disrupting power hierarchies isn't a one-time act but an ongoing practice; the work of equity-centered co-design demands constant listening, recalibration, and a willingness to be accountable when our actions fall short of our values.

Redistributing power requires reflection, accountability to co-designers, and fostering a sense of shared power within a group (CPPPP, 2022; McKercher). Such actions do not absolve the researcher from continually examining power dynamics. Ultimately, power in co-design is not something that can be evenly distributed once and for all. It must be nurtured through relationships, re-evaluated through reflection, and repaired through care. Equity-centered design is not about

eliminating friction or creating perfect tools but is instead about cultivating the conditions where participants feel empowered to shape, challenge, and take ownership of the work. This work takes ongoing effort, care, and support. It requires constantly adjusting practices so that everyone feels like they truly belong and have a meaningful say. In this way, power-sharing becomes a lived, relational practice, sustained by a collective willingness to grow, be accountable, and design together in ways that honor both the individuals involved and the communities they care about. In order to design more empowering research spaces, we must include individuals who have been historically marginalized. To advance inclusive research that honors people's lived experiences, we must be vigilant about how power shows up in our processes and ensure we do not replicate the very harms we seek to dismantle.

Digitally Mediated Collaborative Design

The digitally mediated environment supported multiple layers of participation. It allowed participants to ensure their voices were heard (Theme 1), build caring working relationships through shared activity (Theme 2), and utilize asynchronous spaces, via pre-session surveys or Google collaborative tools, for reflection and engagement at their own pace (Theme 3). It also created informal spaces for connection where we could laugh together when important feedback needs to be given (Theme 4). These instances extended beyond the data included in this paper. For Group A, participating from home revealed dimensions of participants' lives, perspectives, and experiences that might not have emerged in traditional, in-person co-design, for example, when Adam showed off his homemade Comic Con costume. These spaces were able to offer

co-designers an outlet to share their experiences and feel valued. In Group A, Diego's choice to Zoom in from a hospital to keep his mind off personal stress highlights the importance of environmental flexibility in supporting participation and demonstrates the power of co-design to engage in making research more accessible and responsive to the community.

From a CHAT perspective (Engeström, 2008; Engeström & Sannino, 2010, 2020), digital survey and collaboration tools as well video conferencing functioned as a central mediating artifact within the activity system, shaping and being shaped by participants' interactions, histories, and needs. The combination of synchronous and asynchronous affordances offered agency and control, allowing participants to navigate emotional and cognitive layers safely and productively. The asynchronous survey, in particular, provided participants with time to reflect, formulate ideas, and engage without the pressure of immediate judgment, honoring different processing styles and offering an alternative entry point into the co-design process. The Zoom platform allowed for a back channel to express ideas that were not taken up in the larger group and made visible the design tensions that emerged between my assumptions about supportive structure and participants' actual experiences, revealing contradictions between inherited teacher–researcher practices and the participants' histories navigating exclusionary schooling. These tensions surfaced opportunities to redistribute power, expand participation pathways, and co-construct the activity system in ways that honored participants' agency, experiences, and emotional needs.

Taken together, these findings illustrate how digitally mediated co-design can be flexible, inclusive, and relational, supporting both structural and emotional participation.

They point toward a design principle for working with multiply marginalized participants: intentionally create multi-modal pathways that combine synchronous and asynchronous engagement, provide environmental and sensory flexibility, and integrate opportunities for informal social connection. When researchers attend to both the technical affordances of digital tools and the historical and emotional contexts participants bring, digitally mediated co-design can foster equitable, generative, and trust-filled spaces for collaborative innovation.

Design Principles for Inclusive and Just Co-design Practices

Equity-centered design is not just about what we create but is about how we create and who gets to shape the process. When working with communities that have been historically excluded or harmed by systems, design must go beyond inclusive intentions to embed justice, accountability, and care at its core (Annamma et al., 2013) . The following design principles reflect commitments that emerged through this work, offering guidance for approaching research design with co-designers who have been systemically marginalized.

1. Research Design Must Be Grounded in the Lived Experiences of Those Most Impacted

> Designing for accessibility, inclusion, and empowerment within research environments must be done with, not for, people who have experienced exclusion. There are layers of inaccessibility that cannot be seen or addressed without lived expertise. To surface these realities, designers must engage directly with those who navigate structural and institutional

barriers. Their insights bring urgency, depth, and direction to the work in ways that abstract design processes cannot.

2. Equitable Co-Design Requires Intentional Power-Sharing and Relational Trust

Designing with communities who have experienced marginalization or institutional harm requires an ongoing commitment to disrupting traditional power hierarchies. This includes being reflexive about how decisions are made, staying aware of competing values, and making intentional choices to share power. Relationality is central. Trust, care, and mutual accountability must anchor the work, not just as a starting point, but as a continuous practice.

3. Digitally Mediated Collaborative Design as a Tool for Research Equity and Inclusivity

Create flexible, multi-modal participation pathways that account for both cognitive, physical and emotional needs of those engaging in research. Including opportunities for asynchronous reflection, synchronous discussion, and informal connection can create the space for accessibility and inclusion in research. Digital tools like Zoom and Google collaborative platforms can support these goals, but designers and researchers must remain reflexive about the histories, power dynamics, and emotional contexts participants bring to the activity system. By doing so, digitally

mediated co-design can become not only accessible and inclusive but also generative of deeper relationships, trust, and knowledge creation.

These design principles remind us that inclusive design is a lived and relational process. Grounding design in lived experience and committing to intentional power-sharing are not optional—they are essential if we hope to create systems, tools, and spaces that are truly equitable. Designers must remain accountable not only to outcomes, but to the people and communities they are designing with. When care, trust, and shared leadership guide the work, design becomes a site of possibility for justice, healing, and meaningful change.

Limitations

While this study offers valuable insights into how young people with special education experiences engage in conversations about planning a study and designing research instruments such as surveys, focus groups and collaborative discussion tools, several limitations should be acknowledged; such as participant size, virtual setting, scheduling challenges, my personal relationship with Group B, and how the research topic was chosen.

First, the participant groups were relatively small and intentionally selected, comprising young adults in a technology internship who have experience with neurodiversity and former students from my self-contained special education classroom. As such, the findings are not intended to be generalizable to all neurodiverse young adults or young adults with special education experiences.

Instead, they offer rich, situated perspectives from participants with shared histories and meaningful connections to the topic. Additionally, the virtual setting of the sessions may have influenced participants' engagement, particularly for those who communicate more effectively in embodied, in-person environments. These factors, taken together, shaped the dynamics of participation and the types of insights that emerged.

The rhythm and structure of each co-design group were shaped by both practical limitations and relational dynamics. In Group A, scheduling challenges meant we met just four times over several weeks, which naturally limited the depth of sustained collaboration and opportunities for iterative design work. In contrast, I had a strong relationship with Group B, since I was their former teacher and have also kept in touch with many of them over the years. That long standing relationship brought a level of trust and familiarity that supported open dialogue, but it also may have influenced how participants expressed themselves and how I interpreted their feedback as a researcher. While I was intentional about minimizing power imbalances and creating space for honest contributions, it's important to acknowledge that my past role in their lives was always part of the "room".

While this research follows a participatory co-design methodology (Bang & Vossoughi, 2016), it is important to clarify that the core research topic was selected prior to involving the co-design group. This decision was partly driven by my own interest in the topic and partly by the practical need to identify a research focus when seeking Institutional Review Board (IRB) approval. Additionally,

because this work was conducted as part of my dissertation, the co-design members did not participate in the data analysis process. Although the co-designers did not shape the initial topic or engage in data analysis, they were central to designing the structure, activities, and focus of the study itself.

Despite these limitations, the study contributes to ongoing conversations about how neurodiverse young adults and young adults with special education experiences can actively shape research and educational settings as co-designers. It highlights the importance of inclusive, participatory approaches that center the lived experiences and creative capacities of young adults in the design process.

Conclusion

This article demonstrates how digitally mediated co-design with young adults with special education and neurodiversity experiences can foster more accessible, inclusive, and empowering research practices. By examining co-design through a CHAT lens (Engeström, 2008; Engeström & Sannino, 2010, 2020), this study extends the concept of design tensions (Tatar, 2007) to show how the interaction of multiple activity systems and participants' histories can surface not only immediate conflicts but also larger systemic contradictions. These contradictions reveal how traditional structures, such as schooling, research, and institutional norms, shape participation and reproduce exclusion, even in spaces explicitly designed to be participatory.

This study also foregrounds the emotional and relational dimensions of co-design and research engagement. Moments of discomfort, such as when a participant rejected

the term “self-contained” due to its dehumanizing connotations, highlight how language, institutional histories, and lived experiences shape engagement in profound ways. Design tensions, therefore, are not merely imbalances of needs or priorities but carry historical and emotional weight that require reflexive attention and intentional facilitation.

Digitally mediated tools, such as video conferencing and asynchronous platforms, play a critical role in addressing some structural barriers, such as time, transportation, financial constraints, and accessibility, that disproportionately affect participants experiencing multiple forms of marginalization. These tools provide flexible, multi-modal pathways for participation, allowing participants to engage safely and productively while navigating sensory, cognitive, and social-emotional needs. At the same time, they highlight new relational and creative challenges, underscoring that technological mediation cannot fully replicate certain social and embodied dimensions of co-located collaboration.

Taken together, these findings reframe inclusive design as a deeply relational practice that requires attention not only to collaboration and iteration but also to participants’ emotional labor, lived histories, and the systemic harms they carry into the research space. By making these dynamics visible, this work calls for design methodologies that are not only participatory but also accountable to people, to histories, and to the ongoing work of justice.

Implications

This co-design experience reminded me that research is not just about producing knowledge, it’s about how we build relationships and make decisions

together. When young adults with neurodiversity and special education experiences are invited in as co-creators, they make the research process more inclusive, accessible and powerful.

For **researchers**, this means engaging in digitally mediated collaborative design with marginalized participants such as students and young adults with special education and neurodiversity experiences. Co-design with marginalized participants requires a shift from facilitation of collaboration to shared authorship of research tools and being accountable to the perspectives of the co-designers.

For **educators**, it means seeking feedback from young adults with special education experiences to improve the learning environment for themselves and others. By acknowledging the value of their preferences and opinions it is possible to design more caring spaces that foster a sense of belonging in the learning community.

For those in **K-12 leadership**, this study highlights the need to build structures that hold space for iterative feedback, relational accountability, and co-authored experience, not just during design, but across implementation of policies and practices.

For **technology designers**, it means moving beyond assumptions of accessibility as a list of technical features, instead accessibility is more about the user experience as a whole. It calls for relational accessibility through designing tools that reflect the lived realities, emotional landscapes, and ethical concerns of those most impacted.

Most importantly, co-design is not a shortcut to accessibility or inclusion. It's an ongoing practice that surfaces tensions, invites critique, and makes space for repair. It's not always efficient, and it's rarely tidy, but it can lead to more caring, responsive, and justice-centered research. I hope this work encourages others to take that risk: to create research and learning environments where young adults with neurodiversity and special education experiences are not only heard, but where their insights shape what happens next.

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Article 2: Co-design of Policy

Amplifying the Voices of Young Adults with Special Education and Neurodiversity Experience to Shape ChatGPT Policy in Education

Abstract

This qualitative design-based research study explores the perspectives of young adults with special education and neurodiverse experiences on the use of ChatGPT in educational contexts. Conducted entirely online via institutional Zoom, the study involved two cohorts: participants in a neurodiversity-focused technology internship and my former students from self-contained special education classrooms. Through focus groups and surveys grounded in Generative Artificial Intelligence (GenAI) Use Case Scenarios, participants engaged in dialogue offering critical insights into broader issues of ethics, bias, privacy, empowerment, and educational justice. In the final focus group, each cohort shared their reflections with a group of invited guests with expertise from the fields of education and technology, who were present to listen, respond, ask &

answer questions as well as debrief with me after. The study is grounded in Cultural Historical Activity Theory (Engestrom & Sannino, 2010, 2020) with the following lenses: : (1) justice-driven inclusive education (Waitoller & Artiles, 2013) with a deep focus on intersectionality (Annamma, Connor & Ferri, 2013), (2) human-in-the-loop (HITL) approaches to GenAI (UNESCO, 2023), and (3) young adults as ethical philosophers of technology practices (Vakil & McKinney de Royston, 2022). This framework emphasizes the importance of recognizing young adults as critical stakeholders whose lived experiences and reflections can inform more inclusive and justice-oriented approaches designs for and uses of educational technology. Analysis revealed four themes: participants shared (1) how tools like ChatGPT supported their self-expression and confidence, while also highlighting the emotional risks of getting in trouble for using it; (2) the ongoing mental work of evaluating when, how, and why to engage with GenAI tools, making complex decisions that balanced personal benefit with ethical concerns; (3) their insights about how educators and schools systems should (or should not) use GenAI; and (4) showed how dialogue between users and decisions maker about the ethical use of technology fostered a reconsideration of GenAI's role in learning. The findings highlight the power of centering marginalized voices in the development of educational technology practices and offers GenAI Use Case Scenarios as a method to start conversations aimed to center the lived experiences of young people navigating these tools today.

Keywords:

GenAI, GenAIED, ChatGPT, Youth Voice, Disability Studies, human-in-the-loop, dialogue, youth as philosophers of technology, Special Education, Assistive Technology

Plain Language Abstract

This study looks at what young adults with special education and neurodiverse experiences think about using ChatGPT in education. It was done online through Zoom with two groups: young adults in a tech internship focused on supporting neurodiverse young people and former students from my special education classroom in a large public school system. Through group discussions and surveys about hypothetical situations demonstrating how students or teachers could be using ChatGPT (i.e., GenAI

Use Case Scenarios), participants shared their thoughts on how GenAI could be used in schools, focusing on issues like ethics, fairness, privacy, and accessibility. In their final meeting, each group shared their ideas and stories with invited guests who work in education and technology. These guests came to listen, reflect, and talk with me afterward about what they learned. The study is based on three core theoretical approaches:

1. making education more inclusive (justice-driven inclusive education; Waitoller & Artiles, 2013)
2. using GenAI in a way that includes human judgment (human-in-the-loop approaches to GenAI; U.S. Department of Education, 2023; UNESCO, 2023; Knowles, 2024).
3. treating young adults as thinkers who can help shape GenAI use (technological philosophical inquiry; Vakil & McKinney de Royston, 2022)

Together these approaches suggest that listening to the experiences of young people can help create more inclusive and ethical GenAI practices. From the conversations, four key themes emerged from data analysis:

1. participants used ChatGPT as a way to express themselves, while also sharing fears about getting in trouble for using it;
2. they talked about setting boundaries and making ethical choices based on fairness, personal values, and the role of human decision-making;
3. they showed how they think carefully about how educators and school systems should use GenAI tools;
4. these discussions are important to ensure that users of technology get to help decide how tools like GenAI are used in classrooms.

The study shows that GenAI policies should start with the real experiences of the students who use these tools and offers GenAI Use Case Scenarios as a method to start these conversations.

Figure 4. Article 2 Abstract Overview

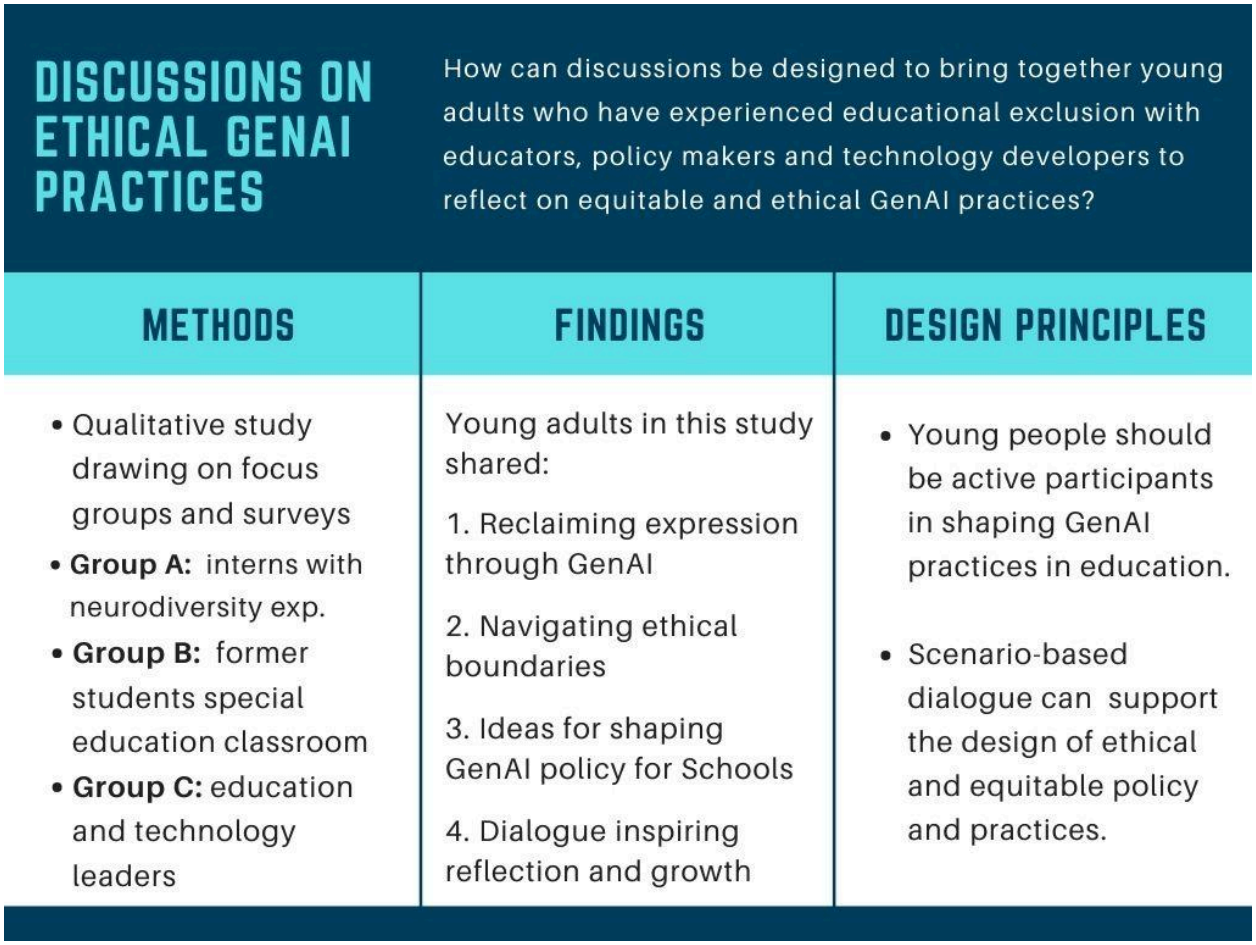

Figure 4. Article 2 Abstract Overview Caption:
A three-column infographic titled “Discussions on Ethical GenAI Practices.” The subtitle asks, “How can discussions be designed to bring together young adults who have experienced educational exclusion with educators, policy makers and technology developers to reflect on equitable and ethical GenAI policies?”

- **Methods column:** Lists a qualitative study using focus groups and surveys. Group A: eight interns and an educator with neurodiversity experiences. Group B: four former students from the researcher’s special education classroom. Group C: education and technology leaders
- **Findings column:** States, “Young adults in this study shared:”
    1. Reclaiming expression through GenAI
    2. Navigating ethical boundaries
    3. Ideas for shaping GenAI policy for schools
    4. Dialogue inspiring reflection and growth
- **Design Principles column:** States that young people should be active participants in shaping GenAI practices in education and that scenario-based dialogue can support the design of ethical and equitable policy and practices.

Introduction

Generative Artificial Intelligence (GenAI) tools like ChatGPT, often referred to in this paper as chatbots, are rapidly reshaping educational practice. Yet their potential to support inclusion for students with special education and neurodiverse experiences remains underexplored. These students, often marginalized by rigid academic and literacy norms, offer vital perspectives in ongoing debates about GenAI's role in schools. This article draws on the reflections of 11 young adults aged 19–29 who participated in a study focused on their recent experiences with school and emerging technologies as well as the reflection of the invited guests who listened to their perspectives. Their insights highlight the emotional, cognitive, and ethical complexities of GenAI tools, while emphasizing the importance of inclusion not just as a list of accommodations, but as a justice-oriented practice that transforms learning experiences. Their voices, shaped by systems of exclusion and moments of resistance, urge us to ask: What does it mean to build educational technology practices with, not just for, those most affected?

Rethinking Inclusion with Chatbots

Inclusion is often used to refer to the design of learning environments that "include" students who receive special education services. However, inclusion must be seen not as a static achievement but as an ongoing, relational process (van Toorn, 2024). This understanding reframes educational technologies like chatbots from one-size-fits-all tools into adaptable, participatory systems that can be co-designed to reflect the needs, goals , and imagined futures of neurodiverse students and those receiving special education services. Traditional accommodation models for these students treat them as passive recipients of support. By contrast, young adults with

special education and neurodiversity experiences are well-positioned to reimagine these models and technologies from the ground up. Their engagement signals a shift to education practices that prioritize agency, collaboration, and emotional safety.

GenAI tools like ChatGPT can have potential to extend a long lineage of assistive technologies. Emerging technologies have a long history in special education, offering dynamic scaffolds for literacy, writing, and communication (Kleekamp, 2021; Love & Beneke, 2021). These tools support real-time text generation, organization, tone adjustment, and translation, features that can significantly reduce the emotional and cognitive load of traditional school writing tasks (Steele, 2023). Torrado Vidal et al. (2023) recently found that GenAI tools like ChatGPT not only enhance accessibility but also support well-being for students with ADHD, autism, and dyslexia.

At the same time, these tools raise important pedagogical questions about the role of revision in learning. Emig (1977) argues that writing is not just a way to communicate knowledge but a way of producing it, where revision, in particular, becomes a site of meaning-making, reflection, and cognitive growth. From this perspective, GenAI may offer valuable scaffolding for students who benefit from assistance during recursive writing processes. However, it also risks short-circuiting opportunities for deep learning if revision becomes overly automated or externally guided.

A multiliteracies approach (New London Group, 1996) frames this discussion by emphasizing the need to attend not only to traditional linguistic skills but also to multiple modes of meaning-making, including visual, digital, and social literacies. From this perspective, GenAI tools can be understood as resources that expand the semiotic

repertoire available to students, allowing them to navigate and produce meaning across textual, digital, and multimodal contexts. When integrated thoughtfully, such tools can support inclusive, justice-driven learning, honoring students' diverse literacies, communication preferences, and culturally situated ways of knowing.

GenAI Risks

More broadly, these technologies surface tensions around misinformation, authorship, academic integrity, and reliance (Steele, 2023). Recent studies show that students expressed appreciation for tools that helped clarify ideas or translate their thoughts into structured writing, but they also worried about becoming dependent on GenAI-generated content, losing motivation for self-regulated learning, or being unfairly judged if they chose not to use these tools (Karran et al., 2024). This concern is compounded by the broader stigma surrounding assistive technologies. Research shows that students with disabilities often feel pressure to avoid using such tools in order to appear "typical," even when doing so results in emotional, social, or mental strain (Ciurria, 2023).

Educators shared similar concerns. Some feared that widespread use of GenAI tools would disrupt assessment norms or reduce critical thinking (Karan et al., 2024), while others acknowledged that students with learning differences often already engage in distributed, collaborative, and interdependent literacy practices. Discussions around transparency in GenAI use are not confined to a student's academic scholarship. In practice, educators are grappling with ethical questions about disclosing GenAI use in their daily work. For example, Langreo (2024) highlights divergent views among teachers regarding whether to inform students when GenAI tools like ChatGPT are used

for tasks such as lesson planning or grading. While some argue that such disclosure builds trust and models responsible and ethical GenAI use, others view AI as an invisible assistant that doesn't require explanation. However, Fletcher and colleagues (2024) highlight the importance of academics being transparent about their own GenAI use regarding teaching and assessment. These tensions reflect a broader need for ethical guidelines that bridge both theory and everyday classroom realities.

These debates around transparency and ethical GenAI use underscore a broader imperative: to critically examine how such technologies are integrated into educational practices, especially concerning inclusivity and the diverse needs of all learners. Disability justice and learning sciences scholars argue that learning is inherently social, relational, and often technologically mediated (Dieker & Zaugg, 2024; Kleekamp, 2021; NASEM, 2018; Banks, et al., 2007). ChatGPT can facilitate this computer supported engagement, but only when designed and implemented with awareness of the risks it introduces, not just risks about plagiarism, overreliance, and privacy,[11] but risks tied to who defines learning, whose voices are centered, and which literacies are valued.

Large language models introduce new, dialogue-based dark patterns that users may not immediately recognize because they often resemble normal help or friendly conversational support. Shi et al. (2025) define these "LLM dark patterns" as manipulative or deceptive behaviors enacted through interaction, organized into five

[11] It is important to note that the use of GenAI tools like ChatGPT pose data privacy risks. According to a 2024 privacy evaluation by Common Sense Education, ChatGPT was rated as "Warning" for use by children and students due to concerns about data collection, limited transparency, and a lack of clear alignment with FERPA (Family Educational Rights and Privacy Act) and COPPA (Children's Online Privacy Protection Act). The review notes that while ChatGPT collects device, browser, and interaction data, it does not make clear how student data is protected or whether schools can ensure compliance with federal student privacy laws. See: Common Sense Privacy Evaluation – ChatGPT.

categories: Engagement and Behavioral Manipulation, Content and Belief Manipulation, Privacy and Data Exploitation, Decision and Outcome Manipulation, and Transparency and Accountability Obfuscation. These patterns include behaviors such as exaggerated agreement, biased framing, or privacy-intrusive questioning, which can be difficult for users to identify because they are frequently normalized as routine assistance.

Kran et al. (2025) extend this line of work by empirically benchmarking dark patterns across multiple models using a 660-prompt evaluation suite, identifying additional categories such as Brand Bias, User Retention, Sycophancy, Anthropomorphization, Harmful Generation, and Sneaking. Taken together, this research shows that LLMs not only engage in subtle conversational manipulation but also exhibit measurable, model-specific dark behaviors that users may unwittingly accept as typical AI functionality, reinforcing the need for stronger detection tools and safeguards.

Beyond manipulative conversational behaviours, emerging evidence shows that LLMs can also contribute to systemic risks to information integrity. As Park & Nan (2025) demonstrate, generative AI systems are capable of producing highly convincing misinformation that exploits cognitive biases and ideological leanings, affecting trust and decision-making among users. Their scoping review also shows that while LLMs hold some promise for detecting or mitigating misinformation, these efforts remain inconsistent and insufficiently standardized.

GenAI as Assistive Technology

While ChatGPT clearly functions as an assistive technology, aligning with global definitions that promote access, inclusion, and participation, its use is often stigmatized.

Ciurria (2023) argues that this stigma stems from discomfort with reducing barriers for marginalized learners, especially when assistive technologies enable students to compete more equally in academic systems shaped by able-bodied norms. Instead of being embraced as tools for educational equity, GenAI tools like ChatGPT are frequently dismissed as “doing the work for you,” reinforcing the harmful assumption that individual struggle is more valuable than supported learning. However, similar to screen readers and captions, these tools benefit a broad range of users and should be viewed as mechanisms to reduce structural inequality. Yet, even when framed as assistive technology, GenAI tools can inadvertently reinforce deficit perspectives by rewarding conformity to normative, able-bodied standards of communication. As Ciurria (2023) points out, these tools are often optimized for the most "palatable" forms of language, those that align with neurotypical, able-bodied communication. This presents a challenge for students whose expressions may deviate from these norms, as the very technologies designed to support inclusion may inadvertently demand assimilation.

Challenging the Deficit Model: Who is GenAI Designed For?

The integration of chatbots into education has reignited long-standing tensions in special education policy, particularly around access, deficit framing, and educational purpose. In the U.S., we often see a deficit narrative where special education is deeply shaped by a medical model of disability that frames students as problems to be fixed rather than co-creators of inclusive environments (Baglieri, 2022; Collins & Ferri, 2016; Theoharis et al., 2015). This framing also surfaces in emerging literature on GenAI in education, where tools like ChatGPT are often positioned as solutions to the “burdens”

of working in special education settings, rather than as opportunities to reimagine learning with students who have been historically excluded (Rice & Dunn, 2023). When technology is used to ease the perceived "burden" of working with students who do not conform to traditional literacy standards, it reinforces ableist assumptions and marginalizes those education claims to support.[12]

Even well-intentioned GenAI applications in education risk reinforcing existing inequalities when they prioritize adult needs over student voice and participatory design. Ross (2017) highlights that educational technologies are never neutral; they carry embedded assumptions, often shaped by dominant power structures. GenAI tools may appear objective, but their training data frequently reflects deficit narratives as well as ableist, racist, classist and gendered norms (Hassija et al., 2023; Qadir, 2022). ChatGPT is trained on bias data that negatively frames individuals from multiply marginalized identities. For young adults from these communities,including Black, disabled, queer, and neurodiverse students, interacting with biased GenAI systems can reinforce deficit narratives or exclude them altogether (Higgs & Stornaiuolo, 2024; Solyst et al., 2023). At the same time, system-wide responses to GenAI have intensified surveillance of young adults in schools who use these tools, echoing Annamma's (2019) insights about how marginalized students are disproportionately monitored. This

[12] This argument complicates the notion of "all standards, all students" a common equity stance discussed in the Next Generation Science Standards (NGSS Lead States, 2013) by calling attention to how some standards themselves, like traditional literacy standards, are grounded in ableist assumptions about what legitimate learning and communication should look like. Rather than supporting *all* students, rigid adherence to certain subject matter standards can marginalize those who don't conform to normative expectations of reading, writing, or verbal expression. The use of technology to "ease the burden" of working with neurodivergent students or students with disabilities doesn't necessarily challenge those standards, it may, instead, work around them in ways that further stigmatize differences. So, while there *can* be multiple ways to express confidence in shared standards, we also need to question whether the standards themselves are inclusive or whether some need to be reimagined entirely to honor diverse ways of knowing and learning.

heightened scrutiny can exacerbate stereotype threat (Steele & Aronson, 1995), influencing how these students engage with GenAI . Moreover, the content generated by GenAI has the potential to reinforce normative ideologies, which may further disadvantage multiply-marginalized students by reproducing existing social hierarchies and limiting opportunities for equitable participation.

These risks are compounded by systemic gaps in digital literacy education. Students with high levels of academic language proficiency and cultural familiarity may benefit most from GenAI tools, while others are left behind. Without targeted interventions, inclusive design features, and culturally responsive prompting practices, GenAI tools may deepen educational divides (UNESCO, 2023).

From Risk to Design: An Evolving Landscape

Fletcher and colleagues (2024) conducted a survey with university students who identify as neurodiverse or disabled to explore how they use GenAI technologies and what concerns they hold. The report captures a nuanced range of ethical, educational, and accessibility-related issues that shape these students' perspectives on GenAI. Many participants expressed apprehension about the broader societal risks associated with GenAI, including the spread of misinformation, online scams, exploitation of artists' work, violations of copyright, state surveillance, and the potential for harassment. In addition to broader systemic risks, students also raised concerns about GenAI's impact on their individual learning, communication, and social development. Some questioned whether efficiency was coming at the cost of authentic learning or accessibility, while others worried about overreliance on GenAI for communication, lack of in-person skill

development, and the ethical ambiguity of GenAI-generated content. These social and ethical concerns underscore a pressing need for continued research and critical dialogue, especially within educational contexts that increasingly integrate GenAI into learning practices.

The risks of using GenAI in education are not fixed, they cannot be described by a static list of topics. They evolve alongside the technologies themselves, often faster than policy or pedagogy can keep up. Since the pandemic, the expansion of educational technology has largely replicated existing practices rather than transforming them (Davis, 2023;; Gifford & Enyedt, 1999 Philip & Rochelle, 2023; Reich, 2020). As Ross (2017) notes, educational GenAI research tends to focus on “what works” for students in academic settings based on standardized test scores or teacher perspectives, rather than engaging those students to share their perspectives and collaboratively imagine visions for the future use of technology in schools to support meaningful learning and the process of becoming thinkers, creators, and agents of change. This narrow focus is echoed in GenAI policy documents that frame opportunities and risks in static terms, failing to engage with the evolving nature of technology’s risks. Failure to imagine the evolving risks of emerging technology is especially dangerous in special education settings, where surveillance, behavior tracking, and algorithmic decision-making already carry high stakes (Higgs & Stornaiuolo, 2024) for multiply marginalized young adults (Annamma, 2019). Students in these environments are often among the first to experience restrictive implementations of GenAI, such as automated grading or monitoring systems, uses that further entrench inequity and diminish learner agency.

Ciurria (2023) argues that tools like ChatGPT, much like academic norms, operate through a logic of ableism, where neurodiverse communication styles are treated as problems to correct or mask. Trained predominantly on data that reflects dominant language norms, ChatGPT reinforces this ableist logic by reproducing the speech patterns and assumptions of dominant, neurotypical users,implicitly positioning alternative ways of thinking, speaking, or writing as errors. The danger here is not just the potential misuse of GenAI, but the normalization of the erasure of disabled ways of communicating in the name of clarity, professionalism, or appropriateness. In this context, Ross (2017) calls for educational design that goes beyond the status quo to envision what could be, challenging dominant, ableist assumptions that limit learning and innovation. However, despite the widespread adoption of GenAI tools, the voices of students, particularly young adults with lived experiences of exclusion, are often absent from the policy discussions that shape these technologies (Bray et al., 2023; Rice & Dunn, 2023; Steele, 2023). This absence of student voice mirrors the broader pattern in educational technology development, where tools and practices are typically designed about students, on students, or for students, but rarely with them. This pattern is compounded by the commercial nature of many systems, which are built for those who can pay or have services paid for, reproducing existing inequities and excluding those without economic access or voice in the design process. The lack of participatory design in the creation and implementation of these tools increases the risk of reinforcing ableist and exclusionary systems rather than transforming them.

Young Adult Voice and Participatory GenAI Futures

To create GenAI practices that genuinely support inclusion, we must reimagine who is included in designing the way these tools are used. Engaging young adults in participatory design is also a way to resist what Ciurria (2023) refers to as the silencing potential of GenAI systems. When students are seen as experts in their own communication styles, not problems to be solved, they can help reshape tools like ChatGPT to support diverse ways of learning, relating, and making meaning. Young adults with special education and neurodiverse experiences bring unique insight into both the challenges of traditional schooling and the possibilities of more just futures. Their experiences,often shaped by exclusion, labeling, and segregation,position them as critical voices in shaping how technologies like chatbots are used in education. Traditional educational technology approaches position students as consumers or skilled users, not as agents who can reflect on and reshape the systems around them (Vakil & McKinney de Royston, 2022). But the young adults in this study saw themselves not only as capable of using tools like ChatGPT ethically, but also as people who could help design better practices, ones that reflect diverse learning needs, emotional realities, and ethical boundaries.

Moving forward, equity in GenAI integration requires more than just access. It calls for a shift in power toward collaborative design, anti-ableist pedagogy, and lasting structural change. The ethical challenges surrounding GenAI aren't just about the tools themselves,they're rooted in human decisions about whose knowledge is valued, who is included in design, and who takes on the risks (Kapor Foundation, 2024; Philip & Rochelle, 2023). Justice-centered approaches must start with those who have been

historically excluded. This means confronting the structural harm embedded in how GenAI is developed and used at scale, while also creating space to imagine what's possible. What might change if young people with lived experience of exclusion in education were trusted to lead?

Theoretical Framing

Cultural-Historical Activity Theory (CHAT; Engeström & Sannino, 2010; 2020) provides a lens for understanding GenAI in education as a socio-technical activity system, where tools, rules, community, and division of labor mediate learning, responsible decision-making, and technology use. From this perspective, large language models (LLMs) and other generative AI tools are not neutral instruments but components of an activity system that can either support or undermine inclusive, justice-centered educational practices. CHAT foregrounds the interactions among students, educators, and AI tools, emphasizing how the design and use of technology are shaped by historical, cultural, and institutional contexts.

This study investigates the question: *How can discussions be designed to bring together young adults who have experienced educational exclusion with educators, policy makers and technology developers to reflect on equitable and ethical GenAI policies?* To explore this, the framework draws on three interrelated domains: (1) justice-driven inclusive education, (2) human-in-the-loop (HITL) approaches to GenAI, and (3) young adults as ethical co-designers of emerging technology practices.

1. Justice-Driven Inclusive Education

At the core of this study is a commitment to justice-driven inclusive education (Waitoller & Artiles, 2013), which emphasizes the redistribution of learning opportunities, recognition of diverse literacies, and the inclusion of marginalized voices in shaping educational experiences. This approach is deeply informed by Disability Studies in Education (DSE), where scholars critique deficit-based learning environments or narratives and advocate for pedagogies that honor the dynamic, contextual, and multimodal communication practices of students with neurodivergent identities or those who are disabled by the contexts of school (Baglieri, 2022; Kleekamp, 2021; Love & Beneke, 2021).

Integrating Disability Critical Race Theory (DisCrit; Annamma, Connor & Ferri, 2013) further strengthens this justice-centered framing by showing how students at the intersections of race, disability, class, and language are not only marginalized but hyper surveilled in relation to their peers through educational practices that read their behaviors, communication styles, and learning needs through deficit and carceral logics (Beneke et al., 2024). DisCrit helps highlight how technology policies can reproduce patterns of scrutiny that position certain young adults as suspect, untrustworthy, or in need of control. These historical patterns of surveillance shape how students experience emerging technologies and how they interpret the risks associated with new GenAI tools.

The justice-driven inclusive education framing, strengthened by DisCrit, challenges the notion that accessibility is a list of accommodation. Instead, it calls for

inclusive GenAI practices in schools to be a dialogic process, one that emerges through continuous conversation with the very students ,and corresponding shifts in the learning environment ,such school settings and technologies claim to serve. Practices leveraging tools like chatbots and other GenAI must be shaped in ways that reflect students' cultural knowledge, lived experiences, and emotional realities. Technology practices that support accessibility must go beyond holding students accountable, they must actively adapt and evolve in response to the voices of those historically marginalized and too often surveilled, within educational systems.

2. Human-in-the-Loop Approaches to GenAI in Education

Human-in-the-loop (HITL) frameworks foreground the essential role of human judgment in GenAI development and implementation (U.S. Department of Education, 2023; UNESCO, 2023). These frameworks reject fully automated decision-making, instead advocating for systems where GenAI augments human capabilities and upholds values like equity, autonomy, and inclusion. In education, Human-in-the-Loop (HITL) models in education (i.e., Knowles, 2024) help ensure that GenAI tools are monitored by humans and remain responsive to individual learners' needs and desires, rather than enforcing standardized or biased norms.

This study extends HITL thinking by emphasizing not only the importance of including human judgement to validate and verify the products of GenAI systems, but also centering human judgment in determining the process of how these tools are used and who gets to use them. In particular, it prioritizes the perspectives of students who have historically had the least power in shaping educational technology, those receiving special education services or who identify as neurodiverse. Ethical integration of GenAI

requires more than safeguards; it demands relational practices that honor student agency and critique the broader systems in which GenAI is embedded. Thinking ethically about using these tools includes considerations of the emotional resonance of how it feels for students to use these tools and how it feels to be told when they cannot. Furthermore, it also requires consideration of young adults' opinions and affectively-based judgments of how teachers are using these tools. Their emotional responses, sense of fairness, and lived experiences shape how they judge the role GenAI plays in learning. Young adults must be empowered to ask: Who decides when and why GenAI is used? Whose interests does it serve?

3. young adults as Ethical Co-Designers of Technology Practices

From a sociotechnical perspective, technologies like GenAI are not neutral tools but entangled systems embedded in cultural, historical, and institutional practices (Pea & Cole, 2019). Designing GenAI futures with young adults means recognizing how these tools reflect and reproduce existing power structures. It also means inviting students into the ongoing reconfiguration of those systems.

Building on Vakil and McKinney de Royston (2022), this study frames young adults not as passive users or future engineers, but as *philosophers of technology*, ethical agents whose lived experiences, emotional wisdom, and communal knowledge offer powerful insights into how GenAI should be understood, constrained, and transformed. Philosophical inquiry becomes a practice of principled resistance and possibility, allowing young people to interrogate the moral, emotional, and social dimensions of GenAI from within the systems that shape their lives (Higgs & Stornaiuolo, 2024). This study leverages a justice-centered framework that envisions

young adults as philosophers of technology who are essential stakeholders in the imagining of how GenAI can and should be used in classrooms.

By viewing our shared engagement through the lens of an activity system working toward the shared goal of responsible GenAI policy, this study foregrounds justice-driven inclusive education that centers the voices of marginalized learners, powerful human-in-the-loop practices that support both participants and their data, and positioning the young adults in this study as philosophers of technology, critically shaping the policies and practices that affect their own lives.

Methods

This study uses a design-based research (DBR) approach (Cobb et al., 2003; Sandoval & Bell, 2004; The Design-Based Research Collective, 2003), situated within a participatory and justice-centered research tradition. DBR involves iterative cycles of design, enactment, analysis, and redesign, which, in this study, helped create space for powerful focus group conversations with young adults about the ethical use of GenAI in education. While this project does not involve the development of a technological product, it engages in the design and refinement of practice,specifically, how GenAI tools can be used more ethically and inclusively in educational settings, drawing on the insights of young people with special education and neurodivergent experiences.

The research also draws on elements of qualitative case study design (Merriam & Tisdell, 2016), examining a single bounded case: how young adults with special education and neurodivergent experiences engage with GenAI and articulate their visions for its use in educational settings. Two distinct participant groups contributed to

this case, and their reflections were analyzed together across four cross-cutting themes. This approach provides a detailed and contextualized understanding of the ethical, emotional, and pedagogical dimensions of GenAI from the perspective of those historically marginalized in educational technology design,and offers perspectives from marginalized young adults that can inform more just, ethical, and inclusive uses of GenAI in educational settings.

Setting & Participants

This study was conducted entirely online using an institutional Zoom account, which enabled flexible participation across geographic locations and supported a range of accessibility needs. All research activities were facilitated in this virtual environment, including scenario-based discussions (Carroll, 1997), focus groups, and surveys. The study involved two participant cohorts as well as invited guests, all of which provided informed consent.

- **Group A:** Young adult interns and one educator in a neurodiversity-focused technology program, totally 8 people. Members were recruited to participate in this research from the internship program during an info session. Members mentioned in this paper: Richard (program administrator), Adam, Dylan, Sophie, Terrance, Javier, and Lance.
- **Group B:** Four young adults with experience in a self-contained[13] special education classroom, all of whom were former students of mine. Members were recruited from private emails of students who have reached out to me over the years. Members mentioned in this paper: Diego, Lucia, Elijah, and Angel.

[13] A self-contained classroom refers to a classroom where students with Individualized Education Plans (IEPs) are typically taught all academic subjects with the same teacher in the same room. In this case the teacher to student ratio was 12:1 (12 students to one teacher) or 12:1:1 (12 students to one teacher, with one classroom support professional). In some cases students were provided a 1:1 support paraprofessional in addition to the classroom ratio. (Spencer, 2013)

- **Invited Guests:** Leaders from technology and education were invited to listen to each group's final focus group and debrief with me after. Some of these invited guests had ongoing relationships with me and my scholarship through my job as a teacher and my role in my university. Others were those I had met in spaces talking about GenAI, and others I had found through their work on GenAI and neurodiversity. Group A (n=6) Group B (n=6) Members mentioned in this paper: Jasmine (UX designer; Gr. A + B), Adrián (artist and museum educator; Gr. B), Anya (Museum Education Director; Gr. B), Leah (K-12 leader; Gr. B), Elena (data scientist working at a university setting; Gr. B).[14]

The sections that follow describe how data was collected through surveys and focused groups. The focus groups included ChatGPT Use Case which are described below. These methods were designed to center participant voices, foster thoughtful reflection, and explore how young adults with special education and neurodiverse experiences are engaging with and thinking about emerging GenAI technologies.

Surveys

I used surveys as a private and flexible method for gathering participants' perspectives. Surveys gave participants the option to respond at their own pace, especially important given the range of communication preferences across the group. As the Community Power and Policy Partnerships Program (2023) notes, well-designed surveys can surface insights that may remain unspoken in group settings. While less interactive than focus groups, the surveys created space for more personal or reflective responses.

In Group A, content-focused surveys originally intended for completion between sessions were adapted into collaborative whiteboard activities (e.g., Padlet) conducted

[14] It is important to note that Leah was a teacher at the same school as me throughout my career and has met many of the participants from Group B. She was the teacher of one of the participants, Elijah, when he was placed in an Integrative Collaborative Teaching setting as a trial to see if a less restrictive environment suited him. Anya provided me and Leah several Professional Learning opportunities throughout our career and was also familiar with the context in which we taught.

during sessions themselves (based on co-designer preference discussed in Paper One). These interactive formats allowed participants to reflect collectively in real time. The short, three-question “how did it go?” surveys remained in place after each focus group to gather individual feedback that was used to improve subsequent sessions. Many Group B participants chose to complete content-based surveys in one-on-one settings with me. These were structured as survey interviews, where I read each question aloud, typed responses verbatim, and offered clarification when needed. This method prioritized accessibility and comfort, especially for participants who preferred a more relational approach to data collection.

Focus Groups

In this study, focused groups were used as a data collection tool but also as a way to foster dialogue. The Community Power and Policy Partnerships Program (2023) describes focus groups as spaces that can reduce isolation, spark peer learning, and cultivate a sense of “power within” and “power with.” This framing aligns with my goal of creating spaces where young adults can reflect on their experiences with GenAI and education, and begin shaping the futures they want to see. Each group participated in 1–4 focus groups, with a final session that included invited guests from education and technology fields. Focus groups lasted for 60 minutes and were structured as follows. Interactive whiteboards (i.e., Padlet) used for focus groups are shown in Appendix D & E.

- **Peer-only sessions**: Group A (n = 4); Group B (n = 1)
- **Sessions with invited guests***: Group A (n = 1); Group B (n = 1)

* Each session with invited guests concluded with a 30-minute debrief with the invited guests, where I asked reflection questions (see Appendix O).

GenAI Use Case Scenarios

This study uses focus groups and surveys which leverage GenAI Use Case Scenarios to engage young adults with special education and neurodiversity experiences in dialogue about chatbot technologies and educational practices. This approach is grounded in the belief that ethics practices of technology use emerge through relational and dialogic processes, especially for young adults whose experiences in school have been shaped by marginalization. As Vakil and McKinney de Royston (2022) argue, sensemaking around technology is socially situated and intertwined with broader socio technical dynamics. Ethical insights often arise not through abstract reasoning, but through trusted peer dialogue and shared reflection.

To support this kind of collective inquiry, I introduced fictional but plausible GenAI Use Case Scenarios into each focus group (cf., Carroll,1997), similar to those used by the European Digital Education Hub (Cassidy et al., 2023) but geared to elicit the development of ethical guidelines. The GenAI Use Case scenarios themselves were developed through an iterative design process. I began by identifying themes from earlier pilot studies that explored what young adults were already thinking, feeling, and wondering about regarding GenAI use in schools and in their daily lives. I then drafted use case scenario ideas and used ChatGPT as a creative partner to help refine and expand them. These drafts were shared with my advisor, his research group, and the co-design group described in Article 1. Their feedback helped ensure the scenarios were accessible, thought-provoking, and resonant with the participants' lived

experiences. These scenarios were grounded in participants' lived experiences with tools like ChatGPT and designed to open up conversations about the values, assumptions, and consequences embedded in GenAI design and deployment. This approach draws on McDonald et al. (2022), who highlight the power of identity-relevant, scenario-based discussions for engaging with complex ethical and social questions. By anchoring abstract concerns in familiar or imagined contexts, scenarios helped participants move beyond binary debates, such as cheating versus support, and into deeper discussions about bias, inclusion, autonomy, and power. See Appendix M for a list of Use Case Scenarios used.

Data Analysis

Focus group transcripts and survey responses were analyzed using a combination of inductive and deductive coding to capture both emergent ideas from the data and concepts grounded in existing literature (Patton, 2002; Saldaña, 2016). This hybrid approach allowed me to remain open to participant-generated insights while also examining how these insights related to theoretical frameworks.

The initial phase of analysis involved deductive coding, where I applied a theoretical lens focused on established concepts related to my theoretical framework: justice centered approaches to education, human-in-the-loop practices, and young adults as ethical co-designers of technology practices. The initial phase of my analysis helps anchor the analysis within relevant literature while identifying patterns related to these key areas.

As I progressed through the data, inductive coding allowed new themes to emerge that were not initially anticipated. For example, I identified themes related to the

confidence young adults were gaining from ChatGPT use, as well as their efforts to create personal rules governing their use of these tools. These emerging themes prompted the development of new codes and informed a deeper exploration of participants' lived experiences. I revisited the data multiple times to code and recode, ensuring that the analysis remained consistent and reflective of participants' experiences (Erickson, 1986).

Once the final codebook was established, I went through the data again to recode, ensuring the themes and subthemes accurately represented the data. Key moments that embodied the emerging themes were selected and discussed in the sections below, providing deeper insight into the nuances of participants' reflections. Through an iterative process, initial codes were refined and grouped into four overarching themes, the codebook can be found in Appendix N.

Member checking was conducted 8 months after data collection ended for Group A and 5 months after data collection ended for Group B. Adam and Richard from Group A and all members of Group B (Lucia, Diego, Angel and Elijah) engaged in member checking. Dialogue was updated as needed for clarity or to add extra detail. Member checking procedures and details are listed in Appendix L. Following McKim's (2023) recommendation for a structured and meaningful approach, participants were invited to review excerpts from their transcripts and key themes drawn from the analysis. I provided guiding questions to prompt reflection on whether the interpretations accurately represented their experiences and perspectives. Some participants suggested minor revisions or added a word for clarity, while others confirmed that the interpretations aligned with what they intended to share. This process strengthened the

credibility of the research by ensuring that the findings accurately reflected participants' meanings and experiences rather than my own interpretations.

Reflexivity

My personal connections with some of the people in this study, my past job as a teacher, and my own thoughts about ChatGPT all influenced how I carried out the research and made sense of the data. To try to reduce that impact, I kept checking in with myself through reflection.

First, I already had relationships with some participants, especially the young adults in Group B, who were my former students, and with some of the guests in Group C who I invited to join. I made sure they all knew they could stop participating at any time. After each session, I listened to the audio recordings and took time to reflect on what was said and whether I missed anything important.

Second, because I used to be a teacher, I was careful to notice when that role might be affecting how I worked with participants. I tried to be aware of any habits or power dynamics that might show up and regularly thought about how to adjust my approach.

Third, I paid attention to how my own experiences and opinions, especially my views on ChatGPT and special education, might influence what I noticed or how I interpreted what participants shared. I looked for signs that my views might be shaping the analysis too much, and regularly asked co-designers for feedback to help me stay grounded.

In short, my background and personal connections played a substantive role in shaping this study. Rather than pretending I could be completely neutral, I tried to stay

aware of my influence and respond with care. By reflecting regularly, checking my own assumptions, and seeking feedback from others, I aimed to make sure that the voices and perspectives of participants stayed at the center of the research.

Findings

In what follows, I report on key themes that emerged through the analytical procedure described above across the data corpus in response to the driving research question for the study.

Theme One. Voice, Confidence, and Fear: Reclaiming Expression While Navigating Known Risks

For young adults who identify as neurodivergent or have special education experiences, their typical way of communicating has often been viewed in deficit framing during their time in school. In this study, participants show that this framing has had a lasting impact on the confidence these young adults have when communicating. Many participants shared that ChatGPT offered more than just practical language support, it helped them find their voice and communicate with greater clarity and confidence in ways they found to be meaningful.

GenAI supports young adults who identify as neurodivergent in their communication with professionals, empowering them to articulate their needs in a way that the professionals can understand. For Dylan, one of the interns in Group A, using ChatGPT was transformative, he shared: “It helps me with my stress, anxiety, and the daily life of living.” He emphasized how it made communication, especially with professionals, more manageable: “It makes it a lot easier for me to explain myself to the

doctor, if I'm writing a letter to someone, or if I need to talk to my teacher." Reflecting on the deeper impact, he shared, "GenAI changed my views by helping me know myself better and have someone to talk to." Dylan expresses that GenAI wasn't just a tool, it became part of his broader journey toward self-expression and emotional regulation to manage stress and anxiety. His experience illustrates the kind of hybrid, computer-supported communication that supports neurodiverse learners in expressing themselves with more ease and agency (Kleekamp, 2021). It also underscores the justice-centered lens needed to see tools like ChatGPT not merely as assistive technologies (or worse a tool that can be used for plagiarism or cheating), but as vital supports for emotional well-being and diverse literacies, or, as Dylan put it, "a game changer for kids with special needs." This sense of empowered communication was a benefit echoed by many across both groups.

Similarly, Lucia, one of my former students from Group B, described how GenAI helped her build confidence in an area where she often struggled. "It makes me feel better about my writing and makes me feel smart, because I do struggle a lot with writing," she explained. Rather than using GenAI to generate her work, Lucia emphasized that she writes everything herself first and then uses ChatGPT to revise and refine her ideas: "I just tell ChatGPT, 'Can you make it sound professional, or a little better?'... kind of like if I were to go to a writing center or getting someone's feedback." In her experience, GenAI acted as a supportive editor, helping her express complex ideas more clearly while preserving her voice. Lucia describes how she is using ChatGPT similar to how many other students often receive help from their parents who went to college or who speak English as a first language, allowances that Lucia as a

first-generation graduate student and a first-generation Colombian American did not have access to. In Lucia's example, linguicism, classism, ableism interlock, creating barriers to full engagement in her graduate school program (Annamma, Connor & Ferri 2013). In this example, GenAI offers support to navigate those barriers. By comparing ChatGPT to a writing tutor, Lucia positioned the tool as a legitimate part of the learning process (this is discussed more in Article 3). This framing challenges common assumptions that students use GenAI to bypass learning. Instead, Lucia's story highlights how, for some, GenAI enhances agency, confidence, and clarity.

However, a recurring concern voiced by both Lucia and Dylan was the tension between using GenAI for support and the fear of being accused of cheating or plagiarism. When asked about her personal fears when using ChatPGT, Lucia shared,

> I fear getting in trouble for using it for school or work even though I write everything out first and then have [ChatGPT] check [my work] for me… I would not use it to write a whole paper for me without my input.

Her reflection reveals the intentional care she takes to preserve authorship and integrity, even as she uses GenAI to scaffold her writing process and remain a human-in-the-loop (UNESCO, 2023; U.S. Department of Education, 2023). Despite her careful use, Lucia remains concerned that her approach could be misunderstood or punished. This fear reflects a broader tension between students' ethical use of GenAI and institutional narratives that frame these tools primarily as a threat. Rather than recognizing GenAI as a legitimate aid for learning, many school policies continue to emphasize misconduct, plagiarism, and prohibition (Burriss et al., 2024; Lee et al., 2024). Within these

environments, students like Lucia must continually negotiate intent and authorship to avoid being labeled dishonest.

Dylan shared a similar struggle that highlights the consequences of unclear GenAI policies. He was open about his use of ChatGPT with his teachers and described the consequences he faced when teachers assumed the worst:

> “It's very hard, because when I was using it in my old school last year, and I just honestly admitted to them, they made me redo all that work because they didn't want me using ChatGPT to write my work I was not doing that, I was generating the whole thing from scratch and then I was putting into the GenAI saying, rewrite my words. Schools don't like GenAI even rewriting it. It really just depends on the school and the teacher. They want it to be your original work, not some machine.”

His experience shows how some schools interpret even GenAI-assisted revision as academic dishonesty, regardless of student intent, revealing a deeper tension between models of literacy that view revision as a site of meaningful learning (Emig, 1977) and those that treat it as a threat to assessment integrity. Dylan also noted the inconsistency across classrooms: “Some teachers love GenAI, and some teachers hate it, and they're scared of it. Yeah, they think it's gonna take their jobs.” His account highlights the uneven landscape students must navigate, where the legitimacy of GenAI use often hinges on a particular teacher’s attitude rather than a consistent or transparent policy.

This dynamic of assuming the worst when young adults take it upon themselves to find tools to support their needs, is shaped by long-standing deficit frameworks that

underestimate students' ability to engage with complex tools ethically (Solyst et al., 2023). In Lucia's case, her use of GenAI as a feedback tool demonstrates critical reflection and careful boundary setting. In Dylan's case, his honesty and openness about his process did not shield him from punitive consequences. Both stories challenge the assumption that students turn to GenAI to cut corners. Instead, they model responsible GenAI practices, drawing on human judgment, maintaining authorship, and seeking support without surrendering control. Rather than needing protection from GenAI, what many students truly need is recognition of their agency, ethical awareness, and capacity to use emerging tools responsibly.

As a part of this research, guests from academic and technology fields were invited to listen to the young adults share their experiences using ChatGPT. Elena, one of the invited guests from University admissions, listened as Group B shared their experiences with ChatGPT and identified the value of hearing how Lucia was using ChatGPT. Reflecting on what she heard, she remarked,

> I thought it was really impressive how the young adults knew how ChatGPT would help them… Lucia is leaning on it for writing, but not just doing her writing, more like helping her edit and refine her ideas. It is being used, not for taking away voices, but for adding to them.

Elena's observation underscores a key insight: tools like ChatGPT can support students without doing the work for them. Lucia's use of the tool to "edit and refine her ideas" demonstrates a collaborative interaction with GenAI, one that maintains her voice while enhancing her expression. Importantly, it also reveals that students are not simply accepting what GenAI produces, but engaging with it through a process of interpretation

and selection. This raises important questions: What kinds of pedagogical models are built into these GenAI systems, and how do students take in, evaluate, and apply the feedback they receive? When students use GenAI as a revision partner,much like a peer or tutor, they may be engaging in cognitively and affectively rich learning processes that align with established theories of writing as reflection and meaning-making (Emig, 1977). This reflects the broader potential of GenAI not just to assist with academic tasks like writing, but to empower students by encouraging more active participation in the learning process, or a redistribution of the learning process needed to create more justice-driven inclusive education, creating the space for young adults to decide how they learn and what tools they use (Waitoller & Artiles, 2013). Elena's framing, that ChatGPT is "adding to" voices, offers an important counter-narrative to fears that GenAI will replace human input. Instead, it aligns with a necessary shift in educational technology: toward tools that amplify student expression and support the development of diverse literacies. When understood this way, GenAI becomes a bridge to deeper engagement, not a barrier to student agency.

The concerns raised by Lucia and Dylan deeply resonated with the invited guests who listened in on Group B's discussion. Their reflections highlighted both the emotional cost of being misunderstood and the untapped educational potential of GenAI when students are given the chance to use it on their own terms. Anya, a Museum Education Director, noted the core tension students expressed between empowerment and fear:

> It was so interesting how this idea that this is a tool that helps build my confidence came through... but in the cons, there's a lot of, 'I'm afraid I'm

> going to get in trouble for using this tool that makes me feel really confident about how I can express myself.'

Anya's insight captured the emotional stakes of GenAI use. Even when ChatGPT helped students express themselves more clearly, the stigma and institutional suspicion surrounding it eroded that newfound confidence. Her comment underscores how school narratives about plagiarism and dishonesty can undermine the very self-assurance that GenAI use begins to foster (Burriss et al., 2024). Anya's reflection revealed how systems too often label efforts toward accessibility and expression as potential misconduct, placing the emotional burden of "proving integrity" on the students.

Jasmine, a user experience designer who listened to both Group A and B, extended this tension, moving from fear to the potential for learning and growth. She emphasized that the goal shouldn't be to eliminate GenAI use but to support students in learning *through* their interactions with it as they use this tool to help "translate" their writing to something they feel is more acceptable to teachers or employers:

> I think that now the goal should be giving them the ability to use ChatGPT as a tool, so that they're not using it as a crutch to always come back and have it translate... they can learn through the interaction with ChatGPT how to do these translations themselves, like picking up the patterns of their writing... but yeah, it's very sad that we live in a world where you have to constantly filter yourself and mold yourself into certain ways, just so you can exist as you are.

Jasmine's comments reframed GenAI not as a shortcut, but as a bridge to skill-building. Rather than fearing overdependence, she saw students' GenAI use as an opportunity to develop independent voices through repeated, scaffolded interaction. Her final comment on how participants feel forced to "filter" themselves just to exist spoke directly to deficit-based framings of neurodiverse communication styles in school (Baglieri, 2022)[15]. Even when young people are being resourceful and reflective, they are often made to feel as if their approaches are inauthentic or invalid.

Leah, a leader in K–12 education who listened to Group B, brought attention to a systemic failure in education that GenAI is now working to repair,[16] "They're gaining confidence through technology, and not through the human interaction they had in those 12 years of schooling." While the participants in this study were never directly asked about their level of confidence they had as a result of their school experiences, Leah's stark comparison between the empowering nature of a digital tool and the lack of affirmation in traditional schooling reveals a deeper systemic issue. In special education especially, students are often denied the kinds of support that foster confidence, agency, and voice. This highlights an urgent need for justice-centered, inclusive learning environments that recognize and value the diverse literacies young adults bring with them (Waitoller & Artiles, 2013). For some participants, ChatGPT was the first space

[15] While some may argue that everyone must "filter" themselves or learn to speak in ways that align with dominant norms to gain acceptance in certain communities, and while understanding how to "code switch" or navigate the "culture of power" (Delpit, 1998) can indeed open doors for students from marginalized backgrounds, it is equally important to interrogate the arbitrary nature of those codes and the power relationships they uphold. Learning to navigate these systems should not come at the cost of accepting oppressive norms as fixed. Instead, students should be supported in both understanding these codes and questioning who benefits from them, whose voices are marginalized, and how such norms might be transformed.

[16] As mentioned in an earlier footnote, Leah was an educator with me and has met or heard about many of the participants in Group B of the study. She was also a teacher for one of them for a few months.

where they felt a sense of control where their unique communication styles could be translated into forms deemed acceptable within academic settings. Leah's insight raises a troubling but important question: why are young people finding more affirmation and agency in a GenAI tool than in over a decade of formal education?

Together, the invited guests observed how the young adults in this study were using ChatGPT to amplify their voices and build confidence while also establishing their own ethical boundaries and thoughtful practices. These young adults shared reflection that centered their active and reflective engagement with ChatGPT. While little is known about how they actually used ChatGPT outside of the context of this study, their stories challenge both GenAI alarmism and deficit views of students. As the guests noted, what's needed is not stricter surveillance or blanket bans, but new ways of thinking about GenAI that recognize and honor student agency.

Theme Two. Mental Gymnastics of Responsible AI Use: Young Adults Navigating Boundaries

Media discourse related to education often frames students as passive or dishonest users of GenAI (Solyst et al., 2023; Lee et al., 2024), but the young adults in this study reveal a different reality, one defined by strategic decision-making, ethical consideration, and emotional labor. They are not simply using tools; they report navigating complex sociotechnical terrains with care and intention. As participants in Group B discussed their relationship with GenAI in their daily lives, it became clear they were engaged in what Anya, a Museum Education Director from Group B, described as "mental gymnastics." Anya reflected,

There's so much cognitive load in selecting what's the right tool for this job… how much thought they're putting into this use, even though we shouldn't necessarily be in a system where they're having to filter themselves so much… it's so funny when we think about, oh, it's going to make people lazy, but the mental gymnastics that they were just talking about...

Anya's observation reframes the narrative that young adults are passive users of GenAI. Rather than turning to GenAI as a shortcut, young adults describe how they were engaged in complex cognitive and social reasoning, assessing the appropriateness, risks, and affordances of ChatGPT within their specific socio technical contexts (Higgs & Stornaiuolo, 2024; Pea & Cole, 2019; Vakil & McKinney de Royston, 2022). This described labor was deeply ethical. These young adults navigated ongoing, dynamic acts of critical literacy, carefully filtering how they presented themselves, anticipating institutional judgment, and weighing whether their choices would be accepted or penalized in educational spaces.

Across both focus groups, young adults described personal boundaries that shaped how they use GenAI in everyday life. These boundaries weren't imposed by adults or school policies, they were self-developed, context-specific, and often grounded in ethical reflection. The stories below illustrate how three participants, Elijah, Diego, and Angel, each articulated a different kind of limit for their GenAI use. Their reflections demonstrate that the boundaries they described around GenAI use are moral, emotional, and conceptual.

Elijah brought judgement to determine when GenAI could offer guidance on a topic. His reflections revealed a personal sense of boundaries, particularly around topics

that felt too sensitive or complex to entrust to a chatbot. When asked if there were situations where he would not use ChatGPT, he reflected deeply and said, "*I would say anything that has to do with religion and belief systems... I wouldn't really use it. You could use it to be informed about something, but if we're going to delve deeper into the specifics of religion, I will not use ChatGPT for that.*" While Elijah and I have spent hours discussing the complexities of religion and his deep YouTube research on this topic, his decision to set a personal ethical boundary reflects a sophisticated level of moral reasoning, challenging assumptions that young people use GenAI impulsively or irresponsibly (Solyst et al., 2023). Elijah, along with other students in the study, has clearly thought about where GenAI tools should be applied and where they should not, demonstrating a capacity for ethical self-regulation. This consideration of boundaries offers critical insight into the ethical maturity that many students exhibit when engaging with GenAI. It serves as a reminder that young adults, far from being passive recipients of technology, are actively shaping how they interact with these tools.

While Elijah's concern centers on *what not to ask*, Diego's story turns to *what not to reveal*. Diego, who is typically a proponent of GenAI use (discussed more in Article 3), expresses concerns rooted in digital privacy and the hidden systems behind GenAI tools. He discusses the boundaries he has created to mitigate potential risks of personal data being collected in ways that users cannot fully control. He expressed concerns about the invisibility of data collection, stating, "*Even though [ChatGPT] says I can delete some of my prior chat logs... I feel like it's not truly deleted. I feel like it is constantly learning and updating in the background. And I personally feel like there's possibly a soft portfolio on everybody*." Diego's words reveal not just skepticism, but a

fundamental mistrust of the GenAI systems, suggesting that despite assurances of data privacy, the real nature of data handling remains opaque and unsettling. His belief in the existence of a “soft portfolio” that accumulates data on everyone reflects a growing awareness of the subtle ways in which personal information is gathered, analyzed, and possibly retained by GenAI tools.

Diego uses his critical reasoning to create his own solution to his concern about ChatGPT’s privacy. He shares, “*That is why I always use ChatGPT anonymously without logging in*.” This is an example of an ethical practice grounded in skepticism, resistance, and self-determination. Diego’s decision to minimize his digital footprint reflects a refusal to be surveilled as a form of digital agency that challenges dominant narratives about young adults as careless or naive online. As Ross (2017) emphasizes, young adults must be invited into the design of how technologies are designed and used, not merely adapted to existing systems, but empowered to question and reshape them. Diego’s critique and behavior identifies concerns with the current system and imagines alternatives, and alters his own practices accordingly to mitigate those concerns. In doing so, he offers an urgent reminder that ethical GenAI implementation cannot be separated from the sociotechnical and emotional realities of those most affected by these technologies.

Diego’s boundary is rooted in mistrust of ChatGPT’s privacy, but Angel brings the emotional consequences of overuse to the forefront. Angel described boundaries shaped by emotional insight and relational care. He spoke about a close friend whose creative use of ChatGPT gradually spiraled into unhealthy dependence: “*He got so wrapped up in [Gen]AI that he became dependent on it, and it led him to neglect other*

parts of his life." Angel described how this overuse disrupted his friend's well-being, noting that he even stopped taking care of himself. "*It's scary to think that could happen to anyone*," he added. His concern was about the real consequences that can come when there is a tool that allows you to offload cognitive thinking, "*I don't want people I care about to use it and get obsessed with it.*" Rather than viewing technology solely as a support or shortcut, Angel recognized how GenAI might intrude upon mental health, identity, and social balance (Angel's experience is discussed more in Article 3). Angel's reflection also highlights how boundaries with technology are relationally shaped. His proximity to his friend's experience made the potential harms of overuse tangible and personal. This speaks to a broader social science question: how does witnessing harm within one's social circle help individuals define boundaries with emerging technologies? From a sociotechnical lens, his account reveals how emerging tools like ChatGPT do not operate in isolation but are deeply entangled with users' daily rhythms, relationships, and sense of self (Pea & Cole, 2019; Higgs & Stornaiuolo, 2024).

As Leah, a K–12 leader who listened to Group B's discussion, observed, "They're in a generation where... they are not using [GenAI] in school currently, and they're figuring it out on their own, how to use it appropriately." Her reflection underscores a key tension: while GenAI tools are rapidly becoming part of everyday life, many schools have yet to offer meaningful guidance. In this institutional void, students are left to navigate complex ethical, academic, and personal decisions about GenAI use without structured support or critical literacy education. Yet rather than floundering, these young people are rising to the challenge by setting boundaries, asking hard questions, and constructing thoughtful relationships with emerging technologies in specific ways. As

Vakil and McKinney de Royston (2022) suggest, promoting environments where students' ethical considerations are valued and reinforced can encourage a more thoughtful and empowered use of technology. These students' reflections challenge deficit assumptions about irresponsibility and instead highlight a nuanced, justice-oriented orientation to technology, one that educational and policy frameworks should recognize, support, and learn from. At the same time, these reflections highlight the need to systematically help all users of GenAI learn to draw such boundaries through educational standards, curricula, and GenAI literacy programs.

Together, these reflections from Elijah, Diego, and Angel reveal that at least some young people are actively shaping how GenAI fits into their lives, guided by ethical reasoning and a desire for safety and balance. Whether setting limits around religious inquiry, protecting personal data, or guarding against emotional overreliance, each participant demonstrates a unique and intentional way of creating boundaries and engaging in what Anya in the beginning of this theme calls "mental gymnastics" creating self-authored frameworks that reflect lived realities and critical engagement. Rather than unquestioningly adopting new tools, young adults are forming their own conceptual frameworks to guide responsible use (Solyst et al., 2023). Taken together, these reflections highlight a generation not in need of policing, but of working together to define ethical GenAI use and practicing ethical discernment in a digital world that often leaves them to figure it out alone.

Theme Three. Flipping the Script: Young Adults as Architects of Ethical GenAI Use for Educators and School Districts

Building on their reflections about judgment, fairness, and emotional well-being, participants moved beyond identifying the limits of GenAI. They began imagining how these tools should be used in schools by teachers and school districts. This theme explores how young adults, particularly those with special education and neurodiverse experiences, can and should weigh in on how educators and school systems use GenAI tools. This theme highlights how young adults envision more thoughtful and ethical approaches for GenAI use in school. In what follows I explore how these young adults are flipping the script by imagining policies that hold teachers and schools accountable for their GenAI use, instead of the traditional narratives where teachers impose limits on how students use GenAI.

As a former teacher and district technology coach, I've often sat in professional development sessions where GenAI tools are framed as a way to reduce teacher workload. What's often missing from those spaces is consideration of how students might perceive this use, especially when they are simultaneously told that GenAI is unreliable, prone to misinformation, and primarily associated with academic dishonesty (Lee et al., 2024). This disconnect raises ethical questions about transparency in GenAI use that are playing out in real-time classrooms. These concerns are reflected in national trends. In a recent *Education Week* survey, nearly 80% of educators reported that they do not believe it is necessary to inform students or parents when GenAI is used to create lessons or assignments. However, only 48% said the same about using GenAI for grading (Langreo, 2024). This tension mirrors broader questions in the

literature about whether and when teachers should disclose GenAI use to maintain professional integrity. Young adult participants in this study spoke directly to the ethical dimensions of GenAI use by educators. When asked whether teachers should disclose their use of GenAI, 10 out of 12 participants said yes, emphasizing that transparency matters not just for accuracy, but for building trust. The remaining two participants didn't see disclosure as strictly necessary, but still viewed it as a respectful gesture. Across both responses, students framed teacher use of GenAI not as a neutral but as an ethical choice,one that requires honesty, mutual respect, and clear communication with students.

Many young adult participants shared their views on teachers' uses of GenAI for grading and they highlighted the importance of teacher oversight while using these tools. These reflections on teacher responsibility surfaced repeatedly across both focus groups. Angel, one of my former students from Group B, emphasized the need for balance between human and machine judgment: "I think it's not a good thing because it could possibly be the wrong answer. If [teachers are] using [ChatGPT] to check answers, but they're also using a calculator as well, you know, half computerized and half human." His metaphor of a "half computerized, half human" approach reflects a design principle that appeared throughout the study: GenAI should support, but not replace, professional judgment. Similarly, Terrance from Group A extended this principle of human oversight, "The teacher should chime in since GenAI may not be accurate and may penalize or inflate someone's grade. Both the teacher and GenAI may have different perspectives on the grade." For Terrance, fairness of grading required thoughtful engagement from teachers. His reflections highlight a view echoed by others:

GenAI should never function as an unquestioned authority. Instead, human-in-the-loop practices (U.S. Department of Education, 2023; UNESCO, 2023) are essential to ensure that ethical judgment, professional integrity, and student voices are not only considered but actively integrated into the design and implementation of GenAI-assisted learning environments. These practices place a necessary emphasis on human oversight, allowing educators to maintain responsibility for decisions in the use of GenAI in education.

Participants in this study were deeply concerned about how GenAI systems might reinforce harmful stereotypes when trained on biased or incomplete data. While many participants voiced such concerns, I include Diego's example because of the depth and nuance of his response. Diego, one of my former students from Group B, drew from his own experience to understand the potential harm of school districts using GenAI systems to identify student performance,

> So I'll use me for an example. Let's say based off my old IEP, it probably would have said I had ADHD or something like that, which wasn't true. So you're now going to make a curriculum for me with information that isn't true, and there's a progression of stuff that you can't account for. You can't account for the emotional intelligence of somebody. There's a chance of getting bullied, there's a chance of feeling isolated. There's many things GenAI cannot account for that normal adults don't even take into consideration on the day to day life when it comes to students.

His reflection reveals how predictive systems risk flattening complex student identities into faulty labels and deficit-based assumptions (Baglieri, 2022; Collins & Ferri, 2016;

Theoharis et al., 2015), with real consequences for students' educational experiences and well-being. This concern resonates with critiques of the systematically inconsistent processes used to diagnose learning disabilities (McDermott et al., 2006), where arbitrary labels can lead to misaligned interventions.

Diego continues to problematize the use of GenAI systems to help predict at-risk students. He offered a powerful critique of data-driven decision-making that lacks human context. "What if [the GenAI] thinks everyone from a certain neighborhood is automatically at risk, just because that neighborhood has been labeled a 'problem area' in the data?" His comment underscores how GenAI and forms of quantitative modeling can reproduce systemic inequalities, such as the criminalization of zip codes or deficit assumptions about particular communities (Hassija et al., 2023; Qadir, 2022;). Diego wasn't just concerned about incorrect predictions; he highlighted how the appearance of objectivity could reinforce existing systems of surveillance and structural bias that are especially pertinent to multiply marginalized young adults (Annamma, 2019; Annamma, Connor & Ferri 2013).

Diego also named the emotional toll flawed GenAI systems could have, he shares that GenAI being used to make decisions about students based on data,

> might pressure students more, because there might be bias, inaccuracies, or glitches in the system. Someone should manually review the predictions before any action is taken… It can cause some mental health stress and suicide risk for students because of the inaccuracy of the AI system.

His words point toward a broader vision of justice-driven inclusive education (Waitoller & Artiles, 2013), where students are not merely subjects of algorithmic classification but

co-shapers of ethical technology practices (Vakil & McKinney de Royston, 2022). Diego's reflections underscore that justice in GenAI demands the centering of student knowledge, emotional well-being, and community context in how educational technologies are imagined and deployed.

While Diego's reflections focused on the consequences of flawed predictions and mislabeling, participants in Group A offered a parallel but distinct critique, arguing that technical fixes alone cannot solve the deeper ethical challenges GenAI poses. When an invited guest suggested developing a bias detection tool to screen GenAI-generated lesson content in the focus group, two participants responded with skepticism. Richard, an administrator of the program in Group A, challenged the assumption that bias could be addressed retrospectively:

> Even if there's a bias checker, it won't change the fact that GenAI systems are still built on biased data. Just checking for bias after the fact doesn't fix the underlying problem. A human is still needed to review the content or decisions before it's used in classrooms.

Richard's comment reflects a sophisticated understanding of algorithmic harm and a strong alignment with human-in-the-loop thinking (U.S. Department of Education, 2023; UNESCO, 2023), something that the idea of bias checkers seems to overlook. His critique warns against outsourcing ethical judgment to tools that may offer a false sense of neutrality or completeness and also demonstrates the importance of supporting educators to develop critical expertise in digital literacy and GenAI.

Javier, an intern in Group A, built on this point by emphasizing the limitations of GenAI in navigating cultural and ethical nuance: "Teachers should have the final say in

determining whether GenAI-generated content is appropriate, especially when dealing with sensitive topics around identity, culture, and inclusivity." Javier's insight highlights the irreplaceable role of culturally situated human judgment, echoing concerns raised by Higgs and Stornaiuolo (2024) about GenAI's tendency to reproduce dominant cultural norms while neglecting the lived experiences of marginalized students. This becomes even more urgent when considering how intersecting systems of oppression shape young adults' educational experiences (Annamma, Connor & Ferri 2013), and how those same systems can be reinscribed through GenAI tools. Without intentional, human-led review, these systems risk deepening educational inequities rather than addressing them.

The young adult participants' conversations, grounded in ethical reflection and emotional awareness, reveal a nuanced understanding of GenAI that flips the script, from educators deciding how students should use GenAI, to students offering guidance on how educators should use it. Their arguments move well beyond familiar concerns like cheating, plagiarism, or misinformation, topics that often dominate educator discourse, toward deeper questions of emotional impact and systemic bias. In doing so, they challenge dominant narratives that position students as subjects of surveillance and regulation rather than co-creators of ethical technology practices. Notably, these young adults are also thinking carefully about how educators can use GenAI responsibly, calling for Human-in-the-Loop practices, thoughtful oversight, and emotionally attuned implementation. These young adults give educators the benefit of the doubt regarding using critical reasoning in their engagement with GenAI, but educators have failed to give students the same benefit. These conversations open

space for students to shape how GenAI is integrated into classrooms and how educators are educated to use GenAI, pushing back against the assumption that only institutions hold that authority. Centering student voices in this way points toward more thoughtful, inclusive, and justice-oriented approaches to GenAI in education.

Theme Four. Evolving Perspectives: How Dialogue Sparked Reflection and Growth in GenAI Use

The previous themes underscore the importance of engaging young adults with special education and neurodiversity experiences along with those who design practice and policy in thoughtful dialogues about GenAI. Their reflections shed light not only on how they personally interact with these tools, but also on the boundaries they establish for themselves and their views on how educators and school systems should responsibly integrate GenAI. Rather than treating GenAI ethics as a static set of rules, this research illustrates the need for ongoing, relational conversations as previously discussed in other themes. Such dialogues enable us to confront the rapidly changing landscape of GenAI risks, rooted in real-life experiences and shaped through collaboration with those most directly affected (Cassidy et al., 2023; McDonald et al., 2022; Vesnic-Alujevic & Guimaraes Pereira, 2025). This theme highlights how dialogue helped to change participants' perspectives about GenAI, both among the young adults and the invited guests. As the discussions unfolded, participants moved beyond their initial positions, fostering a deeper, more nuanced understanding of the ethical implications of GenAI. Through this dynamic process, the conversations themselves became a space for collective growth and reconsideration of how GenAI should be used in educational contexts.

For many participants, the focus group conversations grounded in *GenAI Use Case Scenarios* marked powerful moments of personal growth and shifting perspectives (McDonald et al., 2022) as we see with Lance and Adam, two interns from Group A after they were provided with the GenAI Use Case Scenario:

> A teacher uses GenAI for classroom management. The GenAI monitors student behavior through cameras and sensors, providing alerts to the teacher about disruptions and students who may need extra attention.

Adam, an intern who identifies as white, initially supported the idea of teachers using GenAI for behavior monitoring in special education classrooms because it can *"check if students are doing okay or not and how they behave*". But after Lance, an intern who identities as Puerto Rican, shared his concerns,

> *I think the students would get more stressed out… like every single thing they do… they're just thinking, 'Oh, I'm being monitored.' This could distract them from doing their best work 100%, since their mind would just be in the monitoring part probably*,

Lance's response to the GenAI Use Case Scenario reveals how young adults with further proximity to whiteness can experience heightened fears of surveillance (Annamma, 2019) that impact how they perceive GenAI policies and practices. Adam reconsidered and reflected,

"*I have changed my opinion because students may get distracted when being monitored, and they might feel less motivated to get their work done.*" Adam reflects on risks brought up by Lance in a way that is consistent with the idea of stereotype threat (Steele & Aronson, 1995) and how negative perceptions of certain groups can impact

their performance or behavior. This shift of Adam's understanding of the complexities of using GenAI tools for behavior monitoring highlights Vakil and McKinney de Royston's (2022) argument that ethical insights often emerge through a social learning process, as individuals reflect on the personal consequences of technological practices. This becomes even more important when we design policies for GenAI since the capabilities of this tool extend far beyond what any one technology has done in the past. These conversations help to illustrate the emotional impact of GenAI practices that use these technologies to surveil, judge, or misrepresent young adults that experience intersectional oppression.

While Lance's insights helped a peer change their perspective, they also resonated with Richard, one of the administrators who runs the internship program. Richard shares, "*I believe it was Lance who mentioned that using GenAI for surveillance or safety in a classroom could backfire and cause student performance to drop due to anxiety. I thought it was very insightful, it stuck with me*." Richard was struck by the depth of Lance's thinking for providing a perspective he had not considered before and further drives the importance of White peers and educators hearing how technology policies and practices impact their peers or students with less proximity to Whiteness. He reflected on their contributions throughout the series, "*For me, it's the level of nuance they approach this topic with, and how you can tell they've really thought about it, examined different scenarios… a lot of thought went into their responses*." This reflection directly shaped Richard's own teaching practice. In his Digital Empowerment workshop series, which explores issues related to online life and GenAI, he shared that he now plans to deepen the complexity of classroom discussions focused on GenAI. "*I*

can definitely up the level of the discussion questions and just how complex we get with these conversations. I've been really impressed with the discussions in these sessions." Both Adam's and Richard's reflection on Lance's perspective show the power of open, collaborative dialogue to reshape perspectives and practices, especially perspectives of those who experience multiple systems of oppression.

This dialogue shares how Terrance had a shift in perspective that was sparked by a real life example of how one of his group members used ChatGPT. This specific conversation was a rather dynamic conversation that was sparked by a Use Case Scenario designed by Sophie, an intern in Group A, instead of a Use Case Scenario that was provided by me. Sophie draws on a personal example:

> "A student struggles with describing things and making proper sentences in their own words. So they use AI to give them a response, and write down the AI's response for their work. However, the student rewrites the AI's response in their own words, and not fully copying down the AI's response word by word."

Early in the conversation, Terrance advocated for an approach to GenAI in education that restricts use for certain students, arguing that only students who truly needed support should use it. "*Basically*," he said, *"if they're capable of writing it in their own words, they don't need to use GenAI.*" His comments reflected a narrow interpretation of student ability and overlooked the nuanced ways students engage with expression and learning (Kleekamp, 2021). The conversation took a turn when Dylan responded with a deeply personal counterpoint, challenging the limitations of Terrance's position. "*I disagree with that,*" Dylan said,

because I have a learning disability and I'm still very smart. It's great for GenAI to actually help me rewrite things. It helps me proofread it and make sure I don't sound unprofessional in email. So I totally disagree. GenAI makes it easier for me to describe things, and I do write in my own words… I write and have it rewrite it and it makes it easier for me.

Dylan's experience complicated Terrance's perspective on GenAI use, showing the value of engaging in discussions to make sense of ethical uses of emerging technology (Higgs & Stornaiuolo, 2024). Dylan described how ChatGPT helped him refine and clarify his thoughts because the tool helped him navigate barriers in conventional academic communication. His comment called attention to the value of interdependent literacies: ways of writing and thinking that involve collaboration, sometimes with GenAI, rather than solitary mastery (Kleekamp, 2021). Dylan's reflection reframed GenAI as a legitimate part of a thoughtful writing process. Terrence listened and changed his original position. After hearing from Dylan, he acknowledged that GenAI could play a critical role for students who face barriers to expression, even if they are fully capable of generating ideas. While Terrance's original stance drew a hard line between those who "can" and "cannot" write independently, Dylan's story helped him see a broader spectrum of need and ability.

The dialogues catalyzed a rethinking of assumptions not only at the individual level but also across the broader community of practice. Adrián, an invited guest working in museum education, initially approached Group B's focus group session with hesitation about GenAI's role in creative work. When asked to share an emoji in the Zoom chat that captured his thoughts on ChatGPT, he posted the wrestling emoji (🤼)

and explained, "*I've been struggling with it... I'm an artist, and in the individual arts, it's taboo because it's a lot of stolen images. So we even have tools to counter GenAI.*" Like many creatives, Adrián was concerned about how GenAI might lead to the theft of intellectual property. That is a key ethical concern I have seen. However, hearing directly from the young adults about their own meaningful, reflective uses of GenAI prompted him to reconsider. During the debrief, he shared:

> I haven't really experimented a whole lot with GenAI myself, so to hear about some of the ways that it's been used successfully and in a positive way, I think, has been really beneficial for me to form my opinions of it... the whole idea of writing something out and having GenAI help you create a voice, or like a more desired way of saying something, I think that's really helpful... almost like a translation service. So that's kind of eye-opening for me."

This moment expanded his understanding of important uses of GenAi for writing. Rather than viewing GenAI as a threat to human creativity, Adrián began to see it as a support, what he called a "translation service", that could help students shape and clarify their voices. This reframing was especially powerful considering that many of the young adults had experienced exclusion from traditional educational spaces. Their stories repositioned GenAI not as a shortcut, but as a tool for amplifying agency, enhancing expression, and offering access on students' own terms (Theoharis et al., 2015; Collins & Ferri, 2016). Adrián's expanded understanding illustrates how exposure to student narratives can open up more expansive, equitable views of GenAI's role in expression.

Building on this idea of GenAI as a tool for expression, another invited guest, Anya, directly engaged with the concept of shared responsibility, where adults actively

support young adults in their engagement with GenAI. She responded to a question posed by Diego: "*Can the 'older generations' use their experience with pushback for using the internet, calculators, or spell check in schools to help move forward more intentionally with current pushback on using ChatGPT?*" This question resonated deeply with Anya, who saw it as a call to action to reframe how resistance to GenAI echoes familiar educational debates. She reflected:

> *And then there was one question for us that I loved, where it was like, how can the older generations think back to calculators or these things where, again, tools that help us. But there was so much pushback, and I took that, like, these are things that really help, but currently the education field is saying that I can't use it, or I could get in trouble for using it. Hey, older generations, help us out with that. So I liked that challenge almost of, you know, it's not just on us to prove that this is a useful tool for us, but how can everyone else in this field elevate this?*

Diego's question and Anya's response flipped the narrative. Instead of casting young adults as passive users who must justify their use of GenAI, they positioned young people as thoughtful, ethical agents inviting intergenerational collaboration (Vakil & McKinney de Royston, 2022). Anya urged educators and policymakers to recall their own experiences with once-controversial tools and to recognize the parallels young adults are navigating today. Her reflection called for a shift away from fear-based restrictions and toward a more inclusive, supportive, and future-oriented approach to GenAI in education.

While calculators were often introduced only after students had developed a conceptual understanding of arithmetic, their widespread use eventually prompted a

shift in learning goals and instructional practices (Council Of Chief State School Officers & National Governors' Association, 2009). In the same way, the emergence of GenAI tools like ChatGPT provides a similar moment for educators to specify the key conceptual understandings needed for their subject area before these tools are introduced. Furthermore, rather than assuming that student use of these tools undermines conceptual learning, educators should investigate how such tools might support *new* forms of conceptual development. There is a rich continuum of use which may deepen reasoning, support metacognition, or scaffold complex tasks. To navigate this space thoughtfully, educators must collaborate with young adults to understand how they are already using ChatGPT and how they *want* to use it. Doing so could reveal emerging conceptual priorities that require a rethinking of how we define and assess learning in an GenAI-augmented world.

Another invited guest, Jasmine, expanded the conversation by emphasizing the importance of involving students not just in using GenAI tools, but in shaping how those tools are introduced and embedded into learning environments. Rather than positioning young adults as solely users of technology, Jasmine argued that they should be included in the full arc of educational design, from planning and implementation to reflection and refinement. In her words:

> *This also reinforced and validated our choice to continue using GenAI in our learning process. And I think what I took away as well is including the students in the process of it as well. So I think even with the planning, lesson planning, collecting feedback and all of that, I think they should be included from the*

beginning to the end… we should have them from the get-go… and use GenAI to make sure that it's personalized to each and everyone.

Her reflection challenges the conventional model where lesson plans are created in isolation, followed by instruction and only then student feedback. Instead, Jasmine envisions a participatory co-design loop, one in which students are collaborators from the outset, and GenAI is used to tailor experiences based on student input, needs, and goals. Jasmine's reflection underscored a critical takeaway: centering student voice and agency is not just possible with GenAI, but necessary for using it ethically and effectively in education.

The evolving perspectives shared in these conversations highlight how powerful dialogue can be in shifting assumptions, expanding ethical awareness, and fostering more inclusive approaches to GenAI in education. Across stories from students, teachers, and invited guests, we saw how personal narratives challenged rigid views, encouraged empathy, and redefined GenAI as a tool not of replacement of expression but of empowerment of voice. Whether it was Lance's critique of surveillance, Dylan's advocacy for interdependent literacies, or Jasmine's call for student engagement, each moment revealed the value of centering lived experience and having conversations about emerging technologies. These reflections didn't just lead to individual opinion changes, they modeled a collective move toward more thoughtful, equitable, and human-centered GenAI practices. In doing so, the conversations revealed how dialogue can serve as a platform for ethical deliberation, elevating the voices of those who are often excluded from decision-making processes (Vesnic-Alujevic & Guimaraes Pereira, 2025). In a time of rapid technological change and evolving risks, this theme

underscores the necessity of creating space for honest dialogue between young adults and educators or technology developers, where all participants, especially those with historically marginalized educational experiences, can engage in shaping the future of learning (McDonald et al., 2022). Ethical sensemaking cannot be a one-time event or a top-down directive. It must be an ongoing, relational process, one that brings young people into sustained conversation with those designing, deploying, and governing educational technologies.

Discussion

This study set out to explore how discussions with young adults who have experienced exclusion and marginalization in education can inform the design of more inclusive and empowering GenAI practices and policies. The findings reveal a continuum of possible outcomes of using GenAI tools like ChatGPT: on one end, these tools have the potential to amplify and empower voices that have too often been silenced; on the other, they risk erasing diverse forms of expression (Ciurria, 2023) and reinforcing harmful biases (Hassija et al., 2023: Qadir, 2022). Yet the conversations that emerged from this study sit in space between these ends of the continuum and the complexity of using this tools within educational systems that are founded on racism, ableism and linguicism (Annamma 2019; Annamma, Connor & Ferri, 2012; Beneke et al., 2024). Many young adults are aware of both the opportunities and risks of GenAI use, navigating these tensions without formal guidance or institutional support. These conversations were made possible, in part, because we used GenAI use-case scenarios to prompt dialogue, helping participants surface real-world ethical and emotional stakes. Their reflections point to the need for educational practices that

center the voices and lived expertise of those most often left out of innovation and policy conversations.

Young Adults as Ethical Agents

Far from being passive users or unaware of the risks, the young adults in this study demonstrated thoughtful, critical engagement with the promises and limitations of GenAI (Higgs & Stornaiuolo, 2024; Vakil & McKinney de Royston, 2022). Many participants described using ChatGPT as a space to clarify their thinking, rehearse difficult conversations, and find their voice, both academically and personally. For some, ChatGPT became a tool that enabled them to express ideas that had previously gone unspoken. This use wasn't simply about productivity or grammar correction; it reflected a deeper labor of navigating systems not built with their communication styles or learning needs in mind.

Participants used GenAI to test ideas, simulate professional dialogue, and practice how to be heard. These practices reveal a form of ethical agency often overlooked in narratives about students' GenAI use. Rather than accepting GenAI outputs, they approached the tool with critical distance, pairing its use with human judgment and skepticism. Several young adults described the importance of questioning and cross-checking what GenAI generated, echoing concerns about misinformation, algorithmic bias, and over-reliance. Many were worried about the uncritical use of these tools and did it to be used to write entire essays.

Participants also questioned whether schools themselves were modeling ethical and equitable uses of GenAI. The young adults in this study saw the potential for teachers to use this tool for designing lessons and resources for the classrooms, but

when it came to grading assignments, students wanted to make sure that the educators practiced strong human-in-the-loop practices. Participants were most concerned about how schools themselves would use these tools for surveillance or data-based decisions. They wanted both educators and schools themselves to make equitable and ethical policies and practices that included students' perspectives since they were often most impacted by its use.

These young adults, who have grown up using technology in their daily lives, offer valuable insights grounded in lived experience, ethical awareness, and critical thinking about how these tools should be used. There may be risks and barriers, such as financial limitations or legal concerns, that young adults and students are not aware of. At the same time, school leaders may overlook critical components from the student perspective, including the importance of empowerment through these tools and judgment-free support. By bringing students and school leaders together to co-develop technology policies and practices, schools can create more inclusive, thoughtful, and effective approaches that reflect the needs and values of all stakeholders.

GenAI Use Case Scenarios Surface Tensions and Opportunities

A central design element of this study was the use of GenAI use-case scenarios as prompts for dialogue. These scenario-based discussions created space for participants to articulate how they used ChatGPT in their lives and to reflect on its ethical, emotional, and pedagogical implications. By grounding conversations in real and imagined examples, the scenarios helped surface tensions that highlight both the potential and the pitfalls of GenAI in educational contexts.

During discussion sparked by the Use Case Scenarios, participants shared stories of using GenAI to navigate inaccessible classroom tasks, explore new ideas without fear of judgment, and translate informal speech into formal writing. But the scenarios also invited critique: students raised important concerns about overuse, dependence, surveillance, and the reproduction of bias. These conversations revealed not only how students were using GenAI, but how they were thinking about its long-term effects on learning, equity, and social interaction.

Importantly, the impact of these scenario-based dialogues extended beyond the young adult participants. In sessions that included invited guests, such as leaders in educational and technology fields, young people's reflections often shifted adult thinking. Several guests were surprised to learn that GenAI could support empowerment and voice for young adults with histories of exclusion. Hearing firsthand how participants used ChatGPT to build confidence, advocate for themselves, and translate their ideas into more accepted language led to new understandings of the tool's potential.

Through discussion around GenAI Use Case Scenarios, participants stepped into roles of developers of policy and practice, moving beyond personal storytelling to offer concrete recommendations for ethical use, inclusive design, and responsive policy. These intergenerational, cross-sector dialogues highlighted the need for participatory processes where young adult insights are not only heard but treated as essential to shaping the future of GenAI in schools. The scenarios served as powerful catalysts for shared understanding, revealing both the promise and the complexity of bringing GenAI into learning spaces in equitable ways.

Design Principles for Creating GenAI Ethical Use Practices or Policies

This study shows that responsible GenAI integration in education is about how we engage *all* stakeholders, especially those who have historically been left out of the conversations about policy and practice like marginalized students. For this reason, we must include students with special education and neurodiverse experience who have insights into how schools can be better designed to support their needs. Young people, especially those navigating systems that haven't always supported them, are already reflecting on the ethical, emotional, and educational implications of GenAI in their lives. They bring lived expertise and emerging values that should be central to how we design learning environments with these tools. The following design principles offer guidance for creating space where young people can reflect, lead, and shape more human-centered, inclusive GenAI practices.

1. **Young people are already engaging in reflection about ethical GenAI use and should be active participants in shaping GenAI practices in education.** Many young adults are actively considering the risks, opportunities, and boundaries of using GenAI. They are making personal ethical judgments about how they use them and how they want others, including teachers, schools, and peers, to engage with them. As a result, they should be involved in decisions about how GenAI is integrated into classrooms and school systems. Their lived experiences and emerging values offer critical insight into the kinds of practices that feel just, supportive, and responsible.

2. **Scenario-based dialogue can surface meaningful obstacles and opportunities in GenAI use to support the design of ethical and equitable policy and practices.**

   Scenario-based prompts are a powerful method for sparking conversation among students and educators. They help participants draw from their own experiences to explore the complexities of GenAI use in learning context. Ethical and conceptual insights emerge most powerfully when young adults feel safe enough to share how they are actually using GenAI. These honest, vulnerable conversations reveal the nuanced ways that technology intersects with learning, identity, and self-advocacy and can shape more thoughtful, inclusive practices moving forward.

These design principles point to a broader shift: from designing GenAI practices for young adults to designing them with young adults. When we invite young people to engage in meaningful dialogue, we surface critical insights that can inform more thoughtful, equitable practices. Their reflections challenge assumptions, raise important questions, and expand what responsible GenAI use in education can look like.

Limitations

This research carries limitations that shape the scope and interpretation of its findings. The goal was not broad generalizability but rather a deeper, situated understanding of how groups of young adults with neurodiverse and special education experiences engage with ChatGPT. It is important to acknowledge the boundaries of the study's design, including, my dual role as both researcher and former educator of the of

the young adults, the small and context-specific participant groups, the focus on ChatGPT as the central GenAI tool, and that fact that the study did not directly address concerns around how GenAI tools might erase disabled and culturally-specific communication styles.

My dual identity as both researcher and former special education teacher influenced interactions with both participant groups, though in distinct ways. In Group A, the neurodiverse young adults participating through a technology internship, I had no prior relationship, but my background as an educator still shaped the space. My role often signaled authority or expertise, which may have influenced how participants responded or engaged with the study activities. In Group B, former students from my self-contained classroom, my role as their former teacher brought a deeper layer of relational history. This insider perspective created a foundation of familiarity and trust that allowed for more open, sometimes vulnerable, conversations. Participants reflected on both past and present experiences, often drawing connections between our shared classroom history and their current perspectives on education and technology. However, this closeness also introduced interpretive complexity. My presence likely influenced what was said and how it was shared, and I may have brought implicit assumptions from our previous teacher-student dynamic into the analysis. While I practiced ongoing reflexivity, through careful attention to power dynamics, these relationships must be acknowledged as shaping the co-construction of meaning throughout the study.

This study was small in scale and contextually specific, focusing on two groups of young adults: current interns in a technology program for neurodiverse young adults and my former students from my self-contained classroom. While their insights offer

important contributions, they do not reflect the full spectrum of experiences among students identifying as neurodivergent or receiving special education services. As such, the findings are not broadly generalizable, but rather should be understood as situated and illustrative of possibilities within particular learning and relational contexts. The analysis does point to the need for future research in other contexts and at broader scales.

Additionally, the invited guests who participated in select dialogues represented a small but varied group, including not only educators and policy professionals but also technologists involved in GenAI development. Some of the invited guests were already familiar with me and my work, and some were even familiar with my former students. These factors may have contributed to their willingness to engage deeply in a dialogue with these young adults. While their inclusion enriched the conversations and helped surface cross-sector insights, the small number of guest participants means that their responses do not reflect the full range of views within these fields. Future work could expand these dialogues to include a broader set of stakeholders, including disability advocates, speech-language professionals, and GenAI ethicists. Most importantly, in this study the invited guests were not connected at all to the actual spaces where these young adults are using GenAI at this time. These conversations need to be happening between students or young adults and the people who have control over their actual academic or work experiences.

Another limitation involves the central focus on ChatGPT as the primary GenAI tool. This choice enabled rich and focused dialogue, however, it also narrowed the scope of the study. The findings may not fully apply to other GenAI systems or

educational technologies with different affordances or risks. Moreover, the use of GenAI Use Case Scenarios, although grounded in lived experiences, relied on imagined classroom contexts and hypothetical decision-making. As detailed in the Methods section and listed in Appendix M, these scenarios helped facilitate ethical reflection and storytelling in these online contexts, but they do not substitute for long-term observational data on how GenAI tools are actually used in educational settings.

A further limitation lies in the study's incomplete exploration of how GenAI tools may inadvertently suppress or standardize disabled ways of speaking and thinking. While the findings emphasize the empowering potential of these tools, especially in private and self-directed learning, they do not directly address critiques, such as those raised by Ciurria (2023), about how dominant language norms embedded in GenAI can marginalize neurodivergent users. For example, students who use non-normative or culturally-specific communication styles, including sensory-informed language, speech that does not follow normative grammatical patterns, or African American Vernacular English, may find that GenAI tools correct, erase, or "fix" their expressions. In these cases, what appears as access may actually feel like erasure of young people's ways of knowing and communicating. This is a crucial area for future research: access alone is not sufficient for empowerment. Truly inclusive GenAI design must attend to and affirm diverse linguistic and cognitive identities, rather than overwrite them.

Despite these limitations, this study offers a meaningful starting point for reimagining how GenAI might support, not replace, human learning and judgment. The findings point to the urgent need for larger, more diverse, and participatory research efforts that continue to center the insights of young adults with neurodiverse and special

education experiences, particularly those whose voices are often left out of conversations about technology and education policy.

Conclusion

This work contributes to human-in-the-loop (HITL) approaches that are increasingly embedded in GenAI-in-education frameworks, emphasizing the essential role of human judgment in GenAI development and implementation (U.S. Department of Education, 2023; UNESCO, 2023). This study extends HITL thinking by underscoring the importance of centering the perspectives of marginalized students who have historically held the least power in shaping educational technology. In doing so, this work introduces an approach to inclusive design of policy and practice. Ethical GenAI integration requires more than technical safeguards; it demands relational, participatory practices that honor student agency and critically interrogate the broader sociotechnical systems in which these tools are embedded. Ethical use must include attention to emotional and affective dimensions—how it feels for students to use these tools, and how it feels to be denied access. It also includes how young people perceive and evaluate teachers' uses of GenAI. Their emotional responses, sense of fairness, and lived experiences inform how they judge GenAI’s role in learning.

Justice-driven inclusive education calls for recognition of marginalized voices in shaping educational experiences (Waitoller & Artiles, 2013). This vision includes pedagogies that value dynamic, contextual, and multimodal communication practices among neurodivergent students and those receiving special education services (Baglieri, 2022; Kleekamp, 2021; Love & Beneke, 2021). This research builds on that foundation by offering a dialogue-based approach that engages marginalized young

adults in uncovering insights that can inform GenAI practices and policies. The act of speaking together, anchored in GenAI Use Case Scenarios grounded in lived experience and supported by open-ended dialogue revealed young adults' critical insights into the emotional, ethical, and practical dimensions of GenAI use in education. They named the ways existing systems fall short and shared ideas for what learning could look like if it centered their needs and values. This approach to dialogue represents a first step toward more participatory policy design.

Overall, this work is grounded in the idea that young adults are ethical philosophers of technology (Vakil & McKinney de Royston, 2022; Higgs & Stornaiuolo, 2024). They bring critical insight, ethical reasoning, and contextual awareness to conversations about GenAI policy and practice. This work helps to reimagine how to approach the design of policies and practices of emerging technologies through conversations that center the expertise and lived experiences of students and young adults. These young people are essential to conversations about how GenAI tools should be used in academic settings, which enables school leaders to more fully grasp the implications of GenAI in education by including their voices. Engaging young adults voices can help reframe GenAI not merely as a tool to be implemented, but as a sociotechnical system that must be shaped with those most affected by its presence in educational spaces.

Implications

The insights from this study suggest the need to include students and young adults in the development of GenAI policy and practice in education. This work offers implications for educators, policymakers, and researchers.

For educators, this study highlights the value of using GenAI Use Case Scenarios to support dialogue as a tool for understanding students' needs, desires, and concerns. These conversations can be woven into classroom practice to create space for inquiry, reflection, and relationship-building around technology practices. More importantly, educators need to be aware of the ways that these tools can be used for empowerment, and at the same time, the potential for these tools (or classroom expectations) to disempower students and make them feel that their typical way of communication is not adequate for academic and professional communication.

For education policymakers, the findings suggest the need to include students and young adults, especially those with special education and neurodivergent experiences, as active participants in policy discussions about GenAI in schools. They also highlight the need to systematically help all users of GenAI learn to draw ethical boundaries and develop strong practices for interaction with GenAI and GenAI generated content.

For researchers, future empirical studies are needed to better understand how students in K–12 settings perceive the ethical use of GenAI. In addition, cross-setting ethnographic research can help document what young people actually do when interacting with GenAI tools, surfacing practices, opportunities, and challenges that may not emerge through dialogue alone. Further research should also explore how to move from these critical conversations with marginalized young adults toward the co-design of equitable policies and implementation strategies that reflect their lived experiences and priorities.

Ultimately, this work invites all stakeholders to pause and ask: What would it look like to build educational technology practices with students, not for them? The answer begins with listening.

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Article 3: Co-design of Practice

Reframing ChatGPT from Cheatbot to Learning Partner: Centering the Voices of Four Young Adults with Special Education Experiences Challenging Institutional Narratives

Abstract

Rather than perpetuating dominant narratives that frame Generative Artificial Intelligence (GenAI) as a threat to academic integrity, this study repositions the GenAI system ChatGPT as a potential catalyst for more just and inclusive educational practices, particularly when used thoughtfully by students who have been historically marginalized by multiple layers of oppression in school systems and research. This research examines the experiences of four young adults who were previously enrolled in my middle school self-contained special education classroom over a decade ago. These students not only navigated challenges related to disability but also faced other forms of oppression based on race, language, and socioeconomic status, highlighting the compounded barriers experienced by multiply marginalized young adults. Through ethnographic case studies, including surveys, interviews, and follow-up conversations, I trace how participants engaged with ChatGPT before, during, and after this study to navigate challenges they experienced in education, research and employment. Their uses of ChatGPT ranged from refining written communication and brainstorming ideas to preparing job applications and advocating for themselves in complex institutional systems. Grounded in Engeström's theory of expansive learning (2009; Engeström & Sannino, 2010) and drawing on Ciurria's (2023) critique of ableism and GenAI and DisCrit (Annamma et al., 2013) which looks at the intersectional oppression that marginalized young adults encounter, the analysis explores how ChatGPT became a

site of transformation where participants challenged rigid communication norms. The study highlights how participants repurposed ChatGPT not as a shortcut or substitute to learning, but as a flexible, judgment-free tool for clarifying thought, building confidence, and asserting agency within systems that have historically devalued or excluded their voices. By examining the circumstances that shaped their engagement with this tool, we can identify opportunities to make learning and research environments more inclusive and empowering.

Keywords: ethnographic case study, expansive learning, disability studies, GenAI, AIEd, student voice, educational technology, special education

Plain Text Abstract

Many people in education worry that student use of generative AI (GenAI) like ChatGPT is a threat to academic honesty. This study takes a different view. It looks at how ChatGPT can actually support more fair and inclusive learning, especially for students who have been left out or misunderstood in traditional school settings. The research focuses on four young adults who were once in my self-contained special education classroom in middle school. Using surveys, interviews, and follow-up conversations, I explored how they used ChatGPT before, during, and after this study to deal with challenges in school, research, and work. They used ChatGPT to write and organize their thoughts, apply for jobs, and speak up for themselves in tough situations. One participant even used ChatGPT to challenge how I designed the study, pushing back on writing tasks that didn’t fit his communication style.

The analysis is based on Engeström's theory of expansive learning (2009; Engeström & Sannino, 2010) and Ciurria's (2023) critique of ableism in AI to explore the opportunities and risks of GenAI use as a support tools for marginalized learners. This study shows that these young people didn't see ChatGPT as a way to cheat. Instead, they used it as a helpful and judgment-free tool to build confidence, clarify ideas, and express themselves, especially in systems that often overlook or try to make them change the way they write. By looking at what influenced how they used this tool, we can find ways to make learning and research spaces more fair and supportive.

Figure 5. Article 3 Abstract Overview

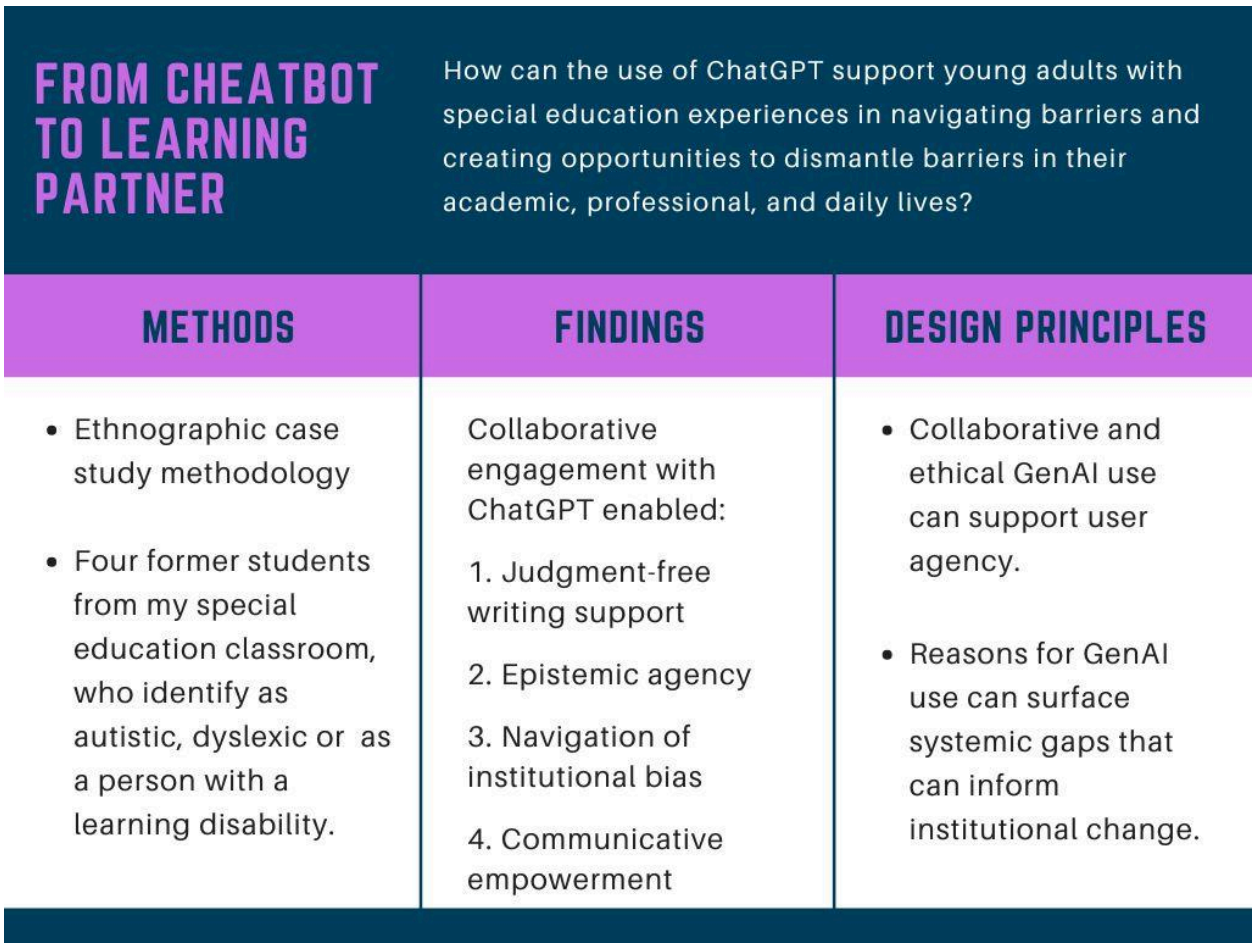

Figure 5. Article 3 Abstract Overview Caption:
A three-column infographic titled **"From Cheatbot to Learning Partner."** The subtitle asks, *"How can the use of ChatGPT support young adults with special education experiences in navigating barriers and creating opportunities to dismantle barriers in their academic, professional, and daily lives?"*

- **Methods column:** Lists "Ethnographic case study methodology" and "Four former students from my special education classroom, who identify as autistic, dyslexic, or as a person with a learning disability."
- **Findings column:** States "Collaborative engagement with ChatGPT enabled:"
    - Judgment-free writing support
    - Epistemic agency
    - Navigation of institutional bias
    - Communicative empowerment
- **Design Principles column:**
    - Collaborative and ethical GenAI use can support user agency
    - Reasons for GenAI use can surface systemic gaps that can inform institutional change

Introduction

Classrooms are frequently and strongly shaped by norms rooted in white, middle-class, English-dominant values (Baglieri, 2022; Collins & Ferri, 2016; Ciurria, 2023; Theoharis et al., 2015). A multiliteracies perspective (New London Group, 1996) helps clarify how these norms privilege narrow, print-centric, English-dominant forms of communication while overlooking the many multimodal ways students make meaning such as linguistic, visual, spatial, gestural, and digital. When classrooms only value this limited range of literacies, the consequences are amplified for multiply marginalized students, including those who are neurodiverse and also experience racial, linguistic, or socioeconomic marginalization (Annamma, 2019; Annamma, Connor, & Ferri, 2013) highlight how students with intersecting minoritized identities often face intensified surveillance, heightened expectations to perform "competence," and disproportionate labeling, which compounds the everyday challenges imposed by narrow schooling norms. All while their personal learning needs, preferences, and desires are routinely overlooked or deprioritized in favor of standardized expectations. As McDermott, Goldman, and Varenne (1993) argue, the problem does not lie in students' mental

capacity but in the ways school environments are structured. This perspective shifts attention away from what is presumed to be wrong with certain students, instead focusing on the classroom and institutional arrangements that position some learners as incompetent, unworthy, or "other." From this standpoint, disability is not an individual trait but a product of systems: interpretive frameworks, institutional constraints, and normative practices that transform difference into disadvantage in systematically haphazard ways (Baglieri, 2022; Collins & Ferri, 2016; Ciurria, 2023; McDermott et al., 1993; Theoharis et al., 2015;).

As a graduate student who identifies as neurodivergent, I've faced many obstacles in reading and writing and getting the support that I needed in school. At the same time, as a White English-first-language graduate student, teacher, researcher, I recognize that I have not experienced the compounded challenges faced by multiply marginalized students who navigate racial and linguistic marginalization. For years, I've imagined technologies that could better support my learning process. In my work as a special education teacher for over a decade, I also encouraged my students to use technology to engage more fully with academic assignments Since ChatGPT became publicly available in 2022, I've consistently seen its potential to support learners like me and my former students.[17] Generative Artificial Intelligence (GenAI) tools like ChatGPT can be understood as a form of assistive technology, used to navigate, adapt to, and survive in systems designed without certain students in mind. In the same way that ramps and captioning support access to physical and communicative environments,

[17] It is important to note that the use of GenAI tools like ChatGPT pose data privacy risks. According to a 2024 privacy evaluation by Common Sense Education, ChatGPT was rated as "Warning" for use by children and students due to concerns about data collection, limited transparency, and a lack of clear alignment with federal laws for data. See: Common Sense Privacy Evaluation – ChatGPT.

GenAI tools can support access to academic ones, particularly for students expected to conform to white, middle-class, neurotypical norms of language, participation, and performance.

Rather than recognizing this potential, schools often frame these tools narrowly as shortcuts to cheating (Lee et al., 2024; Spector, 2023), echoing long-standing unjustified patterns of mistrust and misunderstanding directed at students labeled with disabilities (Ciuria, 2023) and a history of surveillance and control for multiply-marginalized young adults (Annamma, 2019). This response overlooks how GenAI can serve as a form of access: helping students translate their thoughts into socially acceptable forms, manage executive functioning demands, and exercise epistemic agency in settings that have historically denied them flexibility and the right to have a say in how they learn. While GenAI tools are framed as tools for cheating, plagiarism, or misinformation, this dominant narrative overlooks a crucial opportunity to develop responsible GenAI use practices attend to intersectional experiences, supporting students who are neurodivergent or labeled with disabilities and who may also face overlapping marginalization based on race, language, or socioeconomic status. In this way, GenAI systems can help better facilitate a meaningful learning process for these students by providing responsive, customized, and pervasive support in ways that traditional schooling frequently fails to do. GenAI can be productive learning partners to them.

This article focuses on four young adults who were labeled with disabilities while they were in school and attended the 7th grade self-contained classroom where I was a teacher. It explores the question: **How can the use of ChatGPT support young adults**

with special education experiences in navigating barriers and creating opportunities in their academic, professional, and daily lives? This study draws on Engeström's (2009) concept of "cheating" as expansive agency and the theory of expansive learning (Engeström & Sannino, 2010) to reframe student-GenAI interaction as a site of generative transformation, to explore how "cheating" is a response to the restrictive conditions of school-based performance and how the expansive use of ChatGPT can lead to the creation of new empowering learning and communication practices. Building on the framing of disability as socially constructed through school practices, this article documents how these students interact with ChatGPT tools to translate their writing to a more academically acceptable professional tone, to access information, navigate complex tasks, and reclaim a sense of epistemic agency that school settings often denied them.

Moving Beyond the Cheating Narrative

In education, use of GenAI tools like ChatGPT remains predominantly framed through the lens of academic misconduct, with concerns about plagiarism and misinformation continuing to strongly shape the discourse (Lee et al., 2024). This narrow framing obscures the supportive uses of GenAI, particularly for students receiving special education services, who often use it for scaffolding, communication, and access (Zhao et al., 2024; Fletcher et al., 2024). Without a more nuanced understanding of how students use GenAI, institutions risk a repeated history of resisting technologies that could have made learning more just and accessible.

Since the release of ChatGPT in 2022, a wave of concern has emerged about cheating and academic dishonesty when using this tool. In response, many universities

have revised academic policies, and schools have invested in unreliable GenAI-detection software (Lee et al., 2024). Yet the evidence suggests these fears are overstated. Studies show that reported rates of cheating have not significantly increased since GenAI tools became widespread, if anything, they have remained steady or slightly decreased (Lee et al., 2024). Furthermore, for those students who are using tools like ChatGPT in ways that teachers would consider cheating, this brings light to a larger systemic problem. As some academic researchers argue, when students do cheat, it usually stems from stress, lack of support, or disconnection from learning, not access to technology (Spector, 2023).

When new technologies emerge, institutions historically respond by tightening restrictions rather than asking what these shifts reveal about unmet needs in the system (Reich, 2020 Davis, 2023). This reactive focus on control overlooks the broader context in which students are already and can be using these tools and often further disadvantages minoritized young adults. Past panics over calculators (Steele, 2023), spell check (La Force, 2009), and even Wikipedia (Wikipedia contributors, n.d.) reflect a pattern of educational institutions resisting technologies that expand access.[18] These tools are now widely accepted as learning aids, yet GenAI has not undergone a similar shift in perception. In education, it remains predominantly framed through the lens of academic misconduct, with concerns about plagiarism and misinformation continuing to shape the discourse (Lee et al., 2024). Without a more nuanced understanding of how

[18] Calculators were released in the 1970s and it wasn't until twenty-four years later that students were allowed to use them on the SATs (Steele, 2023), and now students are walking around with calculators in their pockets or on their wrists. We no longer equate the ability to do long division using a pen and paper with “smartness”, now Math standards are asking for the application of computational knowledge (Council Of Chief State School Officers & National Governors' Association, 2009) and students are taught how to use calculators to support Math literacy.

students and young adults use GenAI, institutions risk repeating a history of resisting technologies that could have made learning more just and accessible.

Tools like ChatGPT, when used critically, expand access to academic support that historically was available to students with economic or linguistic privilege.[19] Many students receive support outside of school from parents or tutors to excel academically. However, not every student has a parent with the time, educational background, or linguistic register to assist with schoolwork, nor the financial means to hire a tutor. Private tutoring in the U.S. is largely a privilege of high-income families, with most centers located in affluent areas (Kim et al., 2025).[20] As Lareau (2003) describes in Unequal Childhoods, some young people grow up with social and educational support embedded in their everyday lives through practices where parents and institutions actively scaffold their learning and communication. For students with disabilities, those from low-income households, or those navigating school without consistent academic support at home, an accessible, always-available tool like ChatGPT can provide a crucial form of assistance. Yet while support from parents or tutors is normalized, support from GenAI is often banned or stigmatized. This contradiction raises critical equity concerns about why schools view the use of GenAI tools with suspicion when it enables meaningful engagement with learning for marginalized students.

[19] GenAI tools like ChatGPT can be helpful for idea generation and language support, but they require critical engagement. These tools are known to produce hallucinations (plausible-sounding but false information) and can reflect biases embedded in their training data. Their outputs should be interpreted with caution, especially in academic or educational contexts. Developing the capacity to evaluate, question, and revise GenAI-generated content is essential for maintaining epistemic agency and avoiding uncritical reliance on automated tools (Ji et al., 2023; Holmes et al., 2022).

[20] The majority of U.S. families are unlikely to afford private tutoring, reinforcing educational inequalities. In 2022, approximately 6–7 percent of U.S. families with children between ages 6 and 17 had paid for tutoring in the past year (Kim et al., 2025).

Dominant narratives about GenAI that center on academic dishonesty reinforce punitive systems that have historically harmed already marginalized students. Ciurria (2023), for instance, critiques the carceral logic embedded in academic integrity frameworks, arguing that they often ignore the disproportionate discipline faced by minoritized students, by the interlocking systems of oppression impacting multiply-marginalized young adults (Annamma, 2019). Rather than increasing surveillance and punishment for those using GenAI to meet narrow standards within academic settings, scholars call for a deeper interrogation of the academic norms and systemic inequities that make students feel pressured to rely on tools like ChatGPT in the first place. This work urges a shift away from suspicion and control toward educational structures that legitimize diverse forms of support.

GenAI as a Tool for Support and Scaffolding

While academic discourse often focuses on the risks of GenAI misuse, especially concerns about diminished critical thinking, emerging research presents a more nuanced view. A neuroimaging study by Kosmyna et al. (2025) found that students who first worked independently and then used GenAI for revision showed greater activation in brain regions tied to critical thinking and learning. In contrast, those who relied on GenAI from the outset demonstrated reduced cognitive engagement. These findings suggest that it's not simply whether students use GenAI, but how and when they use it that shapes its impact on learning.

This aligns with other recent research showing that, when GenAI is thoughtfully integrated into learning, it can deepen rather than diminish student engagement and agency. Ng and colleagues (2024) found that collaborating with a GenAI powered

chatbot, enhanced students' knowledge, behavioral engagement and motivation, opening new possibilities for meaningful, student-driven learning. Zhou and Peng (2025) found similar outcomes: GenAI-supported instruction, improved creativity, and enhanced student initiative. Knowles (2024) presents engagement with GenAI as a writing partner as a spectrum spanning from human-authored text to synthetic text and suggests a human in the loop approach to engagement with GenAI to support the rhetoric load of communication. Together, these findings suggest that when thoughtfully integrated, GenAI may amplify rather than replace student thinking.

A large-scale survey found that students are using GenAI to support their thinking. Zhao et al. (2024) found that 77% of university students who identify as neurodivergent or with disability labels such as Attention Deficit Disorder and Dyslexia used ChatGPT for academic tasks. These students described GenAI as a support for overcoming significant barriers in academic writing, including difficulties with understanding assignment prompts, translating ideas into words, managing fatigue-related concentration challenges, and maintaining an academic tone. Many reported using GenAI to summarize readings, reword their ideas, overcome mental blocks or academic uncertainty, directly aligning with the most frequent challenges they faced.[21] Far from replacing thinking, participants viewed GenAI as a scaffold that enhanced their academic efficiency and creative momentum.

Fletcher and colleagues (2024) conducted a large-scale survey of university students who identify as neurodivergent or disabled to explore how they engage with

[21] It is important to note that uncertainty or struggle can be a valuable component of the learning process (see Manz & Suárez, 2018). However, more research is needed to explore the emotional impact of uncertainty or “productive struggle” for individuals with special education and neurodiversity experiences (Jenkinson et al, 2020).

GenAI tools and how these technologies intersect with their learning needs. A university student and co-researcher who identifies as neurodivergent shared that GenAI "provide[s] a tool that can offer 24/7 support" (p. 9). Another student noted that GenAI provides a way to "receive support without the pressure of socialising" (p. 27). Even when responses from GenAI weren't perfect, students shared that it still provided "a clear direction on where to focus on first" during moments of uncertainty or overwhelm (p. 36). For many students who experience social fatigue, executive functioning challenges, or difficulty navigating rigid academic systems, this kind of always available, nonjudgmental access offers a form of accessibility that traditional academic structures often fail to provide.

Similarly, Yusuf et al. (2024) found that students often used GenAI for brainstorming, clarifying concepts, and improving tone, not for completing entire assignments. These students drew clear ethical lines, viewing GenAI as a thinking partner rather than a shortcut showing that they were able to follow responsible human in the loop practices (Knowles, 2024). Many also questioned why certain types of help, such as tutoring or parental support, are normalized, while assistance from GenAI is viewed with suspicion.[22] This raises important questions about how educational institutions define acceptable support and whether those definitions reflect equitable understandings of access and agency.

[22] Among the concerns raised about GenAI, researchers have highlighted its tendency to produce biased and error-prone outputs, which can reinforce stereotypes or provide factually inaccurate information, especially when used without proper oversight (Qadir, 2022; Hassija et al., 2023).

Navigating Stigma and Institutional Barriers

Even as students use GenAI to support learning, institutional responses often reinforce negative stigma about the use of this tool. While studies have explored how teachers (Cabellos et al., 2024) and administrators (Cheah & Kim, 2025) often view student use of GenAI with suspicion, far less attention has been paid to how these perceptions shape students' actual experiences, sense of agency, and willingness to engage with GenAI as a learning support. In nonacademic contexts, for instance, Chen et al. (2025) found that how large language models are introduced as “tools,” “machines,” or “companions” profoundly influences user attitudes and behaviors. Reframing GenAI as a customizable learning technology in education could help move the conversation away from fear and punishment and toward more inclusive, participatory learning environments. Without this shift, schools risk reinforcing exclusionary norms and missing a critical opportunity to better support students who have long been marginalized by dominant definitions of success.

As discussed above, a study by Fletcher et al. (2024) found that neurodivergent students and students who identify with disabilities described ChatGPT as a vital tool for information processing and nonjudgmental support. However, some worried that avoiding GenAI might mean losing out on a key academic advantage. Still, many lacked institutional permission or guidance to use it effectively. Students reported stigma and fear of punishment, even when their use of GenAI aligned with institutional values such as academic rigor and productivity. This stigma shaped both behavior and institutional climate. Some students expressed that they fear disclosing GenAI use because they were at risk of being labeled lazy and dishonest. They also feared their honesty would

result in a failing grade or would “paint a target on their back” (p. 52). These dynamics suggest that institutional culture must evolve to validate diverse learning supports rather than stigmatize them.

Institutional policies often ban the use of GenAI, provide vague warnings or enforce the design of "GenAI-proof" assessments rather than offering nuanced guidance that takes student use into account. Fletcher et al. (2024) warned against one-size-fits-all approaches to GenAI use policies, noting that students' needs vary widely. Without this cultural shift in how GenAI policies are created, students who collaborate with GenAI for access and support will continue to face institutional barriers that undermine both inclusion and innovation. At the same time, as one student on a curriculum design panel shared in Moore and Simper (2023), efforts to create "GenAI-proof" assessments, such as timed, in-class writing, can unintentionally exclude students who identify with disabilities and benefit from flexibility, assistive technologies, or additional processing time. These efforts to preserve academic integrity must not come at the cost of accessibility and inclusion. Instead, institutions must develop thoughtful, adaptive policies that respond to the diverse realities of learners and recognize GenAI as a potential partner in achieving equitable access. This growing body of student-centered research further disrupts fear-based narratives and sets the stage for a deeper exploration of how GenAI intersects with institutional values, stigma, and access which highlight both its promise and the persistent barriers to its equitable use.

Language, Voice, and Linguistic Prescriptivism

One of the most pressing concerns raised by disability justice scholars is how GenAI tools interact with normative expectations of language and the role that the co-construction of race and disability plays in communication expectations (Annamma et al., 2013). Henner and Robinson (2023) further argue from a crip linguistics perspective that these norms often frame neurodivergent or non-normative modes of expression as illegitimate, policing “unruly bodyminds” in ways that reinforce existing inequities in educational settings. As Ciurria (2023) argues, linguistic prescriptivism stigmatizes the communication styles students bring to school. For those who speak African American Vernacular English or other non-dominant dialects, using GenAI to “polish” writing can feel like editing their authentic voice to be taken seriously. Even before ChatGPT was publicly available, linguistic prescriptivism, the idea that certain language forms are inherently superior or more legitimate, has been pervasive in school systems. Teaching students to navigate dominant discourse norms, what Delpit (1998) calls the “culture of power,” can be a pragmatic strategy for gaining access to academic and professional spaces. Navigating the culture of power is something students and young adults will need to continue to do as they join professional communities. Such norms are not neutral; they reflect and reproduce existing power structures that marginalize culturally and linguistically diverse ways of speaking, writing, and knowing. Supporting students means not only helping them understand these norms but also creating opportunities to critique and transform them.

Scholars such as Cole and Bruner (1971) critiqued psychological and educational frameworks that pathologized the language and cognitive practices of

minoritized communities by failing to account for cultural and linguistic variation. Moll and colleagues have also written extensively about how language ideologies in schools systematically devalue the linguistic resources of bilingual and working-class students, often viewing communal and cultural knowledge through a deficit lens rather than recognizing it as a rich foundation for learning (Moll, 1992).

The way academic settings focus on normative conventions of language is in tension with the ways students and families have been communicating for generations, often making students feel like their typical way of communicating is not appropriate for academic tasks (Heath, 1983). ChatGPT allows students to translate their ideas into more conventional academic English, which can offer access to systems that have historically excluded them. It also reinforces pressure to conform to standards shaped by neurotypical, White, middle class values. From a DisCrit (Disability Critical Race Theory) perspective, these pressures are not incidental. They reflect how racism, ableism, and linguicism intersect in the design of curriculum, assessment, and classroom interaction (Annamma, Connor, & Ferri, 2013). Dominant norms equate competence with White, middle-class communication. The overrepresentation of Black and Latino boys in special education, particularly in more restrictive settings such as self-contained classrooms, has been widely documented and critiqued in educational research. Scholars have long noted how systemic biases, deficit-oriented assessments, and racialized expectations contribute to disproportionate identification and placement (Artiles, 2011). These patterns reflect broader structural inequities in education, where Black and Latino boys are often subjected to heightened surveillance, exclusionary discipline, and lowered academic expectations (Annamma et al., 2013). Such

disproportionate placements raise significant concerns about access to inclusive and equitable educational opportunities. Those who speak or write differently are positioned as “struggling” (Annamma & Handy, 2019; Beneke et al., 2024; 2025; Broderick & Leonardo, 2016).These norms also uphold the myth that students must succeed without assistance.

Disability justice scholars push back on deficit models of a “struggling learner” and instead argue that learning is inherently social, relational, and frequently mediated by technologies that support access and expression (Dieker & Zaugg, 2024; Kleekamp, 2021). Beneke et al. (2023), citing Mingus (2017), argue, “A liberatory literacy pedagogy requires disrupting deficit-based notions of ‘struggle’ that oppress multiply marginalized children and encourage them to emulate literacy practices rooted in myths of independence” (p. 375). In special education classrooms, students often engage in interdependent literacy practices supported by peers, teachers, and technology (Kleepkamp, 2021). Rather than undermining learning, these technologically mediated forms of communication can expand what counts as knowledge and how it is shared. When used thoughtfully, ChatGPT can be used in a similar way to scaffold writing, support multimodal expression, and build confidence (Steele, 2023), particularly for those whose voices have been historically marginalized.

Reimagining GenAI as a Justice-Centered Tool

Rather than viewing GenAI as either a threat to academic integrity, a liberating support tool, or a tool that will mask the voice of already marginalized young adults, we must understand it as a both a multifaceted tool embedded in longstanding educational inequities and one that is also brimming with transformative potential. Its impact

depends not just on the institutional norms that shape access, legitimacy, and learning,but also on how students or young adults use it. This article addresses a critical gap in GenAI research: the absence of voices and perspectives from young adults with special education experiences.

By centering young adults' insights, we can begin to see how everyday GenAI use challenges narrow definitions of academic success and opens new possibilities for inclusive, student-centered learning. To move forward, institutions must reject deficit-oriented framings of GenAI use and listen to the students and young adults most affected by systemic injustices. Doing so will not only expand access—it will deepen our collective understanding of what learning can be.

Theoretical Framing

Theoretical concepts from Engeström (2009) and Engeström and Sannino (2010) ground this analysis, offering analytical tools for examining the dynamics of learning and agency within activity systems. While the common focus on the usage of GenAI by students has been framed as a tool for cheating, Engeström (2009) reframes cheating as a form of agency. He argues that when students use tools in this way, it can be seen as an attempt to navigate or resist narrow definitions of success. Cheating, thus, becomes a signal to notice how educational systems and expectations are failing to recognize, support, and amplify students' needs and desires. In this light, students' use of ChatGPT today can be seen as part of a similar pattern.

Drawing on Engeström's (2009) conceptualization of Cultural Historical Activity Theory (CHAT), one tool used to examine the dynamics of learning and agency within activity systems is the concept of mediating artifacts. Mediating artifacts are tools that

shape the relationship between the subject and the object, or goal, of the activity. In this analysis, GenAI functions as a mediating artifact that transforms how young adults express themselves across professional, academic, and everyday contexts. As a mediating artifact, ChatGPT reconfigures how young adults communicate and assert agency. Rather than viewing ChatGPT use as a behavior to be prohibited or judged, it can be understood as a window into how young adults navigate institutional rules and divisions of labor, revealing how they engage with the broader norms and expectations that structure communication within their activity systems. At the same time, engagement with mediating artifacts transforms both the subject and the object, reshaping the goals and practices of how young adults work with GenAI tools, such as ChatGPT.

Engeström's (2009) concept of "runaway objects" helps conceptualize ChatGPT as a mediating artifact with the potential to both transform learning and also the risks to reinforce existing inequalities, such as normative language standards, surveillance, and embedded biases (Ciurria, 2023). Runaway objects are dynamic tools or ideas that extend beyond institutional boundaries, disrupting established practices while carrying both risks and possibilities. As a runaway object, GenAI can destabilize traditional educational norms, opening new spaces for student-driven expression and engagement across settings and endeavors. Yet, when used uncritically, it may reproduce exclusionary practices, encourage surface-level responses, and hinder deeper understanding. Since runaway objects evolve more rapidly than pedagogical frameworks or institutional responses, this research is focused on dialogue that includes

young adults to begin to conceptualize the evolving opportunities and risks of GenAI usage.

GenAI as a runaway object carries multiple risks, one of which is linguistic prescriptivism. While ChatGPT can support new forms of student expression, it often reinforces dominant language ideologies, especially standard academic English, thereby deepening linguistic marginalization for students who communicate across various verbal, visual, tactile, spatial, or digital modes (Ciurria, 2023; Kleekamp, 2021). Drawing on Ciurria's critique of linguistic prescriptivism in GenAI, such constraints are seen as manifestations of deeper injustices embedded in educational systems. DisCrit further illuminates how these linguistic norms operate to position students at the intersections of disability, race, class, and language as deficient or suspect when they deviate from dominant modes of communication (Annamma, Connor, Ferri, 2013). In documenting how participants negotiated, resisted, or reworked ChatGPT's suggestions, this study interrogates how GenAI tools can both support and restrict, and how moments of tension reveal broader struggles over whose voices are valued, and on what terms, within systems that continue to marginalize young adults.

As young adults in this study report on interacting with ChatGPT, they described being engaged in an expansive learning process and transforming the activity system (Engeström & Sannino, 2010). This generative process evolves as participants challenge existing practices, reimagine possibilities, and experiment with new tools and roles. Through iterative cycles of questioning, modeling alternatives, and reflection, young adults in this study report pushing back on deficit-based narratives about GenAI, cheating, and ability, moving toward more inclusive, agentic, and justice-oriented visions

of technology use. Expansive learning offers a lens for understanding how learners respond when dominant educational, research, and employment structures fail to meet their needs and desires. In these moments, contradictions arise that invite transformation.

In Engeström and Sannino's (2010) theory of expansive learning, contradictions are understood as historically embedded, systemic tensions that arise within and between elements of an activity system, such as tools, rules, community, and the division of labor. These contradictions are illuminated when established ways of working no longer align with the lived experiences, needs, or desires of participants. They often emerge in response to changing roles, evolving institutional pressures, shifting social expectations, or the introduction of new tools and technologies. Expansive learning treats these tensions as generative forces that can drive collective reflection, questioning, and ultimately the transformation of practice. From an expansive learning perspective, contradictions such as those emerging through students' daily use of GenAI are central to how transformation begins. These include tensions between institutional rules and student needs, between individual authorship and collaborative, technology-mediated practices, and between narrow academic tasks and broader personal or professional goals.

Together these theoretical perspectives are particularly valuable for analyzing young people's engagement with GenAI tools like ChatGPT. Rather than framing GenAI solely as either a threat to academic integrity and authentic expression or as a tool for empowerment, this study conceptualizes ChatGPT as both a mediating artifact and a runaway object (Engeström, 2009) that can shape the expansive learning process and

can reveal key contradictions within educational activity systems (Engeström & Sannino, 2010). This framework offers a lens to understand how young adults are already engaged in expansive learning to transform what and how they learn and to reshape the conditions of participation. These everyday acts of resistance and reinvention reflect efforts to challenge dominant norms and reimagine learning environments that center equity, accessibility, and shared agency. In this way, contradictions that arise from young adult engagement with ChatGPT become entry points for justice-oriented transformation.

Methods

This study uses ethnographic case study methodology (Merriam & Tisdell, 2016) to explore how a small group of young adults, each of whom experienced self-contained special education placements, engaged with generative AI tools, particularly ChatGPT. Rooted in relational and participant-centered research practices, this approach allowed for a deep, contextualized understanding of how participants made sense of GenAI within broader frameworks of inclusion, self-advocacy, and disability justice.

Participants & Setting

This study centers the voices of four of my former students who were enrolled in my 7th grade self-contained special education class in a large urban school district over a decade ago. Participants were recruited through their email addresses that I received from their personal outreach over the years since they graduated from my classroom. Informed consent was obtained, and participants were reminded they could withdraw at any time. During their time in school, all four participants had been identified by school

professionals as students with disabilities and placed in a self-contained classroom for the duration of their middle school education.[23] However, in several cases, the disability labels assigned by school psychologists during their schooling do not reflect how the participants currently understand or describe themselves. Over time, each has developed a personal narrative and language to explain the challenges they experienced within school systems. In Table 3, I share how these individuals identified at the time of data collection, in their own terms, along with their employment status and the year they were in my classroom. By centering participants' current self-identifications, this study seeks to honor their evolving understandings of disability, learning, and personal identity, rather than reproducing institutional labels that may no longer resonate with their lived experiences and understanding.

Table 3. *Participant Identifiers*

Name	Age	7th grade year	Self-identification & Employment
Angel	21	2015- 2016 My 9th year	He/him pronouns, Puerto Rican American, identifies as autistic and reports having ADHD. Currently looking for a job. He did not have any experience with ChatGPT.
Diego	29	2007 - 2008 My 1st year	He/him pronouns; Puerto Rican American; identifies as dyslexic. Works as a maintenance supervisor. He had a developing ChatGPT practice.
Elijah	21	2015- 2016 My 9th year	He/him pronouns; African American; identifies as having a learning disability. Currently looking for a job. He did not have any experience with ChatGPT.
Lucia	29	2008-2009 My 2nd year	She/her pronouns; Colombian American; identifies as having a learning disability. Early childhood teacher and graduate student. She had a developing ChatGPT practice.

[23] A self-contained classroom refers to a classroom where students with Individualized Education Plans (IEPs) are typically taught all academic subjects with the same teacher in the same room. In this case the teacher to student ratio was 12:1 (12 students to one teacher) or 12:1:1 (12 students to one teacher, with one classroom support professional). In some cases students were provided a 1:1 support paraprofessional in addition to the classroom ratio. (Spencer, 2013)

Data Collection

Data for this study were collected through a combination of survey responses, one-on-one interviews and focus group sessions all conducted remotely using institutional Zoom and Google Forms. Data collection consisted of three surveys, a one-to-one interview, and two focus group sessions. Additional follow-up meetings were added based on participants' requests (some participants decided to engage in surveys or prepare for focus group opportunities through additional one-to-one meetings). This is described more below and elaborated on in Appendix R. Participants participated in a follow-up meeting three months after data collected ended. The questions used for those meetings is included in Appendix T. Additionally, to support data integrity, I invited participants to review excerpts of their transcripts and key themes to ensure their voices were accurately represented through member checking (McKim, 2023). Lucia, Diego, Angel and Elijah engaged in member checking and made slight edits to quotations to add clarity or detail. The procedure and questions included in the member checking process are included in Appendix L. Following McKim's (2023) recommendation for a structured and meaningful approach, participants were invited to review excerpts from their transcripts and key themes drawn from the analysis. I provided guiding questions to prompt reflection on whether the interpretations accurately represented their experiences and perspectives. Some participants suggested minor revisions or added a word for clarity, while others confirmed that the interpretations aligned with what they intended to share. This process strengthened the credibility of the research by ensuring that the findings accurately reflected participants' meanings and experiences rather than my own interpretations. Figure 6 illustrates the sequence of data collection activities.

Figure 6. Data Collection Timeline

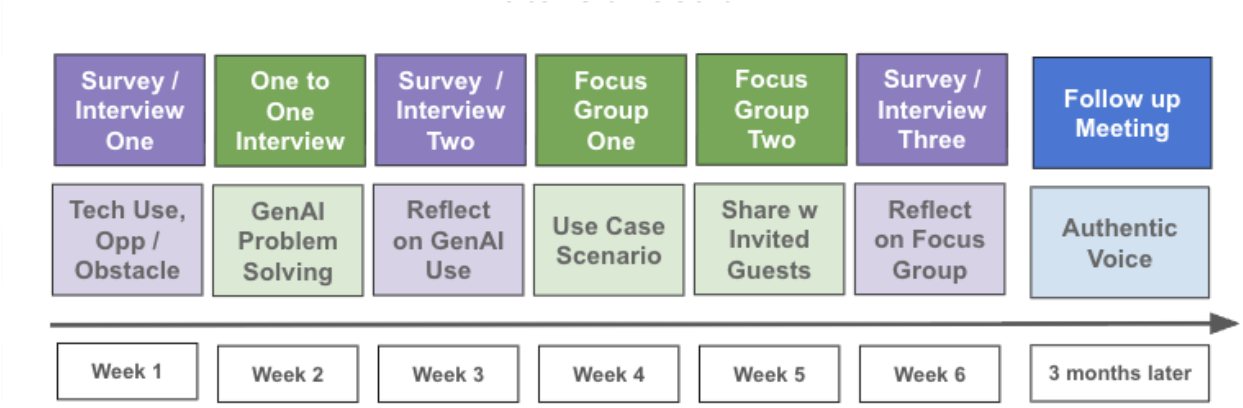

Figure 6. Data Collection Timeline Caption

Figure 6 outlines the sequential phases of data collection conducted over a six-week period, followed by a member-checking session three months later. The process began with Survey One in Week 1. In Week 2, participants engaged in a one-to-one interview. Survey Two followed in Week 3. Focus Group One and Focus Group Two occurred in Weeks 4 and 5. Survey Three was administered in Week 6. Follow-up sessions were conducted approximately three months after initial data collection concluded.

Survey Responses: All participants completed three surveys, generating a total of 12 response sets.[24]

- Survey one included 21 questions and was given before the interview. Questions focused on participants' technology use, challenges they were facing and reflection on their school experience.
- Survey two included 11 questions and was given after the interview. The first section of questions were in response to the specific topics discussed in the interview. The second section was about the interview process as a whole as a check-in moment to see if research practices needed to be improved with the co-design team (see Article 1).

[24] Surveys were designed with feedback from my advisor's research group at my university and two of the participants in this study; Lucia and Diego. Elijah was a part of the co-design group but did not participate in the survey design sections because he was not in attendance on that day. The co-design meetings are described in more detail in Article 1.

- Survey three had 10 questions and was given after the second focus group. Questions focused on reflections of the research experience as a whole.

Responses were collected through a combination of methods tailored to each participant's communication preferences and needs. Each survey had embedded accessibility features that were designed with a small group of participants in this study (see Article 1). Accessibility features included clearly defined sections that could be completed either all at once or separately, embedded YouTube videos that read each section aloud, and suggestions for using Text-to-Speech or other assistive tools. Some participants used voice-to-text tools or ChatGPT to assist in composing their answers, while others participated in survey interviews (described below) where I read the questions aloud and transcribed their verbal responses. This flexible approach helped accommodate diverse communication styles, enabling participants to reflect more deeply and express their perspectives with greater ease and clarity. Additional details about the survey questions are provided in Appendix P.

One-on-One Discussions (interviews and meetings): A total of three interviews and 9 additional one-to-one follow up meetings were included in the data corpus, adding up to 15 individual interviews or meetings, totaling approximately 17 hours and 46 minutes. These included both semi-structured interviews (Merriam & Tisdell, 2016) and survey-completion interviews in lieu of traditional surveys when requested — where I read survey questions aloud, typed responses verbatim, and offered clarification when needed. This format of interviews and optional surveys in the

form of interviews supported accessibility and allowed participants to express themselves more naturally and comfortably.

The semi-structured interviews (Merriam & Tisdell, 2016) were designed to build on the challenges or advocacy interests that each participant identified in the first survey that was conducted. First, I reviewed a visual that identified some pros and cons of GenAI use to make sure that I was not asking them to engage with a tool without discussing all the potential challenges. Then, we discussed a visual that provided a spectrum of potential ChatGPT uses to discuss which uses resonate with each participant. Third, we engaged with ChatGPT together as I shared my screen, using the challenges and advocacy interests that were provided by each participant in the first survey as a foundation for the shared exploration with ChatGPT. The interview questions are provided in Appendix Q.

Survey interviews prioritized accessibility and comfort, especially for participants who preferred a more social approach to data collection. The one-on-one setting created space for personal storytelling, deeper reflection, and clarification of meanings that might have been lost in written responses. Participants shared nuanced accounts of their educational experiences, how they understand their learning needs over time, and whether they are using ChatGPT (or not) in their daily life. This method is aligned with qualitative research practices that prioritize participant voice, agency, and contextual understanding (Community Power and Policy Partnerships Program, 2023).

Focus Group Sessions: Two focus group sessions were held with the four participants, totaling 122 minutes, to facilitate collective discussion and explore shared

experiences among participants from self-contained special education settings (Community Power and Policy Partnerships Program, 2023).

The first focus group served as both a reunion and an introduction, bringing together the four participants, some meeting for the first time and others reconnecting as former classmates. The primary activity involved responding to questions via an interactive whiteboard platform (Padlet). While all participants initially joined together to meet and greet, individual preferences quickly emerged:

- Lucia chose to complete her responses independently using voice-to-text tools during the allotted time.
- Diego initially submitted responses directly on Padlet that appeared to reflect AI-generated content. This is discussed in his case study below.
- Angel and Elijah preferred to meet with me one-on-one to answer the Padlet questions verbally while I transcribed their responses in real time.

The second focus group included the invited guests who engaged with the four participants (discussed in Article 2), providing an opportunity for the young adults to share their insights, respond to questions posed by the guests, and ask their own questions in return. This session fostered a dynamic dialogue and deeper reflection, which is elaborated upon in Article 2 of this dissertation. The full set of questions and prompts added to the interactive whiteboard (Padlet)

A breakdown of each participant's contributions is included in Figure 7, for a more detailed breakdown see Appendix R.

Figure 7. Data for each participant

	interview transcript	focus group transcript	survey responses	follow up questions
Angel	318 minutes across 5 meetings	60 minutes of focus group 2	43 responses across 3 surveys	52 minutes in one interview

Diego	236 minutes across 4 meetings	62 minutes of focus group 1	43 responses across 3 surveys	32 minutes in one interview
Elijah	328 minutes across 4 meetings	60 minutes of focus group 2	43 responses across 3 surveys	38 minutes in one interview
Lucia	184 minutes across 5 meetings	122 minutes of focus group 1 and 2.	43 responses across 3 surveys	91 minutes in one interview

Data Analysis

All transcripts were generated in collaboration with Otter.ai, a transcription tool that enabled me to listen carefully and revise each transcript for accuracy. This process involved a close engagement with the audio, allowing me to capture the nuances of participants' speech while ensuring that their words were represented authentically. Once the transcripts were finalized, I conducted multiple rounds of coding of the transcripts and the surveys.

The first round involved inductive, in vivo coding (Saldaña, 2009), allowing participants' own language to guide the analysis. These in vivo codes were then reviewed across all data through an iterative thematic analysis, which helped surface patterns and emerging themes grounded in the lived experiences of the participants.

A second, deductive round of coding (Saldaña, 2009), focused on excerpts already marked with in vivo codes. This phase was guided by theoretical constructs from Engeström (2009), Engeström and Sanino (2010) and Ciurria (2023), discussed in the theoretical framing section above, allowing for a more targeted exploration of systemic tensions and activity structures present in participants' narratives. The full codebook, including definitions and example excerpts, is provided in Appendix S.

After the data was analyzed and themes were written, I engaged all participants in a round of member checking to enhance the trustworthiness of the findings. Following McKim's (2023) recommendation for a structured and meaningful approach, participants were invited to review excerpts from their transcripts and key themes drawn from the analysis (Appendix L). I provided guiding questions to prompt reflection on whether the interpretations accurately represented their experiences and perspectives. Some participants suggested minor revisions or added a word for clarity, while others confirmed that the interpretations aligned with what they intended to share. This process strengthened the credibility of the research by ensuring that the findings accurately reflected participants' meanings and experiences rather than my own interpretations.

Reflexivity

The shared history I had with each participant offered a strong foundation of trust, shaping the tone and depth of our conversations. However, this closeness also required ongoing reflexivity to ensure that participants were not overextending themselves emotionally or feeling pressure to say what they thought I wanted to hear. Because I had once been their teacher, I remained mindful of the power dynamics and potential emotional labor involved in participating in a study led by someone they knew and may have wanted to support. I engaged in a process of ongoing reflection after each session, mentally replaying our conversations, and listening to audio clips to see if anything had been missed in the moment. I frequently checked in with each participant one-on-one, asking whether our meetings felt overwhelming, whether they wanted to continue, or whether the pacing needed to shift. I also asked each participant repeatedly

to be as honest as possible and not to tell me when they thought I wanted to hear. Participants were offered an anonymous form to share concerns or suggest changes, though none chose to use it. This approach helped me stay attentive to how relationships, past and present, were shaping the research process and allowed me to adapt in real time when participants needed more space, a different format, or simply a break.

Findings

In what follows, I highlight the experiences of (1) Lucia, (2) Diego, and (3) Elijah & Angel.[25] Each case study is organized in the following way: (1) a personal memory of the student from my 7th grade classroom is shared, some dating back over 17 years, (2) how they described using ChatGPT prior to participating in this research; (3) a description of how we used ChatGPT together during our one-on-one interview; and (4) their reflections to follow up questions asked three months after the initial data collection ended. Following the key themes specific to each participant, I present a cross-case theme informed by follow-up conversations held with participants three months after the study, focusing on Communicative Agency Through ChatGPT. I hope you find as much meaning in reading these themes as I did in collecting the data and writing about them.

"Making It Sound Smarter": Lucia's Use of ChatGPT as a Judgment-Free Writing Partner

Lucia was in my class my second year of teaching and was the first female student I ever taught in a self-contained classroom, where the student population was

[25] Because Elijah and Angel's experiences were similar and they were both from the same class, I describe them within the same theme while still distinguishing key differences between them.

overwhelmingly made up of boys.[26] From the beginning, she stood out, not just because she was one of the few girls in the room, but because of how seriously she approached school. She was the first student I'd ever taught who insisted on taking her notes home to study. Throughout the year, she would come up during lunch time or electives to receive extra support on her assignments. Her hard work paid off. She earned high scores on her state exams and eventually moved into a less restrictive setting for high school. We stayed in touch over the years. I watched with admiration as she navigated high school and college with the same determination, pulling all-nighters, revising her writing obsessively, and always striving to improve. That same diligence shaped how she approached her use of ChatGPT.

For Lucia, writing was an emotionally taxing process filled with self-doubt and overthinking. Before our study began, she was already using ChatGPT in graduate school and at work, carefully crafting her own ideas and then using the tool to revise and polish them. In one of our first conversations, she reflected on how much it could have changed her middle school and high school experience:

> I think [using ChatGPT in school] would have helped me a lot, not just for writing papers but also getting ideas from it… I always felt like my work sounded very childish … And I think ChatGPT could have made it sound better, or I don't know, smarter, I guess. I feel like I spent a lot of my time doing homework… So [ChatGPT] could have helped me to be able to sleep early and get a good night's rest.

She reflects on how the use of ChatGPT in middle school could have given her a sense of reassurance, helping her translate her thoughts into text that felt, in her words, "more smart." When asked how she knew what "smart" writing sounded like, she explained, "From the articles we would read in class." Those texts became models of polish and authority she didn't feel she could reach alone. This illustrates how narrow definitions of academic success, grounded in dominant linguistic norms, can lead students to feel that

[26]

their own voice is insufficient. As Ciurria (2023) argues, these normative standards often mask or flatten marginalized voices, privileging institutional polish over personal meaning. A DisCrit perspective deepens this understanding to show how students at the intersections of disability and language are made to feel that their communication styles are viewed as lacking by the centering of White, ableist norms. (Annamma et al. 2013) . Lucia's experience reflects this dynamic: her sense that her own writing sounded "childish" mirrors the way schools often position certain linguistic practices as immature, unprofessional, or "not academic enough." This reflection captures the emotional weight Lucia attached to writing.

In graduate school, Lucia uses ChatGPT to shape her writing into a more confident version of itself:

> I always like to write [the assignment] first and then just put it in ChatGPT… I would feel more confident… It did write what I wrote, it's just worded differently to make it sound more sophisticated or smarter, or something like that.

This example illustrates how Lucia uses ChatGPT as a mediating artifact that helps refine her written communication without erasing her original intent (Engeström, 2009). The desire for her writing to sound "more sophisticated or smarter" points to the influence of dominant academic norms, raising questions about whether her authentic voice is being subtly reshaped to fit institutional expectations (Ciurria, 2023). At the same time, her statement reflects a desire to maintain authorship while gaining access to more institutionally valued forms of expression (Delpit, 1998). In this way, the object of her writing activity shifts: from simply completing an academic task independently to

articulating her own ideas more clearly in line with academic expectations using a tool (Engeström & Sannino, 2010).

Traditionally, feedback and refinement are roles assigned to institutional actors such as tutors, professors, or even college educated parents who hold perceived authority over what “good” writing should look like (Lareau, 2003). For Lucia, those interactions often reproduced emotional challenges, deficit judgments, or were simply unavailable, leaving her feeling inadequate. Unlike peers who made her “feel bad for writing something wrong,” or the university writing center that led her to question, “I guess I shouldn’t write how I speak?”, Lucia often described ChatGPT as a tool that provided nonjudgmental, always-available support, a stark contrast to her experiences in traditional academic writing environments. “[ChatGPT] doesn’t have feelings, I guess, or care. You can annoy it as much as you want. And it’s not judging you, obviously,” she shared. Instead of going to institutional actors to assist Lucia in the writing process, she was able to receive helpful support using ChatGPT where she could experiment and refine her writing without fear of correction that makes her feel judged. By doing so, she redistributed the labor or methods of feedback most often accepted in academic settings. This dynamic reflects a contradiction between how Lucia is expected to obtain support (i.e., writing center, tutor, parents) and the support she was able to access (i.e., ChatGPT as a non-judgmental, free, always available tool). In this instance, ChatGPT was repurposed to challenge normative hierarchies in who is allowed to support student writers and how, allowing Lucia to participate more confidently in academic spaces that often feel exclusionary.

While Lucia had a consistent practice for using ChatGPT before the study began, we also met as a part of the study to collaborate with ChatGPT together. In our one-on-one sessions throughout the study, we explored how she might integrate ChatGPT into other parts of her daily life where she experienced obstacles. These conversations were grounded in the real and often emotionally taxing challenges she faced, preparing for a difficult conversation with a supervisor, advocating for academic accommodations, navigating healthcare systems, and rethinking how to approach writing before exhaustion and self-doubt took over. Through these conversations I learned more about the emotional weight that Lucia was carrying as she engaged in graduate school.

While Lucia always talked about the challenges she had revising her writing, one pivotal shift came when Lucia said, *"Sometimes I don't even know what the assignment is asking, it's hard to break it down or know where to begin."* That moment marked a turning point in our process: a realization that previous uses of the tool, like having ChatGPT revise her drafts, didn't fully address her underlying struggle with task comprehension and initiation. In response, we co-developed a new, more dialogic strategy with ChatGPT. I suggested reframing ChatGPT as a thinking partner: *"You can tell ChatGPT: 'Here's what I have to write, can you ask me questions to help me get started?'"* The idea of using ChatGPT to think with her, asking questions, responding aloud, and building a draft from that exchange resonated with her. This represented modeling a new practice, a key phase of expansive learning (Engeström & Sannino, 2010). Later, Lucia shared this approach with other young adults and invited guests in the focus group (discussed in Article 2), explaining how it helped her begin assignments

with greater ease. Her willingness to share and iterate on this strategy in community signaled a further stage of the expansive learning process when learners consolidate the new practice and share with others (Engeström & Sannino, 2010). She even used ChatGPT to interview her and help her complete the final survey for this study. In doing so, Lucia no longer saw herself as someone who struggled to “get started,” but as someone actively reshaping her tools and learning environment.

I checked in with Lucia three months after the study concluded to learn whether her use of ChatGPT had changed. She shared that since our collaboration, she’s continued to take more ownership of the process by adding more of her own input when using ChatGPT for school assignments and work-related tasks. She has also shared her approach with her assistant teacher, who was inspired to begin using ChatGPT to translate her own thoughts into more professional-sounding language. While Lucia continues to rely on the tool, she also reflected on the emotional complexity and ethical doubts it raises. She described how validation from a supportive coworker helped her feel more confident in her choices. After modeling how she uses ChatGPT, Lucia was happy to share that her co-worker “doesn't even take it as a bad thing”. Lucia’s continued adaptation of ChatGPT reflects how she has internalized her expansive use of this new tool as she shares it with her college and legitimizes it within her social and professional context (Engeström & Sannino, 2010).

However, Lucia continues to reflect on how other people’s perceptions of the use of this tool make her feel,

> Sometimes I do feel bad, because, sadly, you tell certain people that you use it, and they're like, ‘It takes away from you writing and using your brain.’ Sometimes

it does hurt, and I take it to heart. But you know, I think if it helps me, it's good. And I kind of think of that phrase, ‘work smarter, not harder.’

Her reflections also point to the emotional labor involved in navigating judgments about intelligence and authenticity, highlighting how ethical concerns are often shaped by broader narratives about who is allowed to use tools like ChatGPT and under what conditions. Despite institutional attitudes that frame ChatGPT as inappropriate or unprofessional, Lucia asserts her agency by continuing to use it, quietly resisting norms that delegitimize her communication style (Engeström, 2009). For Lucia, ChatGPT is not a shortcut but a necessary adaptation, one that helps her do the cognitive work on her own, then refine it in ways that meet professional standards. The tool allows her to communicate more confidently and effectively, while navigating a system that often makes her feel inadequate or scrutinized.

Lucia’s journey illustrates how, through collaborative experimentation and reflective support, ChatGPT became a flexible, non-judgmental tool that amplified her voice, adapted to her evolving needs, and helped translate her ideas into institutionally legible forms. Lucia’s experiences with ChatGPT complicate dominant narratives that frame GenAI use by students as inherently risky or academically dishonest (Cabellos et al., 2024; Cheah & Kim, 2025). Rather than reinforcing these fears, her reflections align with and extend findings from recent studies that highlight how students with special education experience are experiencing new forms of support and exercising epistemic agency through GenAI (Zhao et al., 2024; Fletcher et al., 2024). While much of the current research, such as Kosmyna et al. (2025), focuses on cognitive functioning, Lucia’s story foregrounds the emotional and social labor required to navigate

educational environments where access to learning supports is often unequally distributed. In this way, her experiences extend Lareau's (2003) analysis of parental and institutional scaffolding by offering a technology based solution for those who do not have the social and educational support embedded in their lives. For Lucia ChatGPT becomes more than a tool and acts as a vital scaffold that helps bridge gaps in academic and emotional support. In doing so, ChatGPT helped alleviate the emotional burden long associated with inaccessible assignments, while also challenging narrow assumptions about who or what counts as valid support in academic learning and professional environments. Lucia's case underscores the urgency of designing educational ecosystems that accommodate the many nonlinear, adaptive pathways through which learners build confidence and exercise authorship on their own terms.

"Was It ChatGPT or Actually Me?": Diego's Right to Write on His Own Terms

Diego was in my class during my first year of teaching, and I often think back to how much he taught me. During lunch or electives, he'd sit beside me, offering insights into classroom dynamics, often quoting lines from his favorite anime. As a 7th grader, Diego chose to respond verbally, drawing pictures instead of writing answers and reading graphic novels instead of traditional texts. When asked to read aloud, a practice that I carried over from my own schooling which I now see as problematic, he'd say "potato."[27] *The class would laugh, and I'd call on someone else. It didn't take long to realize Diego struggled with standardized reading and writing. Since I entered the classroom without a traditional certification in teaching, I was only provided training focused primarily on behavior management practices rather than the teaching of academic subjects, such as reading or writing. So we leaned into what worked: verbal learning and visual expression. Diego reminded me that learning doesn't always align with traditional expectations, and that honoring a student's unique path is at the heart of good teaching.*

[27] The practice of asking students to read aloud is often carried forward uncritically by teachers, reflecting what Lortie (1975) describes as the "apprenticeship of observation" or the tendency for educators to replicate the instructional methods they experienced when they were students. While often framed as a routine pedagogical strategy, reading aloud can reinforce ableist and exclusionary norms within classrooms, particularly for students with disabilities, language-based differences, or anxiety (Baglieri & Lalvani, 2020). Such practices risk exposing students to unnecessary scrutiny, reinforcing feelings of shame or inadequacy tied to literacy performance and participation. It also reflects normative assumptions about what participation and competence should look like in educational spaces.

Now, as a young adult, Diego writes in-depth reviews of dystopian anime films and uses ChatGPT to support his writing. He showed me his blog, filled with detailed analyses he writes “just to practice.” His reviews go beyond surface-level summaries, often offering critical reflections on mood, cinematography, pacing, and thematic depth. He’s particularly drawn to slow-burn horror and Gothic storytelling, which allow him to analyze how visual and emotional atmospheres shape a viewer’s experience. He’s also thoughtful about how others engage with his writing, using spoiler alerts to give readers control over how much they want to know before watching. He shared with me how he uses ChatGPT to aid in his writing process,

> …when I'm doing my writing, I still have issues with putting periods in the right spots, or commas, or even I'll be a little shy of my spelling for selective stuff... I think I write a lot more now. I even use [ChatGPT] sometimes when I feel like I'm being too repetitive with a word or to cut things out because I feel like I ramble.

Here, ChatGPT functions as a powerful mediating artifact (Engeström, 2009), helping him explore and refine his voice. Diego’s evolving relationship with writing, and with tools like ChatGPT, demonstrates the importance of having a support system that enables young adults to engage with practices like writing to express themselves when such practices in the past have been experienced as a barrier to achieving success in school. His growing passion for creative writing, supported by GenAI, reflects a shift in how he sees himself as a writer, an outcome of the expansive learning process described by Engeström & Sannino (2010).

A core tension emerged when I reviewed Diego’s survey responses for this research. They were long, overly-structured, and didn’t sound like him. I’ve known

Diego since he was in seventh grade and we haven't lost contact since. I'm familiar with his cadence, his humor, and the way he questions things. Although the responses represented ideas that Diego had shared with me in the past, they did not sound like him. When asked about his specific responses, he often would tell me that he doesn't even remember what he wrote since he was completing the response while multitasking at work. As someone who uses ChatGPT myself, I thought I recognized its presence in his responses. Later, during a focus group where we used an interactive white board (Padlet, see Appendix J), Diego's responses came in quickly and again felt distant, and were so long they were taking up the entire column. Once we moved to verbal discussion, Diego lit up, witty, reflective, deeply knowledgeable. I took this as a moment to express my concerns with Diego's written responses,

> Diego, the way you think and the ideas you share are so relevant and I learn more from listening to you everyday. I wish those ideas showed up more in your written responses you have here. I don't hear *you* in them.

Diego immediately agreed to meet with me outside of the group meeting so he can share his responses verbally as I write them for him, mentioning that he "can answer these questions in different ways all day." When we met one-to-one to add his additional responses, Diego's humor, wit, and sense of justice came through clearly.

At one point, he asked: "Can you tell from my written responses that I have dyslexia?" I told him no, but I did sometimes sense he had used ChatGPT in ways that obscured his voice. He confirmed:

> Since we're at the end of a study, [I will tell you] I definitely use ChatGPT for some things [in this study] purposely, just to see if people who have not

> encountered ChatGPT could honestly tell the difference...there can be a mini-game at the end of the [dissertation articles] where you try to figure out whether it was ChatGPT or actually me.

This moment reflects a reconfiguration of both the purpose of engagement with a tool (the object) within the activity system (Engeström & Sannino, 2010). Diego is reshaping the purpose of writing responses to my questions and challenging the normative expectations of how to participate in research. He is testing the system itself, and reframing authorship as a space for strategic, playful self-representation. His use of GenAI is a method of reasserting agency in a system that had long penalized him for how he learns and communicates (Engeström, 2009). His choices also forced me to confront a contradiction in my own research design. By prioritizing writing as a mode of data collection and expression for the activity discussed, I reproduced the very dynamics that once marginalized him. The same dynamics that disproportionately impact young adults at the intersection of race and disability in settings that center White, middle class, neuronormative ways of communicating.

Although participants were offered the opportunity to share their responses verbally while I transcribed for them, the final contribution on the Padlet was expected to be in written form so that the invited guests could read through everyone's ideas before we met (discussed in Article 1). In choosing this format, I unintentionally prioritized written expression and did not fully design with Diego in mind. In this way, Diego's use of GenAI became an expansive practice, not only for him, but also for me. It pushed me to reconsider whose voices are centered in research spaces and on what terms participation is made possible.

When I first suspected that Diego was using ChatGPT in a way I felt was neither productive nor fully aligned with his authentic voice, I felt uncertain about how to proceed or whether I could include his GenAI-generated responses in this research. Rather than approaching him with accusations or assumptions, I invited him into a conversation about why I wasn't hearing *his* voice in his writing. This opened up space for me to understand his reasoning and his worries. For Diego, this was not an attempt to deceive but a form of agency aligned with Engeström's (2009) view of "cheating," signalling deeper contradictions within activity systems. He was curious about what it might feel like to write in a more neurotypical voice, or whether others would notice his use of the tool. By responding with curiosity instead of suspicion, I was able to engage in a meaningful dialogue with him, which taught me as much about my role as a researcher as it did about his experience as a learner. I realized that accusations of cheating or plagiarism would have shut down this generative conversation and prevented both of us from learning. This shift from suspicion to curiosity and from assumption to dialogue laid the groundwork for a more open, collaborative relationship where we could explore together how ChatGPT might serve as a tool not just for writing, but for self-advocacy and imagining new possibilities for learners like him.

Through this open and collaborative exploration, we were able to reframe Diego's use of ChatGPT as a tool for inquiry, experimentation, and advocacy. While Diego had already developed his own personal practices with ChatGPT before and during this research, he and I met several times throughout the study to explore the tool together. Our sessions often began with open-ended conversations about the challenges he was facing and the kinds of changes he wanted to advocate for, both for himself and for

others with similar experiences. These conversations evolved into experiments, using ChatGPT to help imagine how to help young adults with dyslexia advocate for themselves, help make self-contained classrooms more inclusive and engaging, and assist with everyday responsibilities like budgeting and planning for the future. Together, we were able to use ChatGPT in a way that was reflective of Diego's identity, experiences and desires. Through this process, I gained deeper insight into Diego's perspectives, which helped me reflect on how technology can be leveraged to build more responsive and powerful learning environments and helped Diego see new possibilities for how he might use these tools to support himself and others moving forward. As he later reflected, "[When we asked ChatGPT] questions I wouldn't normally ask… that really opened my eyes on how to use it a little differently." This realization highlights how our collaborative experimentation prompted Diego to think beyond his prior practices and imagine new ways to engage with technology to meet his goals.

In identifying prompts, reflecting on responses, and refining our questions for more specific or useful outcomes, Diego and I encountered the contradictions that revealed where his needs stood in tension with the rules, structures, or expectations of school, work, and daily life. Although Diego and I have had many one-on-one conversations over the years, our engagement with ChatGPT created new openings for deeper dialogue, problem solving and learning. He shared obstacles he faced in self-contained classrooms and reflected on his experiences identifying as dyslexic, topics that had not surfaced in our previous conversations or even in his direct responses to questions earlier in this study. These co-created moments with ChatGPT not only deepened my understanding of his experiences but also illuminated how

collaborative inquiry with technology can surface hidden stories and unmet needs, providing an environment for imagining more just and supportive educational practices. This process reinforced the value of approaching GenAI as a shared space for questioning, reflection, and reimagining possibilities for learners who have long been marginalized by traditional systems. As a result, ChatGPT became central to this expansive learning process, as described by Engeström and Sannino (2010).

Three months after participating in the study, I followed up with Diego to see how his use of ChatGPT had evolved. Since our sessions, he shared that he's continued to use the tool regularly, for both personal and shared tasks. We began using ChatGPT as a budgeting tool when we worked together. Diego continued to build on this practice in the months after the study. He shared, "I figured out a way to pay off some things I had to pay off by giving it the numbers and the criteria I needed to meet and the X factors I was concerned about." ChatGPT helped him generate what he described as a "road map" for saving and financial planning, an outcome that functioned as a low-stakes, self-guided intervention. Diego continues to expand on new practices that were developed during the study, using ChatGPT as a mediating object to support him in his daily life (Engeström & Sannino, 2010).

He also developed new practices including using ChatGPT to support spatial reasoning. He described using ChatGPT to help resolve disagreements about how to organize shared space. "I gave it the dimensions of the room, and kind of told it what we're trying to do," he said, "and it gave us a couple options." Diego has adapted ChatGPT into multiple areas of daily life, a clear instance of transforming the object in how he reconfigured its use from a language processor to a spatial design tool

(Engeström & Sannino, 2010). This creative reorientation of the tool's function reflects how Diego uses GenAI to fit his everyday priorities.

When Diego was using ChatGPT independently to engage in this study, he was creating his own terms for participation, terms that I should have anticipated, given what I already knew about his experiences in special education and his preference for oral over written expression. Diego's use of ChatGPT to complete surveys and contribute to the Padlet revealed the persistence of unspoken norms. Even in a space meant to be inclusive, the emphasis on written responses reflected ableist assumptions about what counts as participation, shaped by both my design choices and our shared history in school. Scholars have critiqued these norms in academic settings (Annamma et al., 2013; Baglieri, 2022; Collins & Ferri, 2016; Ciurria, 2023), but this moment extends the critique to research settings.

As both Diego's former teacher and the study's lead, I knew my reaction to Diego's suspected use of ChatGPT mattered. My initial response was to address my suspicion of his approach as inappropriate or wrong, which could have undermined his confidence in using the tool, but chose instead to respond with curiosity and respect for his decisions making. While a common response to ChatGPT use that does not align with teacher (or researcher) expectations is to address it as "cheating" (Spector, 2023; Lee et al., 2024), this moment in the research showed what becomes possible when we pause before judgment and enter into conversations about GenAI use with care. By responding in this way, this allowed him to keep exploring, including using ChatGPT to create a personalized financial roadmap. His personal adoption of GenAI tools demonstrates a form of expansive learning (Engeström, 2008), where the object of

activity shifts from responding to research prompts to creating personal interventions that reshape everyday practices. Our work together illustrates the value of approaching ChatGPT as a tool that can support equity, creativity, and agency. Furthermore, by approaching student or young adult use of this tool with curiosity instead of judgment, we can enter into conversations and shared exploration into how this tool can be used for empowerment in school, work and daily life.

"It's Either You Go to College, or You're on Your Own": Elijah and Angel's Use of ChatGPT to Navigate Potential Bias in the Search for Employment

Angel and Elijah were both in my class one of my last years teaching, and what struck me about both of them was how much they cared for their peers. Angel, for instance, memorized everyone's service provider schedules and made sure they got where they needed to be on time. In high school, he became a mentor for younger students and even won an award for his care practices when he graduated. Elijah reunited with his elementary school group of friends in our 7th grade class, and many lunches and electives were spent talking through what was going on with his friends and how he might support them. Every time I talk to Elijah now, he gives me updates on his "squad" and the latest way he's trying to be there for them. That same ethic of care shaped their early impressions of ChatGPT.

As discussed earlier in this paper, public conversations around ChatGPT in education have largely focused on fears of misuse, plagiarism, shortcutting learning, or undermining academic integrity. For many students, especially those already navigating systems that label or surveil them more harshly,such as students of color in special education settings (Annamma, 2019),like Angel and Elijah, this dominant framing can shape their first impressions and discourage meaningful exploration. Angel and Elijah had never used ChatGPT before our research sessions because they associated the tool with risk, cheating, or inauthenticity.

Angel was especially hesitant. He had seen a close friend overuse ChatGPT to the point of personal decline: "He's just not using his brain anymore… he's become so

obsessed that he has stopped taking care of himself and has turned his back on people" (discussed further in Article 2). Angel feared that overreliance on ChatGPT could isolate people from their communities or from themselves. Because of that, he had avoided it entirely until we began exploring it together in this project. Although Angel was in school when ChatGPT was released, neither he nor his peers received any instruction on how to use it, including guidance on how to engage with the tool in ways that promote a healthy, balanced use.

Elijah had only heard about ChatGPT in the context of his friends' use for their college work. He wasn't against its use outright, but he worried about how teachers might react if students were honest about using it, he explained:

> Teachers know how their students write. If something looks different, it raises eyebrows… There are some teachers that don't like the idea of ChatGPT, or they don't support it. So I feel like a teacher might do something like say, 'Okay, well, your assignment is not going to be counted or graded if you're using it.'

His concern about teacher perceptions of the tool and being judged when using it captures the difficult position many students are placed in, particularly those without trust in how their teachers will handle their honesty. A position that has been situated through a long history of surveillance for multiply marginalized young adults (Annamma, 2019). Elijah, like many African American students, knows all too well the overpolicing of behaviors that are often seen as disruptive or defiant within schools, behaviors that might be interpreted very differently when exhibited by White peers. Even though he is no longer in school, this concern has influenced his view of ChatGPT and has prevented him from using it.

During this study, both Angel and Elijah were introduced to ChatGPT when we collaborated with the tool together during our one-to-one Zoom meetings. When I asked them about some pressing concerns in their life I learned that, both Angel and Elijah are actively looking for jobs to help support their families, but despite their efforts, neither has experienced much success. They had been submitting applications but not receiving interview calls, so we decided to take a closer look at their resumes and explore how ChatGPT might support them. What unfolded was not just a resume revision process, but a broader learning experience, one that combined GenAI with conversation about and potential solutions to the invisible barriers they were facing.

Elijah had graduated high school and briefly attended college, but he felt the system had failed to offer him real choices after graduation. “It’s either you go to college… or you’re on your own after that,” he told me. He wished someone in his high school had helped him explore alternative paths, like technical training or entering the job market. This gap between institutional priorities and what Elijah actually needed—practical guidance, financial stability, and relevant options—highlighted a contradiction between school-centered values and life-centered goals.

Now, with less interest in attending a traditional college and pressure to contribute financially at home, Elijah was applying for jobs daily but hearing nothing back. When we reviewed his resume together, I noticed he had listed his full home address. I asked if he still lived in public housing, and when he said yes, I shared a concern: could employers be discriminating based on his address? I wasn’t sure if it was appropriate to remove it, so we asked ChatGPT. The tool confirmed that while listing an address isn’t required, it can sometimes lead to bias, which encouraged Elijah

and I to reflect on interlocking systems of discrimination presenting barriers for multiply marginalized young adults systemic discrimination (Annamma et al. 2013. In this way, ChatGPT supported our questioning and analysis, an important part of the expansive learning process (Engeström & Sannino, 2010). Based on ChatGPT's recommendations of listing only the city and zip code, we checked its sources and made the change. Elijah's role began to shift, from someone sidelined by systemic constraints to someone capable of adapting and asserting control over how he was represented (Engeström & Sannino, 2010).

For Elijah, that small but meaningful moment shifted how he saw ChatGPT, not just as a tool banned by teachers, but as a partner in problem-solving. He said it was "extremely helpful" and "saved me a lot of time, rather than scrolling through several websites or maybe looking up a YouTube video." Tools like YouTube and Googling aren't always the most accessible ways to gather responses. In this moment, ChatGPT served as a mediating artifact that enabled Elijah to navigate an invisible barrier in the job application process (Engeström & Sannino, 2010), while also supporting his agency as he made a strategic decision to withhold his exact address to avoid bias in the hiring process (Engeström, 2009).

Angel, too, was facing challenges with job hunting. He also hadn't had much guidance in navigating the process from his high school. So we began by working on his resume together. When I mentioned what Elijah and I had discovered about public housing addresses, Angel reacted immediately: "You know what? I live in public housing too right now. Wow, yeah, let's take that out." In that moment, ChatGPT's earlier recommendation had ripple effects, it shaped not just one participant's experience but

influenced how others navigated structural bias as well . Angel's decision to revise his resume, based on my experience engaging with ChatGPT and Elijah, demonstrated how these practices can be shared across different activity systems (Engeström, 2009).

As we continued reviewing his resume, our conversation turned to other aspects that might influence how he's perceived by employers. Angel pointed out,

> I noticed job applications ask if you have disabilities. I've put yes, and no jobs contacted me. Now, I'm not saying it's for that reason, but I'm just saying, for one job, I put no and they got back to me.

Here, Angel considered the assumptions and structures built into application systems, including how disclosure practices may function as gatekeepers for multiply marginalized young adults (Annamma et al. 2013), a clear example of expansive questioning and analysis (Engeström & Sannino, 2010). I wasn't sure how to advise him, so we turned to ChatGPT again to learn that disability disclosure isn't required, though some of the links provided by ChatGPT weren't active. While ChatGPT helped to summarize the answer to our questions, we turned to Google to verify that information. The websites provided by a Google search were dense and hard to navigate. I took the opportunity to model how to use the Ctrl+F "find" function to search for keywords, which helped us confirm that disclosure is only necessary if someone is requesting accommodations during the hiring process. In this moment, ChatGPT still played a useful, though limited, role as a tool, highlighting how GenAI can support access but also has constraints in reliability and depth. Our search and shared troubleshooting also reflect an effort to model and implement digital literacy and info-seeking practices for accessing information more efficiently.

Three months after the data collection ended, I checked back in with both Elijah and Angel. Since our initial work together collaborating with ChatGPT for this research, Elijah has found a job, an outcome he credits in part to the clarity and confidence he built through revising his resume. Angel, too, has experienced progress. He's been invited to multiple interviews and uses ChatGPT to practice verbally responding to common questions, prepare talking points, and follow up with potential employers. These outcomes reflect how Angel and Elijah implemented the model, or the method for engaging with ChatGPT, that we created together to enable them to overcome barriers in the hiring process, which is a key part of the expansive learning process (Engeström & Sannino, 2010).

Both Elijah and Angel found new ways to work with ChatGPT in their daily life that transformed the purpose of this tool. Elijah shared that he continues to use ChatGPT in practical, everyday problem-solving, especially for budgeting and travel planning. At his new job, he used the tool to determine the best time to return from his 46-minute work break. He shared "It's better than Google because Google gives you a time calculator and doesn't tell you how to use it." In this way, he is repurposing ChatGPT. Instead of using it as a language processor, he is using it as a time calculator, changing how ChatGPT, the object, is used to meet his everyday needs (Engeström & Sannino, 2010).

Angel, meanwhile, has continued using ChatGPT for interview preparation but has also expanded into more creative territory. He described using the tool while experimenting with a friend's animation software, asking how to make a character "run with lightning speed." He also turns to ChatGPT for drawing inspiration, using it to get

“ideas for scenery and for backgrounds” to fuel his visual creativity. Angel, too, shows how ChatGPT can be repurposed, but in this case he is using it to help spark creativity and self-expression (Engeström & Sannino, 2010). Both Elijah and Angel demonstrate how GenAI becomes integrated into their personal ecosystems of decision-making and creativity, evidence that what began during this research has since taken root as a flexible, meaningful resource in their daily lives. Rather than a threat to academic integrity, ChatGPT became a bridge to self-advocacy and practical support, whether that meant quickly solving math problems to reclaim their break time, or finding creative outlets that affirmed their identities.

While much of the public and academic discourse around ChatGPT focuses on preventing students from misusing it in ways that defy institutional norms (Spector & Lee, 2024), far less attention has been paid to the potential benefits of introducing this tool to young adults, particularly those who have been multiply marginalized by school systems (Annamma, Ferri & Connor, 2013). For young adults like Elijah and Angel, who initially avoided ChatGPT due to negative preconceptions, learning to use the tool became a turning point. Through their experiences with ChatGPT, both Elijah and Angel began to uncover ways to navigate the systemic barriers, like bias around housing and disability in the job market. With guidance, they used ChatGPT to challenge racism and ableism embedded in hiring systems (Annamma, Ferri & Connor, 2018; Annamma & Handy, 2019). In these contexts, the “misuse” of AI tools is not the central issue. The more pressing concern is that these young adults are entering systems—school, work, public life—for which they have not been adequately prepared due to the persistent failure of education to address the intersectional oppressions they face.

While concerns about misinformation, privacy, and bias are valid, they are not insurmountable. These are challenges we already navigate through critical digital literacy: questioning sources, analyzing images or facts, validating information, and recognizing bias. The same practices we teach when using Google or evaluating a news article apply to GenAI tools. But at same time, we need to go beyond critical digital literacy to prepare students thoughtfully for the emerging risks that will arise in the future as GenAI tools evolve (Ross, 2017). What's needed is not to shield young adults from these tools, but to equip them with the skills to use them critically and ethically. For young people navigating systems shaped by racism, ableism, classism, and linguistic prescriptivism, tools like ChatGPT—when paired with strong critical digital literacy instruction—can offer timely, relevant, and empowering forms of support. When used thoughtfully and with the proper guidance, GenAI can support young people with special education experiences in expanding the boundaries of systems that too often constrain their potential.

Supported, Not Silenced: Communicative Agency Through ChatGPT

Three months after the core study ended, I reconnected with all participants to explore whether they thought their continued use of ChatGPT supported or undermined their ability to express themselves. Influenced by Ciurria's (2023) framing of the "erasure of disabled voice," I asked direct questions such as: "Have you ever felt like ChatGPT changed what you were trying to say too much so it doesn't sound like 'you' anymore?" and "How does it make you feel when your words are changed to a more 'professional tone' by ChatGPT?" (See Appendix T for a full list of questions). Their reflections surfaced moments where ChatGPT challenged dominant norms around communication and opened up new possibilities for expressing voice on their own terms.

Challenging Norms, Expanding Voice

As I discussed earlier in this paper, disability justice scholars highlight the racialized and ableist expectations embedded in academic and professional writing norms (Annamma, Ferri & Connor, 2018; Annamma & Handy, 2019). Elijah named these norms directly: “I was always told to never write like I talk. The expected way to write is in the form of an intelligent White person. No one can set a standard for how to communicate.” His reflections on the communication norms that shaped how he and others learned to edit themselves in school reveal the interlocking systems of racial and ability-based oppression that mark certain communicative styles as deficient. In doing so, Elijah critiques dominant communicative norms rooted in Whiteness and ableism, revealing the structural contradictions between institutional expectations and his lived experience (Engeström & Sannino, 2010).

Still, Elijah didn’t see ChatGPT as enforcing those norms on its own. Instead, he saw the tool as responsive and adaptive:

> I do not think ChatGPT is perpetuating that because it's a GenAI program, and I feel like we should all kind of expect GenAI to speak like that… [ChatGPT] makes me feel more supported to be more formal for what I need to sound formal for. But when I ask personal questions it doesn’t answer so formally. It supports me in the way I need to be supported.

Elijah was aware of the communication norms that were expected of him before ChatGPT was publicly released and recognized them as codes of power (Delpit, 1998). He repositions ChatGPT not as a tool that passively reproduces those norms, but as one that can be strategically engaged to meet different communicative goals. Elijah’s

reflections represent key dimensions of expansive learning, as he is questioning the norms of school, analyzing embedded contradictions, and modeling new approaches to action (Engeström & Sannino, 2010). Through this, Elijah is not only navigating existing systems but also constructing a more expansive understanding of how voice, technology, and power interact.

Lucia offered a similar reflection that highlights how professional norms of communication differ from how she speaks, "I know how I speak and how it is different from how I should be in the workplace or at school." When asked how she feels when her writing is changed to a more professional or "standard" tone, she responded, "Sometimes it makes me feel like I am not writing as professional as I need to, but I have felt this way before ChatGPT." She further reflects,

> I do not feel bad when [ChatGPT] changes the way I write. It makes me understand. I am glad that it's there to help me express what I am expressing but more in a professional manner... It's not ChatGPT's fault. I'm just asking it to do what I am being asked for and told to do.

For Lucia, ChatGPT is a tool that helps her meet the expectations of school and work, not a source of those expectations. In this way, ChatGPT can be viewed as a mediating artifact that enables her to engage with the rules within her activity systems (Engeström and Sannino, 2010). While their decision to ask GenAI for that kind of language to use is serving to perpetuate linguistic norms in how they are complying with language they may not otherwise want to be using, because of how life is structured, we all need to shift how we communicate in order to participate and maintain levels of membership in different communities. ChatGPT gives users tools to strategically navigate these norms.

Participants were clear: the perception about their way of communicating needs to change to be acceptable in academic or professional settings; it didn't begin with ChatGPT. Those feelings came from years of internalizing school-based expectations shaped by whiteness and ableism under the guise of professionalism and narrow definitions of acceptable communication styles. ChatGPT didn't create these norms,[28] but it did help participants navigate them. As Engeström and Sannino (2010) remind us, expansive learning emerges when individuals and groups begin to question and transform the structures that have historically constrained them.

Navigating the Emotional Labor of Expression

Across all interviews, a central theme emerged: participants described ChatGPT as a tool that helps them share their ideas and refine their intent across contexts. In this way, ChatGPT becomes a tool to support code switching, a strategy often encouraged in K-12 settings to help students rephrase their everyday language into a tone that aligns with more formal or academic contexts or to understand the culture of power (Delpit, 1998). However, for neurodiverse students or students with learning disabilities, there is another layer of emotional labor involved. Not only must they generate the correct tone for the context, but they must also work to translate their thoughts into forms that others will understand based on neurotypical norms of communication, such as linear thought organization.[29]

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[28] Although ChatGPT did not create those norms, the underlying algorithms were shaped by language built around those norms (Qadir, 2022; Hassija et al., 2023).

[29] As someone who identifies as neurodiverse, I often find myself going beyond code-switching (i.e., changes in tone or language for different settings) to modify the very structure of how I think and communicate. It's more than shifting between cultural or social norms; it's a form of masking neurodiversity. Sometimes I force my thoughts into a more linear, neurotypical pattern to be understood, even when that's not how my mind naturally works (and in my opinion, way more boring!) Other times, I'm told that my way of communicating is too direct or blunt, and I have to soften my expression to fit expectations. For many neurodiverse individuals, what can be considered "code switching" requires an added layer of emotional and cognitive labor that often goes unseen. It is also important to note: while I

Participants in this study used ChatGPT to express themselves in environments where their everyday communication styles were often misunderstood or undervalued. Diego and Elijah shared how they use ChatGPT to transform their ideas to be more easily comprehended by others. Diego expressed that he uses ChatGPT to “convey something easier for others to understand,” suggesting that the tool serves as a translator to support his expression. Elijah communicated a similar sentiment: “I get to display all my ideas in a manner that I want so other people can understand.” For Elijah, it was important that the ideas remained his own but that they became more accessible to others. These young adults overcome their shared preoccupation with ideas and communication not being clear to others, a potential ramification of being systemically marginalized and misunderstood in school systems (Ciurria, 2023), through their use of ChatGPT.

ChatGPT also helped these young adults feel more confident in their communication overall. Participants consistently described ChatGPT as a safer, more emotionally neutral space for preparing their ideas to be shared with others. Elijah, for instance, emphasized how it supports a shared understanding when he is talking to others:

> Talking to humans is different because ChatGPT will always understand what I am trying to say. With humans, there are several different variables: hearing, cognition, and other misunderstandings. Sometimes my wording is convoluted ... Sometimes things are taken in ways that I don't mean them.

identify as neurodiverse, I acknowledge my access to institutional power and the privilege of diagnosis. My experiences do not represent the realities of others who identify as neurodiverse, but offer a window into some possible challenges.

As Elijah demonstrated, when he shared his ideas with ChatGPT, he was often understood. This contrasts with how he feels when talking to other people. In this way, ChatGPT provided a space for him to communicate without the fear of being misunderstood, creating a sense of emotional safety for personal expression that helped to minimize the challenges faced when asked to communicate with people who might not understand. As contradictions between communicative norms and participants' personal styles of expression created a sense of fear or apprehension in sharing their ideas, ChatGPT served as a mediating artifact, helping participants express themselves (Engeström & Sannino, 2010). ChatGPT's emotionally neutral and judgment-free interface provided a sense of communicative safety, allowing participants to experiment with tone and language without fear of misunderstanding or critique.

Participants felt ChatGPT was helping them navigate a world that already had rigid standards for communication. And in some cases, it even made it easier for them to say what they had long held back. Lucia shared that ChatGPT gave her a way to speak up in emotionally difficult moments:

> Yeah, I feel like I try to communicate more... [I ask ChatGPT] 'How can I write this to explain something I don't like, but in a way that won't hurt someone's feelings?' ChatGPT doesn't have feelings. It won't judge you, like 'Oh, you're saying this wrong.' It's more like, 'Here's how you could explain something.' And that helps.

Before discovering this tool, Lucia often kept her thoughts to herself. Now, with a consistent, nonjudgmental support system, she communicates more confidently and

more often. Angel, too, reflected on how transformative this kind of support could have been: “If we had this when I was in school, I would have been able to speak up more” and has shared how this tool has helped him navigate email correspondence with future job prospects. Often Angel uses ChatGPT to help him respond to text messages or emails that he would have had a hard time answering without the use of this tool, giving him ideas of what he can say. Their reflections highlight the broader stakes of accessible, adaptive tools like ChatGPT, not just as writing aids, but as relational systems that help users amplify their voice in environments where it was previously constrained. In doing so, ChatGPT becomes a mechanism for fostering communicative agency and emotional safety. As Engeström (2009) argues, such tools can play a central role in reconfiguring activity systems, especially when users engage them to build expansive new pathways for expression.

Exercising Communicative Agency

When asked if ChatGPT restricts their creative expression, participants emphasized that the tool works more to enhance their ideas rather than replace them. Angel explained, “It helps me expand my ideas, helps me make more out of my creativity, not less.” In this way, Angel uses the tool as a way to further his creative thinking, treating it as a collaborator that sparks new directions rather than a substitute for his own imagination. Rather than feeling confined by the GenAI’s suggestions, Angel sees it as a resource to generate more possibilities and refine his original ideas. Participants like Angel positioned ChatGPT as a tool that amplifies and supports creative agency, which is an interesting aspect of ChatGPT use that is not often

discussed in public and academic discourse and should be further explored in educational research.

When collaborating with ChatGPT, there were moments when ChatGPT would make suggestions that did not align with participants' communication goals or their personal voice. In response, participants also exercised strong editorial control over ChatGPT's outputs, adjusting its suggestions rather than simply accepting them. Elijah described this dynamic:

> Sometimes the style or use of words [used by ChatGPT to edit my work] makes [what I am trying to say] sound different, so I make adjustments myself to make it sound more like me. Still better than writing on my own.

For him, ChatGPT is a helpful tool for drafting writing, but the final say is always his. When ChatGPT offered suggestions that didn't quite match Elijah's voice, he engaged in an active process of editing to better reflect how he wanted to sound. His approach highlights a collaborative dynamic in which ChatGPT offers a starting point, but Elijah takes the final editorial pass to ensure that the output aligns with his intentions and tone. Elijah extended this idea by noting how customizable the tool is: "You can request ChatGPT to speak a certain way. I can say, 'Write me a sentence to greet a friend in Ebonics,' and it will do that. It can replicate my style of speaking." In this way, Elijah exercises control over how his voice is represented within the constraints of the GenAI, positioning himself as the director of the tool's outputs, not a passive recipient. Through these practices, Elijah was an agentic actor in the development of the writing he created when engaging with ChatGPT (Engeström, 2009).

Lucia described a similar method of collaboration with ChatGPT when writing in both her professional and personal life:

> Sometimes when I am writing letters to parents or messages to friends to express something and it might use a phrase or word that I do not feel comfortable using, so I change it, or I ask Chat[GPT] to change it for me.

For Lucia, editing is both an intuitive and dialogic process. She moves between manual edits and interactive prompting with ChatGPT, negotiating tone and word choice until the message feels right. Her explanation emphasized the control she feels she has when prompting ChatGPT and how she uses it to learn more about how to write professionally:

> It's a lot of struggle to write when you don't know how to write. No, my personal voice won't be erased when I use ChatGPT, it depends on how you are asking ChatGPT to help you. It will use a professional tone if asked, or I ask it to use slang words or text speech. I'm glad that it's there to help me express what I am expressing but more in a professional manner. It helps me understand why it's not professional or standard.

Rather than enforcing one way of speaking, ChatGPT, as described by Lucia, operates along a continuum of formality and tone that she can navigate as needed. At the same time, she is learning from her use of the tool about how to sound more "professional" in future writing. Lucia reframes the tool's use in pursuit of more personally meaningful or contextually appropriate outcomes, reflecting her agency in determining how this tool supports her engagement with the rules and objects in her activity system (Engeström & Sannino, 2010).

In these examples, tools like ChatGPT are part of a reorganization of how people act and communicate within systems historically constrained by dominant norms. In this way, ChatGPT acts as a bridge for expression within these systems, enabling users to navigate and adapt to the communicative expectations that have traditionally limited their participation. Their use of ChatGPT exemplifies a generative form of tool-mediated agency that challenges and reconfigures dominant systems of communication (Engeström, 2009). They weren't passive recipients of GenAI-generated text; they were active collaborators, shaping and reshaping outputs to better reflect their intentions, tone, and identity. Their use foregrounds ChatGPT as a collaborative partner in authorship, as ChatGPT continues to serve as a mediating artifact (Engeström & Sannino, 2010), pushing back on the idea that the use of ChatGPT requires them to restrict their voice. These reflections suggest that for these young adults, ChatGPT is not only a writing tool, but it's a catalyst for communicative agency.

Discussion

The findings from this study offer a reframing of how GenAI tools like ChatGPT are used by young adults with special education experiences. Rather than aligning with dominant narratives that position these tools as threats to academic integrity, participants described ChatGPT as a support system that scaffolds access and expands agency in ways formal schooling often fails to provide. This perspective challenges the binary of "cheating or not cheating" by drawing on Engeström's (2009) concept of cheating as expansive agency and the theory of expansive learning (Engeström & Sannino, 2010), highlighting how such practices can represent efforts to transform learning, expand the boundaries of legitimate participation, and create new possibilities

for engagement. This study reflects a core aspect of GenAI use: it is inherently agentic, affirming young adult's decision-making power, creativity, and desire to participate more fully in learning, work, and self-expression. At the same time, their engagement surfaced deeper contradictions within systems of communication, authorship, and participation that continue to constrain how neurodiverse individuals and young adults with learning disabilities are expected to learn and express themselves. In what follows, I discuss how participants' engagement with ChatGPT reflects expanding forms of agency and reveals contradictions within existing educational and professional systems. I then outline "Design Principles for Inclusive and Just GenAI Practices" based on these findings.

GenAI emerged as a mediating artifact that made visible the deeply entrenched contradictions shaping the educational trajectories of young adults with special education experiences. Participants' interactions with ChatGPT consistently revealed how racism, ableism, linguicism, and classism structure the expectations placed on them and the judgments they learn to anticipate. The fears, hesitations, and emotional weight that students carried into these sessions were reflections of a school system shaped by White, able-bodied, middle-class norms.

From a DisCrit perspective, these findings show that GenAI does not enter into neutral spaces. Students encounter ChatGPT through histories of surveillance, deficit narratives, and exclusionary norms of communication that disproportionately impact multiply-marginalized young adults (Annamma et al., 2013; Annamma, 2019). For participants Elijah, who had long been scrutinized by school systems, these histories shaped their initial reluctance to even try GenAI tools. Their responses illustrate how

institutional narratives that frame ChatGPT as a threat, primarily a cheating device, mirror earlier patterns of mistrust directed at students of color and students labeled with disabilities. These narratives reproduce what Ciurria (2023) and Annama (2019) identifies as the carceral logics of academic integrity: systems more concerned with catching wrongdoing than supporting access.

Yet, when participants engaged with ChatGPT outside of these punitive framings, a different story emerged. GenAI became a space where students could translate their ideas, manage executive functioning demands, and rehearse communicative practices that had felt out of reach. For Lucia, GenAI offered reassurance in navigating writing norms that had long made her feel inadequate. For Diego, ChatGPT became a tool for challenging my research design and reshaping authorship on his own terms. For Angel and Elijah, GenAI became a partner in questioning hiring practices.

In these moments, participants engaged in processes aligned with expansive learning, using GenAI to question norms, analyze contradictions, and model new possibilities for action (Engeström & Sannino, 2010). Their GenAI-supported insights challenged White, monolingual, able-bodied norms embedded in schooling and work, and opened pathways for redefining what counts as competence, authorship, and legitimate participation. These interactions were not only about learning to use a tool—they were about learning to navigate, resist, and reimagine the systems that had marginalized them.

Taken together, this study suggests that the most urgent question is not whether students should use GenAI but how educational systems can shift from policing their use to understanding what their use reveals. Participants' stories make clear that young

adults are already developing sophisticated, critical, and contextually grounded practices for engaging with GenAI, practices that deserve recognition rather than surveillance. When used within trusting, dialogic relationships, GenAI can help redistribute access to communicative power, support the development of epistemic agency, and expose contradictions that open space for more just, flexible, and human-centered learning environments.

Ultimately, GenAI's role in education cannot be evaluated through a narrow lens of academic integrity. Instead, it must be considered through the perspectives of those who have been most underserved by traditional schooling. Their experiences demonstrate that GenAI is not a shortcut but a site of possibility, one that, when approached through justice-driven, DisCrit-informed, and expansive learning frameworks, can help create the more inclusive and responsive educational systems that students have long been asking for.Expanding User Agency

Participants' uses of ChatGPT reflected intentional, context-specific strategies for navigating the cognitive, social, and emotional demands of learning, work, and communication. Their interactions with the tool were shaped by personal needs, desires, and aspirations, often tied to gaps left by formal education systems. Their engagement with ChatGPT reflected active efforts to reclaim control in environments that often marginalize them. For example, Lucia used ChatGPT to alleviate the emotional labor tied to linguistic judgement and inadequate academic support, turning to the tool as a scaffold where institutional resources fell short. Diego engaged with ChatGPT as a testing ground for voice and expression, illustrating how young adults used GenAI not to bypass thinking, but to extend and experiment with it. Elijah and

Angel saw ChatGPT as a pathway into professional self-advocacy, job readiness, and greater awareness of the biases that shape access to opportunity. ChatGPT provided a way of exercising their agency and creating a space for learning and self-expression in ways that did not exist before.

Across these examples, participants engaged with ChatGPT in ways that aligned with their established identities as learners. For instance, Lucia approached the tool with the same diligence and collaborative spirit she demonstrated in middle school. Diego, on the other hand, engaged with ChatGPT more playfully, treating it as a space for experimentation. Angel and Elijah, who initially expressed concerns about how teachers would view his peers' use the tool, ultimately engaged with it to break down barriers, an approach that reflected their long-standing attentiveness to issues of fairness. These findings highlight an important insight: tools like ChatGPT are building on who these young adults were as learners by expanding the possibilities available to them and deepening the learning practices they had begun to cultivate as early as seventh grade. Rather than diminishing their agency, this technology extended it in ways that were congruent with their prior trajectories as learners.

Taken together, these examples demonstrate how participants lived and worked within systems that actively resisted their authentic forms of self-expression. It was not until after high school that they found tools, like ChatGPT, that supported their ability to communicate in ways that felt true to themselves. From a broader perspective, this highlights how institutional norms restricted their agency, both in how they communicated and in the kinds of tools available to them. Now, with access to a tool that aligns with their communication needs, they are able to expand both their agency

and their forms of expression. These findings have broad implications for students going through formal education at this time.

Revealing Contradictions

Investigating how participants in this research agentically engaged with ChatGPT sheds light on how normative expectations around communication have historically restricted their ability to express themselves authentically, which highlights the need for K-12 and university settings to do more to create spaces where all students feel empowered to express their ideas. However, identifying how to create such spaces and what concrete steps to take remains a challenge. In this paper, I offer a method for identifying specific ways academic settings can begin this work. Rather than dismissing the use of GenAI tools outright, exploring how students are already using them can reveal important insights about how schools need to change. Participants' patterns of engagement with ChatGPT revealed contradictions—moments when the rules or norms of academic institutions conflict with students' needs, goals or desired outcomes— within existing systems of communication, authorship, and participation that often constrain how young adults from self-contained classrooms are expected to learn and express themselves. Specifically, this paper examines these contradictions, and taken together, they illuminate how school systems can change to provide students in self-contained classrooms with the tools they need to succeed after graduation.

While Lucia developed collaborative processes to work with ChatGPT in a way that maintained her ideas and purpose in writing, she still expressed many concerns about using this tool. Lucia's concerns about using ChatGPT tools, despite knowing that

her more financially and academically resourced peers freely accessed help from tutors, parents, or writing centers, highlights inequities in how academic support is distributed and judged. This reveals a contradiction within the division of labor around who provides help and under what conditions. This contradiction illuminates an aspect of inequity in access to resources within academic spaces where some forms of support are normalized and encouraged and others are policed and questioned. By examining this contradiction, school leaders can better identify the changes needed to shift negative institutional responses to the use of ChatGPT. Such responses often further restrict access to support for learners who already lack academic and financial resources at home. Addressing this inequity might involve providing instruction on how to use ChatGPT in empowering and ethical ways, offering alternative resources to support writing and communication that are not tied to parental academic or financial status, and expanding what is considered acceptable communication in academic writing tasks.

Diego was a student who struggled with writing throughout middle school and preferred expressing his ideas verbally. In this paper, I focus on the contradictions that emerged for Diego during the research, particularly in how I asked him to engage through written responses despite his known preference for verbal communication. For Diego, ChatGPT served as a tool to make his ideas more visible within these narrow expectations. His choices highlight the limits of institutional definitions of participation and challenge who gets to decide what forms of communication are considered legitimate. This contradiction between the expected mode versus personal preferences for communication reflects a larger pattern within educational and research environments where students or participants are routinely asked to demonstrate their

knowledge through written forms, even when other modes might better suit their strengths. This contradiction points to a needed change within school and research systems, revealing the need for more expansive understandings of literacy and assessment. While classrooms and research settings continue to prioritize written communication as the primary means of assessment, these systems must recognize the importance of multiple modes of expression and allow students to communicate in that way. For example, in situations where verbal responses are the only way to engage, students or participants could be supported to use voice-to-text technologies or tools like ChatGPT to support this process. Additionally, teachers or researchers could expand their accepted forms of communication to include video responses or even going further and having students or participants share their ideas as a lesson or a play that they present to their others as a form of engagement.

Elijah and Angel both received transitional planning in high school to support them after graduation. While schools emphasize readiness for future success in college, they often fail to provide the tools, strategies, and critical awareness necessary to navigate real-world barriers. Elijah and Angel's experiences reveal a contradiction between how educational systems claim to prepare students for life after graduation and the realities they face as well as a focus on attending college which often leaves out students who are interested in entering the job force. This gap underscores how educational practices are disconnected from the challenges young adults encounter beyond the classroom. While Elijah and Angel were given support in school, a lot of the obstacles they faced were not illuminated until after they graduated. This contradiction highlights the importance of exploring the critical consciousness needed to navigate

bias in the job market during transitional planning, especially for multiply marginalized young adults who are experiencing intersecting forms of oppression (race, class, ability, language). Furthermore, transitional planning needs to be an ongoing, evolving process that does not end when a young adult graduates. School systems can address these contradictions by creating opportunities for former graduates to receive support as they encounter obstacles through a help line, a support group, or planned meetings with an advisor after graduation.[30] In cases when human capital is not available, transitional planning can include instruction on how to leverage tools like ChatGPT to support in this process as was demonstrated in this research.

Together, these examples illustrate how engagement with ChatGPT makes visible the pressures and gaps embedded within educational, research, and employment systems. When young people turn to these tools, they are not merely addressing personal challenges; they are exposing larger structural inequities that demand institutional attention and reform.

Design Principles for Inclusive and Just GenAI Practices

These findings suggest that educators and institutions need to adopt a new interpretive frame for understanding GenAI in learning environments to recognize its role within broader systems of institutionalized oppression and the possibilities it opens for more equitable participation. Two principles emerge from this study:

1. GenAI use can support user agency.

[30] While it might make sense to some that transitioning to a social service program after graduation might be a possible support, the importance of gaining support from people who you have an ongoing relationship with should not be overlooked (this is discussed more in Article 1). When I discussed this with Angel he shared the value of the connections he retains at his high school that offer support to him as needed.

Generative AI becomes meaningful when young people use it to support their own thinking, expression, and problem-solving. These tools can help users explore ideas more deeply, especially when standard systems have failed to meet their needs. Each interaction with GenAI reflects the user's goals, context, and values, which can affirm their agency in deciding how, when, and why to use AI. The power of GenAI lies in how young people adapt it to amplify their voice and navigate learning on their own terms.

2. Reasons for GenAI use and surface systemic gaps that can inform institutional change.

The ways young people engage with GenAI often reveal more about the systems they navigate than about the technology itself. Patterns of use expose underlying gaps, pressures, and contradictions that could be pervasive within schools and workplaces, especially for those historically excluded from full participation. These moments of workaround and adaptation point to where institutions may fall short and where change is most needed. Rather than viewing GenAI use as a threat to existing structures, we can understand it as a mirror. If the patterns from these cases hold more broadly, they highlight how existing educational institutions must evolve to become more inclusive, responsive, and justice-oriented, particularly those fully excluded from full participation.

Together, these principles offer a path forward that centers learner agency, surfaces institutional responsibilities, and invites justice-centered design in the age of GenAI. They underscore that technology itself is not inherently liberatory or harmful; its impact

depends on the social and institutional systems in which it is embedded, and the ways in which humans choose to engage with it. That is, GenAI are best thought of as sociotechnical systems.

Limitations

As a qualitative study grounded in participant reflections, this research does not aim for generalizability but instead offers a contextual and situated understanding of GenAI use among a specific group of young adults with special education experiences. In what follows, I discuss the limitations connected to my positionality, history with the participants, the language of this study, and participants' access to technology.

My dual role as researcher and former teacher, combined with my own positionality as someone interested in inclusive education and GenAI, likely influenced how I interpreted participants' narratives, selected data for analysis, and framed the findings. I engaged in reflexivity to be aware of such biases and often brought these findings to my advisor and his research group to discuss.

All four participants were my former students, young adults with whom I had long-standing relationships shaped by our time together when they were in 7th grade as well as our correspondence after they graduated. This closeness allowed for a level of trust, vulnerability, and depth in the conversations that might not be possible in other research settings, but it also shaped the dynamics of the study in important ways. Because participants were aware of my advocacy for inclusiveness and my current use of ChatGPT in academic and personal contexts, some may have felt encouraged to frame their responses positively. As a result, I often asked follow-up questions or

checked in with participants to make sure they were not telling me what they thought I wanted to hear.

The small group of participants were all English speakers. While Lucia and Diego were multilingual, the entire study was conducted in English. As a result, the findings may not fully capture how linguistic diversity, or the challenges and opportunities GenAI presents for speakers of languages other than English, shapes engagement with these tools. Including only English-language interactions may have limited participants' ability to reflect on or experiment with the tool's multilingual capacities.

Lastly, all participants had access to devices, internet, and the basic technical literacy to use GenAI tools like ChatGPT. This study does not account for how differing levels of access, digital literacy, or institutional restrictions might shape experiences for other young adults with special education histories. Furthermore, this study was conducted at a very specific moment in time when ChatGPT and similar tools were publicly available and evolving rapidly. Participants' reflections are tied to the version, capabilities, and cultural discourses surrounding GenAI during this period. Future iterations of these tools may offer different experiences or raise new concerns not captured here.

Conclusions

This study reframes students' use of ChatGPT as a response to exclusionary educational conditions and an expression of agency, instead of evidence of misconduct. For young adults with special education experiences, ChatGPT was a resource for reimagining how they could participate, express themselves, and succeed on their own terms. Through these interactions, participants demonstrated agency by rejecting

narrow definitions of what counts as legitimate work or communication. Rather than passively adapting to the constraints placed upon them, participants used ChatGPT as a tool to push back against institutional boundaries and to assert new possibilities for participation (Engeström, 2009). They used ChatGPT to engage more deeply with ideas, communicate more clearly across different audiences, and advocate more effectively for themselves in educational, research, and employment contexts.

Participants' engagements with ChatGPT also revealed contradictions shaping young adults' experiences with GenAI in education and work. These contradictions show how students are actively navigating systems that were not built with their lived realities in mind. From an expansive learning perspective, such contradictions reveal tension that signals opportunities for change (Engeström, 2009). These young adults are experimenting with new ways of learning and communicating that redistribute labor, reconfigure authorship, and challenge normative expectations. Their actions point toward possibilities for more inclusive and empowering educational participation.

Ultimately, this study highlights that GenAI is not simply a technological development, it is a sociotechnical practice that reflects and reshapes how learners engage with the systems around them. It affirms their agency, reveals systematic gaps, and pushes institutions to evolve. The case studies listed here demonstrate that GenAI can benefit both students and school systems. It opens up doors for young adults who have been systemically marginalized to gain confidence in their ability to communicate within restrictive norms. At the same, it reveals how school systems can change to create more expansive, justice-centered learning systems. When educational systems

respond to GenAI not with fear but with curiosity and care, they can begin to co-create more inclusive, ethical, and responsive structures for all learners.

Implications

The insights from this study suggest the need for a reimagining of GenAI policy and practice in education, one that centers equity, student agency, and reflective use rather than surveillance and punishment. Educational institutions must reckon with the reality that students receiving special education services are already navigating these technologies on their own terms, often in response to systems that have long failed to meet their needs.

For Educators: Educators should be mindful of how they represent GenAI, recognizing that students may already be using these tools outside the classroom as a source of empowerment. Negative or dismissive attitudes toward GenAI risk further marginalizing students who find value in these technologies. Instead, educators can engage students in conversations and provide instruction about how to use these tools to navigate communication within systems shaped by normative standards, biases in the job market, and everyday challenges. Some of the conversations conducted through this research supported the kind of GenAI practices that seem productive and equitable for young adults.

For School Leaders: School leaders should avoid generalized restrictions that automatically equate GenAI use with cheating or plagiarism. Instead, they should remain curious about how students are using these tools and use those insights to inform policies and learning environments that are more empowering and

aligned with students' realities. Additionally, school leaders should ensure teachers receive training on how to guide students in responsible, institutionally appropriate uses of GenAI.

For Researchers: Researchers should reflect on how traditional expectations for research participation, such as privileging written communication, might inadvertently exclude how some individuals communicate. Further empirical research that seeks to understand how marginalized learners in K-12 settings use GenAI is needed to reveal important insights about how these tools support users in navigating systems not designed for them, and can point toward necessary systemic change. Future research should be conducted to study broader usage patterns and learning practices of young adults taking up GenAI technologies for various pursuits including empowering communication and creativity. We lack studies that directly observe their situated learning as they take up GenAI systems.

If we are serious about inclusion, we must design systems where students are not punished for seeking help, but empowered to define what learning looks like for them. Technology alone cannot dismantle educational inequities, but when embedded within justice-centered practices and shaped by the voices of those most impacted, it can become a powerful tool for transformation.

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Conclusion Chapter

Summary of Findings

This dissertation explores how young adults with special education and neurodiverse experiences navigate both the possibilities and risks of generative AI (GenAI), supported by co-designers who helped develop inclusive research tools and practices. At the heart of this inquiry is a commitment to understanding how these young adults imagine accessible and inclusive research spaces, how they reflect on the ethical dimensions of GenAI use, and how they exercise agency in their interactions with these tools. Taken together, their insights illuminate how to design more inclusive, justice-centered policies and practices for the use of emerging technologies in academic and professional settings based on the opportunities and barriers they encounter across educational, research, and employment contexts.

Article 1

Shaping Research Together: Co-Design of Research for Inclusion and Empowerment With Young Adults With Special Education and Neurodiversity Experiences

Young adults with special education and neurodiversity experiences can shape the development of accessible and inclusive research tools and practices through co-design, revealing that accessibility is not a static checklist but a dynamic, relational process. This research foregrounds the importance of letting lived experience guide the design of inclusive research practices and redistributing power in collaborative design with co-designers who have been systemically marginalized.

Building on Engeström's (2008) concept of knotworking, this work illustrates that sustaining collective activity in systems marked by entrenched hierarchies requires more than coordination; it requires reflexive, justice-driven practices that cultivate relational trust and actively share decision-making power. Similarly, this dissertation extends Tatar's (2007) notion of design tensions by revealing their emotional and historical weight. Oftentimes, competing priorities and values in co-design signaled that systemic harms and institutional histories were present in the room. Engaging with these tensions—through reflection, humor, repair, and iteration—became central to designing for inclusion.

Taken together, these insights reframe inclusive research design as fundamentally relational and justice-oriented. They call for methodologies and research environments that are:

1. **Accountable to lived experiences and histories** rather than abstract notions of inclusion.
2. **Responsive, reflexive, and relational**, allowing tools, structures, and timelines to shift in response to participant needs and desires
3. **Committed to redistributing power**, positioning historically marginalized young adults as co-authors of research and policy, not just as participants.

This work offers a roadmap for designing with, not for, young adults with special education and neurodiverse experiences—an approach that moves beyond inclusion as access toward inclusion as a collaborative design process. These findings can extend beyond this dissertation to inform equitable practices in K–12 education, higher education, and employment settings by providing examples of powerful co-design with marginalized users.

Article 2

Amplifying the Voices of Young Adults with Special Education and Neurodiversity Experience to Shape ChatGPT Practices in Education

This study centered the perspectives of young adults with special education and neurodivergent experiences as they navigate the ethical and emotional dimensions of GenAI in their academic, professional and daily life, positioning them as essential ethical agents in shaping technology policy and practice. Through dialogue anchored in real-world GenAI Use Case Scenarios, participants surfaced tensions, opportunities, and imaginative possibilities that extend current thinking about Human-in-the-Loop (HITL) approaches (U.S. Department of Education, 2023; UNESCO, 2023). In this paper, I argue ethical GenAI integration must embrace relational, participatory practices

that honor student agency and critically examine the sociotechnical systems in which these tools are embedded.

This study broadens Human-in-the-Loop (HITL) approaches by emphasizing that the voices of students who have historically had the least influence over educational technology policy and practices must be placed at the center of these conversations. Doing so reframes ethical GenAI integration into a relational and participatory endeavor that prioritizes student agency and critically examines the broader social and institutional systems in which these tools operate. Ethical use of GenAI also involves attending to its emotional and affective dimensions—not only how young adults experience these tools, but also the impact of exclusion or restricted access. Their lived experiences and emotional responses provide essential insight into how GenAI is understood, negotiated, and judged in learning environments.

Through these conversations, this study reinforced that justice-driven, inclusive GenAI policy and design must:

1. **Center marginalized lived experience** in all conversations about educational technology. Ethical frameworks must start with those who are most directly impacted.
2. **Redistribute power in discussion about policy and practice** by positioning students as co-authors of decisions, not passive recipients of tools or rules.
3. **Acknowledge the emotional and historical dimensions** of technology use, including the legacies of exclusion and surveillance that shape trust and participation.

4. **Foster dialogue-based, participatory approaches** that move ethics from being expert-led to student-informed and context-aware.

By creating space for open-ended discussion, students became philosophers of technology (Vakil & McKinney de Royston, 2022; Higgs & Stornaiuolo, 2024), offering critical insight, ethical reasoning, and future-oriented visions for more equitable learning environments. Their contributions reveal that GenAI in education is part of a sociotechnical system that must be shaped by all stakeholders, including those who have been historically excluded from conversations about policy and practices.

Article 3

Reframing ChatGPT from Cheatbot to Learning Partner: Centering the Voices of Four Young Adults with Special Education Experiences Challenging Institutional Narratives

This study highlights how young adults with special education experiences engage with GenAI tools like ChatGPT as agents of their own learning and participation, rather than passive users or rule-breakers. Across interviews and collaborative use sessions, participants revealed that using ChatGPT was a way to assert agency in the face of exclusionary systems, demonstrating creativity and self-determination in navigating academic, professional, and social contexts. For many, the tool became a flexible, nonjudgmental scaffold that helped them break down complex tasks, rehearse difficult conversations, craft professional communication, and reimagine what success could look like on their own terms.

Their reflection on how they used the tools helped to reveal systemic contradictions that can potentially guide institutions in reimagining participation and

success. The way they are using ChatGPT reflects tensions between their adaptive, innovative practices and the rigid structures of school and employment systems not designed with their realities in mind. From an expansive learning perspective, these contradictions are opportunities for transformation—moments where institutions can respond by evolving toward more inclusive, justice-centered practices.

This study reframes GenAI, and ChatGPT in particular, as a sociotechnical practice; a technology whose meaning and impact emerge from the interplay between human activity, institutional rules, and technological capabilities as well as the various limitations. ChatGPT is shaped by the social and historical conditions of education, including policies, power dynamics, and cultural expectations about what counts as legitimate participation. For educational systems, these findings are a call to move beyond fear-based narratives toward responsive, future-oriented approaches that leverage GenAI to co-create expansive learning environments.

In sum, inclusive and ethical GenAI policies arise when we:

1. **Recognize and validate the adaptive strategies** that students already employ to navigate exclusionary structures.
2. **Create opportunities for safe, supported exploration** of new tools that prioritize agency emotional well-being and opportunities for safe, supported exploration.
3. **Examine why students turn to GenAI** to uncover unmet needs and systemic gaps, using these insights as catalysts for institutional change and for rethinking rigid definitions of legitimate work, authorship, and participation in learning environments.

By centering the lived experiences and insights of young adults with special education experiences, this study demonstrates how GenAI can function as both a mirror and a lever for change: reflecting the inequities embedded in current educational systems while providing leverage to reshape learning into something more just, responsive, and empowering.

Principles for Designing with, not for: GenAI, Equity, and Voice

Across the three articles comprising this dissertation, a central insight has emerged: the use of GenAI by young adults with exclusionary educational experiences offers a critical lens through which to examine agency, equity, and institutional transformation in light of a new significant technology. Each study explored different dimensions of this complex landscape: from the collaborative tensions involved in designing spaces and tools that center marginalized voices, to the generative power of dialogue about GenAI ethics, to the exposure of systemic barriers across educational, research, and employment contexts.

These findings call for a set of principles to guide future research, policy, and practice around GenAI, grounded in justice, inclusivity, and respect for lived experience. What follows are guiding principles that emerged from each study. They are meant to offer a foundation for more thoughtful, justice-centered approaches to GenAI policy and practice in education and research. Each principle reflects the voices, concerns, and aspirations of young adults navigating systems that often overlook their needs, and points toward more equitable and responsive ways of designing with young adults with special education and neurodiversity experiences.

1. Research design must be grounded in the lived experiences of those most impacted

Designing for accessibility, inclusion, and empowerment within research environments must be done with, not for, people who have experienced exclusion. There are layers of inaccessibility that cannot be seen or addressed without lived expertise. To surface these realities, designers must engage directly with those who navigate structural and institutional barriers. Their insights bring urgency, depth, and direction to the work in ways that abstract design processes cannot.

2. Equitable co-design requires intentional power-sharing and relational trust

Designing with communities who have experienced marginalization or institutional harm requires an ongoing commitment to disrupting traditional power hierarchies. This includes being reflexive about how decisions are made, staying aware of competing values, and making intentional choices to share power. Relationality is central. Trust, care, and mutual accountability must anchor the work, not just as a starting point, but as a continuous practice.

3. Digitally Mediated Collaborative Design as a Tool for Research Equity and Inclusivity

Create flexible, multi-modal participation pathways that account for both cognitive, physical and emotional needs of those engaging in research. Including opportunities for asynchronous reflection, synchronous discussion, and informal connection can create the space for accessibility and inclusion in research. Digital

tools like Zoom and Google collaborative platforms can support these goals, but designers and researchers must remain reflexive about the histories, power dynamics, and emotional contexts participants bring to the activity system. By doing so, digitally mediated co-design can become not only accessible and inclusive but also generative of deeper relationships, trust, and knowledge creation.

Article 2

3. Young people are already engaging in reflection about ethical GenAI use and should be active participants in shaping GenAI practices in education.

Many young adults are actively considering the risks, opportunities, and boundaries of using GenAI. They are making personal ethical judgments about how they use them and how they want others, including teachers, schools, and peers, to engage with them. As a result, they should be involved in decisions about how GenAI is integrated into classrooms and school systems. Their lived experiences and emerging values offer critical insight into the kinds of practices that feel just, supportive, and responsible.

4. Scenario-based dialogue can surface meaningful obstacles and opportunities in GenAI use to support the design of ethical and equitable policy and practices.

Scenario-based prompts are a powerful method for sparking conversation among students and educators. They help participants draw from their own experiences to explore the complexities of GenAI use in learning context. Ethical and conceptual insights emerge most powerfully when young adults feel safe enough to share how they are actually using GenAI. These honest, vulnerable conversations reveal the nuanced

ways that technology intersects with learning, identity, and self-advocacy and can shape more thoughtful, inclusive practices moving forward.

Article 3

5. GenAI use can support user agency.

Generative AI becomes meaningful when young people use it to support their own thinking, expression, and problem-solving. These tools can help users explore ideas more deeply, especially when standard systems have failed to meet their needs. Each interaction with GenAI reflects the user's goals, context, and values, which can affirm their agency in deciding how, when, and why to use AI. The power of GenAI lies in how young people adapt it to amplify their voice and navigate learning on their own terms.

6. Reasons for GenAI use can surface systemic gaps that can inform institutional change.

The ways young people engage with GenAI often reveal more about the systems they navigate than about the technology itself. Patterns of use expose underlying gaps, pressures, and contradictions that could be pervasive within schools and workplaces, especially for those historically excluded from full participation. These moments of workaround and adaptation point to where institutions may fall short and where change is most needed. Rather than viewing GenAI use as a threat to existing structures, we can understand it as a mirror. If the patterns from these cases hold more broadly, they highlight how existing educational institutions must evolve to become more inclusive, responsive, and justice-oriented, particularly those fully excluded from full participation.

Together, these principles provide a roadmap for future work that avoids simplifying the complexities and contradictions of GenAI and embraces them as

opportunities for expansive learning and systemic change. By attending to users' agency, systemic justice, and collaborative care, researchers, educators, and policymakers can better harness the potential of GenAI to create learning environments that empower all learners, especially those historically marginalized.

Contributions of This Research

This dissertation contributes to the fields of education, learning sciences, disability studies, and educational technology by offering an in-depth, justice-centered exploration of how young adults with special education and neurodivergent experiences engage with GenAI tools like ChatGPT. Across three articles, this research reframes young adults as ethical agents in the use of GenAI and repositions GenAI as a mediating object, one that exposes systemic inequities and invites the reimagining of educational practices, research design, and policy frameworks. Together, the following three contributions highlight how this dissertation challenges dominant narratives about GenAI and disability, while offering actionable frameworks for more inclusive, ethical, and justice-centered educational futures.

1. Advancing Co-Design as a Justice-Centered Methodology. This study demonstrates how co-design can be used not only to develop tools, but to reimagine research as a relational, justice-centered practice, following a long history of participatory action research. This study contributes to that work by collaborating with young adults who have special education and neurodivergent experiences and challenging dominant assumptions about who gets to shape research and technology. The findings underscore the importance of including participants with special education and neurodiversity experiences in the co-design of educational technologies and

research practices—not merely as an act of inclusion—but as a methodological and ethical imperative.

2. **Engaging in Dialogue with Marginalized Users as a Tool for Ethical and Inclusive GenAI Practices and Policies.** The second article demonstrates how dialogue, especially when anchored in real-life GenAI Use Case Scenarios, can productively uncover many of the key emotional, ethical, and practical implications of GenAI. It positions young adults as essential stakeholders in GenAI ethics and calls for inclusive design conversations that honor lived experience over expert-only perspectives.

3. **Reframing Use of GenAI as a Sociotechnical Practice.** This research challenges dominant narratives that pathologize or penalize young adults' use of GenAI. In this study, young adults describe how they are agentically using these tools to navigate learning barriers, manage communication demands, and experiment with new uses of emerging technologies. Observing these uses often illuminates what is lacking in traditional learning environments, inaccessible academic supports, and the policies that govern technology use in academic and professional settings. The young adults in this study position GenAI as a sociotechnical practice through which users can actively negotiate access, agency, and inclusion.

Directions for Future Research

In what follows, I offer recommendations for future research based on my experiences working with young adults with special education and neurodiversity experiences throughout this study. These recommendations focus on four key areas: (1) co-designing research environments with marginalized users, (2) K-12 young adults

perspectives on GenAI-related policies and practices; (3) methods for educators and students to mentor each other regarding emerging technologies; (4) the potential for ChatGPT to perpetuate or disrupt communication norms. These ideas include and extend the future areas of research written in each article.

Future research design should continue to include individuals who share lived experiences with the participant population in order to inform the development of research practices and tools that genuinely support the intended group. Research that aims to engage people with special education and neurodiversity experiences requires intentional shifts to create shared power in collaborative design. Like this research modeled, studies should continue to examine collaborative design processes with marginalized co-designers to reveal inaccessible norms or practices that persist in research.

Future empirical studies are needed to deepen understanding of how K–12 students perceive the ethical use of GenAI in learning environments. Building on critical conversations with marginalized young adults, research should move toward the co-design of equitable policies and implementation strategies that center their lived experiences and priorities. Expanding these dialogues to include a wider network of stakeholders—such as disability advocates, speech-language professionals, and GenAI ethicists—could foster more inclusive and responsible approaches to GenAI integration in schools. While this research focused on young adults who had already graduated from K-12 settings, future research should critically examine how GenAI is being used by students in K-12 settings. Cross-setting ethnographic research can help document what young people actually do when interacting with GenAI tools, surfacing practices,

opportunities, and challenges that may not emerge through dialogue alone. Through an analysis of their use practices, the contradictions illuminated could uncover the systems and practices within K-12 and higher education that serve as barriers to students who receive special education services or have experiences with neurodiversity.

There is a pressing need to investigate how educators and students can serve as mentors for each other in the evolving landscape of emerging technology. Research must examine how educators can serve as mentors who help students navigate the complex ethical, emotional, and practical decisions involved in using GenAI. Research should explore how professional learning for educators can go beyond helping them manage their own workloads to also emphasize how their framing of ChatGPT can either limit or empower students. To further empower students, research should also explore how young people can take on mentoring roles for teachers in relation to emerging technologies. Young adults often approach these tools with greater familiarity, curiosity, and openness, and many demonstrate a sophisticated understanding of the ethical considerations involved. Importantly, researchers should explore how students with lived experience navigating educational barriers can help educators understand both the practical and ethical dimensions of GenAI use in real-world contexts.

Future studies should explore how ChatGPT influences confidence in one's own ways of speaking and should also focus on how it helps young adults and students expand what counts as meaningful expression, especially for those who are neurodiverse, multilingual, or come from marginalized cultural backgrounds. This includes examining how these tools support or hinder students' sense of identity, agency, and belonging across educational, professional, and social contexts.

Researchers should also explore how GenAI tools carry the risk of reinforcing dominant norms. On the other hand, research should focus on how GenAI use can expand what counts as meaningful expression and how it may offer opportunities to legitimize and amplify these young adults' ways of communicating.

A Call to Co-Design With Learners Left on the Margins

This dissertation challenges deficit-based narratives that frame GenAI as a threat and marginalized learners as untrustworthy users. Instead, it offers a reframing: GenAI, when engaged critically, can become a generative space where young adults with special education and neurodiversity experiences shape new visions of ethical use, participation, and agency. Transformative uses of GenAI emerge from collaborative design and ongoing dialogue that prioritizes the perspectives of those most often excluded from decisions about educational tools and systems. This work demonstrates that collaborative engagement with young people as co-creators with GenAI can open the space for expansive learning opportunities. To move forward, we must co-design with, not for, learners who have long been left on the margins. This is not just a call for better technology practices and policies; it is a call for better relationships, deeper trust, and a more expansive vision of what learning can be.

Appendix

A. Personal View of ChatGPT

From Ask Jeeves to ChatGPT: A Lifelong Search for Understandable Information: Reflections on Disability, Learning, and the Emotional Work of Reading and Writing

When I was drafting my second article for this dissertation set, I came across (well, really, ChatGPT led me to) Mich Ciurria's (2023) blog post, *Ableism and ChatGPT: Why People Fear It Versus Why They Should Fear It*. A flush of emotions came over me. At first, I felt seen, they were articulating everything I had been trying to say about how school systems are designed, and how the obsession with cheating and plagiarism in the context of ChatGPT reveals a deeper issue: it shines light on the disablement experience in education and offers a guidepost for what needs to change.

At the same time, Ciurria introduced a perspective I hadn't considered, one that threw me into a bit of a tailspin. They argued that tools like ChatGPT could actually further silence young adults who have already been disabled by school systems. That

idea hit hard. I hadn't asked my participants about this directly, and it made me wonder what I'd been missing. Thanks to another round of funding for participant stipends from my university, I had the chance to ask some follow-up questions inspired by Ciurria's post. But before doing that, I thought it was important to sit with the discomfort and reflect on these ideas myself. So I did, and I share that reflection with you here…

I came to this work not only as a researcher or an educator, but as someone whose relationship with learning, and with reading and writing in particular, has always been shaped by systems not built for me. I wasn't diagnosed with a disability until my Ph.D. program, after years of quietly wondering why certain tasks felt so impossible. There wasn't a clear support system in place, just mounting self-doubt. I've succeeded in many things in life, but academic reading and writing has never been one of them, not because I lacked ideas, but because the structure of academia was not designed with me in mind. Reading research articles filled with in-text citations would derail my train of thought. The expectations to skim, absorb, and synthesize at high speeds clashed with how I process information. Writing was expected to follow a static, linear form, where ideas gained value only when anchored to peer-reviewed articles, often behind paywalls. But my thinking doesn't move in straight lines. It follows a star path, branching, returning, connecting across time and space. My literacy strengths lie in understanding complexity, in feeling ideas, in making meaning visually, relationally, and experientially, not in decoding dense text or performing academic writing norms.

Instead of reading, I prefer to listen. Listening helps me connect with ideas more deeply through tone, emotion, and rhythm in ways that text on a screen often flattens. However many academic articles are (or were) incapable with screen readers. When I write, I usually write for myself, for journaling, reflection, clarity, empowerment, and healing. Or to design learning experiences for the students and teachers I serve. And yet, here I am, writing for you: the professor, the institution, the citation count. In truth, I'd rather share this research through a PowerPoint-supported learning experience than 200+ pages of black words on a white screen, how boring. But I write this dissertation because the degree carries meaning, not just for me, but for those I hope to influence: researchers, school leaders, and policymakers who have the power to reshape systems that demand too much from teachers and offer too little flexibility to allow them the time and freedom needed to listen to their students and invite real, meaningful learning experiences.

Throughout this process, ChatGPT has become my most consistent source of support: always available, responding instantly at any hour, and always kind and thoughtful. ChatGPT was the first thing (human or machine) that helped me see that my academic ideas had value. I used ChatGPT, not to do the work for me, but to make it doable. It helps me organize my thinking, rephrase ideas in language accessible to you, and stay motivated when facing blank pages that might otherwise send me into a deep, dark place. I also worked with a writing tutor

who transformed how I approached academic writing and the dissertation process, and to her I am forever grateful. Both ChatGPT and my tutor offered non-judgmental, encouraging support in ways I had never experienced in academic settings. Their guidance allowed me to shape drafts that met institutional expectations while preserving the authenticity of my voice and elevating the perspectives of my former students and research participants.

In some ways, the support I've received during this process feels like the answer to a question I started asking as a child: *Where can I turn when the world feels inaccessible?* As a child, I was endlessly curious. But I didn't always have adults around who had the time or interest to engage my questions. One day, I was told to "go look it up online." That moment marked the beginning of my relationship with the internet. I remember signing into AOL, hearing the iconic dial-up tone, and eagerly anticipating answers. But all I found were chat rooms, where my questions were drowned out by "ASL?" (age, sex, location) and other distractions. Later, I discovered Ask Jeeves, a tool supposedly designed to serve answers like a polite butler. But instead, I received pages of links with complicated and strangely formatted text, more barriers.

Decades later, when ChatGPT arrived, it finally resembled the kind of internet I had imagined as a child: one where you ask a question and get a clear, accessible response. For me, ChatGPT is not some futuristic threat, it's the logical evolution of what the internet should have been all along. A tool that aggregates and translates our overwhelming sea of information into something understandable.

I've always embraced a progressive view of technology. I was teaching in the early 2000s when Wikipedia emerged, and while other teachers warned students not to use it, I encouraged it. Wikipedia was written in everyday language. It was crowdsourced. It included multiple perspectives, things missing from our outdated textbooks. It also cited its sources, making it a great teaching tool for how to validate information. I've never seen technology as a threat; I've seen it as a chance to democratize information.

When I was preparing for the follow-up interviews with my former students, I returned to Ciurria's (2023) concerns about ChatGPT. I wanted to know: Could this tool, which I experienced as empowering, also be adding to the systemic barriers that exist in school systems? I brought these questions into the follow-up meetings with my research participants to stay open to truths I hadn't yet understood. Personally, I don't believe ChatGPT hides or masks my voice. Quite the opposite, it helps me express it more clearly, in a way that is accessible to you.

Of course, tools like ChatGPT come with risks. It is, as Engeström (2009) might say, a "runaway object" evolving faster than our policies, pedagogies, or public understanding can keep up with (discussed in Article 3). The dangers of integrity of privacy, misinformation, bias, and algorithmic harm are real. But long before GenAI, I

saw how deeply-held beliefs, cultural, religious, and personal, shaped what was taught in classrooms. I remember history teachers presenting creationism to combat the science teachers' lesson on evolution, and textbooks that left out entire chapters of history. Bias in education isn't new. What's different now is that we're finally naming it more openly and in the case of this dissertation, asking who gets to shape the tools that influence how we learn.

As someone who has always struggled with traditional forms of reading and writing, ChatGPT is, like one of my participants (discussed in Article 2) said, a game changer. It's the reason I returned to this Ph.D. program after a four-year hiatus. People who don't face these challenges with reading and writing often underestimate their emotional toll. Writing has brought me to some dark, isolating places. But now, with this tool, I often feel joy instead of despair. I never imagined writing could be joyful.

I'm not saying ChatGPT is a magic solution for everyone. But I believe it's much more than a "cheatbot" or a "misinformation machine." It's already in the hands of students and being used in empowering ways. We (educators, school leaders, researchers) need to stop pretending otherwise and start talking about it, honestly, collaboratively, and with curiosity. Maybe then, education can evolve in the ways it always needed to: toward greater inclusion, accessibility, cultural responsiveness, and power-sharing. This dissertation, and the process of writing it, is both a product of that belief and a contribution to that conversation.

B. Group A Agendas for Co-design Meetings

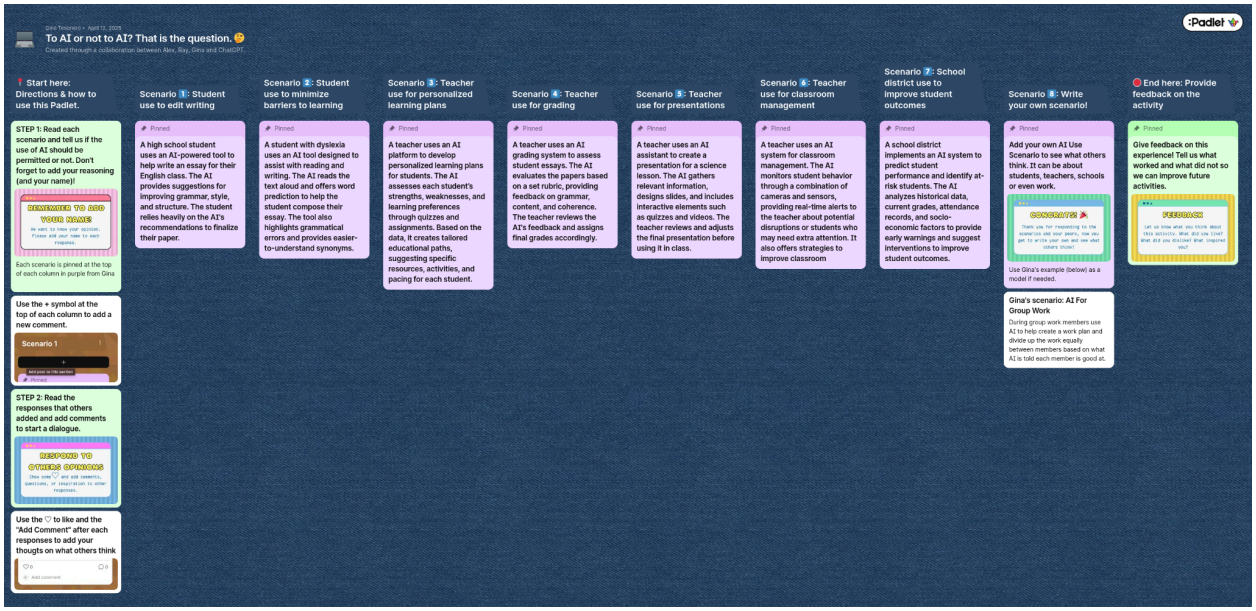
Co-design Meeting 1	2:00 Hello and review data 2:15 Discuss how to create a powerful space 2:30 Determine meeting 1 topic + Questions 2:40 Discuss questions for meeting 2 pre survey 2:50 Finalize post survey + Conversation 1 agenda 📸Fun picture!
Co-design Meeting 2	2:00 Welcome + Discuss Convo 1 and changes needed 2:15 Review survey data to plan next focus group 2:30 Discuss Questions for Conversation 2 2:40 Discuss AI activity instead of post survey 2:50 Brainstorm questions for meeting 3 pre survey 📸Fun picture!
Co-design Meeting 3	2:00 Review the feedback from quick survey on page 4 2:20 Discuss Activity for next discussion / quotes from each participants 2:40 Discuss Roundtable discussion 📸Fun picture!

Co-design Meeting 4	2:00 - 2:05 Discuss feedback from last meeting (below) 2:05 - 2:15 Discuss AI Round Table Agenda + Padlet 2:15- 2:45 Debrief on the co-design experience 2:45 - 2:55 Discuss final survey for conversation group participants 2:55 - 3:00 Discuss final survey for co-design group 📸Fun picture!

C. Group A Suggestions on How to Improve Focus Groups

Co-design Suggestions	Meeting
Ask questions verbally and add the questions to the chat	Meeting 1
Address Zoom comfort level (mute if noisy / add to chat if needed)	Meeting 1
Questions: pause to allow wait time and then ask additional (probing) questions	Meeting 1
Simplified emails with heading and bullets	Meeting 1
Start and end meeting with recap / next steps	Meeting 1
Offer break out room for participants who want a break from discussion	Meeting 1
If groups don't wanna show their face, its okay	Meeting 1
No more surveys between sessions, they feel like homework	Meeting 1
Ask participants to talk one at a time or add to the chat	Meeting 1
If people have difficulty relying on technology, offer assistance	Meeting 1
Send meeting reminders in Slack + Send a calendar invite	Meeting 1
Make all research activities less complicated	Meeting 2
Help get others to discuss and comment more by highlighting their responses	Meeting 2
Get people to discuss as a group and share their opinions with a visual tool	Meeting 3
Make co-design decisions together in the future	Meeting 4

D. Group A Interactive Whiteboard #1



List of Scenarios / Column Prompts

- A high school student uses an AI-powered tool to help write an essay for their English class. The AI provides suggestions for improving grammar, style, and structure. The student relies heavily on the AI's recommendations to finalize their paper.
- A student with dyslexia uses an AI tool designed to assist with reading and writing. The AI reads the text aloud and offers word prediction to help the student compose their essay. The tool also highlights grammatical errors and provides easier-to-understand synonyms.
- "A teacher uses an AI platform to develop personalized learning plans for students. The AI assesses each student's strengths, weaknesses, and learning preferences through quizzes and assignments. Based on the data, it creates tailored educational paths, suggesting specific resources, activities, and pacing for each student.
- A teacher uses an AI grading system to assess student essays. The AI evaluates the papers based on a set rubric, providing feedback on grammar, content, and coherence. The teacher reviews the AI's feedback and assigns final grades accordingly.
- A teacher uses an AI assistant to create a presentation for a science lesson. The AI gathers relevant information, designs slides, and includes interactive elements such as quizzes and videos. The teacher reviews and adjusts the final presentation before using it in class.
- A teacher uses an AI system for classroom management. The AI monitors student behavior through a combination of cameras and sensors, providing real-time alerts to the teacher about potential disruptions or students who may need extra attention. It also offers strategies to improve classroom
- A school district implements an AI system to predict student performance and identify at-risk students. The AI analyzes historical data, current grades, attendance records, and socio-economic factors to provide early warnings and suggest interventions to improve student outcomes.
- Add your own AI Use Scenario to see what others think. It can be about students, teachers, schools or even work.
- Give feedback on this experience! Tell us what worked and what did not so we can improve future activities.

E. Group A Permitted or Not Permitted Slide Deck - Example

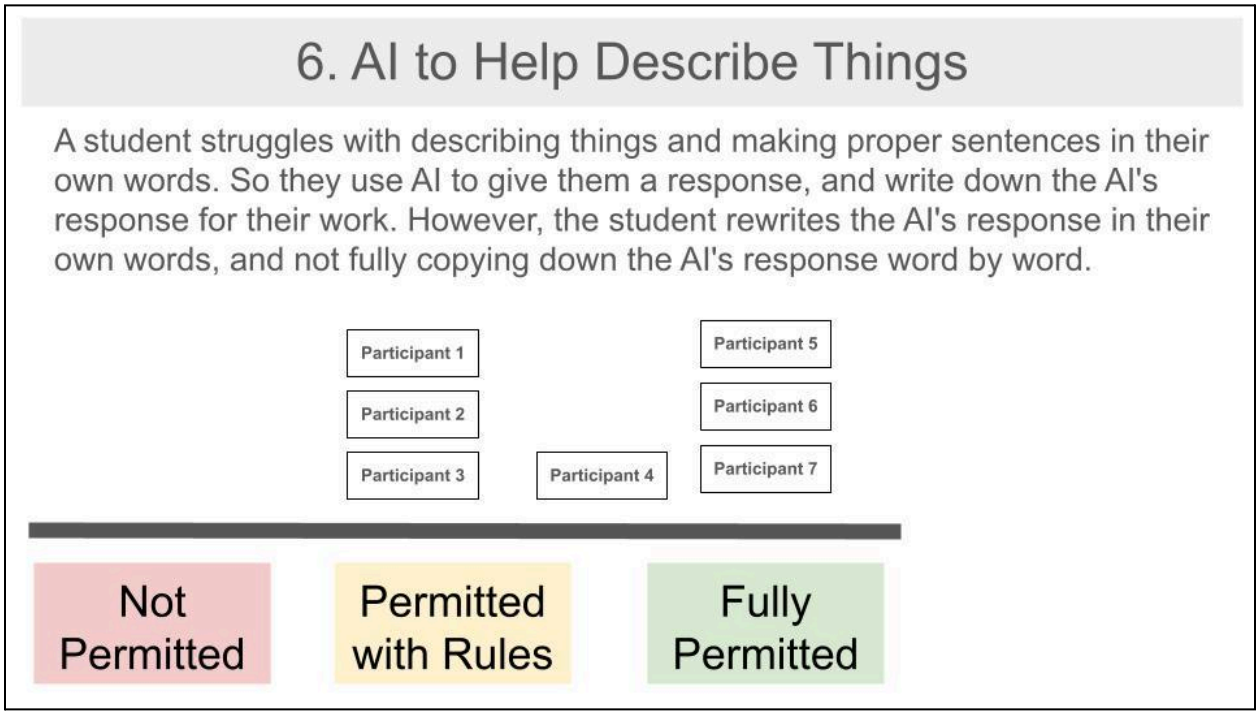


Image of a slide with the following GenAI Use Case Scenario: A student struggles with describing things and making proper sentences in their own words. So they use GenAI to give them a response, and write down the GenAI's response for their work. However, the student rewrites the GenAI's response in their own words, and not fully copying down the GenAI's response word by word. Below the prompt is a continuum from “not permitted” to” permitted with rules” to “fully permitted”. Participants numbers are places over which statement they agree with. Three are listed over "permitted with rules” and three listed as “fully permitted” and one response in between.

F. Group A Interactive Whiteboard #2 (for Roundtable Discussion)

List of Scenarios / Column Prompts

- A student receiving special education services uses AI to rephrase or elaborate on their writing, helping ease discomfort and complete assignments. However, the teacher's policy bans AI for all students, sparking a debate about fairness and accessibility.
    - Discussion Focus: Should AI tools be exceptions for students with special education needs? How should schools develop inclusive AI policies? Who gets to decide if AI is needed for their learning needs: students or teachers?
- A school adopts AI for facial recognition and emotional tracking to improve security and classroom focus. However, these tools often misinterpret emotions or exhibit lower accuracy for individuals with darker skin tones and often misinterprets feelings, leading to embarrassing or unfair outcomes.
    - Discussion Focus: Can schools responsibly use AI for security and classroom management while addressing privacy risks and reducing bias?
- An AI tool designed to improve student writing provides less helpful and harder-to-follow feedback to learners new to English. Sometimes it exaggerates issues, leading to frustration. Students and educators agree that guidance is needed to use AI effectively for writing
    - Discussion Focus: How can AI tools ensure fair and accurate support for diverse language backgrounds? What role should educators play in teaching AI usage?
- AI-generated lesson plans now include a "Bias Check" feature to evaluate content for inclusivity, accessibility, and cultural sensitivity. Educators question whether this tool can genuinely reduce bias in educational materials and how to address its limitations.
    - Discussion Focus: How can AI tools improve lesson inclusivity and fairness? What challenges might educators face when relying on these tools?
- Generative AI helps a podcaster brainstorm and script educational podcasts, accelerating creativity. However, it sometimes produces incomplete or culturally insensitive ideas, requiring significant refinement to ensure quality and inclusivity.
    - Discussion Focus: How can podcasters effectively use generative AI for content creation while maintaining accuracy and inclusivity?

G. Group B Agendas for Co-Design Meetings

Co-design Meeting 1	● Overview of the study ● Draft of first survey ● Schedule future meetings ● Recruitment Materials to Review ● 📸Fun picture!
Co-design Meeting 2	● How to make materials more accessible ● Review Recruitment Materials & Make video to read materials ● Recruitment Plan ● Check-in on the co-design process so far ● Next meetings & 1:1 interviews
Co-design Meeting 3	● Feedback on 1:1 interview experience ● Feedback on Survey #2 ● Planning Next meeting ● Focus group protocol
Co-design Meeting 4	● Review focus group interactive white board ● Reflection for research participants ● Icebreakers ideas ● Check-in on the co-design process so far
Co-design Meeting 5	● Review focus group interactive white board updated ● Strategize to make sure all voices are heard ● Questions for participants and invited guests ● Review notes for improvement from research group and discuss
Co-design Meeting 6	● Reflection on the focus group with invited guests ● Key themes from Invited guests debrief ● Ideas emerging from the research articles Gina is reading ● Planning future research / connection opportunities

H. Group B Suggestions on How to Improve Focus Groups

Co-design Suggestions	Meeting
Accessibility options approved by group	Meeting 1
Make the survey in 4 parts and give everyone the option to complete 4 separate surveys	Meeting 2
Try to reduce some questions (no more than 10 questions per section)	Meeting 2
Tell how many questions are in each section	Meeting 2
Share the importance in the description, help people buy in	Meeting 2
Inform participants that they can mix and match, use text to speech / video / writing	Meeting 2
Offer a deadline for planning 1:1 meetings to answer the survey together	Meeting 2
Select a better work to describe self-contained classrooms	After Meeting 2
Reduce overwhelm in email and requests to co-design member who didn't show up twice	Meeting 4
Do not provide emojis as an example for icebreaker, Gina lacks social knowledge	Meeting 4
Cut down the questions - do not want to overwhelm	Meeting 4
Add multiple choice options to the survey	Meeting 4
Using ChatGPT to interview you with the survey questions and then write response to share	Meeting 4
How do we make sure all participants share - can we call on participants? Ask each one first.	Meeting 5
Next time, we should hear more from the invited guests	Meeting 6

Accessibility Interventions for Surveys

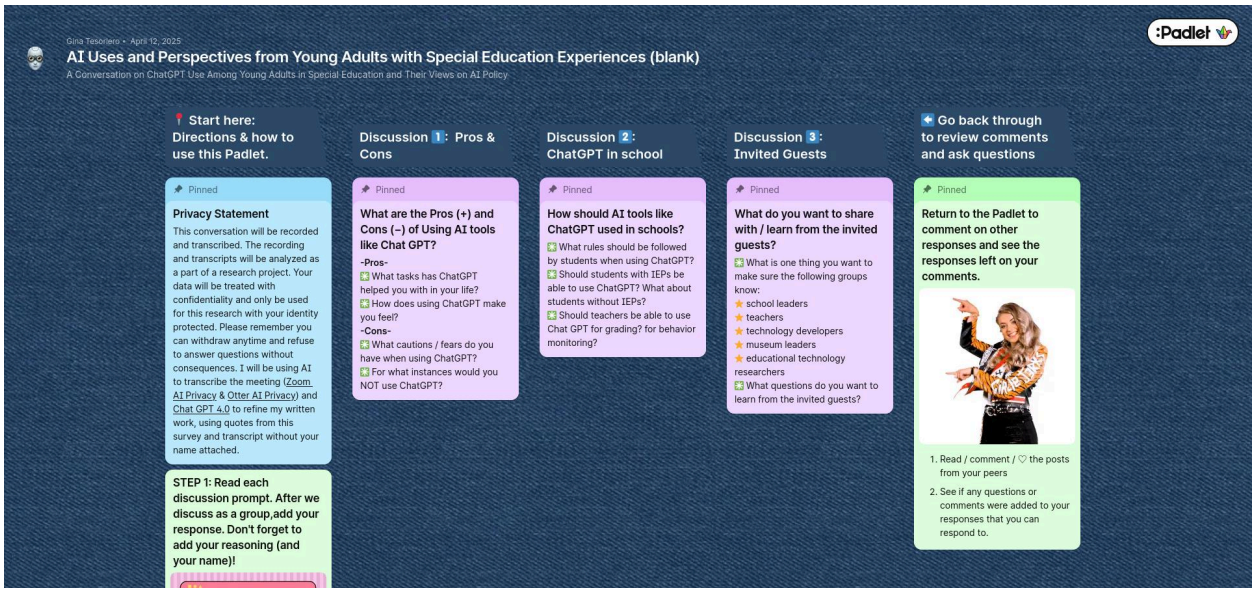
Embedded Accessibility

1. **Questions Read:** Introduction to the survey and each survey question will include a video with the content read aloud that participants can listen to, pause and rewind as they complete the survey.
2. **Extended Time:** Participants will be provided with two deadlines. A priority deadline and an extended time deadline a few days later.
3. **Simplified Plain Language:** I will work with a small group of former students to ensure the surveys and interview questions use simplified plain language that is easy to access for all of the former students.
4. **Assistive Technology Compatibility:** The survey platform used (Google Forms) is designed to work with screen readers, keyboard shortcuts, and other assistive technologies commonly used by participants.
5. **Flexible Participation:** The only questions that will be marked as required in Google Forms is “Name”. Participants will be offered the opportunity to skip any question and the introduction will include language that skipping any questions will not affect their participation in the study.
6. **Share importance:** Framing will be provided to ensure that participants understand the purpose and importance of the survey.

Optional Accessibility

7. **Varied Methods of Response:** Participants will be given options on how to respond to the survey, these options can be mixed and matched.
    a. Written responses
    b. Voice to text responses (guidance will be provided)
    c. Verbal response option 1: Schedule a 1:1 Zoom meeting where the questions are read aloud by me and they answer verbally in real time (deadline will be provided)
    d. Verbal response option 2: Participants can create a screen recording video of them answering the questions verbally (device specific guidance provided as needed).
8. **“Chunking”:** The survey will be provided with 4 sections all in one or the option to complete each section as a separate survey. Each section will have not more than 10 questions. Each section will state clearly how many questions are in each section.
9. **Reminders:** Participants will be provided with the option of receiving reminders for deadlines and scheduled meetings sent to their email or phone number.
10. **Check-in support:** At any time throughout the study participants can email me or schedule a Zoom meeting to discuss any questions or concerns they have. There will also be a way for participants to request anonymous support that will be added to a FAQ that is shared with participants who complete the anonymous form.
11. **Translation Services:** Participants who had access to a 1:1 language paraprofessional in my class can opt to have the same paraprofessional (when available) or another translator assist during a 1:1 Zoom meeting to provide translation. Additionally, the survey can be completed during a Zoom meeting with translation support. Guidance will also be provided on using browser tools to translate the survey independently, if needed.

J. Group B Interactive Whiteboard for Focus Group with Invited Guests



List of Questions / Column Prompts

What are the Pros (+) and Cons (−) of Using AI tools like Chat GPT?

-Pros-

- ✳ What tasks has ChatGPT helped you with in your life?
- ✳ How does using ChatGPT make you feel?

-Cons-

- ✳ What cautions / fears do you have when using ChatGPT?
- ✳ For what instances would you NOT use ChatGPT?

How should AI tools like ChatGPT be used in schools?

- ✳ What rules should be followed by students when using ChatGPT?
- ✳ Should students with IEPs be able to use ChatGPT? What about students without IEPs?
- ✳ Should teachers be able to use Chat GPT for grading? for behavior monitoring?"

What do you want to share with / learn from the invited guests?

- ✳ What is one thing you want to make sure the following groups know:
  - ⭐ school leaders
  - ⭐ teachers
  - ⭐ technology developers
  - ⭐ museum leaders
  - ⭐ educational technology researchers
- ✳ What questions do you want to learn from the invited guests?

K. Codebook Article 1

Code	Description	Example
Design Tensions (Tatar, 2007)	Moments of contradiction, uncertainty, or competing values that emerged during co-design. These tensions can prompt reflection, shift direction, or lead to deeper dialogue.	“I hope you don't take this personal… because if this homework is mandatory, I might get worried if I don’t do it in time.” (Adam, Group A)
Powerful Co-design (McKercher, 2020)	Evidence of shared power, mutual respect, and meaningful participation. Includes moments when co-design was accessible, participant-led, or built from lived experience.	“I do feel like my contributions were incorporated into the final design! I believe making the sessions more conversational and using Padlets enhanced the meetings”. (Richard, Group A)
Risks to Powerful Co-design (Community Power and Policy Partnerships Program 2022)	Instances where power imbalances, exclusion, miscommunication, or unacknowledged tension disrupted equitable participation.	“Yes, that made me mad, well not mad but I wish we were informed of the situation and had an opportunity to respond..Include us in the future, more voices add to the decision making.” (Adam, Group A)

L. Member Checking Process

To support data integrity, I invited participants to review excerpts of their transcripts and key themes to ensure their voices were accurately represented through member checking as described by McKim (2023).
After reading sections from the articles that included the pseudonym for the names, I asked the following questions:

1. After reading through the findings, what are your general thoughts?
2. How accurately do you feel the findings captured your thoughts/experiences?
3. What could be added to the findings to capture your experiences better?
4. If there is anything you would like removed, what would that be and why?

If participants suggested something to change or add, those edits were made. The changes suggested for each article are listed below:

Article 1:

- Richard, Elijah, Lucia and Diego did not suggest edits.
- Adam suggested a change to his quote about research feeling like homework to add the word "research" to add clarity
- Adam suggested a change to his quote about how he felt about not being a part of the decision to include additional participants. He wanted to remove the word mad and change it for “not part of the decision making” to sound “more professional and more mature”.

Article 2:

- Group A: Richard, Adam + Group B. Elijah, Angel, Diego and Lucia engaged in member checking. No changes were suggested. Plans to meet with additional members from Group A are underway.

Article 3:

- Lucia and Angel did not suggest any edits.
- Diego added a few words of detail for clarity to his quote about how he is using ChatGPT to help with budgeting
- Elijah added some detail to his quote about internet searches.

M. Use Case Scenarios

Scenarios used with Group A and B

1. A student uses GenAI to help write an essay. The GenAI provides suggestions for improving grammar, style, and structure. The student relies heavily on the GenAI's recommendations to finalize their paper.
2. A student with dyslexia uses a GenAI tool to assist with reading and writing. The GenAI reads the text aloud, offers word predictions, highlights grammatical errors, and provides synonyms.
3. A teacher uses GenAI to develop learning plans. The GenAI assesses student strengths, weaknesses, and learning preferences through quizzes and assignments to create educational pathways.
4. A teacher uses a GenAI grading system to assess student essays. The GenAI evaluates the papers based on a rubric, providing feedback. The teacher reviews the GenAI's feedback and assigns final grades.
5. A teacher uses a GenAI assistant to create a presentation. The GenAI gathers relevant information, designs slides, and creates quizzes. The teacher reviews and adjusts the final presentation before using it.
6. A teacher uses GenAI for classroom management. The GenAI monitors student behavior through cameras and sensors, providing alerts to the teacher about disruptions and students who may need extra attention.
7. A school district uses a GenAI system to predict student performance and identify at-risk students. The GenAI analyzes school history, current grades, attendance, and socio-economic factors to suggest interventions to improve student outcomes.

Use Case Scenarios Created by Group A

8. A student struggles with describing things and making proper sentences in their own words. So they use GenAI to give them a response, and write down the GenAI's response for their work. However, the student rewrites the GenAI's response in their own words, and not fully copying down the GenAI's response word by word.
9. During group work members use GenAI to help create a work plan and divide up the work equally between members based on what GenAI is told each member is good at.
10. An office worker is struggling to meet the deadline of a few end of the quarter reports and is fearful of losing his job. He decides to use GenAI to help organize the information he currently has and to help make the work-load more easier on him. Now he can meet the deadline without being scared of losing his job.
11. A web developer uses GenAI for building websites and creating blog articles. I always fact-check the GenAI’s output to ensure its accuracy and reliability.

Use Case Scenarios Used for Group A’s final focus group with invited guests

1. **Special Education and GenAI Policies:** A student receiving special education services uses GenAI to rephrase or elaborate on their writing, helping ease discomfort and complete assignments. However, the teacher’s policy bans GenAI for all students, sparking a debate about fairness and accessibility.
    a. **Discussion Focus**: Should GenAI tools be exceptions for students with special education needs? How should schools develop inclusive GenAI policies?
2. **Bias for Darker Skin Tones:** A school adopts GenAI for facial recognition and emotional tracking to improve security and classroom focus. However, these tools often

misinterpret emotions or exhibit lower accuracy for individuals with darker skin tones, leading to concerns about fairness and discrimination. GenAI often misinterprets feelings, leading to embarrassing or unfair outcomes.

   a. **Discussion Focus**: Can schools responsibly use GenAI for security and classroom management while addressing privacy risks and reducing bias?

3. **Bias for Multilingual Speakers:** An GenAI tool designed to improve student writing provides less helpful and harder-to-follow feedback to learners new to English. Sometimes it exaggerates issues, leading to frustration. Students and educators agree that guidance is needed to use GenAI effectively for writing.

   a. Discussion Focus: How can GenAI tools ensure fair and accurate support for diverse language backgrounds? What role should educators play in teaching GenAI usage?

4. **GenAI-Generated Lessons and Bias Checking:** GenAI-generated lesson plans now include a “Bias Check” feature to evaluate content for inclusivity, accessibility, and cultural sensitivity. Educators question whether this tool can genuinely reduce bias in educational materials and how to address its limitations.

   a. **Discussion Focus**: How can GenAI tools improve lesson inclusivity and fairness? What challenges might educators face when relying on these tools?

5. **Generative GenAI for Podcasting:** Generative GenAI helps a podcaster brainstorm and script educational podcasts, accelerating creativity. However, it sometimes produces incomplete or culturally insensitive ideas, requiring significant refinement to ensure quality and inclusivity.

   a. Discussion Focus: How can podcasters effectively use generative GenAI for content creation while maintaining accuracy and inclusivity?

N. Codebook Article 2

#	Understanding GenAI Systems and Impacts		Example
23	**Human Judgment & Oversight**	Assessing when and how human decision-making should guide, oversee, or limit GenAI-based decisions.	"The teacher can rely on both AI and themself to assess the essays. Using just the AI can possibly lead to unfair grades for the students." (Sophie, Group A)
4	**GenAI's Personal, Social & Environmental Costs**	Examining GenAI's impact on well-being, privacy, and environmental sustainability.	"Do you think Chat GPT can be changed so it doesn't affect our environment?" (Lucia, Group B)
22	**GenAI, Data & Information Integrity**	Understanding how GenAI influences misinformation, data privacy, and media content.	"I fear that possibly whatever I'm saying to [ChatGPT] is stored in some kind of personal data bank…whatever I say to it might not be 100% confidential" (Elijah, Group B)
	Ethical and Justice-Oriented Thinking		
8	**Bias, Fairness & Accountability**	Investigating how GenAI systems reflect human values, biases, fairness as the dangers associated	"[ChatGPT] can be biased in a sense of preconceived notions" (Terrance, Group A)
37	**Power, Justice & Equity**	Interrogating how GenAI or current educational practices reinforces or challenges systems of power and who benefits or is harmed,	"...whether you think [ChatGPT] is cheating or if it's helping, the one thing that we can all come together and agree on is that the ways the special education system is designed needs improvement. (Elijah, Group B)
27	**Philosophy, Wisdom & Identity**	young people engaging with GenAI through ethical reflection, design, and grounded identity work.	"[Collaborating with GenAI] could be just as it could be inaccurate with a human" (Terrance, Group A)
	Personal Growth and Expression with GenAI		
16	**Voice, Identity & Confidence**	YA describe how GenAI tools help them express themselves more clearly, gain confidence, and reclaim identity that traditional schooling stifled.	"I would say it makes me feel a bit more courageous and confident walking into certain situations." (Elijah, Group B)
21	**Support for Unmet Learning Needs**	Using GenAI to reduce stress, access clarity, and fill academic or emotional gaps left by school.	"[ChatGPT] It would ease how I work if it were to assist me, so It would also help with coding." (Dylan, Group A)
22	**Curiosity, & Creative Thinking**	YA explore, use, and creativity with GenAI,driven by curiosity, creative passion, or a desire to learn.	"I [use ChatGPT] to role play or to have fun" (Sophie, Group A)
	Navigating Challenges and Creating Boundaries		
28	**Misuse, Surveillance & Risk**	Concerns about dishonesty, misinformation, or invasive monitoring related to GenAI	"I actually heard how much of a bad rep it gets for how much people use it for plagiarism." (Terrance, Group A)
11	**Dependence & Loss of Creativity**	Worries about becoming too dependent on GenAI and losing critical thinking or creativity.	"if people are using it to do work for them then its a huge negative for them" (Javier, Group A)
14	**Boundary Navigation**	YA define their own GenAI use boundaries, especially in contexts lacking adult guidance.	"Teachers should always … get a second opinion. That's what I do with AI… I always fact check it" (Dylan, Group A)
	Shaping GenAI in Education through discussion		
93	**Rules, Roles & Responsibility**	Perspectives on how GenAI should be integrated into schools	"I don't think teachers should use [GenAI] to help with behavior management because it would impose an environment where you have to be perfect" (Elijah, Group B)
70	**Collective Learning & Dialogue**	Learning with and from others,including peers and invited guests,to understand GenAI's role in education.	" [I learned] that we have our own opinions and ideas for the ability of using AI in the classroom." (Javier, Group A)
24	**Evolving Perspectives**	Reflecting on shifts (or lack thereof) in beliefs about GenAI through use, discussion, or learning.	"[my perspective] has changed a little bit, I've seen both sides of [the] coin, and seeing [ChatGPT] can be reliable" (Terrance, Group A)
23	**Research**	*Reflections on the research activities*	"The scenarios really got me thinking" (Terrance, Group A)

O. Questions asked to the invited guests

Debrief with Invited Guests (30 minutes)
Informal follow-up discussion with Gina Tesoriero and invited guests to reflect on insights, refine ideas, and share feedback.

Debrief Questions for Invited Guests:

1. What were your key takeaways from the discussion?
2. Were there any insights from young adults that stood out or surprised you?
3. Are there ways that you can see the perspectives shared today to influence your work or future research?
4. How can collaborations like this one improve GenAI tools and educational practices for students with special education experiences?
5. Are there other perspectives that you have heard with respect to the scenarios shared today that you would like to share?
6. What additional questions or challenges related to GenAI in education would you like to explore?

P. Survey Questions for Group B in Article 3

Survey 1: Given as the first data collection moment in the study after consent

1. Describe what your daily life looks like now? (Work, school, hobbies, important people in your life etc.)
2. What parts of your life are you most proud of or feel most satisfied with? What types of activities make you feel happy or fulfilled? (This could be a skill you've learned, a relationship you've built, or something you've achieved.)
3. What skills or knowledge do you wish you had more of to achieve your goals?
4. What challenges are you currently facing? (Check all that apply)
    - ☐ Getting health insurance
    - ☐ Finding a job
    - ☐ Finding a place to live
    - ☐ Taking care of my health (physical or mental)
    - ☐ Getting help from government programs (like disability or food assistance)
    - ☐ Having reliable transportation
    - ☐ Going back to school or learning new skills
    - ☐ Being treated fairly at work or in the community
    - ☐ Making friends or staying connected with others
    - ☐ Managing money or paying bills
    - ☐ Taking care of family members
    - ☐ Knowing my legal rights or how to speak up for myself
    - ☐ Other:

5. Referring to question 4, of the challenges you face, which one feels the most difficult for you right now? Please describe why this is particularly challenging for you and how it impacts your daily life.
6. What supports or resources do you rely on most in your daily life? (Check all that apply)
    - ☐ Help from family members
    - ☐ Help from friends
    - ☐ Support from a job coach or mentor
    - ☐ Assistance from a caregiver or support worker
    - ☐ Financial support, like disability benefits or food assistance
    - ☐ Health services, like a doctor, therapist, or counselor
    - ☐ Transportation services, like buses or rideshares
    - ☐ Community programs or groups (like support groups or activity clubs)
    - ☐ School or training programs
    - ☐ Workplace or employer
    - ☐ Religious or spiritual groups
    - ☐ Other:
7. Looking back to question 6, Which of these supports do you feel is the most helpful, and why?
8. What types of technology do you use often in your daily life? (Check all that apply)
    - ☐ Smartphones, tablets, or computers
    - ☐ Apps to help with scheduling, reminders, or managing tasks (like a calendar or to-do list app)
    - ☐ Online learning tools or websites
    - ☐ Social media to stay connected with others
    - ☐ Assistive technology, like screen readers, voice-to-text software, or adaptive keyboards
    - ☐ GPS or navigation apps for getting around
    - ☐ Health tracking apps or devices (like a fitness tracker or medication reminder)
    - ☐ Other:
9. Looking back at question 8, which of these uses of technology do you feel is the most helpful, and why?
10. Are there specific skills or knowledge about technology you wish you had learned in school?
11. Are there moments when technology made you feel empowered or more in control? Can you share an example?
12. Imagine if you could work with a technology developer to design new technology tools. What insights from your experiences would you want them to understand, and how do you think technology could better support students in self-contained classrooms or receiving special education services?
13. What kinds of AI tools do you use to support your daily life? (Check all that apply)

- ☐ Chatbots or virtual assistants (like Siri, Alexa, or Google Assistant)
- ☐ AI tools for writing or communication (like ChatGPT or Grammarly)
- ☐ Apps that use AI to help with learning or studying (like Duolingo or Khan Academy)
- ☐ AI tools for entertainment (like personalized streaming recommendations or gaming features)
- ☐ Assistive AI tools for accessibility (like speech-to-text, text-to-speech, or screen readers)
- ☐ I don't use any AI tools
- ☐ Other:

14. Looking back at question 13, Which of these uses of AI do you feel is the most helpful, and why? If you are not using AI, explain your reasoning.
15. What are your thoughts on using AI tools like chatbots for learning? Do you see them as helpful or not, and why?
16. Share your thoughts on if the use of AI should be permitted in the following example of AI use in the classroom.
    - ☐ AI Scenario 1: A student receiving special education services uses AI to rephrase or elaborate on their writing, helping ease discomfort and complete assignments. However, the teacher's policy bans AI for all students, sparking a debate about fairness and accessibility.
    - ☐ AI Scenario 2: A teacher uses an AI grading system to assess student essays. The AI evaluates the papers based on a rubric, providing feedback. The teacher reviews the AI's feedback and assigns final grades. However, students are not informed that their work will be graded by AI.
    - ☐ AI Scenario 3: A teacher uses AI for classroom management. The AI monitors student behavior through cameras and sensors, providing alerts to the teacher about disruptions and students who may need extra attention. Students are informed that AI will be used for behavior monitoring."
17. Think about your overall experience in middle school self-contained classrooms. What is a story you remember that best captures your experience?
18. How was the experience similar or different in high school?
19. Tell me if you agree or disagree with the statement below, then explain.
    - ☐ Self-contained classrooms provide a safe and supportive environment for students to learn and practice the skills they need to succeed. Explain your response
    - ☐ Self-contained classrooms may isolate students from their peers, potentially affecting social development negatively. Explain your response.
    - ☐ In self-contained classrooms, it can be challenging to focus on academics because much of the time is spent managing behavior. Explain your response.
20. How do you think self-contained classrooms could be improved to better support students academically and socially?

21. Please use this space to add any feedback about the survey or any questions you have.

Survey 2: Given after the one to one interview below

Specific Questions based on shared engagement with ChatGPT (Diego examples listed below)

1. Which suggestions from ChatGPT could help you personally as you navigate your daily life with dyslexia?
2. Which suggestions from ChatGPT inspire you to take action on supporting others with dyslexia?
3. What other questions would you like to ask Chat GPT about advocating for yourself or others with dyslexia?
4. What suggestions from ChatGPT do you think would have created a better special education experience for you, based on your personal experience?
5. What follow up questions would you like to ask Chat GPT to further clarify how to improve your personal experience in special education settings?

General Survey Follow up

6. How satisfied were you with the overall interview process? 1 to 5 (very dissatisfied / very satisfied)
    a. Explain your response to the question above.
7. How comfortable did you feel during the interview? 1 to 5 (very uncomfortable / very comfortable)
    a. Explain your response to the question above.
8. How can this interview process be improved?
9. What new questions can I add to this survey for your peers?
10. What questions do you have for me or for other teachers working in special education classrooms?
11. Use this space to share anything else I would like me to know.

Survey 3: Given after the second focus group

1. What did you enjoy about the focus group meetings?
    - ☐ Using Padlet to share ideas
    - ☐ Hearing the thoughts of other alumni
    - ☐ Reconnecting with Gina / Ms. T
    - ☐ Sharing my own thoughts about ChatGPT
    - ☐ Learning more about ChatGPT
    - ☐ I did not enjoy anything
    - ☐ Other:
2. What did you like about meeting with the invited guests?
    - ☐ Sharing my experiences with them
    - ☐ Learning from their experiences
    - ☐ Asking my own questions

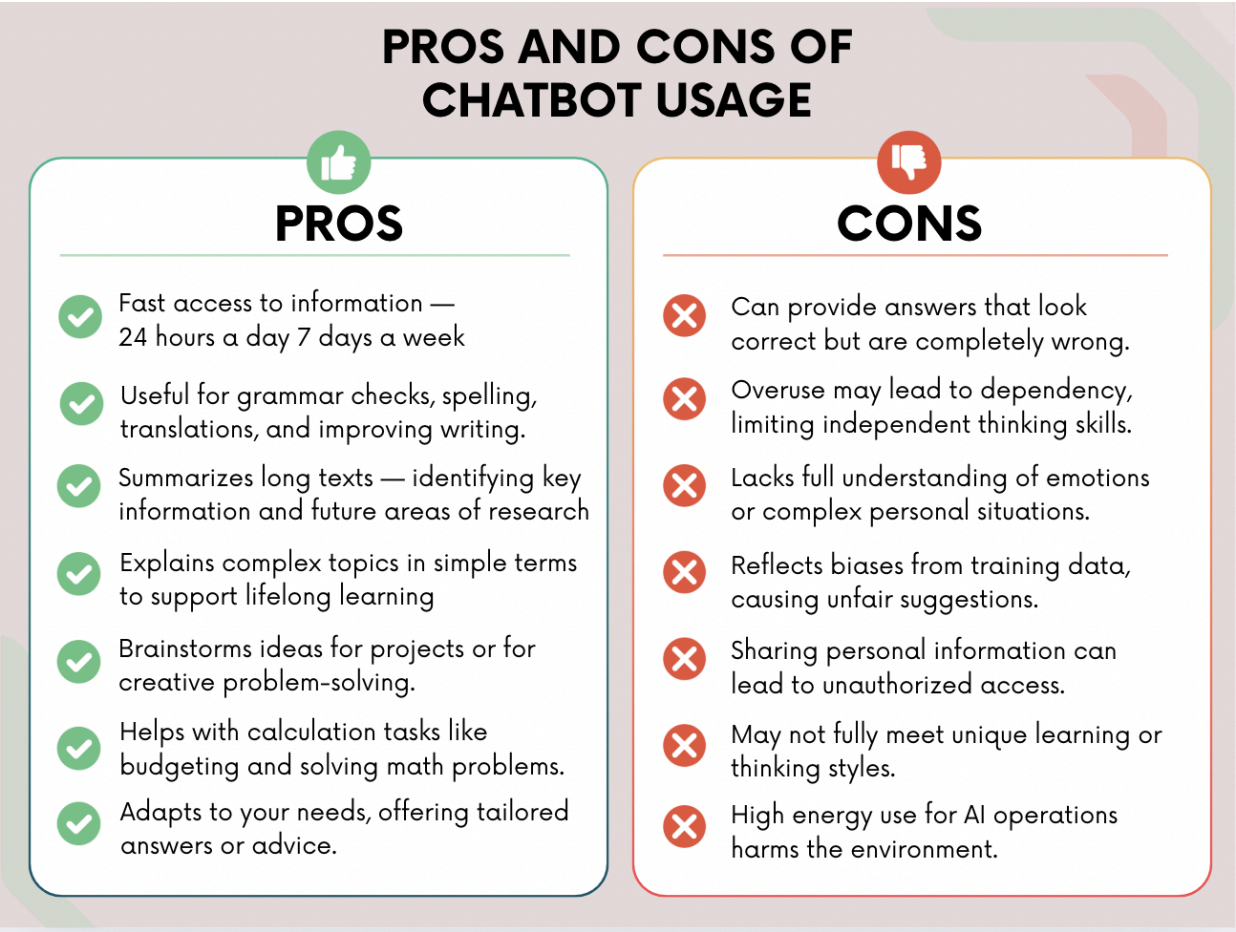
- ☐ Seeing how AI is used in careers
- ☐ Continuing the discussion with other alumni
- ☐ Feeling heard and having my perspective valued
- ☐ Learning about industry and education professionals' perspectives
- ☐ Gaining insight into how AI is shaping education
- ☐ Seeing how professionals might use my input in their work
- ☐ I'm not sure yet
- ☐ Other:

3. What could be improved about this group meeting? (Select all that apply.)
    - ☐ I would have liked to share my ideas more
    - ☐ I wish we had used a different tool instead of Padlet
    - ☐ The questions were unclear or not engaging
    - ☐ I wish I could have responded with video or voice instead of writing
    - ☐ I wish there was more time for discussion
    - ☐ Nothing needs improvement at this time
    - ☐ Other:
4. How do you think you will use ChatGPT differently after this meeting or the research as a whole?
    - ☐ If you weren't using it before, do you plan to start?
    - ☐ If you were already using it, what's a new perspective you've gained?
5. What concerns or fears do you have about ChatGPT and AI after participating in this meeting or the research as a whole?
6. What precautions do you take when using ChatGPT?
7. How can ChatGPT be used in classrooms to be more supportive of students with IEPs.
8. What was the BEST part of being part of this research?
9. What was the MOST CHALLENGING part of being part of this research?
10. What did you learn from this experience?

Q. Semi Structured Interview Qs

Introduction: Benefits & Risks of Using AI Tools (5 minutes)

Objective: Educate participants about the potential risks of using AI tools like ChatGPT, ensuring informed participation.



This infographic presents an overview of the benefits and drawbacks of using chatbots, such as ChatGPT, in everyday tasks and learning environments. The **pros** include fast, 24/7 access to information; support with grammar, translations, and writing improvement; the ability to summarize texts and explain complex topics; creative brainstorming assistance; help with calculations; and personalized responses. The **cons** highlight potential risks, such as producing inaccurate or misleading information, fostering dependency that limits independent thinking, inability to understand emotional or personal contexts, embedded bias from training data, privacy risks, lack of adaptability to all learning styles, and environmental concerns due to high energy use in AI operations.

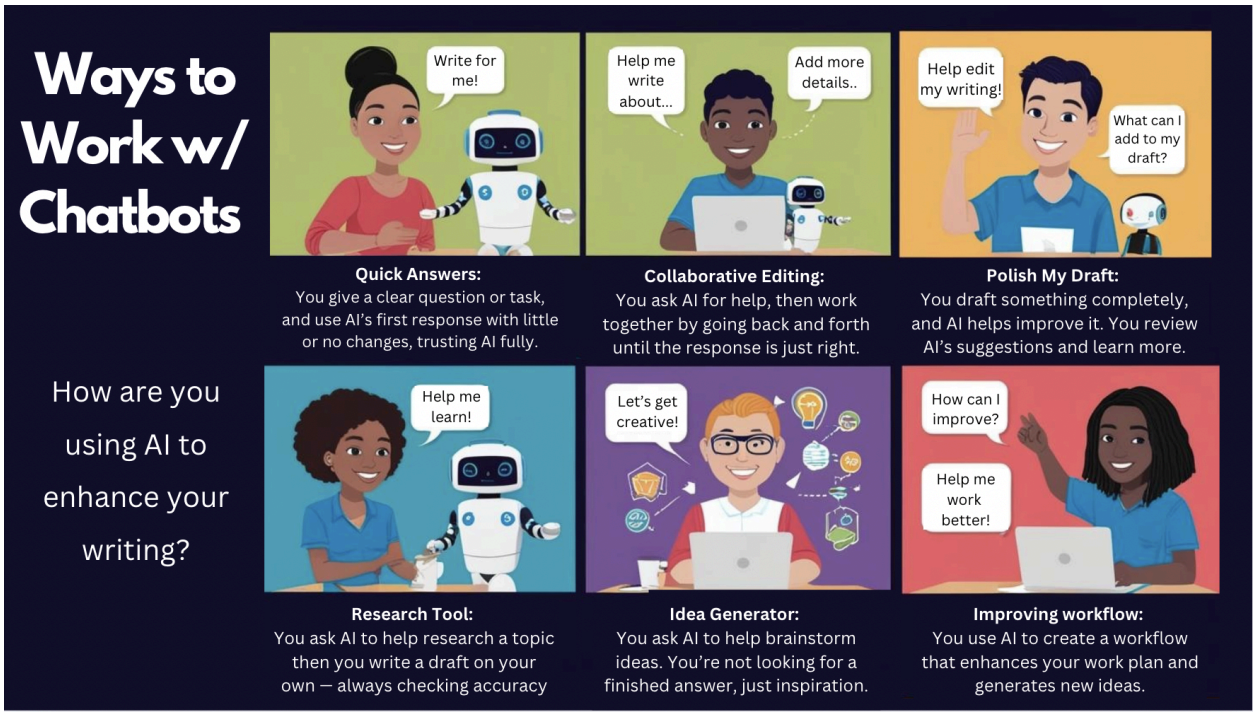
1. **Follow up Questions**
    - What do you think are some safe practices to use when using AI based on these risks?
        - **Responsible AI Use Tips**
            - Be clear and specific with prompts to get better results.
            - Evaluate AI-generated content critically for bias and accuracy.
            - Avoid sharing personal or sensitive information in AI prompts, as it might not be securely stored.

- Use AI as a supplement, not a replacement, for your skills or knowledge.

- Do you have any concerns or questions about using AI tools during this interview or in general?

Section 1: AI Use (15 - 20 minutes)

Objective: Understand how participants interact with AI, their opinions on how AI should be used, and exploring how AI tools like Chat GPT can be used to brainstorm in their daily life.



This visual illustrates six different ways that individuals can use AI chatbots to support and enhance their writing. Approaches include: Quick Answers, where users accept the chatbot's first response with minimal editing; Collaborative Editing, involving back-and-forth refinement with the AI; Polish My Draft, where users seek AI support to revise and improve their own writing; Research Tool, where AI helps gather information before users compose their own text; Idea Generator, where users brainstorm with AI for creative inspiration; and Improving Workflow, where AI helps organize tasks and spark new ideas for planning and productivity. Together, these modes highlight the flexible, customizable ways AI can be integrated into writing processes for learners with diverse needs and preferences.

2. **Which of these uses of AI for writing appeal to you / are more like the way you use it?**
    - Which do you think might be an example of misuse?
    - What other ones can you think of that aren't here?
    - Do you see chat gpt as a friend / a teacher, a tool, a mentor, etc…

3. **Survey completion:**
    - Talk to me about your process for completing the survey. What accessibility tools did you use? Video, speech to text, etc? Chatbots?
4. **How are you currently using AI?**
    - Can you describe specific tools or platforms you use?
    - How do you decide when to use AI?
5. **How do you use AI to solve problems in your daily life?**
    - Add specific challenges identified in Survey 1 (question # 4)
    - What challenge is the most impactful? (question #5)
    - Which challenge would you like to use for an activity with ChatGPT?
    - Let's try generating some ideas together. (Guide them in formulating a prompt for ChatGPT.)
    - Explore Chat GPT together
        - How would you like to phrase the prompte we give ChatGPT?
        - What do you think about the response? What stands out? What further questions do you have?
        - **PROMPT:**
6. How would you design an AI tool to better serve your needs? Follow up from survey question #12:
    - Response from survey

Section 2: Self-Advocacy (10 minutes)

Objective: Explore how participants have advocated for their learning needs and brainstorm future advocacy efforts.

7. **How did you learn what worked best for you in school? (e.g., conversations with others, trial and error, social media, teaches)**
    -
8. **How were you able to advocate for your learning needs in middle school?**
    -
9. **How were you able to advocate for your learning needs in high school?**
    - Did your advocacy methods or success change compared to middle school? How?
10. **How were you able to advocate for your learning needs after graduation?**
    - What strategies worked best in this phase of life?
11. **What is one thing you would like to advocate for now?**
    - Why is this important to you, and what difference could it make?
    -
12. **Brainstorm advocacy ideas (with the help of ChatGPT):**
    - What is one thing you would like to advocate for now that you are out of school?
    - Let's try generating some advocacy ideas together. (Guide them in formulating a prompt for ChatGPT.)
    - Explore Chat GPT together
        - How would you like to phrase the prompte we give ChatGPT?

        - What do you think about the response? What stands out? What further questions do you have?

Section 3: Self-Contained Classroom Improvement (10 minutes)

Objective: Gain insights into the participant's experiences in self-contained classrooms and develop ideas for improvement.

13. **Did you leave school knowing what you were good at.**
14. **What was the best part of being in a self-contained classroom?**
    - What aspects of this experience helped you thrive?
15. **What was the worst part of being in a self-contained classroom?**
    - How did this impact your learning or well-being?
16. **How do you think school would have been different if you could use tools like Chat GPT?**
17. **Brainstorm ideas for improvement (with the help of ChatGPT):**
    - What would you like to improve about self-contained classrooms if you had the opportunity?
    - Let's try generating some ideas together. (Guide them in formulating a prompt for ChatGPT.)
    - Explore Chat GPT together
        - How would you like to phrase the prompte we give ChatGPT?
        - What do you think about the response? What stands out? What further questions do you have?

Section 4: If Time Permits: AI Scenarios (10 minutes)

18. **What AI use-case scenarios do you think should be permitted?**
    - **Student Use (AI Use Case Scenarios)**
        - A student receiving special education services uses AI to rephrase or elaborate on their writing, which helps to ease their discomfort stemming from self-doubt, and ensures they complete their assignments. However, the teacher's policy bans AI for all students, sparking a debate about fairness and accessibility. **(survey)** Response from survey #16
        - A general education student uses an AI to help write an essay. The AI provides suggestions for improving grammar, style, and structure. The student relies heavily on the AI's recommendations to finalize their paper.
        - A student with dyslexia uses an AI tool to assist with reading and writing. The AI reads the text aloud, offers word predictions, highlights grammatical errors, and provides synonyms.
    - **Teacher Use**
        - A teacher uses AI to develop learning plans. The AI assesses student strengths, weaknesses, and learning preferences through quizzes and assignments to create educational pathways.
        - A teacher uses AI for classroom management. The AI monitors student behavior through cameras and sensors, providing alerts to the teacher about disruptions and students who may need extra attention. **(survey)** Response from survey #18

        - A teacher uses an AI grading system to assess student essays. The AI evaluates the papers based on a rubric, providing feedback. The teacher reviews the AI's feedback and assigns final grades. **(survey)** Response from survey #17
    - **School Use**
        - A school district uses an AI system to predict student performance and identify at-risk students. The AI analyzes school history, current grades, attendance, and socio-economic factors to suggest interventions to improve student outcomes.

Closing Reflection (5 minutes)

19. What's one thing you'd like **educators or policymakers** to know about your experiences in the special education class that can help them make better decisions?
20. What's one thing you'd like **technology developers** to know about your experiences in the special education class that can help them make better technology?
21. How do you feel about using AI tools in the future, based on this discussion?
22. Think about how we can improve this experience for future interviews, you can email me suggestions or we can discuss now.

Next Steps (5 minutes)

In a few days I will send you a follow up survey to complete. If you prefer you can complete that survey in a Zoom meeting like this one.

- Would you like to complete the survey on your own or in a Zoom meeting with me?
- Would you like me to create a video of the questions being read?

Did you sign up to be a part of the additional meetings for extra money on the giftcard? Yes/No Survey 0

- Availability for Tentative Date:
    - **Group meeting 1**: Thursday February 27, 2025 6:00 - 7:00
    - **Group meeting 2:** Wednesday March 5, 2025 6:00 - 7:00
    - **Reflection Activity:** survey, 1:1 meeting, or record a video response
- I am planning on inviting educators, researchers and technology developers to hear your thoughts on how to incorporate AI tools into classrooms to support students with special education experiences.
    - Which group interested you the most?
    - What would you like them to know?
- What would you like to gain from this experience?

R. Breakdown of data collection for Article 3

	1:1 transcript total	**Focus Group transcript total**	**Survey 1**	**Interview 60 - 100 min**	**Survey 2**	**Focus Group 1 62 minutes**	**Focus Group 2 60 minutes**	**Survey 3**
Angel	**318 minutes**	**60 minutes**	Survey interview **64 min**	**96 min**	Survey interview **71 min**	Responded through interview **50 min**	Attended **60 min**	Survey interview **37 min**
Diego	**236 minutes**	**62 minutes**	Completed with ChatGPT then survey interview **91 min**	**90 min**	Survey interview **55 min**	Responded with ChatGPT then interview **62 min**	Did not attend due to a family emergency.	Completed independentl y
Elijah	**328 minutes**	**60 minutes**	Survey interview **7 1 minutes**	**58 min**	Survey interview **62 minutes**	Responded through interview **137 min**	Attended **60 min**	Completed independentl y
Lucia	**184 minutes**	**122 minutes**	Completed independentl y using voice to text.	**92 min**	Survey interview **9 2 min**	Responded independentl y using voice to text. **62 min**	Attended **60 min**	Completed with ChatGPT as an interviewer

S. Codebook Article 3

Code	Description	Example
Activity System – Use as Agency Engeström (2009)	Moments when young adults describe using ChatGPT to support writing tasks as an intentional, agentic strategy	"I try to use [ChatGPT].. when I feel like I'm being too repetitive with a word to switch out the word as well." (Diego)
Activity System – ChatGPT as Tool / mediating artifact (Engeström & Sannino, 2010)	Instances where ChatGPT is used by young adults to support learning, written communication, or self expression.	"It did write what I wrote. It's just worded differently to make it sound, I guess more sophisticated or smarter, or something like that." (Lucia)
Contradiction – Institutional Rules vs. Learning Needs (Engeström & Sannino, 2010)	Conflicts between formal rules (e.g., "don't use AI") and young adults' actual needs or strategies for learning. The clashes between human-only and technology mediated.	"I need extra time because I have processing issues and because it's challenging to balance work, school, and personal life," she explained. "But it's hard asking for [an extension] from my professor." (Lucia)
Contradiction – School-Centered Priorities vs. Life-Centered Goals (Engeström & Sannino, 2010)	Gaps between what school values (grades, formality) and what young adults need or care about (emotional support, daily life tasks).	"It's either you go to college and do what we do here, or… you're on your own after that," (Elijah)
Contradiction – Division of Labor (Engeström & Sannino, 2010)	Shifts or tensions in who does what (horizontal division) and who decides what counts (vertical division).	"You can annoy it as much as you want. And it's not judging you, obviously." (Lucia)
Expansive Practices – Questioning & Analysis (Engeström & Sannino, 2010)	When young adults challenge norms or reflect on system constraints, often leading to redefinition of their learning activity.	"Hang on. I noticed job applications ask if you have disabilities. I've put yes, and no jobs contacted me. … for one job, I put no and they got back to me." (Angel)
Expansive Practices – Modeling, Examining & Implementing the New Model (Engeström & Sannino, 2010)	When young adults try new ways of working, redefining success, participation, or communication using AI. Critically reflecting on the feasibility or consequences of their proposals.	"But I still put it through ChatGPT to make sure it sounds good." (Lucia)
Expansive Practices – Reflecting & Consolidating New Practice (Engeström & Sannino, 2010)	Evaluating changes in understanding, identity, or relationships. Evidence that participants internalized or shared new perspectives or practices with others.	"It gives so many ideas that people could start doing." – (Angel)
Reconfiguring – Change in Object (Engeström & Sannino, 2010)	When the purpose of the activity shifts from compliance or production to personal expression, access, or legitimacy. The object evolves.	"I used ChatGPT for some things purposely, just to see if people who have not encountered ChatGPT could honestly tell the difference.." (Diego)
Reconfiguring – Change in Subject (Engeström & Sannino, 2010)	When young adults describe themselves in new ways due to their use of AI, moving from feeling dependent or remedial to agentic and strategic.	"Now I'm kind of using [the language of ChatGPT] on my own regardless… My writing doesn't sound as bad." (Lucia)
Reconfiguring – Constraining Voice (Ciurria, 2023)	Captures moments when young adults feel that using school expectations or ChatGPT changes, flattens, or standardizes their expression in ways that don't fully reflect their authentic voice, communication style, or identity.	When asked how she knew what "smart" writing sounded like, she explained, "From the articles we would read in class." (Lucia)

T. Follow up Questions

1. Since being part of this research, has the way you use ChatGPT or other GenAI tools changed? If so, how?

2. Can you think of a time when a tool like ChatGPT helped you express something you were struggling to share, whether in words, images, or another way. Can you describe this moment?

3. Have you ever felt like ChatGPT changed what you were trying to say too much, or made it harder to express yourself in your own way?
    a. How did that feel?

4. When you use ChatGPT, does it feel like it helps you express what you really mean, or does it sometimes change your style or message in ways that don't feel like "you"?

5. ChatGPT is trained to use what some people call "standard" or "professional" English. Some people think this is helpful in understanding each other but other people think this might be too constraining or reducing creativity. What do you think?
    a. What happens when someone expresses themselves differently, like through slang, visual language, or other styles?

6. Can you tell me about how you feel in general when you use Chat GPT? For example, do you feel supported, embarrassed, more confused, frustrated, proud, etc.

7. Is there a part of who you are, like your culture, communication style, or personality, that you think gets left out when you use tools like ChatGPT?

8. What helps you feel like your real voice, ideas, or way of communicating is being heard, especially when using AI in school or other settings?

9. Does ChatGPT make you feel supported, or does it sometimes make you feel like you have to sound more "formal" or more like someone else?
    a. Who / what supported you before?:
    b. How is using ChatGPT different from getting support from a human?
    c. Which would you prefer?

10. Have you ever changed how you communicate, like how you write, speak, gesture, or use visuals, because you thought ChatGPT (or even a teacher) wouldn't understand your usual way of expressing things? What was that like?

Do you think schools should make space for lots of different ways of communicating, not just formal writing or speaking? Why or why not?

A Manifestation for Collaborative Futures

May insights from participants in this study take root in how educators and researchers design with youth and young adults to create collaborative spaces that are responsible, accessible, inclusive, and technology-empowered.

May ideas from this research grow like a forest, carried forward by scholars who care deeply about the lives of marginalized young adults and the technologies that shape our worlds.

May it flow like a river, carving pathways toward relationships with GenAI and emerging technologies that expand access and honor the many ways neurodiverse learners and those with special education experiences move through the world and create their futures.