Practitioner Perspective

Above the Influence:
Youth Activism in a School Makerspace

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Abstract

This article examines the "Above the Influence" (ATI) unit implemented in The Tech Café, a social action Makerspace situated in an urban middle school. Through purposeful making, students engaged deeply with the social and scientific issues surrounding vaping and THC use. Grounded in Critical Pedagogy, Youth Participatory Action Research, Asset-Based Pedagogy, and Social Justice Education, the unit invited students to channel their skills, creativity, and lived experiences into advocacy projects, including board games, short films, songs, sculptures, and podcasts. These projects culminated in a school-wide celebration, where middle schoolers presented their work to younger peers, sparking dialogue and reinforcing substance-free values. Feedback underscored the initiative's impact, revealing both an increase in student understanding and the resonance of youth-led messages. This case study illustrates how educational Makerspaces can foster critical thinking, personal expression, and meaningful action, offering a replicable framework for integrating social justice advocacy into interdisciplinary curricula.

Introduction

PS/MS 188, The Island School, is home to a Social Action-themed Makerspace known as "The Tech Café." The Tech Café is a required Technology class for all students in grades 6–8, held during the regular school day. While not formally part of the core curriculum, The Tech Café regularly supports and extends classroom learning through teacher collaboration and the sharing of materials and tools. Classes are scheduled to attend two to three times per week.

Here, middle school students engage with a wide variety of social issues, presented through mini-lessons available on my open-access lesson plan site, www.techbrarian.com. Over the past 15 years, the topics have been diverse, including animal rights, LGBTQ+ Pride, entomophagy (edible insects), homelessness, and domestic violence.

Once students dive into the chosen theme, they spend the semester channeling their understanding into arts, crafts, inventions, music, games, and media. Their work often extends beyond the walls of The Tech Café, reaching wider audiences through video and music platforms, as well as social media. Projects also impact the school community through building-wide 'celebrations' and our neighborhood via community outreach. For the latter, examples include our edible insect stand and uplifting cards for people without homes. Many of these projects are documented on our YouTube Channel: youtube.com/@TheTechbrarian/videos.
The class is organized through a menu system,

offering students a broad range of project options that serve as outlets for expression and social activism. Each menu item is supported by scaffolds that guide students through the creation process. To illustrate this innovative approach to social activism within our Makerspace, this article showcases our efforts to combat youth vaping and marijuana use. Collectively, the theme was titled 'Above the Influence' (ATI).

School Makerspaces

While the origins and precise definition of the Makerspace movement remain somewhat "nebulous" (Stornaiuolo & Nichols, 2018), Makerspaces have undeniably become a growing presence in schools (Rouse & Rouse, 2022). In these educational Makerspaces, students are encouraged to experiment with both low- and high-tech tools, creating unique, hands-on projects that foster STEM-related skills. Research highlights positive outcomes for students participating in school Makerspaces, including increased creativity and intrinsic motivation (Peppler & Bender, 2013), enhanced STEM engagement (Sheridan et al., 2014), the development of essential "21st-century skills" (Bevan et al., 2015), and positive effects on student identity and agency (Vossoughi et al., 2016).

However, the mission of School Makerspaces can often diverge from the traditional goals of the schools that house them (Godhe et al., 2019). Whereas schools typically emphasize standards-based content knowledge, Makerspaces focus on practical skill development and the creation of unique artifacts (Vossoughi & Bevan, 2014). As

part of a growing movement to bridge this divide (Blikstein & Valente, 2019), Lahana (2021) presented a case study illustrating how the mission of School Makerspaces can align with English Language Arts objectives. In this study, students created arts, crafts, and media projects to engage with the social issues explored in the novel *A Long Walk to Water*. Through these creative endeavors, students developed critical literacy skills and deepened their self-expression in response to the novel's themes, ultimately meeting the ELA standards required for the unit.

Building on this work, the current paper further explores how School Makerspaces can bridge the gap between traditional content-driven classrooms and skill/artifact-driven Makerspaces. By demonstrating how these approaches can complement each other, this study highlights the potential for Makerspaces to integrate into academic curricula while retaining their emphasis on creativity and hands-on learning.

Frameworks

Several theoretical frameworks guided The Tech Café's ATI unit: Critical Pedagogy (Freire, 1996), Youth Participatory Action Research (YPAR) (Cammarota & Fine, 2018), Social Justice Education (Bell, 2016; Hackman, 2005), and Asset-Based Pedagogy (Flint & Jaggers, 2021; Yosso, 2019). These complementary perspectives collectively informed an educational approach that placed students at the center of the learning environment. Our Makerspace provided them with resources to engage meaningfully with substance-abuse-related themes and recognized their capacity to create positive change on this social issue.

Critical Pedagogy

At the heart of our social activism is Critical Pedagogy as described by Paulo Freire, particularly his concept of "generative themes." Freire emphasized that education should foster critical consciousness by working with students to engage with themes connected to their lived experiences. In The Tech Café's ATI unit, this principle was adapted to build on the educator-initiated theme of substance abuse, with student-led investigations into how these issues affected their lives. Freire explained that generative themes are impactful when they reflect people's "thinking about reality and

action upon reality." Such a praxis holds the power to foster awareness and meaningful engagement with social challenges (Pedagogy of the Oppressed, p. 107). By exploring relevant, resonant topics—such as the effects of vaping and THC on health and well-being—students were encouraged to reflect on these issues critically and engage with this content through hands-on creation within our Makerspace.

Youth Participatory Action Research (YPAR)

Building on Freire's foundation, the ATI unit also aligned with Youth Participatory Action Research (YPAR), a framework emphasizing student-led inquiry and advocacy. In YPAR, students are empowered as researchers of their own lives and communities, investigating social issues that matter to them. Within the Tech Café, this took shape as students explored the effects of THC and vaping on their bodies, conducted peer interviews to gather diverse perspectives, and analyzed how these substances are marketed and consumed in their communities. Through this participatory approach, students cultivated a sense of agency and responsibility, fostering a stronger commitment to their projects and advocacy efforts. Indeed, research in YPAR has shown that when students explore social issues firsthand, they develop critical awareness and a sense of personal agency (Abraczinskas & Zarrett, 2020), which were central to the ATI unit's objectives.

Social Justice Education

Social Justice Education, with its focus on empowering students to understand and address social inequalities (Bell, 2016; Hackman, 2005), added an essential dimension to our work. Through this perspective, the ATI unit encouraged students to see substance abuse not merely as an individual health issue but as part of larger social dynamics affecting their communities. Students explored how substance abuse intersects with peer influence, youth-targeted advertising, and community health. These connections encouraged them to think critically about justice and equity, envisioning themselves as advocates for healthier and more equitable community spaces. This approach supported the ATI unit's aim of fostering student-led advocacy and awareness, positioning them as active contributors to a more just society.

Asset-Based Pedagogy

Finally, the ATI unit incorporated Asset-Based Pedagogy, which values students' backgrounds, knowledge, and cultural identities as strengths (Flint & Jaggers, 2021; Yosso, 2019). Many students in The Tech Café brought unique perspectives shaped by their personal experiences surrounding vaping and marijuana. This approach recognized these perspectives as foundational to their projects, whether through interviews, storytelling, art infused with popular culture references, or calls-to-action geared to their communities. By drawing on these assets, the ATI unit not only validated students' experiences—it celebrated them. When one student incorporated Venezuelan slang into his anti-vaping song, it sparked a wave of excitement among his peers, who began finding ways to infuse their own cultures into their projects. These connections to identity and community not only enhanced engagement but also made their work deeply personal and resonant.

A Holistic Approach to Youth Advocacy

Together, these frameworks transformed The Tech Café into a hub of social action, supporting students in refining and amplifying their voices, fostering critical thinking, and strengthening personal agency. While the educator introduced the core themes of vaping and marijuana, students actively shaped their own understanding and responses through project-based learning: creating arts, crafts, and media that communicated their insights on substance abuse. Thus, the ATI Celebration was a platform for student advocacy where participants shared their projects, inspired peers, and contributed to a broader community conversation around substance use and its impacts. By aligning with Critical Pedagogy, Youth Participatory Action Research, Social Justice Education, and Asset-Based Pedagogy, The Tech Café's approach emphasized that students were not only learners but also advocates capable of influencing their communities.

Methodology and Data Collection

This qualitative case study examines the design, implementation, and outcomes of The Tech Café's Above the Influence (ATI) unit. Data were collected through classroom observations, student reflections, project artifacts, and feedback forms from the ATI Celebration event. As the coordinator of The Tech Café and the author of this case study, I document the unit from the perspective of a classroom practitioner engaged in long-term, school-embedded work.

Many of our students reside in homeless shelters and domestic violence shelters or are refugees and asylum seekers living in temporary housing. Given the high transience within our student population, the estimated number of middle school students who participated in this Tech Café unit was approximately 120. Additionally, about 250 elementary students attended the ATI presentations. These data sources were used to capture both the depth of middle schoolers' engagement with the social issues highlighted in the ATI unit and the broader scope of participation in the celebration.

To protect student privacy, all names in this article have been replaced with pseudonyms. This ensures confidentiality while still showcasing the students' voices and contributions.

Approach to the Unit

Each year, social issues explored in The Tech Café are guided by student interests. Students complete a survey to rank the topics they feel most passionate about, ensuring the projects focus on the issues they are eager to address and create positive change around. Vaping and Marijuana were among those highest ranked. Informal discussions with students and faculty have echoed these results, highlighting widespread concern over the rising use of nicotine and THC among New York City youth.

The Tech Café Menu

Central to The Tech Café's pedagogical approach is a multimodal menu of project options designed to inspire and guide student activism by honoring their strengths, passions, and emerging interests. Throughout each unit, this menu evolves to reflect new avenues of exploration within the overarching theme.

Launched in February 2024, the ATI menu featured a variety of projects designed to ignite the creativity and diverse talents of middle school students, drawing on years of experience in The Tech Café. Students could choose from the following options:

1. Record an Anti-Nicotine Podcast
2. Design an Anti-Nicotine Video Game
3. Carve an Anti-Nicotine Stamp
4. Create Anti-Nicotine Jewelry
5. Make Anti-Nicotine Buttons
6. Develop an Anti-Nicotine Board Game
7. Write an Anti-Nicotine Song
8. Draw a *Healthy* Addiction Portrait

Figure 1

The Tech Café February 2024 Menu
Techbrarian

Each option provided a unique entry point into the topic, allowing students to engage in ways that connected with the aspects of the issue that resonated with them, the creative mediums they were curious to explore, and their lived experiences. This flexible framework embodies Asset-Based Pedagogy, recognizing and building upon the diverse cultural backgrounds, personal strengths, and interests that students bring to the learning environment (Flint & Jaggers, 2021; Yosso, 2019). By affirming these assets, the approach ensured that all participants, regardless of their chosen menu option, contributed meaningfully to the shared mission of shaping healthier attitudes toward substance use.

Menu Changes within the ATI Unit

While each menu offering was carefully designed to capture students' diverse interests and talents, some projects, such as board game design, required significantly more time and effort to complete than others. These options were kept on subsequent menus to allow students the opportunity to refine and finish their work. At

the same time, many students struggled to sustain their attention on long-term projects. To support these students, high-impact, short-term projects were introduced that rotated each month. These shorter projects not only provided quicker, more manageable creative outlets but also allowed students to experiment with and develop skills in new artistic mediums.

Additionally, the menu evolved as new themes were introduced. In this instance, when the focus shifted toward marijuana education, new project options were added to encourage students to explore the topic creatively and meaningfully. These adjustments helped maintain the menu's variety, flexibility, and ability to engage all students effectively.

Techbrarian.com

Each session in The Tech Café began with a 10-minute teacher-led lesson to foster a shared understanding of substance abuse. Through discussions, media viewings, and demonstrations, our class explored the issue together, grounding their work in a common understanding before delving into project-based exploration for the remaining 35 to 60 minutes. These lessons were organized in the "Journal" section of *Techbrarian.com,* allowing students to revisit key ideas and draw inspiration from past student projects. This approach ensured that students could connect the issue to their own experiences while building a foundation for meaningful and creative project work.

Spanish Lessons, Translations, and Media

In May 2022, political and economic instability in Central America led to a significant rise in immigration to the US, resulting in a 25% increase in The Island School's student population. Many of these new students, primarily from Venezuela and Colombia, brought a need for Spanish instruction in certain classrooms, including The Tech Café. In classes with Spanish-speaking students, lessons were delivered entirely in Spanish or bilingually, depending on whether the group included only Spanish speakers or a mix of Spanish and English speakers.

Additionally, entries on *Techbrarian.com*—including the menu—were offered in both Spanish and English. Many featured Spanish-language media or subtitled content, ensuring

they were accessible and inclusive for the school's diverse and evolving community.

Timeline of ATI Unit Implementation

To provide a clear overview of how the unit unfolded, the following timeline outlines the major phases of the Above the Influence (ATI) project from February to June 2024.

Table 1

Timeline of the Above the Influence (ATI) Unit (Spring 2024). Monthly Progress: Exploring and Creating Around Substance Abuse

Month	Key Activities
February 2024	- ATI unit launched in The Tech Café - Project menu introduced (anti-nicotine focus) - All students prototyped board games
March 2024	- Continued board game development - Project options expanded (podcasts, music, films, etc.) - Mini-lessons on THC and marijuana introduced
April 2024	- Ongoing project development with scaffolded support - Short-term projects added (jewelry, buttons, mask-making) - Iterative feedback provided on in-progress work
May 2024	- Finalization of projects - Celebration prep (station and gallery setup, invitations, feedback forms)
June 2024	- ATI Celebration Event held - Students presented projects to approx. 250 elementary students - Feedback and student reflections collected - Projects were shared through social media, including YouTube and SoundCloud

February-March 2024

The unit opened with a focus on nicotine's impact on mood. Videos from The Truth Initiative captured students' attention, depicting mood swings, anxiety, and strained family relationships resulting from nicotine addiction. Watching a teenager lash out at their family due to withdrawal symptoms, one student yelped, "No way, my mom would never take that!" The videos not only shocked the students but sparked critical conversations, setting the stage for their own creative PSAs.

While students were encouraged to freely select from the menu, the school-wide showcase for this unit highlighted student-created board games focused on the ATI message. To build momentum for this focal point, students spent the first two weeks prototyping initial game designs, working either individually or collaboratively. After this introductory phase, students could choose to continue refining their board games or pivot to another menu option if their interests shifted.

To introduce fundamental game-design principles before presenting the full menu, students participated in a hands-on task to create a simplified "Nicotine Escape Game." Players rolled handcrafted clay dice to move across red or blue spaces: landing on red spaces required drawing cards describing negative consequences of vaping, while blue spaces detailed positive outcomes linked to adopting "healthy addictions," such as exercise or hobbies. This activity not only modeled core design components but also reinforced students' understanding of nicotine's impact. As with all menu-related scaffolds, clear guidelines were provided, offering students structured yet flexible entry points into the creative process, while challenging them to actively develop and expand their ideas (see Figure 2).

However, students showed limited interest in creating game boards that followed the explicit directions on the scaffold. Instead, they focused on designing elaborate, painted game boards on canvases that included spaces for "good" and "bad" choices with corresponding positive and negative outcomes. These artistic pieces, as shown in Figure 3, became the foundation for multiple long-term game board projects rather than serving their original purpose as simple "starter" versions.

Figure 2
Excerpt of Game Design Scaffold

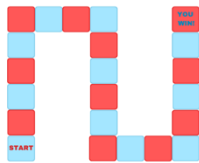Simple *Nicotine Escape* Game

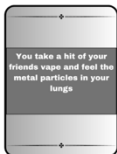1. Draw a game board with at least 20 squares.

2. Color half the squares blue and the other half red.

3. On the first square, write "Start" and on the last square, write "You Win!"

4. Create at least 10 BAD cards about using Nicotine like, "You Vape and...."

Figure 3

7th Graders Painting their Game Boards

Music Begins

As board game design progressed, it was time to introduce the full February Tech Café Menu. One challenge of offering authentic choice and differentiation was figuring out how to present each option without overwhelming students. With options ranging from podcasting, song recording, and game design to embroidery, painting, and clay mask making, the sheer

variety could understandably feel daunting. Another challenge was the risk of hindering student progress by introducing new, seemingly more exciting options over time, leading to a cycle of abandoned projects. To address this, all options were presented simultaneously, dispelling the notion that more appealing choices were just on the horizon. This approach allowed students with clear preferences to dive into their creative process, avoiding the pitfalls of starting projects they lacked a genuine interest in completing. Scaffolding materials for each menu item were made available immediately, enabling students to explore their chosen option even before formal lessons on that item were delivered.

Following a brief introduction to the February Menu, the focus shifted to music design—a form of activism and self-expression that has effectively addressed various social issues in past years. This option intentionally leverages students' interests and abilities, recognizing their affinity for music and talents in singing and rapping.

However, creating a song remains one of the most challenging options for teens. Crafting lyrics, developing or selecting instrumentals, and ultimately recording and sharing their work with peers often evoke fear and self-consciousness. To alleviate these concerns, examples of impactful songs created by previous students were shared. Tracks such as "That's What Daddy Do"—a poignant song about a family's journey through surviving domestic violence—demonstrated how taking creative risks and embracing vulnerability can lead to deeply resonant work. As students bobbed their heads in appreciation of the music, a sense of ease and enthusiasm spread through the room, creating a supportive environment for those considering taking on the challenge of songwriting. Importantly, utilizing "That's What Daddy Do" as a mentor piece reflects a core tenet of asset-based pedagogy: placing "value on students' insights, languages, and cultural practices," while also seeking "to critique injustices, oppression, and other social-political issues" (Flint & Jaggers, 2021, p. 255).

To guide students in their musical journey, a scaffold was provided that included rhyme combinations addressing key facts and issues discussed during the unit (see Figure 4). Students were encouraged to build on these starter lyrics to tell stories highlighting the

struggles of peers facing nicotine addiction or the consequences of marijuana use.

Figure 4

Lyric Scaffold

Immediately, newly immigrated students from Central America embraced the challenge, showing remarkable enthusiasm for writing and performing songs. Seventh graders Manuel and Santiago quickly began crafting lyrics in Spanish, skillfully blending the provided scaffold with their own distinct musical influences and perspectives. Their first song, *"Dejar de Vapear"*, exemplifies this creativity and deep engagement with the unit's themes, as seen in the excerpt below. While this group eagerly took on songwriting, it remained one of the more demanding menu options for most students during February and March, highlighting the unique challenges of this creative medium.

Manuel:
Hoy me he despertado a las 3 de la mañana
con un respiro de muerte que sale por la ventana.
Siento que me tocan el brazo y me dicen "para ya" porque
estaba en un mundo el cual no podía controlar
y mi mente me decía para de vapear.

Santiago:
Con un respiro de muerte te vas a despertar, y por
eso tienes que dejar de vapear, tu vida está hecha pedazos por las dosis de nicotina que has inhalado.

Translation:
Manuel:
Today, I woke up at 3 a.m.
with a breath of death drifting out the window.
I feel someone touching my arm, saying, "Stop now,"
because I was in a world I couldn't control,
and my mind kept telling me to stop vaping.

Santiago:
With a breath of death, you'll wake up,
and that's why you have to stop vaping.
Your life is in pieces
from the doses of nicotine you've inhaled.

Figure 5

Image of Santiago and Manuel Rapping

Podcasting

Unlike the creative freedom, energy, and risk involved in creating songs in The Tech Café, recording a podcast offered a more straightforward approach. Using a fill-in-the-blank script (Figure 6), students began by presenting compelling facts about vaping and connecting them to their own understanding of this form of substance abuse. Guided by pre-written questions, podcasters conducted interviews with peers or community members to explore diverse perspectives. Finally, they reflected on these interviews, tying the insights back to their initial arguments to create a well-rounded and engaging narrative.

Figure 6

Excerpt of a 7th Grader's Podcasting Script
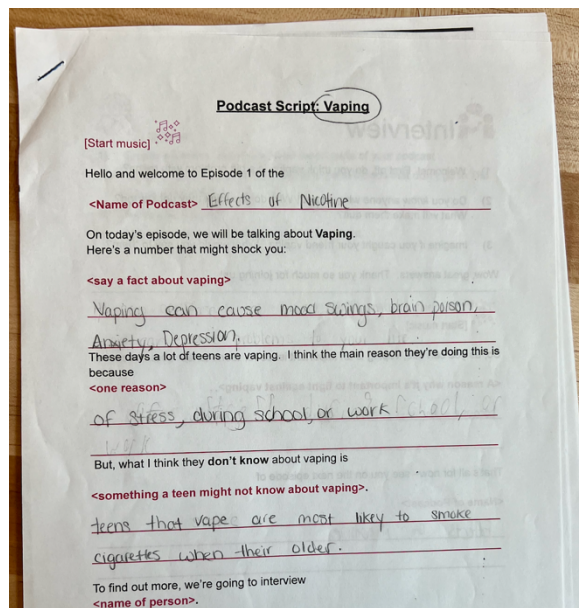
The podcasts were highly successful by all measures, with enthusiastic participation from students across all three middle school grades. Many groups naturally selected a lead host, while others opted for a "co-hosting" format that included several members. Students completed their scripts thoroughly, drawing on teacher-provided fact sheets about vaping and conducting independent research during class time.

Once their scripts were ready, students moved on to recording their vocals. The process was not without challenges—there were plenty of false starts, poor recordings, and uneven performances. However, students quickly grew comfortable with multiple takes, learning to repeat lines within the same recordings to refine their delivery during the editing process. After recording, they added premade loops and sounds within the web-based digital audio workstation (DAW), resulting in podcasts that were full of heart and offered unique, thoughtful perspectives on the issues.

Eighth-grader Javier demonstrated a deep understanding of the physiological and psychological implications of nicotine addiction. He shared:

I know that, like, it's known that penile shrinkage and erectile dysfunction are linked with vaping, which can cause certain situations in the future when you want to have kids. It also makes your skin...you might have acne and stuff. So that's...those are very big motivators of why I've never vaped.

Javier reflected on how early nicotine use could lead to lifelong addiction:

Imagine when you're 25 and you started smoking nicotine now, like, how addicted your brain is gonna be. And nicotine can also cause you to have an addictive personality, and in the future, possibly get addicted to other drugs.

He also considered the appeal of vaping among youth, emphasizing its targeted marketing strategies:

They have, like, crazy flavors, like pink Lemonade, Mango Madness—like, a bunch of stuff that's gonna lure kids in. So, like, oh, it tastes good, and it looks cool, and there's different colors and stuff. So obviously kids are gonna think it's cool and be more attracted to it because it makes them feel like they're older and things like that.

Finally, Javier internalized the ATI lessons by connecting them to his personal experiences. Reflecting on peer pressure, he said:

No, I've never vaped in my whole life. Vaping—I just know it's bad for me. I know that I'm gonna end up in a bad place, spending a bunch of money, and with, like, you know, undesirable traits. And I don't want to get addicted and stuff. One time, those two people, they also tried to peer pressure me to vape. But I kept saying, 'No, no, no, no.' And then they were just like, 'All right, you're lame.' And I was like, 'I'm not lame. I just want my lungs to be...' I told them why I don't do this.

Such peer-driven narratives align closely with the principles of YPAR, which affirms the power of students investigating social issues through personal experience and dialogue (Abraczinskas & Zarrett, 2020; Cammarota & Fine, 2018).

Figure 7

6th Graders Podcasting

"Escape the Vape" Game Design

In past years, game design has been an effective way to connect students' understanding of social issues with the interactive medium of gameplay. The process of coding in Scratch's block-based programming language, combined with creating fun and dynamic ways to communicate ideas, has consistently captured student interest. This approach typically begins with heavily scaffolded instructions, which are gradually reduced as students develop independence and more advanced programming skills.

This year, however, presented unexpected challenges. Despite several live demonstrations of a prototype Scratch game titled *Escape the Vape*, few students showed sustained interest. Those who participated created an initial maze—the first step in developing the game—but quickly lost interest and abandoned the project. At this stage, it had not been fully considered that the digital approach, despite sharing similarities with board game design, might not offer the same appeal. Hands-on board game creation provided unique benefits, such as group collaboration, tactile experiences, opportunities for multiple iterations, and immediate feedback—elements that may have been less prominent in the digital version, possibly contributing to the students' disengagement.

Paper Masks

Decorating paper masks has long been a staple of The Tech Café, offering an accessible way to merge art and activism while addressing issues like domestic violence and cigarette smoking.

Using pre-constructed masks as their base, students could paint, cut, or add decorative elements to convey their messages. For this unit, students created masks illustrating the links between nicotine use and mood swings, depression, and addiction. Approximately a quarter of the students chose this option weekly, appreciating its approachable format, quick completion time, and achievable outcomes. To guide their efforts, masks from previous years were displayed alongside printed examples from professional artists and traditional tribal craftspeople. These visual references helped students draw connections between their work, broader artistic traditions, and the social issues they aimed to address.

Figure 8

An 8th Grader's Paper Mask

Button Making

Similar to paper masks, button-making offered an accessible starting point for students. They designed anti-vaping buttons to adorn shirts and backpacks, using them as a visible commitment to the ATI message. Buttons had previously been used successfully in campaigns against catcalling, demonstrating their effectiveness as a simple yet impactful form of social activism. However, only a small number of students—primarily eighth graders—chose this option. One possible deterrent was the expectation for students to operate the button-making machine independently, which may have intimidated some. Despite this, those who embraced the project found it to be a straightforward and empowering way to amplify their voices.

Figure 9

A 7th Grader's Anti-Vaping Button

April-May: Positioning Projects as Forms of Activism for Elementary School Students

With students deeply immersed in their work, the connection between their projects and social activism was made explicit. Their board games, music, podcasts, and films would be featured at an ATI celebration. Elementary school students would attend to experience these creations firsthand—playing board games, listening to music and podcasts, and watching films produced by middle schoolers. Surrounding the event would be their decorated masks and special tables offering ATI buttons and jewelry as activist souvenirs. The announcement sparked excitement and renewed energy. Students were motivated by the idea that their projects could influence younger peers and serve as tools for social activism. This sense of purpose created urgency, driving students to be well-informed and prepared to answer elementary schoolers' questions about vaping. This alignment with Social Justice Education highlights students' development of "Tools for Action and Social Change," empowering them to directly address issues that impact their community (Hackman, 2005, p. 104).

**Introduction to the THC Unit: Exploring Neuroscience and Addiction**

In April 2024, the focus of our ATI unit shifted to the neuroscience of addiction, particularly the effects of THC on memory, mood, and learning. Students were introduced to the concept of "rewiring the brain," exploring how substances like THC alter brain chemistry, impacting cognitive abilities, motivation, and emotional regulation. This foundation emphasized how marijuana affects the hippocampus, critical for transferring information

from short-term to long-term memory, and the prefrontal cortex, essential for impulse control and decision-making.

Through whole-class activities, students labeled parts of the brain and practiced identifying which structures control specific mental functions. These exercises reinforced their understanding of how THC impacts brain regions critical to learning and their emotions, grounding their knowledge in scientific facts that would inform their anti-THC advocacy projects. Indeed, Hackman (2005) considered "content mastery" in social justice education to be essential to students' ability to effectively dialogue (pp. 104-105).

Figure 10

Brain Labeling Activity
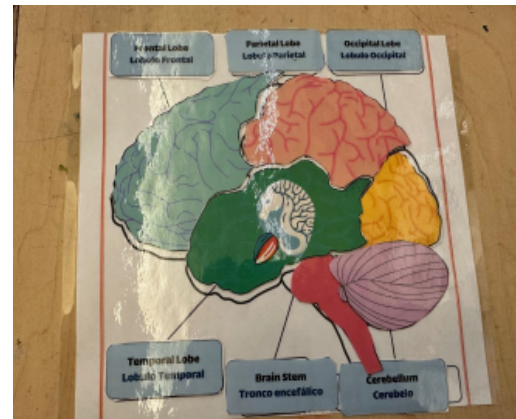
The April Tech Café Menu (Figure 11) reflects the integration of THC into our broader discussion of substance abuse.

Figure 11

April Tech Café Menu

Film Making

The filmmaking portion of the ATI unit was a standout feature, offering students a unique opportunity to create impactful social advocacy through a medium they engage with daily—video content creation. This project not only allowed them to channel their creativity but also empowered them to reach wide audiences with compelling messages. In May 2024, students took on the challenge of creating short films focused on the dangers of vaping and THC, guided by an emphasis on narrative structure, scientific accuracy, and emotional appeal. The goal was to produce videos with the same shock value, humor, and originality as the public service announcements featured throughout the ATI unit.

To guide the process, students were provided with a series of film synopsis that outlined potential storylines in broad strokes (see Figure 12). These included ideas like *Stupid Powers* and *The Breakup*. To ensure successful outcomes, the process began with lessons on storyboarding. Storyboards were a required step, serving as visual blueprints that helped students break down their ideas into clear, actionable scenes. By mapping out character actions, dialogue, and shot composition, students gained essential skills for visual storytelling.
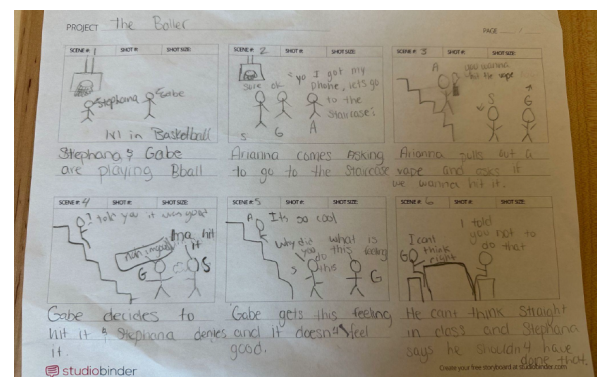
Figure 12

Excerpt Of Film Ideas Scaffold

Once their storyboards were complete, students collaborated in small production teams to bring their scripts to life. The films varied widely in scope—some took place over two periods, while others required more than a month to shoot. The former featured a film titled *The Awkward Date*, in which a teen tries to impress their date by vaping, but each puff makes them appear increasingly awkward and embarrassing. More extensive filmmaking occurred in the productions *All Fun and Games: Part 1* and *Part 2*. In these dual narratives, Andrés, a student, is convinced to vape by his classmate Mella and suffers a deadly reaction due to respiratory failure. The film required meticulous storyboarding, multiple locations throughout the school, hand-crafted props like vapes and a tombstone, and a guest-starring role by the school nurse. The cast filmed numerous takes to perfect emotionally charged scenes, including Mella's regret-filled confession to her friend Alina as Andrés struggles to breathe under the nurse's care: "I should have never given him that vape."

When the film was screened for classmates—typically known for their lively commentary—there was an unusual quiet in the room. Instead of the laughter or playful critiques, the audience was captivated, reacting with audible gasps during Andrés's desperate cry, "Wait, I can't breathe!" The emotional weight of the scene struck a chord, leaving many visibly moved. The students' work transcended expectations, delivering a message that resonated powerfully with their peers and effectively demonstrating how purposeful making can foster both critical consciousness and meaningful action (Freire, 1996; Vossoughi et al., 2016).

Figure 13

Mella's Storyboard for All Fun and Games

Figure 14

Screenshot of a Scene in All Fun and Games

Clay Masks and Monsters

The tactile, expressive nature of clay work has long made it a cornerstone of creative expression in The Tech Café. Building on the success of the nicotine-themed paper masks, clay mask-making was introduced as a new menu option to explore the dangers of both nicotine and THC. Using life-like clay molds as their base, students sculpted hauntingly vivid faces: anguished expressions representing THC-induced psychosis, fragmented portraits of vape addiction, and heads with missing sections symbolizing the cognitive toll of substance use (see Figure 15).

Figure 15

An 8th Grader's Clay Mask

This project drew widespread participation, often engaging nearly half the class, and allowed students to channel their creativity into authentic, meaningful artistry. Ultimately, the collection of two dozen masks became one of the most impactful features of the ATI celebration,

arrayed across several tables where visitors could reflect on the powerful messages conveyed through this blend of art and advocacy.

Meanwhile, a smaller group of students focused on creating polymer clay figurines representing vape and THC monsters. These striking creations, taken up by students like Manuel, featured vividly colored creatures shaped like pipes and marijuana-themed monsters (shown in Figure 16). The figurines served as a sharp critique of the cultural representation of smoking weed as "cool," using bold designs to confront and challenge this narrative.

Figure 16

Clay Figurine by 8th Grader Manuel

Jewelry

Building on the tactile artistry of clay masks, another menu item encouraged students to convey anti-vaping and anti-THC messages through wearable art. Jewelry design offered a distinctive medium for creativity and advocacy, allowing students to engage their peers in conversations about substance use. While beaded letter necklaces provided a straightforward way to express support for the ATI theme, some students, like Luciana, gravitated toward shrinkable plastic (commonly known as Shrinky Dinks) for its potential to create detailed and highly customizable pieces. Over the course of two months, Luciana meticulously developed a series of necklaces aimed at raising awareness about the dangers of

vaping. One standout piece featured a vape-shaped charm inscribed with the question, *"Do you know what vaping does to you? Stress!!"* (see Figures 17 and 18). These wearable artworks demonstrated how students could blend artistic expression with impactful messaging, transforming personal creations into tools for social advocacy.

Figures 17 and 18

Lucianas' Shrinkable Plastic Art
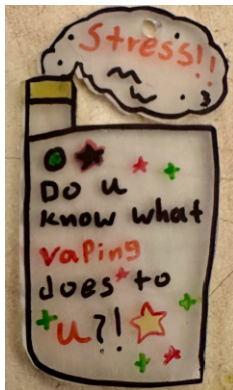
ATI Symbol Art

The ATI initiative, launched as part of a national effort to combat youth substance abuse, is widely recognized for its compelling—if occasionally overly dramatic—public service announcements and memorable visuals. A key representation of the movement is its distinctive logo—a circle with an upward-pointing arrow—meant to symbolize rising above societal pressures and negative influences to make thoughtful, independent choices.

As part of ATI's approach, young people are encouraged to create their own interpretations of the symbol, making it a personal reflection of their values and aspirations. Inspired by this idea, we integrated it into the April/May menu in The Tech Café. Students were tasked with designing a customized version of the ATI logo that represented either a personal strength or a significant future goal they were committed to safeguarding from harmful influences. This menu option allowed students to connect more deeply with the ATI message, blending introspection with creative expression. Many students embraced this as either a primary menu item or a meaningful addition to their completed projects. Emil, for example, created an ATI artwork that reflected his passions for math, sports, and music (Figure 19). Inside his arrow, a seabird flies into a storm, suggesting an unyielding determination to navigate through the turbulence, no matter the challenges ahead.

Figure 19

Emil's Above the Influence Artwork

June Games are Completed

As June approached, the anticipation for the celebration reached its peak, and students worked diligently to finalize their projects. This was especially true for those focused on board game design. They had now developed intricate and engaging games, complete with trivia questions and scenario cards that described both positive and negative outcomes, dictating players' movements across the board. This form of purposeful making exemplifies research emphasizing how hands-on, iterative projects in Makerspaces foster sustained student engagement, creativity, and deeper content understanding (Bevan et al., 2015; Sheridan et al., 2014). Students like Diego, Valeria, and Kai

took particular pride in their creations, meticulously crafting dozens of cards and adding vibrant, imaginative designs to their game boards (shown in Figure 20).

Figure 20

Kai Showcasing Her Group's Gameboard
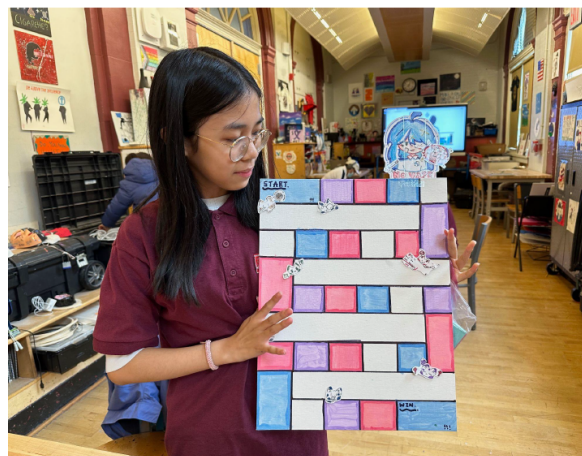
Song Creation Continues

At the same time, Manuel, Santiago, and two classmates collaborated on two additional songs, including their standout piece, *Veneno* (*Poison*), which showcased their deep engagement with the ATI unit's themes. Drawing on their Venezuelan and Peruvian roots, the song began with a proud cultural introduction—*"Venezuela and Peru in the house"*—before diving into a sharp critique of nicotine addiction. Their lyrics combined vivid imagery with scientific awareness, underscoring vaping's dangers by referencing its chemical makeup:

> *Miren amigos, vamos a hablar de la nicotina*
> *Que está afectando a la sociedad*
> *Está hecha de baterías*
> *Y mucho más*
> *Los chicos ansían vapear*
> *Pero no entienden que está afectando su mente*
> *y a la sociedad.*

> (*Look my friends, we're going to talk about*
> *Nicotine*
> *That's affecting society*
> *It's made of batteries*
> *And much more*
> *Kids crave to vape*
> *But they don't understand it's affecting their*
> *mind and society.*)

This verse reflects a critical point about the chemicals in e-cigarettes, such as lithium and other substances found in batteries, connecting their hazardous origins to the damaging effects on the body and brain. Although the mention of tobacco was less accurate, it illustrated the students' perception of vaping as an extension of traditional smoking. The chorus delivered their central warning in stark, simple terms: *"Es un veneno. Es un veneno. Es un veneno."* (*It's a poison. It's a poison. It's a poison.*)

The song also captured the internal battle faced by those drawn to vaping, portraying a vivid struggle between temptation and resistance:

> *Me despierto*
> *Mi celular suena a las 7 AM, pero no quiero*
> *levantarme*
> *No quiero ir a la escuela*
> *Quiero vapear*
> *Tienen sabor a manzana y quiero probar*
> *Mi mente dice que no lo quiero*
> *Pero no puedo.*

> (*I wake up*
> *My cell phone is ringing at 7 a.m., but I don't*
> *want to get up*
> *I don't want to go to school*
> *I want to vape*
> *They've got apple-flavored, and I want to try*
> *My mind says I don't want it*
> *But I can't.*)

Through these lyrics, Manuel and Santiago poignantly illustrated the addictive pull of vaping and its insidious impact on mental health. The line *"Está hecha de baterías"* (*It's made of batteries*) highlighted their understanding of the chemical components in e-cigarettes, bridging their scientific learning with their creative advocacy.

By integrating these insights with their cultural identities and artistic talent, the group created a powerful tool for social change. *Veneno* not only resonated with their peers during the celebration but also exemplified how student-driven musical expression can amplify critical messages about substance abuse.

Independent Projects Emerge

While many students continued working on their chosen menu items, a few ventured into unique off-menu projects that added depth and

diversity to the ATI unit. Ethan, for instance, crafted a diorama of a dark, ominous alleyway, featuring a clay figurine of a drug dealer (Figure 21). This haunting scene conveyed the insidious and addictive nature of nicotine, using a powerful visual narrative to capture the lurking menace of substance abuse.

Ethan's decision to create a diorama independently exemplified YPAR, illustrating how student-driven inquiry and personal passion can deepen understanding of social issues through hands-on, self-directed exploration (Cammarota & Fine, 2018).

At the same time, Gabriela channeled her talent for Japanese anime-style art to craft compelling characters that conveyed one of the key messages emphasized in class: "Vaping doesn't solve your issues—it promotes anxiety and stress." Her vibrant illustrations combined artistry and advocacy, blending relatable imagery with a powerful, thought-provoking message that resonated with her peers (Figure 22). Gabriela's anime-inspired artwork reflected asset-based pedagogy, intentionally validating her cultural interests and artistic identity, thereby enriching the ATI message through culturally relevant representation (Flint & Jaggers, 2021).

These off-menu projects highlighted the students' initiative and creativity, demonstrating their ability to translate the themes of the ATI unit into deeply personal and impactful works.
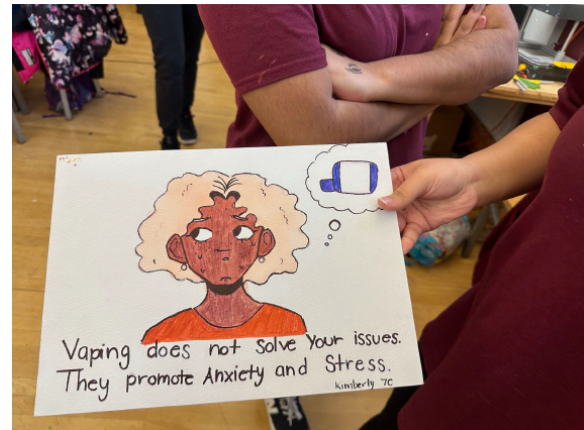
Figure 21

Ethan's Diorama Depicting Nicotine Addiction

Figure 22

Gabriela's Artwork Highlighting Vaping's Link to Anxiety and Stress

In keeping with the goal of fostering authentic advocacy, it was important to ensure students played an active role in shaping the celebration. With this in mind, Daniel, a sixth grader who was one of the most engaged participants during the ATI unit, was selected to host the event. He consistently demonstrated a deep understanding of the material through his thoughtful contributions in class discussions. Daniel was tasked with writing a speech to welcome elementary school attendees, providing an overview of the celebration, while emphasizing the importance of staying ATI. In his speech, Daniel shared how his perspectives on vaping and THC evolved over the course of the unit. "I used to think that vaping was not a big, crazy, life-threatening habit and problem," he admitted. "I actually thought that vaping was a quick and simple cure for anxiety." Through his research, however, Daniel came to understand that "vaping has tons of nicotine, which makes it EXTREMELY addictive. It can even kill you through illnesses such as lung cancer due to the cancer-causing metals found in the heating coils that make vape smoke."

Daniel also reflected on his initial misconceptions about marijuana, noting, "I used to think that weed was natural and because of that, nothing bad would happen to you after smoking it—maybe it would even benefit you." He contrasted this belief with what he learned: "The THC in weed is a long-lasting toxic chemical that can shrink your hippocampus, which is responsible for memory and learning. It can also cause depression or psychosis—a

condition that causes you to imagine or see things that aren't really there."

Daniel concluded his speech by highlighting the purpose of the projects displayed at the celebration, explaining, "To show you guys the dangers of nicotine and THC, we in The Tech Café have created all sorts of projects that signify that we are ATI." He drew attention to his own anti-vaping commercial, which illustrated the dangers of addiction by portraying it as "like prison." Ending on a hopeful note, he encouraged his younger peers to embrace the message of the celebration: "I hope that by the time you leave, you too will be ATI and understand the terrible side effects of vaping and smoking weed."

Daniel's speech effectively set the tone for the event, blending heartfelt storytelling with scientific insights and advocacy. His ability to connect with the audience exemplified The Tech Café's emphasis on empowering students to share their voices and make meaningful contributions to their communities. At the same time, his speech embodied core tenets of Social Justice Education: content mastery, critical analysis, and personal reflection (Hackman, 2005).

Figure 23

Daniel Delivers His Speech At The ATI Celebration

The ATI Celebration

Feedback Forms

In advance of the celebration, a feedback form was created for elementary schoolers to complete, aimed at capturing their impressions of the event and deepening their engagement with the ATI themes. The form included prompts such as "What was your favorite project today?" to identify which projects resonated most with attendees, and "What's something you learned today that you didn't know before?" to gauge the impact of the educational content.

Additionally, the form featured a creative exercise: students were invited to personalize the ATI symbol by filling it with words or drawings representing their strengths and passions. This activity encouraged younger students to reflect on their own motivations for staying substance-free, reinforcing the celebration's key message. By analyzing their responses, valuable insights were gained about how the projects influenced students' perceptions and inspired them to make thoughtful, independent choices about their futures.

Preparations for the Celebration

By mid-June, everything was set for the ATI Celebration. Middle school students who had completed their projects were invited to participate in the all-day event. Early that morning, student volunteers arrived to decorate the room with balloons and ATI-themed artwork, creating an inviting and vibrant atmosphere.

The day before, clay masks were carefully arranged on tables and individually numbered to allow elementary school attendees to reference specific pieces in their feedback forms. A table was prepared with buttons, designed and crafted by a select group of eighth graders, ready to be handed out as keepsakes. Luciana's colorful and impactful shrink-plastic jewelry had its own dedicated display, where her creations were gifted to the elementary school students as tokens of their commitment to be ATI. The remaining tables were filled with students' board games, each carefully set up to engage and educate attendees, making the room a dynamic showcase of creativity and advocacy.

Expanding the Celebration to Younger Grades

As the final preparations were being made, a group of first graders happened to pass by the event setup. Their teacher asked if the students could take a quick tour, and I agreed, using the opportunity to share some insights about vaping, marijuana, and their health implications. To my surprise, the young students were not only attentive but also asked thoughtful and probing questions, such as, "Why would someone want to smoke something bad for them?" and "Does vaping make you really sick right away?"

Their curiosity and engagement were striking, prompting me to rethink the event's original audience. Initially planned for upper elementary grades only, I decided to extend the invitation to include second graders and above. This adjustment required reorganizing the event's schedule, which had been structured into two shifts—late morning and afternoon—into three shifts. The additional shift was scheduled for the early morning and specifically tailored to accommodate younger grades. After checking with their teachers, who responded with enthusiasm, the new plan was set. This change ensured that even the youngest students could engage with the ATI Celebration, fostering awareness and interest at an earlier age.

Launching the Celebration

The anticipation among the middle schoolers was palpable as they finished setting up their games and displays. While waiting for the elementary students to arrive, they took the time to explore one another's creations, admiring the ingenuity and effort on display. When the first group of lower elementary students arrived, the middle schoolers eagerly stepped into their roles as game hosts, ready to guide and engage their younger peers. Daniel took the stage to deliver his opening speech, setting the tone for the day. Behind him, the smartboard was used to screen the students' films, interspersed with their songs and podcasts, creating a dynamic flow of content to complement the interactive exhibits.

Daniel's initial nervousness quickly gave way to a confident delivery, captivating the audience as they listened to his heartfelt reflections on the dangers of vaping and marijuana. Elementary students were handed feedback forms and crayons, allowing them to rate projects, express their thoughts, and create their own ATI artwork while absorbing the presentations. Five standout films, including *All Fun and Games*, were showcased in a carefully planned sequence. The emotional impact of *All Fun and Games Part 2* was particularly powerful. As Andrés's tragic fate was reversed in the rewind sequence, revealing scenes of hope and friendship, the younger audience audibly reacted with gasps and cheers. When Andrés, the "movie star," stepped forward after the screening, he was met with enthusiastic applause, further heightening the excitement.

Music and podcasts were seamlessly integrated into the event. Between film screenings, songs like *Veneno* played, eliciting head nods and quiet singing from students as they connected with the messages. While podcast excerpts were kept brief for the younger groups, older elementary students were treated to longer segments later in the day, offering a deeper dive into the narratives and perspectives. This careful pacing ensured that each piece of media had its moment to shine while maintaining the flow of the event.

The second session brought upper elementary students, joined by sixth and seventh graders who had the opportunity to experience the event alongside them. The middle schoolers sat behind the elementary students, quietly observing their reactions and enjoying the opportunity to see their projects appreciated. Daniel delivered his speech with even greater confidence, building on the energy of the first session. The older students engaged deeply with the films, music, and podcasts, responding with thoughtful questions and insightful feedback.

The interactive portion of the event was equally engaging. Elementary students eagerly participated in the board games, rolling dice, navigating clay figurines, and grappling with trivia and scenario cards. While some technical challenges emerged—such as cards running out too quickly or text being too complex for younger readers—these moments were overshadowed by the excitement and enjoyment of playing the games. Middle schoolers were visibly proud as they witnessed their creations come to life, learning valuable lessons about iteration and audience engagement in the process.

Figure 24

Elementary Schoolers Playing Board Games


Meanwhile, students lined up for buttons and Luciana's handcrafted necklaces, which were a tremendous hit. Due to their popularity, adjustments were made to reserve some jewelry for the remaining sessions. Feedback forms and ATI

Lahana, L. I. (2025). Above the influence: Youth activism in a school makerspace. *Middle Grades Review, 11*(1). https://doi.org/10.70793/mgr.225

drawings revealed students' aspirations and reflections, offering a glimpse into how they connected the event to their personal goals and values. The masks on display drew significant attention, with elementary students taking their time to examine the artistry and rate their favorites.
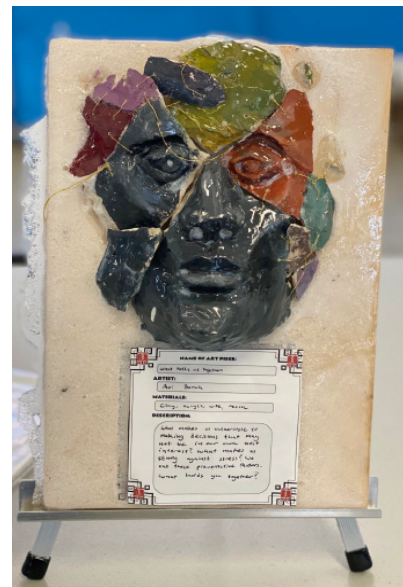
Figure 25

Jewelry and Button Stands
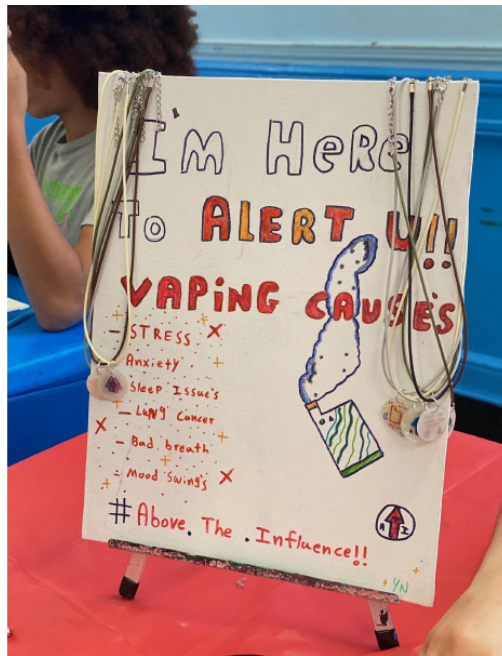
Figure 26

Mask on Display

The addition of sixth and seventh graders to the second session created a unique atmosphere of shared appreciation, fostering connections between younger and older students. The event maintained its momentum, with every moment thoughtfully curated to maximize engagement and reinforce the ATI message.

Feedback Highlights: Student Reflections and Impact

The feedback collected from elementary students after the ATI celebration provided valuable insights into the event's impact. Within the 145 responses, a significant number of students demonstrated a strong understanding of the dangers associated with vaping and marijuana use.

Their responses highlighted the effectiveness of the middle schoolers' projects and ATI-themed presentations, which sought to educate attendees and provide an opportunity for middle school students to engage in meaningful activism.

Physical Health Risks of Vaping

Many students grasped the serious, life-threatening physical health risks of vaping. A third grader noted, "Vaping can give you lung cancer," while a fifth grader pointed out, "Coils

in vapes can cause cancer," linking specific vape components to life-threatening health consequences. Further supporting these points, a fourth grader shared, "Vaping can make you sick or die, so it's bad for your health," underlining the clear dangers conveyed in the celebration.

Psychological and Mental Health Effects

Students also demonstrated a deep understanding of the psychological effects of vaping. One fifth grader remarked, "Vaping nicotine causes things such as hallucinations, mood swings, and maybe even death depending on your health," illustrating the mental health consequences. Such an insight was echoed by another fourth grader's observation, "Vapes can cause mood swings, death, and depression," emphasizing the emotional toll vaping can take. An astute second grader revealed an emerging understanding of the dangers of substance abuse, noting that, "...vaping can hurt your brain, then something called a hippo that will make you dumb." Collectively, such reflections indicate that elementary schoolers understood the psychological risks of vaping, including mood swings and long-term mental health effects.

Addiction and Its Consequences

The celebration also prompted students to reflect on the broader consequences of addiction. One fourth grader observed, "I learned that addiction can stop you from achieving your goals," showing a personal connection to the broader implications of substance use. Another fourth grader noted, "Drugs can mess up your wellbeing," demonstrating an awareness of how substance use affects both mental and physical health.

Comprehending the Full Extent of Vaping's Harm

Students appeared to grasp the wide-reaching dangers of vaping. One student wrote, "Vaping can mess up your coordination," while another observed, "Vaping is bad for the lungs and bad for the heart," reinforcing the multi-dimensional harm caused by vaping. These insights reflect the students' comprehension of vaping as a significant health risk beyond just its impact on the lungs.

Empowering Students through Advocacy

The feedback further demonstrated the personal resonance of the celebration. Younger participants appeared particularly drawn to the engaging visuals and interactive elements, which helped make the information more relatable. One younger student shared, "I didn't know vaping could hurt your brain," illustrating how the event helped them connect new ideas to their lives. This message, perhaps gathered through viewing many of the middle schoolers' films, corresponded to one student emphasizing, "No copiar a las demás personas," meaning "Don't copy others." This quote demonstrates the student's important take-away from the event, highlighting the value of resisting negative peer influence.

Reinforcing Youth-Led Advocacy

Overall, the feedback confirmed that the celebration achieved its dual purpose: educating attendees about the dangers of substance use and providing an opportunity for middle school students to engage in meaningful advocacy. The responses reinforced the importance of youth-led initiatives, showcasing how peer-created projects can effectively engage and inform younger audiences. Indeed, one fifth grader reflected, "Smoking and vaping can mess up your life and brain," a comment that demonstrates the lasting impact of substance use on both physical and mental health. Such an insight underscores the power of student-led projects in raising awareness and sparking positive change in their communities.

Limitations: Addressing Implementation Challenges

Because The Tech Café benefited from steady access to tools, materials, and dedicated class time, educators seeking to replicate this model may face significant implementation challenges. Schools operating with fewer resources might encounter obstacles such as limited access to technology, a lack of materials for hands-on projects, or insufficient staffing and planning time to support long-term initiatives.

However, the strength of the ATI unit did not lie in access to specialized equipment. Rather, it emerged from its emphasis on student choice and personal relevance. The menu system allowed students to select from a range of mediums—including songs, podcasts, films, board games, and visual art—enabling them to engage in ways that aligned with their interests and abilities. This structure fostered investment, creativity, and ownership across a diverse student body.

Equally important was the students' ability to share their advocacy projects with authentic audiences beyond the classroom walls. The ATI celebration, school-wide presentations, and sharing through social media platforms provided students with real-world contexts that deepened their engagement and reinforced the significance of their advocacy efforts.

While materials and tools can enhance the work, they are not prerequisites for meaningful advocacy. Many of the projects featured in this case study could be adapted using commonly available classroom supplies. What remains essential is a commitment to honoring student perspectives, supporting authentic inquiry, and providing opportunities for learners to express their ideas through varied forms of making and public sharing.

Conclusion: Empowering Student Advocacy Through Purposeful Making and Social Action

The ATI unit in The Tech Café exemplifies the transformative power of combining purposeful making, content knowledge, and social activism. Rooted in frameworks like Critical Pedagogy, Youth Participatory Action Research, and Asset-Based Pedagogy, the unit empowered middle schoolers to engage deeply with the societal impact of nicotine and THC use. By positioning students as both creators and advocates, the unit encouraged them to explore substance abuse through projects such as board games, clay masks, music, films, and jewelry. These activities not only enriched their understanding of the topic but also allowed them to craft authentic, resonant messages for their peers and younger audiences.

The culminating ATI Celebration highlighted the profound connections fostered by this student-centered approach. Elementary schoolers participated actively—playing games, viewing artwork, and discussing videos—while middle schoolers gained a sense of purpose and pride, witnessing the direct impact of their work. These moments embodied Freire's concept of praxis, as students applied their learning to real-world advocacy, fostering both critical awareness and meaningful action.

Feedback from the celebration underscored the unit's success. Students articulated newfound knowledge, such as the health risks associated with vaping and the psychological effects of THC, and shared moments of personal transformation. This aligns with the principles of Asset-Based Pedagogy, which focuses on leveraging students' developing skills and personal interests to advocate for meaningful change. Whether through songwriting, game design, or sculpture, students drew on their strengths to amplify their voices and address issues that resonated with their lives.

Through initiatives like ATI, The Tech Café demonstrated how Makerspaces can transcend traditional educational boundaries, promoting both academic growth and social-emotional development. By integrating frameworks that prioritize student agency and community engagement, Makerspaces have the potential to become powerful hubs for advocacy and change. The ATI unit, in particular, inspired students to view themselves as leaders and changemakers, capable of influencing not just their peers, but their communities and futures. As one sixth grader reflected during an end-of-year interview:

> **Tara**: We also created Above the Influence commercials… it was kind of embarrassing, but it was also, like, we're teaching other people about stuff they might not know.
>
> **Lahana**: Do you think you can make a real change?
>
> **Tara**: Yeah… because we're educating others with the videos in a way they might understand.

Through purposeful making and meaningful social action, the ATI unit illustrated how educational Makerspaces can amplify student voices and foster transformative learning. By intentionally integrating frameworks such as Critical Pedagogy, Youth Participatory Action Research, Asset-Based Pedagogy, and Social Justice Education, students deeply explored substance abuse issues in personally relevant and culturally affirming ways. Their diverse and powerful projects—songs, films, interactive games, and evocative artwork—exemplified their capacity to engage as both critical learners and community leaders. Ultimately, the ATI unit affirmed that when provided meaningful choice, authentic tools, and supportive scaffolding, middle-grade students can effectively challenge social injustices and actively shape healthier futures for themselves and their peers.

Lahana, L. I. (2025). Above the influence: Youth activism in a school makerspace. *Middle Grades Review, 11*(1).
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