

FASHIONING LEARNING:

Connected Learning through Fashion Design Programs

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CONNECTED LEARNING
WORKING PAPERS

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INTRODUCTION



Moving energetically between a book of illustrations and her easel, Rebecca was teaching a table of teenage girls how to sketch fashion designs with a mind to garment production. The teens all had their own sketchpads and followed along intently as they received instruction. Rebecca drew a simple outline of a T-shirt on her easel, pausing intermittently to push her bright blue hair out of her eyes. “Say, for example, you need to send the design to a company that produces garments,” she said as she added some markings to the T-shirt. “One way to do this is by creating dotted lines called stitching lines. They tell the company where to sew the fabric.” Participants in the class learned that sketching for fashion is a form of intra-industry communication. Certain markings are used by others involved at different levels of the design process to create garments.

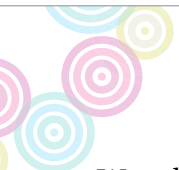
Throughout the lesson, Rebecca switched between traditional instruction and one-on-one mentoring as the girls attempted to sketch their own clothes. During the second half of the class, Rebecca integrated use of a website called Polyvore to explain how to practice building design collections. “To convince your boss that your drawing is worth producing, it helps to create a story around it,” she explained. “This story can take the form of a *theme*.” Polyvore, a digital media-centered web community, allows users (both fashion companies and everyday people) to share images of fashion designs they enjoy. Rebecca told participants that they could find a picture of a piece of jewelry they liked on Polyvore and then draw a whole collection around that specific piece as a way to practice. Another way, she suggested, was to find outfits on the website and redraw them using different color palettes.

These participants, like the hundreds of others from Southern California who attend Cali Design, learn the skills needed to design and produce their own garments among peers and mentors who also share an interest in fashion. Cali Design, as well as another case in this study, Hive Fashion, is a face-to-face learning environment. Educators believe that the skills needed in fashion design (including sketching, creating and using cutting templates, and competence with sewing machines) are often best learned through a mixture of mentorship during in-class activities as well as by using digital resources in instructional settings. This program provides an important nexus for connected learning, providing an educational environment centered on their interest in fashion and shared with peers from surrounding neighborhoods who love it, too.

Rebecca’s workshop-based sketching lesson demonstrates how fashion programs can foster connected learning through diverse teaching strategies. By offering opportunities for learning that are socially embedded, interest-driven, and tied to civic, academic, and career opportunities, the program connects participants’ passion for fashion with caring design mentors who cultivate their skills as designers. As we will also see in this report, fashion programs are structured in a way that provides participants ample opportunities to help their peers as they collectively build technical and creative skills in fashion design. Key principles of connected learning theory posit that the productive intersection of interests, peer engagement, and academic subjects drives learning experiences that are exciting, meaningful, and persistent. Through connected learning, youth interest in fashion is harnessed to spur the development of educational skills and open up possible career options.

¹ To protect participants’ anonymity, all names are pseudonyms.

DESCRIPTION OF RESEARCH STUDY



We selected fashion design programs as a case study for connected learning for two overlapping reasons: the demographic reach of the interest area (in that it serves primarily women across a wide range of racial-ethnic groups), and its potential as a link connecting youth interests with academics and career. Fashion is often characterized as a traditionally feminine pursuit, but it has a broad appeal across racial-ethnic and socioeconomic groups (Davis 1992). Research on connected learning benefits from empirical cases that explore diverse interest areas and populations to identify avenues for skill building and growth. Fashion is also an important case for connected learning because it can be productively tied to both school and career spheres. American public schools have a history of including Home Economics courses that often include sewing skills in their lessons, and so purposeful application of fashion design skills may have relevance to school. Fashion design skills also require competence in academic subjects, such as math, that are relevant to youth of this age group. Fashion is a global industry and a viable career option for youth with interests in the area.

We report on interview- and observation-based data collected in four different fashion-centered programs based in Southern California and Chicago, Illinois. The sites were selected for regional and demographic variation, as well as for their diversity of curricular goals. Across the cases, a total of 18 youth and 16 adults (including parents and teachers) were interviewed, and we logged more than 70 hours of program observation. The program in Southern California, henceforth referred to as Cali Design, typically draws white, middle-class young women between the ages of 8 and 18. The three organizations in Chicago are part of a larger organizational network called Hive Fashion. The organizations participating in Hive Fashion programming typically serve black and Latino teens of both genders. Observations and interviews were conducted over a one-year period (2012–2013). We conducted fieldwork through unobtrusive observation during program events, and interviews occurred throughout the year. Matt Rafalow collected data at Cali Design, and Kiley Larson, Erin Bradley, and Nathan Reimer collected data at the Hive Fashion programs. Themes that emerged from observations informed the kinds of questions we asked during interviews, and vice versa.

What makes this case selection particularly interesting is that the fashion programs differ in the types of skills they teach with technology and digital media. Hive Fashion explicitly attends to skill building with new technology, but teachers at Cali Design do not see technology as a primary focus of their lessons. Hive Fashion allows teens to pursue their interest in fashion through style blogging, fashion photography, clothing remixes, fashion design, and experimentation with technologies for design (including Adobe Illustrator, Photoshop, and video editing software). Cali Design also focuses on the development of technical skills, but it includes pencil and paper sketching, sewing machines, and garment construction. As this case reports, both programs employ a variety of digital media technologies to augment their learning practices and render program activities tied to a shared purpose. The difference is that Cali Design uses easily accessible technology, including mobile phones and social networking sites such

as Instagram and Facebook, to aid with teaching. This case demonstrates the range of technologies, both analog and digital, that can be used to support connected learning.

This report first describes the history and background of Cali Design and the Hive Fashion programs that are the subjects of this study. We then describe how these fashion programs bridge the three key spheres of connected learning: interest-driven, peer-supported, and academically oriented. We also document, in detail, the shared purpose in these spaces, as well as the production-focused and openly networked design of these environments. Thereafter, through an analysis of the various features of Cali Design and Hive Fashion, including social, technical, and cultural dimensions, we show how these fashion programs provoke us to think more about the challenges and opportunities presented to the connected learning model.

BACKGROUND ON CASES

In this section, we provide a history and background on the programs selected for study, a description of the populations they serve, and the programs' learning relevance.

CALI DESIGN

Cali Design prides itself on being a program different from other girl-centered fashion programs in that it focuses primarily on developing design skills. In the words of Anne, the owner and manager, "There's not a mirror here, and that's for a good reason." Other programs in the area attract young women by offering dress-up parties and runway shows; Cali Design, on the other hand, focuses on building the skills needed to create, design, and produce garments from start to finish.

Cali Design's headquarters are situated in a warehouse-sized facility within a major mall in a suburban region of Southern California. The aesthetic of Cali Design is, in the words of many of the participants, "girly." The walls are decorated with pictures of women in stylish outfits from major fashion magazines, and a major element of the program's color palette is pink. The logo of the program, displayed prominently along a wall, includes a curvaceous silhouette of a woman with flowing hair who holds scissors and wears a tailor's measuring tape around her neck. The program space is divided into two identical rectangular workspaces, approximately 1,200 square feet each and separated by pink curtains. Each workspace includes three large tables that typically serve the same purpose for most lessons: One table has sewing machine stations, one table is for garment selection, cutting, and pinning, and another table is a general workspace. This arrangement allows mentors and youth participants either to receive traditional instruction or work independently as the activity requires.

The program provides a wide range of events and workshops that address different interests and skills within fashion. These classes include "Sewing 101," or the basics of sewing, "Design and Go," which is a design-to-garment production class, and program events that teach participants how to design their own bags, pajama pants, or skirts. All of the program lessons and events emphasize the design process: Participants are taught basic garment production skills, including sketching, sewing, or cutting, but they are encouraged to integrate their own aesthetic as well as design ideas into the project. Participants are encouraged to ask peers and mentors how they can add a feature to their designs beyond the scope of the lesson, such as pleats or bows, and mentors readily provide one-to-one counseling. In this way, mentors nurture participants' own ideas for design in a demand-driven way and enable interests in fashion to flourish. As far as attendance, Cali Design typically draws young women between the ages of 8 and 18. Male participants are a minority; however, as teachers reported, they are among the most engaged program attendees.

HIVE FASHION

While Cali Design is a stand-alone program owned and managed by one person, Hive Fashion is a set of thematically focused programs that are hosted by different organizations and specifically funded for members of the **Hive Learning Network**,

a group of cultural and civic institutions—libraries, museums, community-based organizations—that work together to construct innovative learning opportunities in various cities. For this case study, we focus on three programs within the Chicago metropolitan area. During the period we conducted our study, all three host organizations received funds from Hive to create fashion workshops that highlighted the use of digital media. From the outset, Hive Fashion administrators asked program educators to encourage youth participants to make their work publicly accessible, primarily through social media outlets. They also connected youth to professionals in the fashion industry to introduce them to new potential career pathways and opportunities. In this report, we describe one of these programs in detail and highlight other features that are common across all three.

The Hive Fashion program we primarily focus on is housed at YOUMedia, a tech-oriented drop-in center for teens in a downtown Chicago library. This space is designed to support a wide variety of teen interests and is staffed by librarians and mentors with expertise in digital media production. From the outset, this space was meant to support the three forms of digital media participation identified by Ito et al. (2010)—hanging out, messing around, and geeking out. The overarching purpose was to create a space that supported digital and traditional literacy development and was welcoming of, engaging to, and easily accessible by teens. Here, teens can borrow video cameras, laptops, books, and art supplies for their own use. They can also access music recording equipment, as well as music editing and graphic design software. In addition to providing access to high-quality hardware and software, this space connects young people to the vast array of knowledge possessed by the in-space mentors, who are often professionals in their chosen fields. As part of a push to help teens build knowledge and expertise, workshops and mentoring in interest areas are offered. One of these workshops was Hive Fashion.

Because Hive Fashion took place in a drop-in center with no attendance requirements or fees, it did not have a stable participant base; teens filtered in and out with a core group of four to five participants attending each week. This program serves primarily youth of color from low- and middle-income families, and it aims to create low-risk, low-barrier entry points for youth who are exploring their interest in fashion. In addition to reaching nondominant youth, this program also attracts a mix of male and female participants.

Programming is structured in a way that provides youth with opportunities to hone their skills in a number of different fashion-related areas: blogging, fashion photography, design, and use of Adobe Illustrator and Photoshop. Here, teens have access to mentors who lead programming and who have professional experience in the fashion industry. This experience also increases the mentors' fashion-related social capital and enables them to connect teens to other industry professionals. Mentors also worked to help teens connect their existing interests that might not be obviously related to fashion—such as graphic design—to program activities.

CALI DESIGN

Bobby's Fashion Shop



Bobby and his sister, Sarah, have always been interested in art. Bobby (9 years old, Southern California), an Asian American fourth grader, loves sketching (especially clothes). His sister, who is just a couple of years older, enjoys making origami. Although both are great students (according to their parents), they do not have sufficient opportunities to explore these interests in art in school. As a result, the siblings began expressing their interest and budding affinity for art by showcasing their own work in their bedrooms to create makeshift galleries. The two are very close, and together they created a “store”; Bobby says: “I’ve put signs up and the prices and all that. But since they’re only sketches they only cost, like, a dime or something ... my sister has an origami paper store because she really likes it. We’ve always wanted our own business.” Bobby and Sarah’s artistic pursuits are supported by their family, too. Their grandma and mom come over to their business front and the youth walk them through the various items for sale, though sometimes Bobby entertains them with free hairdos or massages as they think about what to buy.

Bobby’s father sought out an informal learning environment that would embolden his interest in fashion and teach him relevant skills. “My son was always into fashion,” said his father. “He draws dresses. He needed something [to learn sewing]; I was looking for anything. Then I found Cali Design. I think this is his fourth monthlong class.” Bobby has a number of interest activities that he pursues through programs, but “this is his one passion.”

As a Cali Design participant, Bobby’s passion for design took off through a combination of fashion mentorship and family support. All of the designs he makes in class are for his sister. For example, he created a skirt in the image of an outfit he found with Google search: “I saw a picture online that looked really cute. I just typed in ‘fashion’ and looked up images online. I found this pink skirt and I thought it was really cute, and so I actually sewed it.” Bobby takes fashion ideas to both his Cali Design mentors and his grandmother to successfully produce garments: “Abby (the Cali Design teacher) usually tells me what to sew, and then I just sew it, and then I keep asking her what to do next ... if there’s something I’ve never done before they just show me right away.” In addition, Bobby’s family and family friends continually encourage the development of his craft by asking for new outfits: “My aunt expects me to sew whole bunches of stuff ... she wanted me to make a dog Halloween costume ... and my friend’s little brother wants to be a mascot so he asked me to make a knight costume.”

Bobby’s interest in fashion is supported by his family in ways that spur engagement as he learns design skills both at home and in Cali Design lessons. His family serves as both the muse for his designs as well as motivational support to continue developing his skills in garment construction.

ANALYSIS: CONNECTED LEARNING THROUGH FASHION DESIGN

Connected learning is an education theory centered on integrating learning between formal institutions, such as schools, and informal learning environments such as those studied in this report (Ito et al. 2013). Through the pursuit of their shared passion in fashion design, blogging, or videography, youth engage in production-centered activities in peer-supported and openly networked settings that drive academically oriented achievement. In the following section, we discuss the various features of these fashion-based connected learning environments through their everyday practices.

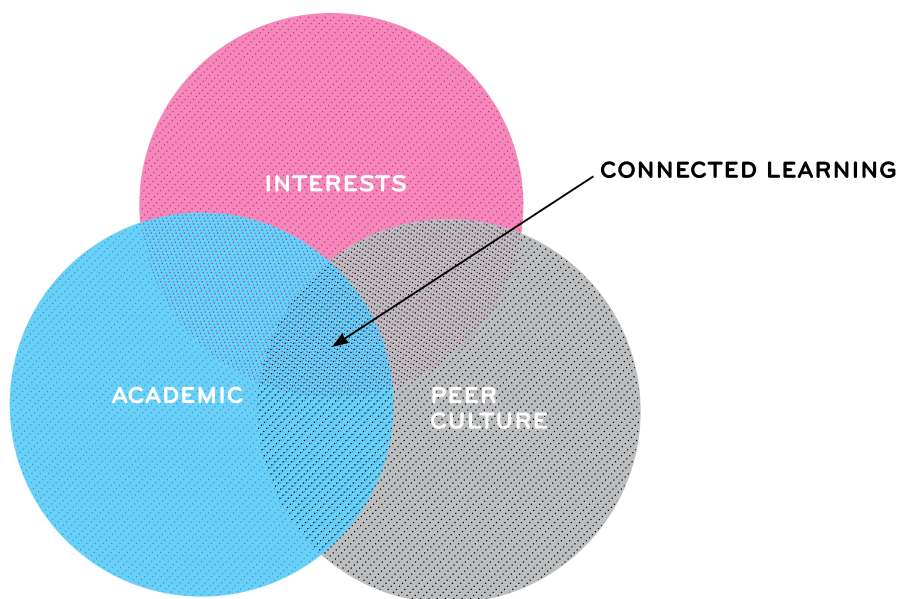


Figure 1
Connecting the
Spheres of Learning,
from Ito et al. 2013

INTEREST-DRIVEN

Connected learning theory contends that activities focused on learners' interests can be productively connected to academic outcomes. The learning activities at Cali Design and Hive Fashion are centered on an interest in fashion that spurs youth engagement. At Cali Design, all youth participants have long-held interests in fashion that are fostered and emboldened through the program events. Participants at Hive Fashion, however, have a wider range of interest in fashion. Those who came to the program with an interest in fashion had experiences similar to those of the participants at Cali Design. Participants who were less interested in fashion before attending Hive Fashion described the program as a gateway experience that fostered interest in fashion in ways specific to their own tastes.

Participants at Cali Design all arrived at program lessons with deep interest in fashion that they often had had since they were very young. One parent described her daughter's interest: "Since she was two, she's loved clothes. ... I went shopping with her and she would grab a dress off the rack and say, 'Mom.' And she knew exactly what she wanted to wear in the morning. She told *me* what I should wear." Another parent explained that the program was a strong fit because it matched her daughter's personality: "The program's focus

on fashion, design, the creativity, to learn to make your own accessories—it just fit her to a ‘T.’ These are all things that Sandra loves to do and wants to do ... she wants to style me, her sisters ... it’s just kind of who she is.” Yet another parent expressed that her daughter had interest in fashion and sketching well before attending the program. “My daughter just loves sketching clothes ... she sits down and draws, she likes to draw clothes.” To support her daughter’s interests, she enrolled her in art classes and then the fashion program. “It generated from this art class giving her the confidence that she could do it. And then it just morphed into that.” Parents of participants at Cali Design cite their child’s interest in fashion as a key reason for choosing the program for their son or daughter.

Participants at Cali Design also described their interest in fashion as long-held and noted that attending the program translated their interest into learning fashion design skills. Sandra (10 years old, Southern California), for example, explained that her interest made the fashion program a good fit: “I used to walk around in my mom’s high heels. I always loved high heels. I don’t know—I like fashion, it interests me. ... I took a lot of classes at Cali Design.” She believed her interest helped her work through difficult tasks in the design process, such as sewing buttons. “It was frustrating for me because I’ve never really sewn a button before ... but then I went home and I was practicing sewing buttons, I’d get little swatches of fabric. ... I kept practicing until it wouldn’t gather the fabric.” Another participant, Bobby (9 years old, Southern California), also found that his interest in fashion enabled him to persist through tough obstacles during program activities: “I was really proud when I made the pajama pants. They were really cool. And I wear them almost every night now. ... I never made pants before and they looked pretty difficult. And then, I liked how I put the fabric and all that.” Cali Design parents and participants see an interest in fashion as a key motivator for program attendance as well as persistence through design.

Hive Fashion participants pursue the programs to not only learn garment-construction skills but to develop other technical skills. Hive Fashion participants expressed much more diverse reasons for pursuing the programs than did Cali Design participants. Darryl (17 years old, Chicago), a Hive Fashion participant, was primarily interested because the program featured technical programs: “Learning about music software, video software, has got me interested in kinda techy things, but being creative with it, too. I like animation.” Carl (18 years old, Chicago), another participant, said he enrolled in the program because he was receiving credit at his school. When pressed about his interest in fashion, he said that he had a general interest: “I mean I like to think I dress fashionably. [Laughs.] I wouldn’t quite say I was so interested in the concept of [a fashion program]. ... I feel like I have my own sense of style, and I just wear that.” Others, such as Cheryl (17 years old, Chicago), said she had a preexisting interest in fashion, but that the interest was not always fully harnessed by the Hive Fashion workshops she attended: “It’s really fun. It was more hands-on than I thought it would be ... even though I kinda wish we were a little more hands-on with sewing and making things. We design mostly on the computers.” Cheryl had an interest in fashion, but she wanted to apply it most through garment production.

Participants at Cali Design and at Hive Fashion typically reflected that they pursued activities during the program that were tied to their interests. These learning environments provide their participants opportunities to pursue their interests through garment construction or media production.

PEER-SUPPORTED

Peer support is a key dimension of connected learning. Youth thrive in a caring, inviting context where they can improve their skills among supportive peers. At both Cali Design and Hive Fashion, participants routinely help one another out with their projects and share expertise. Often, participants become impromptu mentors when instructors are occupied with other tasks. For example, Sandra had attended enough fashion-program lessons to develop expertise in sewing a messenger bag. She shared her knowledge through mentoring other youth at the program: “Yes. I’ve helped people cut out their patterns. Like when we were doing the messenger bag I’ll help out. I helped her how to set up the patterns.” Sometimes Jane (10 years old, Southern California) attends programs with her friends, but she finds that she mixes with others who are at different stages and skill levels in the design process. “You’re usually not with your friends,” she noted. “They’ll have advanced people go on and start sewing, and they’ll have other people [sketching].”

Sandra’s experience as a mentor among peers with mixed skill levels describes the peer structure of the learning environments at both Cali Design and Hive Fashion. Typical activities at the fashion programs begin with a brief, teacher-led lesson and then shift to less structured project-based assignments. Instructors give participants basic templates that allow the participants tremendous agency in how they complete the project and that provide opportunities for participants to support one another. For example, during one event focused on making skirts, participants moved between the three tables to select fabric, cut, pin, and sew their garment together. At the table with sewing machines, participants asked nearby peers for help, such as how to fix tangled thread on a machine. In another example, a participant incorrectly used the sewing machine and botched the thread in her skirt fabric. The teacher suggested that she remove the thread from the fabric using a tool that rips out seams. A fellow participant had finished her skirt and volunteered to help her friend rip the seams, an otherwise time-consuming process. Similarly, at a Hive Fashion activity, some participants worked on a project that involved an electronic drawing pad. The instructor asked them to create images from designs they drew on the drawing pad that could later be uploaded to the class blog. One teen, Charlene (Chicago), was the only participant to figure out how to use the electronic drawing pad and so she used the tool for most of the class. However, another teen, Randy (Chicago), expressed interest. Charlene helped Randy learn how to use the electronic drawing pad while the instructor was working with other groups of participants.

In addition to providing support through mentorship, peers at Cali Design and Hive Fashion are a major source of positive reinforcement and feedback during program events and activities. Carl (18 years old, Chicago) described how his peer relationships with other participants at Hive Fashion influenced his skill development and growth: “It’s all a support group ... we are collaborators. We’re friends ... we’re more aligned [as] friends and collaborators, because we do collaborate a lot, and we get involved with each other a lot, and going outside shooting [video].” One of the Hive Fashion programs owns and manages a class blog on which participants share multimedia fashion projects they produce through the class. An instructor explained that participants use “group critique” as a source of sharing and feedback: “When [participants] create, when they put this hard work into doing a photo, whether it’s a lookbook, or doing a video, they’re ready to push it out and be like, ‘Look at what I did!’” As participants produce content, they receive feedback from instructors and peers. “If they impress myself, [the other mentor], or their peers, I think that pretty much serves as encouragement for them to want to push it out and let more people see it.” Hive Fashion participants share their projects in progress for real-time feedback among peers and instructors, and doing so builds the confidence needed to share their work with wider audiences.

Participants at Cali Design receive important feedback from other participants during lessons. After initial instruction, participants frequently share their works in progress with peers for feedback and suggestions, and sometimes participants will offer their feedback without provocation. For example, one program event used colorful paper on miniature croquis, or mannequins, to practice design ideas. Each participant was allowed to use the paper however he or she would like to create mock skirts, tops, and jewelry. While mentors walked around the room to offer suggestions or answer questions, participants would provide evaluations and support, too (“Oh my gosh, that’s such a great skirt!”). Other times participants would ask how someone was able to mold a particular garment on the croquis so they could try, too (“Wow, how did you do that?!”).

Cali Design participants also receive support from nonprogram peers. During one program lesson, Debbie (Southern California) told the class that people came up to her at school and asked her where she got her dress because they liked it so much. “I made it!” she’d tell them excitedly. “I get shocked looks from other people at school when I tell them it was me who designed it.” Other participants talked about how they would get compliments from their nonprogram peers, some of whom would ask the program participants to design things for them. For example, Bobby was asked by his friend’s little brother to make a knight costume so he could be a mascot for his school. He also makes things at the program for his sister, such as a skirt and pajamas. Compliments from mentors and peers within and outside of the interest activity are a key part of the learning process among participants in these environments.

Peer interactions in the form of feedback, help, compliments, and sharing works in

progress are important dimensions of the learning environments at both Cali Design and the Hive Fashion programs. These peer supports aid participants in their skill-building process and also bolster confidence to share their projects with wider audiences.

ACADEMICALLY ORIENTED

The connected learning model posits that students' learning potential is maximized through an intersection of interest-driven activities and strong peer supports. Both Cali Design and the Hive Fashion programs facilitate academically oriented engagement through a variety of skills involved in fashion design and production. At Cali Design, digital media technologies are used to augment fashion design lessons tuned to the skill level of the participants. At Hive Fashion, participants are provided the opportunity to build expertise with digital media technologies to create fashion-centered blogs, videos, and designs.

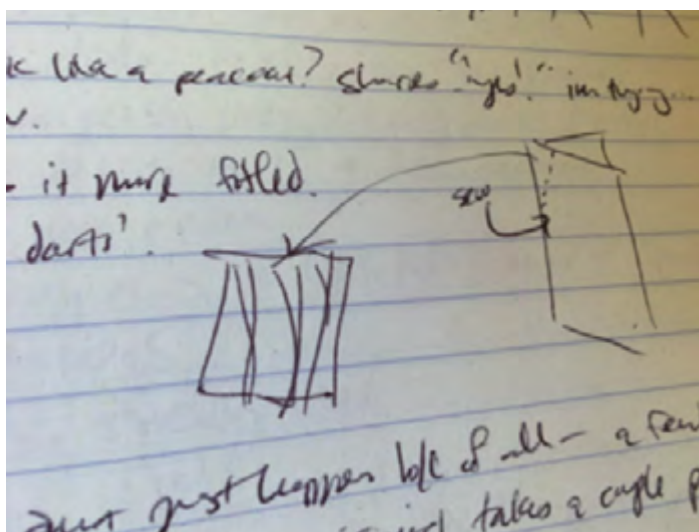
Cali Design's central mission is to give participants the skills they need to create, design, and sew garments. "We're a learning space," explained Anne, the program owner and manager. "No one who comes here has ever touched a sewing machine. But we're going to show them how to sketch ... we're going to foster what's already in here. I want to take what's in here and help them see the process from beginning to end and teach them." Observation during program lessons shows that the program is structured in ways that teach different elements of the fashion design process through participants' projects. For example, report author Matthew Rafalow attended a program lesson to teach fashion sketching for design. At the start of one class, an instructor was talking with five youth about the latest trends. One young woman, about 13 years old, said she was into "ombre." The teacher noted that ombre is "very in right now," and that Cali Design happened to have ombre polka dot fabric at the program. She told the girls that they might consider incorporating ombre into their drawing lessons for today after they had learned how to draw croquis (or mannequins). Curious about the term, the author asked the instructor what it meant. "Ombre print *fades*," she said. "See how the polka dots are saturated on one end of the fabric but then fade to a lighter shade of pink on the other end?"

Cali Design teaches a fashion vocabulary that describes not only academically relevant techniques (requiring skills in math, design, and an understanding of cultural history), but also a broader relationship to the fashion industry and production. A couple of hours into the sketching class, the teacher explained that sketching is not just about drawing something pretty but that it is also a blueprint for you and others: "Say, for example, you need to send the design to a company that produces garments. One way to do this is by creating dotted lines called stitching lines. They tell the company where to sew the fabric."



The author's attempt at sketching a T-shirt that includes stitching lines (---), or marks that indicate where to sew the fabric. Image courtesy of Matthew Rafalow.

Participants learn how to sketch in ways that are inherently tied to collective understandings of design and production. In the above example, *stitching lines* are composed of small *darts*, or dashes, that indicate where to sew. Participants also learned how to draw symbols for types of fabric, such as wool or leopard prints, using combinations of markings and labeling. Additionally, most sketches must be constructed with a mind to their three-dimensional final product. For example, participants learned how to draw ruffles on skirts to indicate how they would look and fit when produced and inverted.



An example of how sketching must be done with a mind to three-dimensional final products. Stitching lines on the corner of a folded fabric (drawing on right) results in fitted pleats when sewed and inverted (drawing on left). Image courtesy of Matthew Rafalow.

As shown in the above image, stitching lines on a folded piece of fabric result in pleats once the fabric has been sewn and flipped inside out. While participants are sketching on a two-dimensional pad of paper, their designs are inherently instructional: They are learning to convey to others how garments are constructed in three dimensions and how others are involved in different steps of the production process.

Teachers at Cali Design also use digital media as a way to augment their lessons, providing new challenges and opportunities for participants to learn at different skill levels. One way the program engaged in learning practices was through a lesson on designing themed collections. As a designer at a fashion company, the teacher expressed that her drawing process was a lot like her process in the industry: “I need to run my designs by my boss, and to convince your boss that your drawing is worth producing, it helps to create a story around it so it’s easier to understand your outfits. This story can take the form of a theme.” The teacher instructed participants how to build garments around themes at their own pace while using fashion magazines and websites such as Polyvore. Polyvore is a digital media-centered web community that allows users (both fashion companies and everyday people) to share images of fashion designs they enjoy. One way the teacher suggested participants could use Polyvore was to find a picture of a piece of jewelry they liked and then draw a whole collection around that specific piece of jewelry. Another way, she suggested, was to find outfits on Polyvore and then redraw them, over and over, using different colors and patterns. In this way, digital media is used to augment the learning process. Participants at different skill levels are able to learn a complex set of skills and fashion vocabularies using resources, both online and offline, to enhance their learning.

The Hive Fashion programs are designed in ways that use interest-driven fashion activities to spur development of technical skills and critical thinking. The program brings in fashion professionals in the field to connect youth with opportunities in the industry. One project, for example, involved collaboration with a Chicago boutique. Participants were challenged to re-create the logo of the boutique store to tell a story about their experiences growing up in the city.

Program mentors use the class blog as a venue where participants share their work. Using the blog as a creative space, participants are challenged to make connections between various cultural expressions, such as hip-hop and fashion, or how cultures and identities are represented in downtown Chicago through photo shoots and blog posts. “My main goal was for students to not see fashion as what trends are cool and what everyone else does,” said Drew, an instructor. “I just want them to think more about it as self-expression, like a way that you could tell the world who you are every day.” The program uses its Tumblr blog to showcase participants’ work. Drew explained:

It’s mostly photos. Some photos of the kids actually doing stuff in class, field trips. Some of it is things that they’ve drawn. We use it to promote the zines we put out, and that’s actually a huge part of the class ... blogging, figuring out how to curate an interesting blog that someone would want to look at.

Hive Fashion activities include lessons for how to not only use blogs such as Tumblr but also curate fashion-specific content that can engage their audience. “The classes [are] more about [creating] a somewhat structured environment where we can discuss things like this and critique them and let people know how we feel whether it’s through a blog or a publication.”



Sample images from Hive Fashion photo shoots for the class blog. Participants incorporate their own fashion style ideas into media production projects designed for wider audiences. Image courtesy of Hive Chicago.

Literacy with media production tools is a central component of many of the Hive Fashion programs and activities. Dylan, another instructor, reflects on his role as a video production teacher: “Media literacy is a big thing that we try to implement into our workshop. Just teaching youth how to look at different things, whether it’s an advertisement or a news segment; how to look at it with a critical eye and analyze it is definitely a goal.” Participants reflect that they develop media literacies through their fashion activities. One participant, Robert (17 years old, Chicago), described some of the media production activities:

It’s a lot of video editing ... [we] cover different kinds of fashion that we were interested in covering—ethnic fashion, skater fashion, techno, cosplaying, I think grunge was one of ‘em, a couple others—and bring ‘em all together in this blog and documentary. ... My role, I did a couple of blogs on the blog myself, and I’ve done some video editing.

Robert explained that his participation in the program improved his media literacy skills, such as “the use of video editing. I kinda got a video and camera work 101 ... learning how audio works during the interview, how the audio equipment works, video equipment ... and even coming up with plans for how we wanna display the documentary.” He also noted that the program was “definitely teaching me about teamwork because I’ve got to rely on other people and myself to come up with things and collaborate for the video in a set amount of time.” Gerard (18 years old, Chicago), another Hive Fashion participant, explained that the program’s media literacy focus

helped him on his own path to become a programmer. “I want to go into computer science and game design and programming, and I think a lot of the editing and splicing and camera angles are really useful things to know when you’re coming up with designs. ... I learned how to use Photoshop ... software and editing programs.”

Cali Design and Hive Fashion both encourage the development of academically oriented skills and involve digital media to facilitate learning and production. Hive Fashion programs teach media literacies to participants, including proficiencies with video and photo editing programs, as well as critical-thinking skills to curate and share media with various audiences. Cali Design capitalizes on digital media technologies to augment its fashion design lessons by using websites such as Polyvore to provide additional learning opportunities tuned to the skill level of the participant. Both cases represent examples of connected learning activities with clear and valuable academically related goals.

PRODUCTION-CENTERED

In connected learning environments, production is at the center of hands-on learning that is relevant and socially embedded. Both Hive Fashion and Cali Design are production-centered, though the products that youth construct vary. At Hive Fashion, youth produce photo blogs, design T-shirts and logos, and create video documentaries. At Cali Design, participants produce their own fashion designs and garments that vary from sketches to making bags, skirts, and dresses.

Cali Design’s primary mission is to empower youth with the skills necessary to produce their own fashion designs and garments. The program owner, Anne, explained: “I want to take the skills behind fashion—sketching, sewing, designing, creating—and put them to work in projects that are applicable for a 10-year-old.” A key outcome of their learning activities is their fashion creations.



Image of a Cali Design event booth that displays the emphasis on designing and creating fashion products. Image courtesy of Matthew Rafalow.

The program environment itself includes all the tools needed for participants to design garments from beginning to end. It is stocked with sewing machines, a variety of fabrics and threads, cutting templates, needles, sketching paper, and pencils. Program lessons provide guidance necessary to instruct youth on how to use these tools to create. “Basics of Sewing” teaches participants how to use the sewing machine, use patterns, and ultimately create garments such as a skirt. “Sketching 101” provides participants with the basics of fashion sketching, and participants produce sketches of croquis, dresses, jackets, and pants.

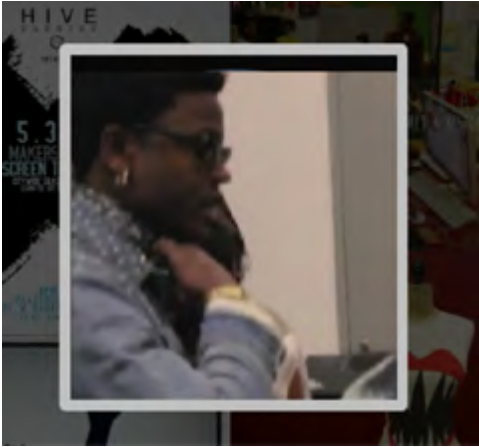


Some Cali Design classes are focused on creating sketches of garments that are translated into production with fabric. Image courtesy of Cali Design.

More advanced classes, such as “Fashion Workshop,” incorporate many elements of these introductory classes to enable participants to create their own fashion garments from start to finish. Bobby, for example, attended a number of workshop classes over a period of weeks to design and create an elaborate dress for his sister.

In addition to garment production, Hive Fashion programs also encourage digital media production. Many of the Hive Fashion events encourage production in the form of photos, blog posts, images, T-shirts, and logos. In one example, Jason, a mentor, guided participants through the creation of a boutique logo design, working one-on-one with participants to develop advanced skills in Adobe Illustrator. Jason sat with a teen in front of a large Mac desktop computer and opened a photo of a woman’s hand in the Illustrator application. The teen watched as he showed her how to use Illustrator to remix the image. He tilted the computer screen toward her and gave her the opportunity to try to do what he did. She became frustrated trying to replicate his adjustment, but with encouragement and patience, he showed her how to change the color to fill in the outline of the image. Soon after, she experimented with the image’s color palettes with this newfound skill.

Some participants refined their skills as videographers and produced video content such as documentaries for the fashion program. In some cases, participants interviewed people in the fashion industry about their craft and used editing programs to create video interview productions. In others, participants created video documentaries about the Hive Fashion program itself.



A screen shot of the Hive Fashion program website and a streaming video produced through the event. Image courtesy of Hive Chicago.

Both cases provide examples of learning programs that teach academically oriented skills through production-focused challenges. Cali Design and Hive Fashion both lower barriers to entry for the development of complex production skills through mentorship and enable youth to create from their own inspirations.

OPENLY NETWORKED

A central design tenet of connected learning is that the learning environment spans and supports visibility across multiple settings. This means that youth have a number of places to pursue connected learning, such as places to share their works in progress, receive feedback, and show off and take pride in their creations. Cali Design and Hive Fashion use digital media to connect participants' learning activities with intergenerational audiences, including not only family and friends, but also professionals working in the fashion interest space.

Cali Design provides an example of how openly networked practices with digital media, or environments that design links between institutions, home, and interest communities, engage parents with youth classroom practices. For example, the Cali Design Facebook page is host to a great deal of content shared by Anne. Some updates are event specific, advertising upcoming program events ("Join us Saturday for the Sketching Workshop!") or displaying recent news about the program from other media outlets. The bulk of the content shared on the page, however, consists of colorful photographs and video taken during the programs themselves. A common form of the photographs is a split screen that includes three images: an instructor giving a lesson, participants applying the lesson to their particular assignment, and the participant showing his or her final product.



A lesson on using the sewing machine (top left), participants applying a hand-sewing technique to hat design (right), and the final crafted product (bottom left). Image courtesy of Cali Design.

According to Anne and parents of program attendees, the Facebook page provides a key link between parent, teacher, and classroom experiences. Program updates through social media provide parents with a window into the minutiae of their children's educational practices and also serve to engage parents with the material that participants learn in the classroom. The program facilitates connected learning through openly networked practices with social media, rendering classroom activities more transparent and visible to intergenerational audiences. Platforms such as Facebook allow youth work to gain public and parent recognition.

Many parents send their children to Cali Design because they themselves know very little about fashion, design, and sewing, but they want to support their children's interests. Yet Anne expressed that conveying to parents exactly what they do in the classroom is a challenge given public perceptions that frame fashion as frivolous:

There are a lot more [programs] popping up that are sewing-based ... but it makes me cringe when I see these because it's like, 'Come and play dress-up, look in the mirror, look at how pretty I am, walk the runway, let's put makeup on,' and we do nothing of the sort here, you know? I want to take the skills behind fashion—sketching, sewing, designing, creating—and put them to work in projects that are applicable for a 10-year-old.

For Anne, connecting classroom practices with other audiences allows her to demystify the structure and content of what they do. In order to connect parents with the learning activities in the classroom, Anne shares updates from the classroom with parents on the program's Facebook page:

Parents are kind of like, 'Okay, [participants] do what?' So, along the way, I'm taking pictures, you know, like, 'Hey, look ... the sketch is right here on the cutting table. And here's the little girl with her dress, and she's putting studs on and you can literally see ... whatever we've done. Then take another picture and it's the girl at the sewing machine and then the girl wear-

ing the dress. To me, it couldn't be more clear what we've just done. And the comments, you'll see they'll be like, 'Oh my gosh,' 'Wow!'

For Anne, the program's social media presence accomplishes dual purposes: It engages parent audiences with upcoming program events and publicity, and it also accomplishes the difficult task of connecting parents with the many dimensions or stages of classroom practices. In Anne's words, it shows parents "we're a learning space ... if the parents come and drop their kids off, by the very end they've missed the stages. So this is a good way for us to communicate that." Through use of digital media, Cali Design is able to render its activities openly networked to parents and make learning activities much more clear intergenerationally.

Exploring the program's Facebook page reveals the parental impact of connecting classroom practices through social media. The page's wall includes image after image of different participants working on various projects: receiving lessons, sketching, sewing, and showing off their final work. In one example, a parent reacts to her child's work being showcased through an image on the Facebook page. The image includes a split screen of participants' work on sketches, sewing, and modeling their completed garments. Georgia, the mother of the displayed participant, leaves a comment on the picture: "My daughter had the best time of her life and couldn't stop talking about the program event all day long. Thank you for giving her such a terrific environment to express her creativity and learn about fashion design!" In another example, Joanne comments on an image of participants studying fashion magazines and other media: "My daughter came home today and expressed that this was her favorite class by far!" And in yet another example, Linda leaves a comment on a picture of participants sharing their designed garments on dress forms, or miniature models for creating designs: "Look at all the smiles in this picture. Those girls had the best time this morning!"

Parent reactions demonstrate their excitement in viewing the intersection of their child's own interests with academically relevant practices. In all cases, parents used social media to engage with different stages of the learning practices that participants pursue during their Cali Design lessons. This reflects a tenet of connected learning through an emphasis on openly networked design: Educational practices should be crafted with the many dimensions of participants' lives in mind, including not only the classroom activities but also the important connections youth have at home.

Like Cali Design, the Hive Fashion programs share their creations in both physical and digital environments. In one workshop space, for example, a corner is the "Hive Fashion" area that showcases dress forms, including T-shirts designed by the youth participants. In this space, other teens not participating in Hive Fashion activities can observe the workshops and artifacts teens produce. Highlighting Hive Fashion activities and products in the space helps participants share their works with friends and peers. Program educators also looked for other ways to highlight teens' accomplishments, such as creating events where they could showcase their work or

looking for festivals where teens could submit their fashion-related videos. In addition to sharing work in physical spaces, Hive Fashion programs also push content out on several digital platforms, including Tumblr, Facebook, Vimeo, and the Hive Fashion blog. When asked if she shared her work with others, one teen, Sharon (18 years old, Chicago), described how she leveraged various social networking platforms to drive site clicks:

I push my work out, definitely. That's the only reason I actually use it, or started using Twitter. I have a fashion blog, so I guess that could be another hobby. I push my fashion blog on there so much, on Facebook, on Twitter. I push it, I push it, I push it. I haven't been updating lately, so I haven't been pushing it as much. When I update it, man, am I making a post every hour. Everyone's like, "Shut up! We'll go look at it! Gosh!" I got 5,000 hits just off of posting it on my Facebook, no type of advertisement, anything. I got 5,000 hits in three months, doing nothing. I did nothing. I did nothing. I thought that maybe, with a little more effort, I could actually have some real traffic coming through.

While some teens are highly motivated to share their work, others are more reluctant. One mentor, Barbara, describes how she encourages teens to share their programmatic accomplishments:

A lot of that...starts with the group critique within the classroom. Critiquing the work that they're doing. I would say that a lot of them don't really need a whole lot of encouragement for sharing their stuff. When they create, when they put this hard work into doing a photo, whether it's a lookbook, or doing a video, they're ready to push it out there and be like, "Look what I did!" As long as they get the okay from myself, another mentor, and their peers, I think they've been pretty good with just wanting to put stuff out there. We have a student who is always like, "Man, we haven't uploaded anything on our blog in a week!" He's like, "What do we have? What do we have that we can put out there?" It's kind of a mix of one, having enough content to—well, having enough content that they're confident about putting up there, and also just us doing our daily critiques with them and giving them feedback on what they're doing. I mean, if they impress myself, [the other mentor], or their peers, I think that pretty much serves as encouragement for them to want to push it out and let more people see it.

Another educator, Drew, explains how teens use the program's Tumblr to both publicly share work and to collaborate with peers:

It's mostly photos. Some photos of the kids actually doing stuff in class, field trips. Some of it is things that they've drawn. We use it to promote the zines we put out, and that's actually a huge part of the class ... blogging, figuring out how to curate an interesting blog that someone would want to look at. Then other social media, we mostly stay in touch through Facebook. It's the easiest

way for me to talk to my kids. We have a collaborative group where we can post things that we want to talk about in class or just any general information that might need to be shared. So that's been clutch because it's kind of difficult to get a hold of younger kids on the phone or anything like that. I know they're all on Facebook, so that helps a lot.

Sharing information this way allows teens to access it and participate in Hive Fashion activities regardless of location.

Hive Fashion attendees also have access to iRemix, a private website that allows teens to share their work, collaborate, and receive focused feedback from program peers and mentors. Through time, as participants develop and refine their projects in iRemix, they can export their work from iRemix to other, more public, platforms. While one program used the private platform regularly, other educators found it challenging to incorporate into their programming because teens saw little value in using the site. One educator explains, "iRemix is a great idea but the students don't want to use it because they say that there's nobody else on there." The design and curricular relationship between production via iRemix and more broadly accessible websites illustrates how one Hive Fashion program uses digital media tools to provide gradations of openly networked participation.

Digital media platforms provide new means for mentors, youth, and their families to become connected to youth learning, and for parents to celebrate their children's achievements in a friendly, public forum with other parents. As these examples show, digital media enable unprecedented forms of parental involvement with youth learning experiences by making these practices visible intergenerationally. In particular, with activities such as fashion design, including sketching, sewing, and garment construction, as well as digital media projects, such as blogging and video production, digital media environments provide new venues to share and receive feedback.

SHARED PURPOSE, CULTURE, IDENTITY

Connected learning thrives most when the learning community is built around a strong shared purpose. In our cases, youth and adults collaborate in ways that are tied to a shared vision or goal. Some practices bridge intergenerational audiences around the production activities of youth; others orient their work around challenges, contests, or fashion shows that provide shared purpose and goals.

Cali Design hinges much of its work on fashion shows or runway events for participants and their families. These runway shows are designed to be beautiful and exciting spectacles: Some fashion event shows have bright pink runways and participants strut their designs while parents and their friends take pictures—just like a runway show during Fashion Week. One fashion show took place at a local community fair. Anne grabbed a microphone and walked up to a stage with a large audience of family members and program attendees. After describing the program

and explaining what the participants do and the projects that they design and create, she exclaimed, “With that, we can start the music!” Participants then walked across the stage, one by one, modeling their designs and walking around the stage. “This is Tina,” Anne said as Tina strutted around with a big smile. “This is probably the simplest project you’re going to see from Tina all day. Some pajama pants are one of the first things she sewed with us.” While Anne describes outfits the audience members cheer and take pictures and record videos with their cameras. “This is a great messenger bag that Bernice did with us. Bernice just spent her spring break sewing different things with us. And you’re going to see all of them. And she got better and better!” Next up was Bobby, who wore a big scarf and walked across the stage with a model (his sister) wearing his dress:

Bobby has been coming for quite a few months now since last fall. And he’s incredible. He’s such a great sewer. His attention to detail is phenomenal. He actually finished this dress and brought it back the next week and said, “It’s not long enough. Can we add a ruffle to the bottom?” And we did.

A fashion show is an exciting and emotional event that celebrates participants’ work with their families. It fosters a shared value for fashion design production with all members of the learning environment.

With a heavier emphasis on digital production, the Hive Fashion programs created opportunities for teens to collaborate to create blogs, videos, and zines for public consumption. By working together to create digital content—from writing articles and producing “how-to” videos to capturing “street style” photos—teen participants and adult mentors often worked together toward a common goal. The capstone project for one program was the creation of a video that addressed two specific intersections of fashion and culture: the ways in which fashion builds or breaks community and how different groups are perceived because of their fashion choices. Teens worked with mentors to develop these themes and were able to decide what they wanted to focus on within each theme. They also used the material gathered for the video for an ongoing blog that captured their experiences and served as a sort of trailer for the video.

At the beginning of program meetings, the mentors would often lead a discussion about what content should be uploaded to the blog. Teen participants would suggest various photos they had recently taken or ways to write short pieces based on interviews they had been conducting for the video. When concluding the discussion, the mentors would take the teens’ suggestions and assign and distribute the work among them. While mentors were engaged and helpful, they also gave teens space to make their own decisions. Teens often consulted with the mentors and each other when trying to make decisions about different aspects of their project. In one instance, Langston (Chicago), a teen participant, and Andrew, a mentor, were working on a video segment that called into question the idea that school uniforms reduce gang activity. The opening visual needed to represent a teen who believes that school

uniforms reduce gang violence: “[student image] = [gang violence image].” Langston struggled to determine what image to use to represent gang violence. His original idea was to use an image of a gun to symbolize gang violence, but Andrew questioned whether or not that accurately portrayed the message. After a bit of discussion, Andrew suggested that they ask the rest of the group. Teens threw out various ideas, with many also suggesting a gun.

Andrew pushed them to think more carefully about exactly what message the image should convey. This made the group members work harder to think about other images they could use; however, they seemed to be convinced a gun was the best option. Further conversation between Andrew and Langston led to the idea of using text instead of an image. These types of seemingly banal interactions, which happened often in Hive Fashion programming, were vital to creating and making a sense of shared purpose among teen participants.

ANGIE

Learning to Build a Brand

Angie, an 18-year-old African American teen from Chicago, heard about Hive Fashion from a friend at high school. Angie expressed that she has been interested in fashion for a very long time, and she enjoys fashion photography and styling with her friends in her spare time. “Almost every year, I try to start a clothing brand, but it just never goes all the way through.” She was drawn to the Hive Fashion programs in particular because it felt relevant to *her*; she described the program as a “melting pot of different cultures with teens ... it’s not super high fashion, like Chanel and people you’ll never see in your lifetime. Like us, it’s really original.” She explained her typical activities as a Hive Fashion participant through roles she adopted during a number of style challenges posed by the program. “I was a fashion photographer,” she said. “I slowly became a stylist. ... We’ve gone up north to thrift stores and picked out clothes, and shopped together, and done silkscreen workshops, and T-shirt-making workshops.” One of her biggest takeaways from the Hive program, however, was learning to build a brand:

I learned more how to build a brand from Hive. Learning how to look at fashion in different ways other than just what you see. How did they make it look this way, or with videos and pictures and fashion shows, and the business side, too. Just a mixture of everything, not just the clothes someone wears.

Angie described the “business” side of fashion as something more catered to her own interests, “like actually being the mentor, rather than looking at the mentor, you know what I mean? Creative directing is something I never thought of before.” Although Angie refined her skills in fashion styling and garment construction, she also developed creative and technical skills that supported skill development in other facets of the fashion industry, such as branding through blogging:

Hive Fashion is a blog, so definitely learning better writing skills when it comes to blogging, and ways to use other programs on the computer like Photoshop, Illustrator, different programs like that. How to put it all together, basically.

At Hive Fashion, participants learn how to brand through multiple forms and stages of multimedia production, including photography, video recording, image and video editing, and sharing across social media networks. Through her work as a Hive Fashion participant, Angie learned new skill sets that are valuable to fashion and also new avenues through which to pursue both academic and career possibilities.



The Cali Design and Hive Fashion cases show how the development of important skills, such as garment construction and digital production, can be fostered in environments that engage with key connected learning principles: interest-driven activities, strong peer supports, and academically relevant outcomes. These cases also enable us to challenge and build on the connected learning model. Two central themes emerged from our data that provoke further thinking about the theory: the barriers and opportunities presented by *gendered* youth interest in fashion, and the important role of mentorship in youth's effective uses of digital media for learning.

BARRIERS AND OPPORTUNITIES PRESENTED BY GENDERED YOUTH INTEREST IN FASHION

Lowering barriers of access to educational opportunities is an important dimension of connected learning theory. Much of our research examines whether and under what conditions barriers to entry either break down or become more difficult to overcome. Gender remains an important subject of study to consider when building successful connected learning experiences.

At Cali Design participants construct interest in fashion as a feminine pursuit. Girls' interest in fashion is described by some parents as "genetic": "Since she was two [my daughter] has loved clothes," said one mom. When report author Matthew Rafalow asked another parent how long her daughter had been interested in fashion, she conveyed a similar overlap between girlhood and fashion: "Oh yeah, she's all girl. She's very opinionated about what goes with what. And she's always drawn. I always look and scour the Internet for fashion-related crafts and books where she could put things together ... she was always interested in things like that." Female participants, too, see their interest in fashion as an expression of their femininity. One young woman Matthew interviewed, Lara (10 years old, Southern California), described the relationship between fashion design and being girly:

Matthew:	What about [design] is so fun?
Lara:	I like designing clothes ... and I like being a girly girl.
Matthew:	What does that mean?
Lara:	I like being girly.
Matthew:	So part of being girly is designing clothes?
Lara:	Yes.

From this vantage point, participant interest in fashion as a gendered project spurs the interest-driven dimension of the connected learning model. Girls who see interest in fashion as girly and an expression of their identity are actively engaged in the learning activities provided by the program.

Hive Fashion regularly included a number of male participants. Male mentors and youth expressed their interests in the activities as tied to aspirations for high-quality

fashion items during childhood. One mentor, Don, explained interest in fashion from the vantage point of his own adolescence:

I grew up in Chicago with Jordans and that whole phenomenon of being just like, man, going to school and seeing people's reaction to who had on a nice pair of sneakers. That stood out to me. Even though I wasn't always able to get sneakers ... so now it's like, you know, I got my money, I can buy these sneakers. Yeah, from that aspect, I'm definitely into fashion.

For this instructor, his interest in fashion was related to a desire to participate in "sneaker culture." For Darryl, the 17-year-old participant mentioned earlier, his interest in fashion was similarly focused in presenting a style of selfhood and shared identity among peers:

Everybody's a little nervous about what they wear because how will other people think. Am I presenting myself the right way? How much of an effect does this have on my personality? My fashion is, the way dress has changed over the years is partly due to the people around me, but not so much. It's partly due to me ... I don't believe that the project changed my sense of fashion.

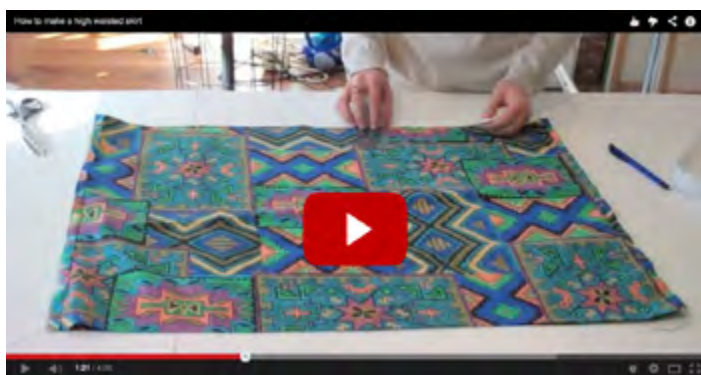
Instead of describing how his interest in fashion motivated his decision to enroll in the program, or spur his interest-driven learning, he instead emphasized that he had an interest in videography: "After doing two kinds of programs about doing video documentaries like that, I would like to spend my time writing articles and doing interviews ... I would just love to do that." The curricular breadth of Hive Fashion, including different technology emphases, encouraged more males to participate.

Both Cali Design and Hive Fashion provide two unique ways that connected learning occurs through the pursuit of interests. Cali Design participants see fashion as an interest that engages a particular form of femininity among its members. Additionally, the youth who participate in Cali Design are quite young and still likely working out their gender identities. The program may provide opportunities to not only build valuable design skills but also engage in gendered projects of selfhood. The teenagers who participated in Hive Fashion also see their fashion pursuits as a form of self-expression and identity, though the range of participation—including activities focused on blogging and videography—provide more diverse avenues for male youth, in particular, to engage.

These cases demonstrate that youth enter connected learning environments with different identities and affinities for production. In order to maintain low barriers for entry and engagement, designers of these programs should offer, when possible, a range of ways for youth to participate to spur engagement and minimize attrition.

CONNECTING YOUTH TO ONLINE RESOURCES THROUGH MENTORSHIP

Those interested in learning more about fashion can look no further than YouTube for countless online guides and other resources. For example, thousands of YouTube videos provide instructions for fashion styling and make-up application, as well as how-tos to learn sewing, sketching, and step-by-step guides to create various garments.



Screen shot of a YouTube video that provides a step-by-step guide to design a high-waisted skirt. The original video can be found at <http://youtu.be/FyPtsrGBA18>.

Some researchers, however, argue that digital media users are subject to a phenomenon called attention scarcity due to information abundance (DiMaggio et al. 2004; Hargittai 2000). Attention scarcity results in two related outcomes of importance to connected learning. On the one hand, online resources are incredibly numerous and offer seemingly unlimited potential for skill building across a variety of subjects. On the other, the vast amount of information available may be a hindrance to identifying key materials most useful for tasks at hand. To address attention scarcity, teachers at Cali Design believe that online materials are most helpful to youth when they have other supports and mentors to guide them through online resources. Opportunities for skill building need to be sharpened and guided by purpose and interests in order for it to be productive for learning.

For example, Bobby has a passion for fashion and has attended many of the Cali Design courses on sketching, sewing, and design. While an avid technology user and video game player (his father noted that he picks up computers, iPads, and video games very quickly), he did not know how to integrate online media into his own design practices before receiving instruction at the programs: "I didn't really know that many websites before Cali Design, and Polyvore was one of them. I've just been looking up pictures of different fashion garments to get inspired to sketch new ones. I just sketch them to work on my drawing." Although Bobby is a skilled technology user with great passion for fashion design, he did not know which websites to use to improve his skills. The Cali Design teachers recognized that participants such as Bobby may not have been exposed to digital literacies around fashion, so they provided technical resources and integrated Polyvore, a fashion media platform. While the programs direct participants to online resources, they also construct the websites in particular ways that render them useful for skill building. Cali Design teachers integrate Polyvore into many of their design lessons. Anne, the program owner and manager, teaches participants how to use the website to refine their fashion skills:

[With Polyvore] you create an inspiration board around an outfit, including mood and style. So for a styling class, it gives them the ability to do that. I can't take them to a store and say, 'style this look,' but with Polyvore they can create an entire mood the way, say, maybe a magazine stylist would have to create a mood for a photo shoot.

By itself, Polyvore stands as a website that allows users to identify and buy fashion garments. However, with Anne's support and mentorship, the website is transformed into a tool for learning that participants such as Bobby use both in the classroom and at home to refine their design skills. Anne believes that digital media can be a great support for fashion design learning, but that learning through these tools without mentors is difficult—"no matter how many YouTube videos you want to watch."

Parents also provide their children with support so that they may best identify and take advantage of online resources for fashion design. Lily (fourth grade, Southern California) was trying to learn how to use a sewing machine at home after receiving lessons on sewing machines at Cali Design. However, the sewing machine at home was a different model from what Lily used at the program. Her mother, Daria, explained that she and her daughter explored different media and search engines together to figure it out: "We used the CD package, the manual online ... and we put them on to learn the basics. And what we still couldn't get we looked up on Google and YouTube. [On YouTube] people have instructions for the videos. I look through it and make sure it relates." Daria also believes that investigating online resources together with her daughter allows her to filter suitable content: "She can't go on the computer by herself. I have to because I have to make sure it's kind of appropriate. You look something up and you never know what's going to pop up."

Parents, with their children, can explore online resources together to identify useful and age-appropriate material for youth learning. As seen with Lily and Daria, participants and parents can focus their engagement with media on interests and expertise development while the child's interest is driving the shared inquiry and evaluation of online resources. Cali Design participants, including learners, teachers, and parents, provide examples of how interest-driven learning can occur in an openly networked setting through strong intergenerational ties and mentorship. Connected learning advocates may do well to consider that while youth may find useful online resources on their own given the opportunity, teachers and parents can be important guides for digital media-supported learning.

REBECCA

A Mentor's Perspective of Learning through Fashion Design



Rebecca, a Cali Design instructor, had a proclivity toward creative design starting when she was young, much like many of the youth participants in her classes. “When I was a kid, I knew I was either going to be a fashion designer or a computer engineer,” she said. “I would draw pictures of me fixing computers. I’m not so great with that stuff, so obviously fashion worked out.” During her childhood, her mother and grandmother taught her to sew, and she eventually learned how to make her own clothes and bags. She had mixed experiences during school, however, that made the pursuit of fashion through formal education a bit challenging. Although she learned to sew at a young age, these skills did not fully translate to fashion course work: “I just started with a sewing class, and I was like ... oh my gosh, I don’t know what I’m doing.” However, the class gave her a foundation that allowed her to apply her interests and excel in other facets of the fashion industry: “At college I took fashion illustration, which is the class I teach now. We only did hand [drawing] stuff, and our teacher told us everyone in the industry uses Adobe Illustrator. I took an Illustrator class, and as soon as I started on the first day of class I was like, ‘I totally love this.’”

Rebecca’s own learning trajectory in fashion translates to her teaching practices at Cali Design. As a mentor, she understands that participants enter the classroom with a variety of different entry points and skill levels. “I’ve learned how to feel it out to figure out who is going to be able to do this and who doesn’t want to do it. Or if we have kids

who’ve already taken two of the sketching classes, then I make sure we do something else.” This teaching perspective, through which participants are provided a mixture of lecture and project-based assignments, augments learning lessons in ways that are tuned to the skill levels of the youth. The key to learning in the Cali Design setting, however, is that Rebecca mobilizes the skills of certain participants to help others:

If I see that out of five kids, one of them is not getting it, then I’ll usually sit next to that one and teach the rest of the class while I sit next to her ... and most of the time the other kids really want to help, you know? They’re like, ‘Oh, look, yes, you do it like that. Oh, it’s really good!’ And it actually works out—especially if they’ve come a couple times to have this ownership over [the fashion program].

As an instructor, Rebecca encourages peer-to-peer learning to maximize the learning potential of the class. Moreover, identifying participants with skills to help others emboldens their own engagement with the class: “They like being able to be like, ‘See? I can do it! I can show them how. I want to help.’ It’s fantastic to watch them do that.”

Rebecca’s own experiences as a student and a mentor at Cali Design illustrate how connected learning occurs when participants’ needs are individually tailored through instruction. Teachers can tailor their own lessons in ways that draw on the wealth of knowledge their youth participants develop to best meet the needs of all learners in the environment.

CONCLUSION



This analysis of Cali Design and Hive Fashion allows us to examine connected learning practices among youth in two environments that cater to an interest in fashion. It pushes us to appreciate how contexts may differently employ digital media to achieve important academically oriented outcomes, including skills with math, design, and teamwork, as well as technical skills with video and audio recording and editing technology.

Both cases also illustrate how youth learn digital media literacies centered on curation and presentation to varied audiences, both in face-to-face environments and in online platforms. While Cali Design instructors did not see their work as inherently “techie,” they used digital tools such as Polyvore to augment their design lessons by providing opportunities to learn tuned to the skill level of the participants. They also used digital media to connect intergenerational audiences to the everyday learning practices of the program. Hive Fashion made explicit its goal to use and teach proficiencies with digital media technology. Participants pursued fashion-centered projects that often relied on the development of skills with video and audio recorders, image editing programs such as Adobe Illustrator, and advanced video editing applications such as Final Cut Pro. It is important that these cases show that with the right supports, connected learning environments can exist across a variety of contexts, including those that may resemble classes or programs offered in many schools.

Both cases also provide examples of learning environments that have strong peer supports, a production focus, and a shared sense of purpose and community. These characteristics make them ideal connected learning environments, and they provide examples of how other programs may be similarly successful while serving a wide range of youth audiences across gender, race, and class.

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