

# Youth Roles and Leadership in an Online Creative Community

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**Abstract:** Teens within local community organizations often serve in leadership roles, such as camp counselors or program assistants. As they carry out their responsibilities, they gain work skills and the community benefits from their contributions. With young people spending more time online, how might they build similar skills while contributing to the online communities they engage in? In this paper we examine the experience of youth who have taken on leadership roles within Scratch, a creative online community. We identify the main challenges these youth encountered, the strategies they used to manage these challenges, and what they learned in the process. Their descriptions suggest a progression from learning to carry out their responsibilities in collaboration with other team members to eventually developing their own visions for improving the community. We have found that these roles provide pathways of participation and deeper engagement for youth interested in contributing to online communities.

## Introduction

Scratch is a programming language that enables children to create interactive media, such as animations, games, and stories. Scratch is also an online community, where young people share their creations and connect with other members online (Resnick et al., 2009). Inspired by Seymour Papert's idea of a "computational samba school" (Papert, 1980; Zagal and Bruckman, 2005), the Scratch online community is designed to engage members of all levels of expertise, ages, and backgrounds in learning from one another as they create and play together. In Scratch, members explore others' projects, write comments, and download and remix each other's projects. The Scratch website also includes a discussion forum, where members can ask questions, converse about Scratch-related topics, and find collaborators. Since it launched in 2007, Scratch (<http://scratch.mit.edu>) has grown into a dynamic community with more than a million registered members, primarily between the ages of 8 and 16, and over 2.8 million shared projects.

As participation in the Scratch website grew, young people contributed in ways beyond what we had originally anticipated. More and more young people took the initiative to help others—from answering questions in the website discussion forums to creating interactive tutorials to share their skills. Youth also began to look for ways to help the Scratch Team, which we are members of, including reporting issues and suggesting ideas for improving the programming language and the website. The Scratch Team saw these emergent activities as opportunities to engage members in helping create a supportive environment for the entire community. We and other team members have incorporated youth's ideas in a number of ways. In this paper, we focus on one of our initiatives: creating explicit roles for youth to volunteer their time to help out in the Scratch community.

Youth within local community-based organizations often take on leadership roles, for example, serving as camp counselors, program assistants, and peer tutors (Roth & Brooks-Gunn, 2003). As they carry out their roles and responsibilities with support from adult staff, they learn to handle challenges and develop planning, problem solving, communication, teamwork, and other work and life skills (Salusky et al., 2012). In addition to youth gaining valuable experience, the community organizations also benefit from the new ideas, perspective, and energy of youth leaders (Pittman, Irby, Tolman, Yohalem, & Ferber, 2003).

As young people are increasingly spending time online (Lenhart, Purcell, Smith, & Zickuhr, 2011), how might youth—and the online communities they participate in—gain similar benefits in roles online? In this paper, we explore this question by looking at the experience of youth who have taken on leadership roles within the Scratch online community. We first describe the roles of *community moderators* and *collab counselors* and introduce the youth that we interviewed about their experience. We then examine the challenges these youth leaders encountered, the strategies they used to overcome them, and what they learned in the process. Finally, we reflect on the opportunities for learners and designers in providing leadership roles for youth in online communities.

## Community Roles for Youth

In this paper, we focus on two key roles that youth have served within the Scratch online community: community moderators and collab counselors. We also refer to youth in these roles as "youth leaders," as they

are developing leadership skills and fulfilling authentic responsibilities in collaboration with the Scratch Team adult facilitators.

Community moderators assist in the management of the Scratch community's activities, particularly in the website's active discussion forums, which receive about 1,100 posts a day. They help answer questions, provide constructive feedback, keep discussions friendly and on-topic, and model respectful interaction in the community. They have access to a moderators' forum, where they can discuss community-related issues with the Scratch Team. The first group of community moderators were hand-picked by the Scratch Team in 2008. The selection process was shifted into an election model in 2010. Scratch members who are interested in becoming community moderators can nominate themselves and describe their interest in the role. The Scratch Team then selects a subset of nominees for community members to vote on. Since the community moderator role was created, there have been 14 moderators from 6 countries.

Collab counselors support the community in a series of online collaboration events called Collab Camps on the Scratch website. Collab Camp is a community-wide event in which participants form collaborative groups, called "collabs," to create a Scratch project. Prior to the start of each Collab Camp, we invite community members who have demonstrated the ability to give constructive and helpful feedback to become collab counselors. A collab counselor's primary responsibility is to give constructive feedback on projects created by participants of the Collab Camp. Like community moderators, collab counselors have a private discussion forum to ask questions and discuss strategies for giving constructive feedback. Since we created this role in 2011, there have been 9 counselors from 5 countries.

The Scratch Team, based in the MIT Media Lab, develops and manages the Scratch programming environment and online community. We, the authors of this paper, are part of the Scratch Team. As adult facilitators, we regularly interact with moderators and counselors, answer questions, select or encourage members to take on these roles, and discuss the latest trends and issues in the community.

We discuss youth participation in Scratch from the perspective of youth development literature, which focuses on children and adolescents developing a broad range of skills through active participation in programs, typically in out of school time (Eccles & Gootman, 2002). Some youth development studies focus specifically on adolescents' development of leadership skills as they carry out responsibilities, such as leading activities for younger children or organizing community action projects (e.g., Conner & Strobel, 2007). To date, only a few studies have examined youth leadership in online environments, and those have focused on youth working with each other as part of a group or team (e.g., Cassell, Huffaker, Tversky, & Ferriman, 2006; Turkaya & Tirthalia, 2010). The current paper focuses on youth carrying out roles with responsibilities within a broader online community, in which they help to manage online activities for people of diverse ages and backgrounds.

## Studying the Experiences of Youth Leaders

To understand the experiences of the youth in these roles, we collected observations and online activity data from the Scratch website, such as their comments, forum posts, projects, and self-reported age and gender. These observations and online activity enable us to see how they participated in the community. To understand more deeply how they saw their experiences, we also conducted semi-structured interviews. We posted a message in the moderator and counselor forums inviting them to be interviewed about their experiences in their roles. Three moderators and one counselor responded to our message. Table 1 provides brief descriptions of each youth leader. In these interviews, we asked them questions (e.g., "What has been challenging?", "Why do you continue to take on this responsibility?") to surface their challenges and the lessons they learned to overcome them.

Table 1: Brief portraits of the youth leaders

<i>Jacob</i> , a 15-year-old from Belgium, was one of the first community moderators to be invited by the Scratch Team. He started using Scratch when it first came out in 2007 and began making creative and sophisticated games that became well-known in the community.
<i>Fayth</i> , a 22-year old from the United States, was invited to be a moderator by the Scratch Team. Fayth is the oldest of the moderators and counselors. She discovered Scratch in a college course and became an active member of the community, creating many art and animation projects.
<i>Sam</i> , a 14-year-old from Canada, was chosen as a community moderator in the first community-wide moderator election. Sam began using Scratch in 2008, and has shared many game projects on the website.
<i>Jessica</i> , a 17-year-old from the United States, was one of the first collab counselors to be invited by the Scratch Team. She started using Scratch in 2009 and has created many simulations and interactive projects that express her love of math.

We used grounded theory strategies (Charmaz, 2006) to analyze all our data from interviews, observations, and documentation. Our coding and analysis led to the identification of the key challenges and strategies that the youth used to fulfill their responsibilities.

## **Learning from Challenges**

The youth interviews suggested four types of challenges that youth leaders encountered: (a) learning to carry out their role as part of a team; (b) managing their new identity within the role; (c) interacting constructively in an online medium with limited context; (d) and facing broader challenges within the community. In this section, we examine each of these challenges, the strategies youth used to manage the challenges, the skills they developed in the process, and how these experiences connect with related studies in the youth development literature.

## **Fulfilling Responsibilities Through Collaboration**

One of the first steps in becoming a moderator or counselor is learning what one's responsibilities are and how to fulfill them. Sam described how he needed to read several pages of guidelines on how to be a community moderator before getting started—and then additional instructions on the steps for carrying out each of the responsibilities.

I found that I had several pages of moderator guidelines before me before I was able to do anything. After that I found that I had even more to read on how to actually do what I needed to do, such as close topics or respond to reports.

All four youth we interviewed remarked at how valuable their fellow moderators and counselors as well as the Scratch Team were in learning how to fulfill their responsibilities. Moderators and counselors worked together closely, using their respective discussion forums to communicate and coordinate around their shared responsibilities. Jacob summarized the overall workflow of moderators as a collaborative process:

We have the moderators forum where you post a topic about this conversation. We use it a lot—whenever there is something going on and we see what people have to think about it. It's an important source of information. Because when you see how others do it, you can change yourself to match it. . . . We basically do everything together as a group. And when someone does something wrong, it's corrected by others. It's a continuous collaboration, moderation.

Learning from each other was especially emphasized by moderators, who described not only learning new forum moderation tools, but also learning how to answer questions, respond to reported issues, and to maintain a friendly and respectful tone in the discussion forums. When new moderators come into the role, they are encouraged to ask many questions and observe other moderators. For example, Sam explained that he learned “right away to ask for help rather than guess what to do” whenever he was unsure how to respond to an issue or question that arose.

Learning from each other went in both directions, as experienced moderators and the Scratch Team learned from new moderators. Jacob described how new moderators come in with “fresh perspectives” that they can share with the rest of the team. “They have been on that side and now they are moderators and they share their opinions and it makes us think more like the community thinks.” In moderator forum discussions, the Scratch Team and older moderators explicitly asked new moderators to participate and share their opinions.

Based on the descriptions of their experiences, the nature of cooperation in the moderator group resembles a community of practice. Members learn through peripheral as well as productive actions (Lave & Wenger, 1991). For example, through participating in discussions in the moderation team, Sam learned how the team thinks through decisions very carefully, which he says he had not realized before as a regular member of the community. The experience of working together on a team not only help youth learn to carry out their responsibilities, but also how to collaborate with other team members to accomplish shared goals. This ability to collaborate effectively on a team is recognized as a fundamental skill for the development of youth leadership (Conner & Strobel, 2007). For Scratch moderators and counselors, this experience extended to learning to work together on a team not only with other youth but also with adults.

## **Managing New Identities**

When youth took on a role within the Scratch community, the title (e.g., “Collab Counselor”) appeared under their name in the website discussion forums. As they began to interact with their peers in the rest of the community, moderators and counselors noticed how their peers perceived and interacted with them differently.

Jessica described how Scratch members, especially the newer and younger ones, saw her as an authority figure. While Jessica understands that she had a special role in the community, she wanted members to see her as a “big kid,” someone who is helpful and experienced but not an authority figure:

I don't really want them to think I have more authority, necessarily. I like [to convey] the feeling, especially [to] younger Scratchers . . . of sorta being a “big kid” and helping them along but not necessarily being in charge. . . . I try to construct my comments as suggestions and not “now go do this I'm in charge” because of I'm not. [Laughs.] I don't know, I guess that's the main thing, especially the younger Scratchers thought I had more authority than I did when in fact I was just trying to help them.

She carefully wrote her comments as suggestions, making sure her comments were perceived as suggestions from a peer, rather than an authority figure. Similarly, Jacob tried to act in the community as he would normally act, regardless of being a moderator. He did not want to seem “distant and unreachable and important.” He saw his role as nothing more than extra tools to do what he would normally have done in the community.

Despite the unwanted perceptions, they also recognized the value in having a formal title. Jessica found it useful to introduce herself as a “collab counselor” to members, especially to members she had never interacted with before, so they could understand why she was giving them detailed and constructive feedback. When intervening in a conflict between two Scratch members, Jacob found his title useful to explain why he became involved.

While youth leaders in face-to-face contexts also deal with perceptions of authority (e.g., Dean, 2010), moderators and counselors must negotiate this perception in an online medium. For example, signals taken for granted in person, such as facial expressions and physical appearances, are not apparent, especially in a website where members are anonymous. To protect children's privacy on the Scratch website, we do not display their age or gender, and discourage members from sharing personal information. Youth leaders must also learn to manage their identity in a community where membership is ephemeral: new members are constantly joining, and old members are leaving. To overcome these challenges, moderators and counselors actively worked to make sure that they were seen as someone who is accessible and helpful, rather than distant and important. In addition, they learned to leverage these perceptions to help them fulfill their responsibilities effectively. Learning to negotiate one's identity when taking on new roles is seen as a positive developmental outcome of community-based youth programs (Polman & Miller, 2009), and the descriptions of the youth leaders in the Scratch community suggest that they learned to manage their new identity as they interacted with their peers.

### **Using Empathy and Interpreting Signals**

Communicating within the text-based medium of Scratch comments and discussion forums can be challenging, as members usually have never met in person and what they say can, at times, be ambiguous. Jacob talked about sarcasm online and the difficulty of detecting it. For example, when a member writes, “That's the best project ever,” they may mean one of two things: either they are genuinely expressing praise or are sarcastically implying that it is not a good project.

When responding to posts like these, moderators often tried to take the perspectives of the individuals involved. For example, Fayth encountered a situation where one Scratch member posted an Internet joke that was funny to some, but was offensive to others. When handling a tricky situation like this, Fayth would ask herself to think about the people she is interacting with:

With the Scratch community, we have to deal with people of almost every age. From what I heard, the youngest users are around 5 years old, and some of the oldest, they're like grandparents already, and then there's everyone else in between. And so, I guess it's kind of like, when moderating the Scratch community, you have to think about, “Well, who am I talking to? Am I talking to them in the right way so that they can understand me?”

Fayth tried to empathize with the people involved, to understand why they might say or do the things they've done. She then took a step back and tried to “clarify everything to come to some sort of solution that is beneficial to everyone.”

For counselors who are responsible for giving feedback on projects, sometimes the lack of context made it difficult to understand who the creators are and what they needed most from feedback. Through her work as a counselor, Jessica interacted with diverse types of projects and creators. She said her biggest challenge was to respond to genres of projects she was less familiar with, especially game-related projects. Because most of her projects have been simulations and math-related projects, at first she felt that she may not be able to contribute any valuable feedback, especially if it was an advanced game project.

To better understand what project creators might need, Jessica looked to other cues such as what the creators write in their projects notes and other projects they've created. As she described:

Simply reading the project notes gives it away. Often Scratchers will include hints about what they're particularly proud of: "We spent hours perfecting the timing!" . . . Of course, glancing at some of their other projects might provide a hint too.

Jessica used these new cues to understand what project creators cared most about in their project. Rather than writing a comment about what she would do and what she cares about, Jessica crafts her comments so that they are most relevant to the creator and their project vision.

The ability to give others' constructive feedback is a key skill that youth in local community-based programs say they learn through their participation (Dworkin, Larson, & Hansen, 2003). The youth took on the challenge of communicating effectively and constructively in this medium by striving to consider as much as possible about the individual members in their responses, including reading their project notes to understand their intentions and viewing other projects they had made. The ability to consider others' perspectives and communicate with consideration for differences are considered core skills for adolescents to develop (Lerner, 2009), and their roles provided opportunities for the youth moderators and counselors to practice and refine these skills.

### **Developing a Vision of Community**

When young Scratch members took on these roles, they transitioned from being a creator—designing and sharing projects on the Scratch website—to a role where they learned new responsibilities and experienced new ways to interact with the entire community. Through these experiences, they became aware of community-wide dynamics and challenges they had not known of before. For example, Jessica saw more clearly the challenges newcomers encounter on Scratch and became more sympathetic to them over time.

People want to work with [expert Scratch members] . . . so they may not give new people as much of a chance in their groups. I noticed a lot of [new Scratch members] never managed to get a group together. Probably [new Scratch members] didn't really know many people from the Scratch website. So that made it hard for them.

When discussing the community, all four youth leaders described what they wished for the community and what they wanted for their peers to experience. Fayth described how she wanted to help others in the community have the kinds of positive experiences she had. Similarly, Sam believed that the community should be "welcoming to everyone and really nice" and "appropriate for all ages."

These visions for community translated to how they wanted to improve the community. As a moderator, Sam found that he spent a significant amount of his time responding to reported issues and other forum maintenance tasks, such as moving posts to relevant topics and closing threads. However, rather than only reacting to and cleaning up content, Sam wanted the moderators to also focus on initiating positive interactions:

One of the things that we don't do enough is put positive things in the community. We take out the negative things, but we don't put positive things as much as we should. And I think that's something that should be changed.

As Sam became more experienced as moderator, he also began working with the Scratch Team to conceptualize a "welcoming committee" in Scratch, a group of Scratch members who are interested in helping newcomers get started. As of this writing, this committee has been implemented on the website, with newcomers being greeted by youth volunteers. Jessica is now helping the Scratch Team to manage the growth of the committee.

When our youth leaders first began, they operated under the expectations of their roles and worked hard to fulfill them. However, as they began to interact with their peers and actually act on their responsibilities, they started to develop a vision for the community that, at times, extended beyond the expectations and boundaries of their role. They became motivated to do more to support their peers in having positive and constructive experiences in the community. This process of youth leaders envisioning and contributing to improvements fits with the ideal of youth development programs in which youth not only develop leadership skills, but also contribute new ideas, perspectives, and energy to address problems within the community (MacNeil, 2006; Camino & Zeldin, 2002).

## Discussion

In this paper, we examined how young people developed leadership skills within these roles online. In their experiences, we see a progression in their development. When they first came into their roles, they needed to learn their various responsibilities, looking to each other to learn how to fulfill them. Even after they learned the ropes, they continued to learn by collaboratively working with other moderators and the Scratch Team. By taking on a role and title, they were faced with the task of learning to negotiate their new identity within the Scratch community, managing perceptions of being an authority figure, but using the recognition of their role and title to carry out their responsibilities. They were also learning to interact with diverse members of the community, which developed into new connections, but also new challenges to understand people who had different interests and backgrounds. And, as they became more aware of the dynamics and challenges across the community, their participation transformed. From fulfilling responsibilities outlined by the Scratch Team to developing their own visions for themselves and for the community, these youth leaders saw new ways to create and sustain a supportive community.

Embedded within the youth's experiences are structures we designed to support them—structures that we continually redesigned with input from our youth leaders. Moderators and counselors discussed and coordinated within separate website discussion forums, which became valuable spaces for them to learn from one another. We developed “guidelines” which describe their responsibilities and suggest ways for them to interact with other community members. We iterated on these guidelines together with the youth leaders, especially as they developed new strategies to carry out their responsibilities of moderation or giving constructive feedback. And as they developed new ideas to support the community, we worked together with youth leaders to design new structures, such as the “welcoming committee” to greet newcomers.

The youth's contributions through these roles have benefited the entire community. While the Scratch Team accepts overall responsibility for the website, we depend on discussions with youth moderators and counselors as a way to collectively think through choices related to the community and the design of the website. These interactions between the Scratch Team adult facilitators and the youth have developed into partnerships, where we work together to achieve shared goals. The youth leaders have provided valuable insights into the community—insights they have gained from their authentic participation. These insights have influenced our views of the community and have helped us better maintain the community. Finally, the community not only benefits from the contributions of their role (e.g. keeping forum discussions friendly and giving constructive feedback), but these youth illustrated to other members how these roles can be pathways of participation.

The experiences of these youth highlight the opportunities that youth leadership roles in online settings can provide for the youth, their adult partners, and the communities they participate in. While many youth in the community already help out independent of these roles, these roles created explicit and visible pathways of participation. Such visibility can be valuable for youth who may be interested in contributing, but may not stumble into these kinds of activities on their own. This visibility is especially important in open and large online communities, where most actions—while public and persistent online—may be buried in the rapidly changing and increasing activity of the community. From these roles, we saw how youth expanded their vision and crafted new ideas for what was possible in the community. These youth envision a community where they and other young people can create and share their projects in a supportive and safe environment. Designers of online communities can create these opportunities for their members and for their community through these youth leadership roles. Such participation can foster an environment where members are actively taking ownership of the community and giving back in multiple ways. As Jessica, the collab counselor, so aptly stated, “When everyone helps a little bit, we all benefit.”

## References

- Camino, L. & Zeldin, S. (2002). From periphery to center: Pathways for youth civic engagement in the day-to-day life of communities. *Applied Developmental Science, 6*(4), 213–220.
- Cassell, J., Huffaker, D., Tversky, D., & Ferriman, K. (2006). The language of online leadership: Gender and youth engagement on the Internet. *Developmental Psychology, 42*, 436-449.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London, UK: Sage Publications.
- Conner, J.O. & Strobel, K. (2007). Leadership development: An examination of individual and programmatic growth. *Journal of Adolescent Research, 22*, 275-297.
- Dean, C. (2010). *The ecology of peer tutoring: Perspectives of student staff in one high school writing center* (Doctoral dissertation). Retrieved from <http://digitalcommons.library.umaine.edu/etd/488/>
- Dworkin, J.B., Larson, R., & Hansen, D. (2003). Adolescents' accounts of growth experiences in youth activities. *Journal of Youth and Adolescence, 32*, 17–26.
- Eccles, J. S., & Gootman, J. A. (Eds.). (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press.

- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation (1st ed.)*. Cambridge University Press.
- Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social media & mobile Internet use among teens and young adults*. Pew Internet & American Life Project. Retrieved from <http://pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx>.
- Lerner, R. M. (2009). The positive youth development perspective: Theoretical and empirical bases of a strengths-based approach to adolescent development. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology*. (2nd ed., pp. 149–163). New York: Oxford University Press.
- MacNeil, C. A., (2006). Bridging generations: Applying “adult” leadership theories to youth leadership development. *New Directions for Youth Development*, 109, 27-43.
- Papert, S. (1980). *Mindstorms: Children, computers, and powerful ideas*. New York: Basic Books, Inc.
- Pittman, K., Irby, M., Tolman, J., Yohalem, N., & Ferber, T. (2003). *Preventing problems, promoting development, encouraging engagement: Competing priorities or inseparable goals?* Washington, DC: The Forum for Youth Investment.
- Polman, J. L., & Miller, D. (2010). Changing stories: Trajectories of identification among African American youth in a science outreach apprenticeship. *American Educational Research Journal*, 47, 879–918.
- Resnick, M., Maloney, J., Monroy-Hernandez, A., Rusk, N., Eastmond, E., Brennan, K., et al. (2009). Scratch: Programming for all. *Communications of the ACM*, 52, 60-67.
- Roth, J. L., & Brooks-Gunn, J. (2003). What is a youth development program? Identification and defining principles. In F. Jacobs, D. Wertlieb, & R. M. Lerner (Vol. Eds.), *Enhancing the life chances of youth and families: Public service systems and public policy perspectives: Vol. 2. Handbook of applied developmental science: Promoting positive child, adolescent, and family development through research, policies, and programs* (pp. 197-223). Thousand Oaks, CA: Sage.
- Salusky, I., Larson, R. W., Wu, J., Griffith, A., Raffaelli, M., Sugimara, N. & Guzman, M. (2012). *How youth develop responsibility: What can be learned from youth programs*. Manuscript submitted for publication.
- Tversky, D., & Tirthali, D. (2010). Youth leadership development in virtual worlds: A case study. *Procedia Social and Behavioral Sciences*, 2, 3175–3179.
- Zagal, J. P., & Bruckman, A. S. (2005). From samba schools to computer clubhouses: Cultural institutions as learning environments. *Convergence: The International Journal of Research into New Media Technologies*, 11(1), 88–105.

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