

*Participation and collaboration within online communities can support, inspire, and enable young people to become active creators (and not just consumers) of interactive media.*

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## Making projects, making friends: Online community as catalyst for interactive media creation

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WATCHING MUSIC VIDEOS on YouTube. Chatting about the latest dramas at school on Xat. Playing video games on Addicting Games. Browsing friends' profiles on Facebook. These are just some of the ways in which young people engage with digital media online. Although young people spend a considerable amount of time online, they are typically engaged as consumers of media and have fewer opportunities to engage as creators of media, particularly as creators of interactive media.

All young people should have opportunities to be creators of interactive media. Why? In our day-to-day lives, we are surrounded by interactivity, from video games to electronic door locks, to online ordering systems, to mobile phone applications. And just as we value the abilities to consume (read) as well as create (write) text, our ability to consume interactive media should be accompanied by complementary abilities to create interactive media. It is important for young people to be able to create video games, not just play

them; create Web pages, not just browse them; create simulations, not just observe them. Being a creator of interactive media enables broader understandings of how these artifacts are created and function, understandings required for full participation in and negotiation of a technologically saturated society.<sup>1</sup>

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### *Young people as interactive media creators*

To be creators and express themselves through interactive media, young people need to develop certain dispositions and capacities. In addition to cultivating capacities for mathematical and computational expression and manipulation, the creation of interactive media requires developing design, problem-solving, and socio-emotional capacities. It is sometimes expected that because they have always been surrounded by interactive media, young people have inherent understandings and use these artifacts and technologies effortlessly.<sup>2</sup> But development of the dispositions and capacities for media creation should not be assumed.

Young people need to have access to contexts in which they can develop as creators of interactive media. This development is not a wholly individual process; it is important for creators to be situated in and supported by a community of practice that connects them to other people, resources, routines, and goals.<sup>3</sup> In this article, we describe one such context, using the Scratch online community as a case study to explore how different forms of participation and collaboration within a community can support and enhance the ways in which young people develop as creators of interactive media.

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### *Scratch and the Scratch online community*

Scratch is a programming environment, developed by the Lifelong Kindergarten group at the MIT Media Lab, that makes creating interactive stories, games, art, and simulations easy.<sup>4</sup> A main goal of Scratch is to enable young people to engage in

**Figure 7.1. The Scratch programming environment, sample projects, and programming blocks stack**



construction-oriented, personally meaningful acts of creative expression. Projects are created by snapping together digital programming elements or blocks, as one would snap together interlocking plastic bricks. These projects can then be shared with an active online community consisting of more than 500,000 registered members. In the process of creating and sharing projects, young people learn core computational and mathematical concepts, while also learning important strategies for designing, problem solving, and collaborating.

The Scratch Web site, launched in May 2007, has become a vibrant online community, with members sharing more than 1 million projects. Each day members of the worldwide Scratch community (mostly ages eight to sixteen) upload roughly fifteen hundred new Scratch projects to the Web site—on average, a new project every minute. The collection of projects is incredibly diverse: interactive newsletters, science simulations, virtual tours, animated tutorials, and many others, all programmed with Scratch's graphical programming blocks (Figure 7.1).

### *Bringing together socializing and creating*

But how does access to and participation in this online community support young people as media creators? In addition to viewing the collection of projects uploaded to the site, which serves as a

large library of creative possibility and inspiration, members can download projects to study their construction, remix downloaded projects to be reshared online, create galleries of related projects, comment on projects to ask questions and provide feedback, and discuss issues in the forums. These features are appropriated by members in a variety of ways. Through our observations of the community, we have developed a framework for characterizing the different forms of participation in the community that emerge from these varying processes of appropriation.

We describe participation in the online community in terms of a spectrum ranging from socializing to creating. At one end of the spectrum, we observe the socializers—participants who are predominantly motivated by socializing, the group dynamics, and interactions with others. A socializer might use the gallery creation feature of Scratch to create spaces that can be used as chatrooms without contributing any projects. At the other end of the spectrum, we observe the creators—participants who are predominantly motivated by creating, by the individual processes and products of programming. A creator might focus predominantly on the programming aspect of Scratch’s Imagine, Program, Share tagline and express frustration when projects that they perceive as less technically sophisticated receive greater attention from the community, acquiring more views, comments, bookmarks, downloads, or remixes. (We acknowledge that even these extremes are moderated by their context: the social aspects are influenced by an overall atmosphere of and interest in creation, and the activity of creating projects for the Web site is influenced by the social networking environment.)

We see problems with participants dwelling in the extremes. Socializers are deprived of opportunities to focus on interactive media creation and express themselves with new forms. Creators lack the benefit of learning with and from others, developing the community’s and their own capacities for creation. We are most interested in, and see some of the most exciting interactive media creation taking place in, the middle space, where participants draw on the best of the socializing and creating practices.

Participation within this middle space is diverse, with unanticipated creative forms emerging through multiple collaborative configurations. In the following sections, we describe three instances of young people who occupy this socializing-creating middle space to great effect, imagining, designing, and sharing interactive media that would not have been possible through only socializing or creating processes. We use these narratives to demonstrate not what every participant's experiences are like, but rather to give a sense of what is possible.

*Partner production: Animating Jodie the Superheroine*

With bright colors and bold structure, a project listed in the Newest Projects section on the front page caught the eye of Nadia, a high school student and member of the Scratch online community. Nadia, who enjoys creating animations with Scratch, went to view the project, hoping it was an animation. But to her surprise, she found that the project, created by another high school student named Katie, an unknown Scratch community member from a different country, was simply a static image, not interactive or animated: "I was looking on the home page and I saw one that popped out. It was of a cat-like creature. I read the description and thought it was an animation, but it wasn't. So I left it."

A few weeks later, Nadia noticed another project by Katie, which encouraged her to explore Katie's collection of projects. There Nadia found hundreds of these static images, with accompanying notes describing the stories behind the images, focusing on the adventures of a superheroine named Jodie. Nadia imagined the possibilities of bringing these stories to life through animation and proposed a collaboration to Katie by leaving a comment on one of Katie's projects: "Can I try to make moving sprites of your characters? We could work together to make this animated if you want. But only if you want to. Thanks. (I like these drawings you do.)"

Katie responded positively to Nadia's suggestion, and for more than a year and a half, the girls have collaborated on animating Jodie the Superheroine, producing ten episodes in a series about

Jodie. Through this collaborative process, initiated and maintained solely by Katie and Nadia, Katie has learned more about programming with Scratch, expanding her creative capacities beyond static images, and Nadia has learned more about aesthetic expression with Scratch, exploring new ways of communicating ideas and emotions through drawing.

***Group gatherings: Establishing critique groups for feedback***

“The worst feeling in the world,” wrote Albert in a post on the Scratch community forums, “is to pour your hard work and creativity into a project, only to have it ignored completely by the Scratch community.” With this post, Albert, a middle school English teacher, had identified a core challenge of the Scratch community. Given the overwhelming number of new projects appearing on the site every day, it is impossible for every project to get the care, attention, and feedback it deserves.

In response to this challenge, Albert proposed a solution: Scratchers could form critique groups, following the practices of visual artists and writers. Critique groups consist of five to seven Scratchers who come together to discuss projects within a genre and provide feedback to one another. Albert created a template for providing feedback: “(1) Describe or summarize the project; (2) Notice one thing you liked or could relate to about the project; (3) Answer any specific questions the author has about the project; (4) Ask questions to clarify the author’s intention and suggest alternative choices the author could experiment with; and (5) Encourage the author to keep working on it.”

Albert started a critique group as a model for others. Based on the early successes with his group, Albert encouraged others to start their own critique groups. Seeing the helpful comments and ideas emerging from this small group format inspired other Scratchers, and numerous critique groups have since been established. From critique groups for different skill levels to critique groups for different project genres, the groups have been a way for members of the Scratch online community to connect their social and creative practices by giving and receiving thoughtful feedback.

*Collective connections: Inspiring and drawing inspiration from Memes*

Memes spread rapidly through the Scratch online community. Sometimes connecting to broader popular culture and sometimes instigated from within the community, Scratch memes take different forms: slogans, musical excerpts, images. Nery, a middle school girl who loves designing and animating characters, did not expect that her work would become the source of a community meme: a sassy, lovable reptile character that she had been independently working on at home and then shared online.

The community's infatuation with Nery's reptile pets began unassumingly, with Nery posting stories, games, and animations featuring her self-drawn reptile pet. A few other members of the community started to create projects as a tribute to the character, creating fan art that extended the adventures and experiences of Nery's reptile. This fan art created further visibility for the pets within the community, and over time hundreds of fan projects and companion reptile pets have been created. All of this activity, initiated by Nery's character, has expanded beyond the Scratch community, with the characters being ported to other creation spaces, such as Spore, a game in which players develop species, and Roblox, an online environment in which participants build artifacts with virtual bricks.

Nery's participation in the community has not only changed other members' creative practices, it has also changed her own creative activities. She draws inspiration from other community memes to expand her creations. One story involving her reptile pet, for example, acknowledged a current Scratch community obsession with hamsters. Nery also draws on community interactions and expertise, acknowledging that the development of her ideas and programming abilities lies within the community. "A lot of my ideas sprung from Scratch 'roleplaying' [acting out stories through comments and projects] which is quite popular with some of the users here. [An online friend] taught me most of my scripting, but I've also learned from the programming 'greats' over time."

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### *Community as catalyst for interactive media creation*

The framework of the socializing-creating middle space provides a way of thinking about these narratives, both through the particular social configurations that are enacted and the units of creation supported by these configurations. Socially, we see that the Scratch online community has enabled multiple, diverse configurations: a more intimate partnership for Nadia and Katie, a small working group for Albert and other critique group participants, and a more diffuse (but nonetheless influential) relationship between Nery and a large number of Scratchers. Within these social configurations, different units of creation are explored: Nadia and Katie focusing on project construction, Albert attending to project improvement and reflection, and Nery contributing to (and deriving) project inspiration.

Despite these differences in social configuration and project creation within the socializing-creating space, all three of these narratives demonstrate how the online community enabled new forms of participation, catalyzing interactive media creation for everyone involved. Access to the community created opportunities for individuals to imagine new possibilities for creation; develop their technical and aesthetic abilities; create more technically, aesthetically, or conceptually sophisticated projects than would have been possible to create independently; and reflect on their development as creators of interactive media.

But even with all of the possibilities afforded by the Scratch community, there are cautions. The community and its socializing-creating middle space can inhibit just as it encourages. For example, a workshop participant looked at projects in the online community and felt intimidated by what he perceived to be unattainably high-quality work, and a current online community member was discouraged by an early experience with negative feedback. This is somewhat unsurprising, as interacting with others (particularly in a communication medium such as an online community) and giving and receiving critical feedback are skills that require practice. In response, we need to enable numerous entry points for



participation, where participants can safely enter into the community with opportunities to learn, and also contribute to, the community's habits and practices.

The narratives of Nadia, Katie, Albert, and Nery emphasize the potential of connecting social practices and creation practices. We hope that ideas and lessons learned from the Scratch community can be applied within other online communities and face-to-face contexts, enabling a wide variety of young people to go beyond interacting with media to become creators of interactive media.

### Notes

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