

Best Practices for Designing Connected, Digital DIY Media Platforms for Kids



The Kids Do-It-Yourself Media Partnership

2011-2018

Summary Report of Key Findings

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Best Practices for Designing

Connected, Digital DIY Media Platforms for Kids

Where children's creations used to be relegated to refrigerator doors and classroom bulletin boards, they can now be shared with an audience of millions thanks to connected digital technologies. Between 2013 and 2018, the Kids DIY Media Partnership looked at how and where children create and share media online, and at the designs, regulations, infrastructures, and technologies that underpin the platforms kids use. Our focus was on exploring the opportunities and challenges associated with kids' DIY media, and with finding ways to best foster a rights-based, inclusive, child-centric approach to children's online media-making and sharing. Working with Canadian and American academics, designers, media producers, child advocates, educators, and NGOs, we identified many strengths in the kids' DIY media landscape. We also spotted some areas for improvement.

Our project began with a content analysis of 140 websites where children can share everything from fanfiction to computer programs, physical media to digital videos. We also looked at the laws and regulations that govern these websites. Subsequently, we conducted seven case studies of exceptional, productive models of children's digitally connected DIY media production and participation: Algodoo, DIY.org, Gamestar Mechanic, Roblox, Scratch, Storybird, and Tate Kids. We conducted focus groups with children who use DIY platforms and held workshops with adults who design them. Together, all of this information has resulted in the recommendations provided here: research-based, user-supported best practices for designing DIY media platforms aimed at (or inclusive of) children.

Our research has shown that there is no single best way to support children's media making. As a result, we propose a range of principles to consider when designing for and with children. We begin with ways to improve creation, sharing, collaboration, civic engagement, self-representation, and education; next, we turn to legal concerns such as child-friendly privacy policies and copyright regulations; finally, we consider how platforms can be child-friendly and age-appropriate.

Opportunities for Creation

At its core, DIY media is about creativity. To be considered DIY, platforms must provide children with places to create anything from a virtual world to a short story to a digital avatar for connected gameplay.

Many platforms offer children virtual versions of analogue activities, such as drawing pictures or writing stories. Others offer children tools for creating newer media forms, such as games, but only at a very basic level. We recommend that DIY media opportunities be expanded to include more activities for which digital tools play an integral role, and which allow for more complex, multi-media creations.

1. Provide children with a broad range of design features and complex DIY media opportunities. Make use of the digital medium to provide children with venues for doing things they cannot do in analogue environments.

When given creative license, children often draw upon existing material. In some cases, this means remixing and modding their peers' creations; in other cases, this means adapting content from favourite television programs and video games:

2. Facilitate children's remixing and modding of their peers' works. Provide children with better access to each other's creations, so that they can build on each other's work.
3. Allow for better integration with and access to material under copyright. Corporate interests must not override those of children. DIY media users must be permitted to make use of copyright material in their creations to the full extent permitted by fair dealing.

Opportunities for Sharing

Sharing is integral to the DIY media creation experience. For children, sharing their creations and benefitting from the advantages associated with sharing are key motivators for creating media on a connected platform. Sharing is important for understanding what is possible, learning new methods, and becoming part of a creative community:

4. Give children opportunities to share their creations. Provide a full, robust system for the distribution of DIY media creations within and beyond the confines of the virtual world in which the creation has been made or posted. Ensure that methods for sharing (and for viewing work that has been shared) are easy to access and easy to use.
5. Provide curated public venues for sharing. Featured user creations should be easily accessible—for example, on the home page or another page that is easy to locate. Kids need to be able to find others' works as well as share their own.

Some of the most engaging platforms we analyzed shared users' media on their front pages, giving easy access to everything from recent creations to popular projects to curated content

that showcases new techniques. Some fanfiction sites even feature writing under revision, providing kids a great opportunity to learn from seeing how their peers have progressed from one version to the next:

6. Find ways to make the sharing process iterative. Allow children to save and share multiple versions of their work. Provide venues for showcasing progress.

Children gain a lot by sharing with their on-site peers but also from sharing with—and receiving feedback from—friends and family who do not use the platforms:

7. Opportunities for sharing should not be restricted. Consider providing children with ways of sharing their creations with family and friends who do not use DIY media platforms.

Storybird provides a model for both personal and public sharing. Participants can distribute their work to friends and family via a provided link. At the same time, material to be shared publicly is submitted for moderation; once it has been cleared by an in-house team, it is posted so that it can be viewed by the site's other creator-participants and by the broader public. While subscribers have their creations reviewed and publicly posted more quickly than non-subscribers, all users can share their works immediately with friends and family.

For kids to be able to share their work off-platform, there must be mechanisms to facilitate sharing. The easier it is to share, the more likely children are to do so:

8. Do not require children to have access to third-party applications in order to share. Children should not need access to Facebook or other social media platforms (especially those that ban children under 13) to share their creations with family and friends.

Opportunities for Collaboration

Collaboration exists alongside—and often as a result of—sharing. To increase collaboration, kids need opportunities to interact with each other:

9. Provide plentiful venues for interaction. For example, give users opportunities to “like” and comment on each other's creations. Provide opportunities for exchanging constructive criticism.

By sharing their creations, kids learn how to engage with an audience and contribute to something bigger. Sharing their works and viewing and commenting on those of others lets them practice providing and accepting constructive criticism. To foster these skills, platforms must encourage sharing. They can do so by providing kids with ways of seeing whether their work interests other users: for example, platforms can provide page view counters and buttons for “favoriting”, and so forth.

Allowing users to comment on each other's creations facilitates socializing via shared interests and can lead to collaboration. Platforms can encourage a constructive environment by having designers provide motivational comments and by training children to provide high-quality feedback on their peers' work:

10. Create an environment that fosters creative collaboration rather than hampering it. Protect this positive environment via peer and third-party moderation of forums and opportunities to report abuse.
11. Encourage social interaction through forums, user chat, and other means of communication. Consider how social interaction can be used to encourage collaboration. Have designers and user-leaders model constructive criticism and motivational comments.

Opportunities for Civic Engagement

A major strength of kids' DIY media is the opportunity it provides for civic engagement. Children can use DIY media platforms to practice collaborative behaviour that has lifelong, real-world applications:

12. Design platforms that support children's civic engagement and enable them to develop digital citizenship. Provide them with opportunities to voice their opinions, engage in civil debate, and have input on decisions that will affect them. Ensure they are informed of their rights and responsibilities.
13. Provide children with opportunities to become leaders: encourage peer moderation and peer mentorship. Invite children to provide feedback on how their platforms are designed, ruled, and regulated.

If kids are going to practice civic engagement, they need good behaviour modeled for them:

14. Develop an age-appropriate model for teaching children about public accountability, how to participate in on-platform moderation, and how to engage in civil communication and creation.
15. Provide ways for children to report inappropriate conduct and content. Engaging children in the moderation process will help them take ownership of the platform and will hone their civic values.
16. Where possible, provide additional moderation and content-vetting by platform staff. Be transparent about how these decisions are made.

Opportunities for Self-Representation

DIY media platforms allow children to represent themselves via online profiles. Detailed profiles provide users with a sense of self while also showcasing their accomplishments and creations, and offering them a way to connect with others who share their interests:

17. Offer children the means to express their identities. Foster self-representation through tools such as modifiable profiles and opportunities to customize personal pages. Let users curate content for their profiles and for the platform.

There are some excellent examples of creation-based profiles on DIY media platforms. For example, the user profile on Scratch includes not only a thumbnail image and details about the user's on-site experience but also examples of the user's works with the option to highlight a featured project. Profiles on Scratch can also feature projects that the user has favorited, collections of projects they have curated, and projects and people they follow (and those who follow them) (see figure 1). By curating and featuring other users' works, profiles become a keystone for networked communities:

18. Provide tools that can be used to connect users. Curated projects, pages to feature, likes and favourites, and lists of friends and collaborators are all ways that children can build networks.

While representing themselves online can provide kids with an excellent opportunity for identity formation, platforms must still protect them from identity theft or worse:

19. Ensure that profile-building tools respect the privacy and protect the safety of children. Do not allow children to share information that will put them at risk.
20. Provide guidance on what information users should share and how to best represent themselves online.

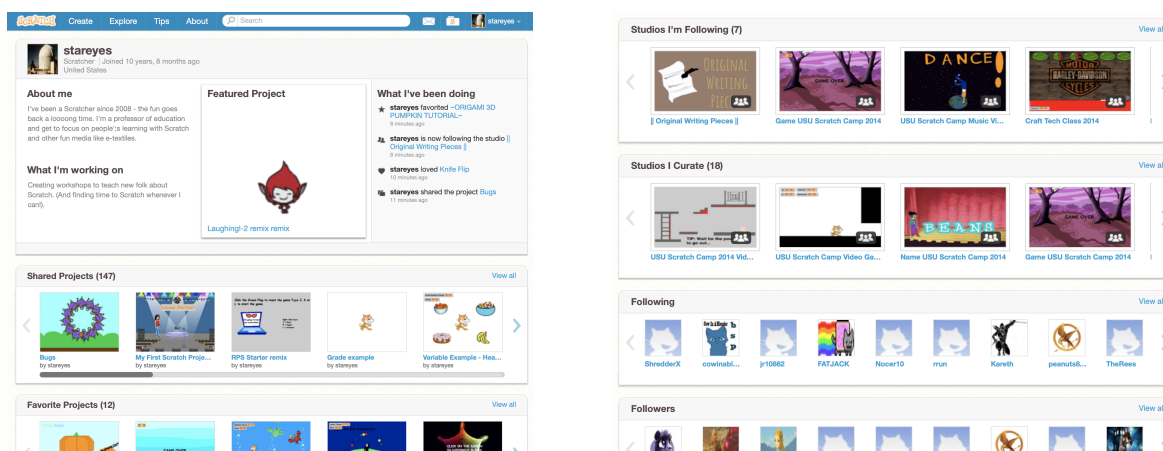


Figure 1. Side-by-side views of the extensive Scratch profile.

Opportunities for Education

In order to make the most of DIY media platforms, kids need instruction. While most platforms provide introductory tutorials on tools and techniques, few help users develop the deeper skills and critical awareness that complex, meaningful projects require:

21. Provide comprehensive and compounding opportunities for education. Children need instruction for where to begin when using DIY media platforms, but they also need advanced resources to develop their skills and projects.

The platforms we looked at offered a range of educational opportunities. Some provided written and video tutorials; others offered user-generated tutorials; others still rewarded users who engaged in educational activities with badges or access to additional features.

For example, DIY.org provides patches in more than a hundred different categories, from acting to rocket building to cartooning. Users not only receive assistance developing new skills, but they also earn certifications to display on their profiles, thus showcasing their expertise.

Gamestar Mechanic requires users to improve their skills to access certain areas of the site. Users proceed through a set of quests, each of which teaches a technique; after completing a set number of quests, users are rewarded with privileges—for example, the ability to publish their own games (see figure 3).

Some platforms use special events to develop users' skills. For example, Storybird hosts monthly writing challenges to encourage kids to experiment with techniques such as point of view and brevity (see figure 4). Not only do special events encourage users to develop new skills, they also have the benefit of facilitating user interaction.

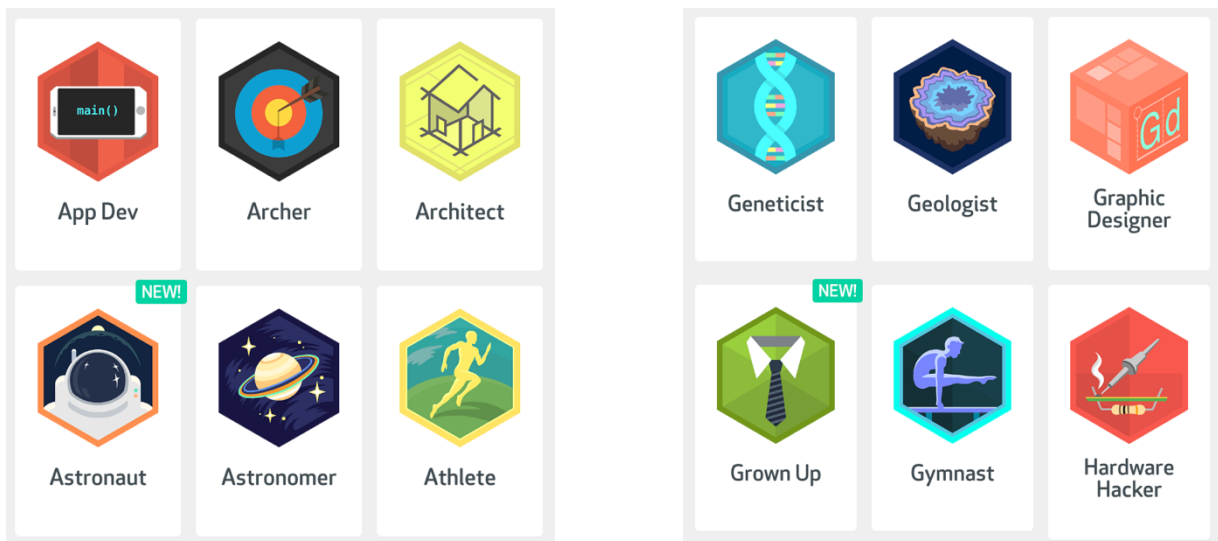
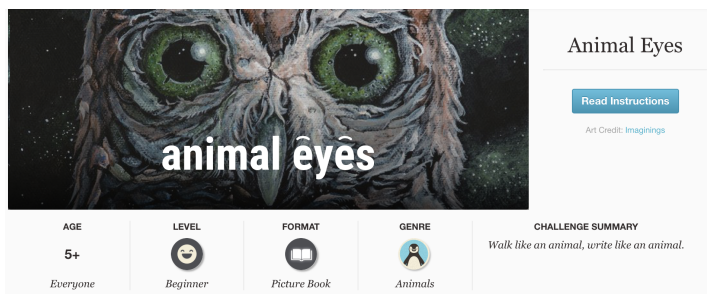


Figure 2. DIY.org rewards users with patches for developing new skills.



Figure 3. Gamestar Mechanic quests allow users to earn publishing privileges and design tools.



Ever wondered how a swooping owl sees the world? What about a mountain lion on the prowl? Or a salamander hiding in a stream?

For this challenge, we want you to write a story from the **Point of View** of an animal. Point of View (or **POV**) is how a character sees things in a story. For example, a tiger's POV might be thrilling, while a giraffe's POV is contemplative, observing the world from way up high. A bat's POV is quick and always on the move, but an elephant's POV is slow and patient.

When writing from a specific **Point of View**, there are some things you should think about:

The stories in this month's roundup demonstrate just how much creativity and growth you all have to offer. One thing was clear when we were reading these: whether you're a lovely butterfly, a soaring raven, or a curious owl, you're all creative Story Birds!

Take a look at the featured stories for **October's Animal Eyes Challenge**:



[Wordless Sky by ArcticWolfLady](#)

Not all perspective has to be direct. Sometimes, as in this story, a point of view can be expressed through more literary elements like lyrical prose and symbols.

Figure 4. Storybird's October 2018 "Animal Eyes" challenge focusing on the technique of perspective: original challenge (left); roundup of featured submissions (right).

Child-Friendly Privacy Policies

Underlying the design of DIY media websites are the rules that govern the national and global digital environment. In some cases, DIY media opportunities are hampered by these regulations. In other cases, failure to comply with regulation puts children at risk:

22. Comply with COPPA and PIPEDA regulations. Where compliance is not possible, lobby governments for change rather than contravening regulations. (Recommendations for improving regulations are provided in a separate policy recommendation document.)

Although COPPA and PIPEDA have been designed to protect children, our study has shown that their protectionist stance—with its focus on shielding children from digital predators—also curtails children’s freedoms:

23. Be aware of how attempts to protect children may also limit their freedom of expression. Find ways to respect children’s rights to share creations, interact with peers, and participate in digital civic engagement.

In an effort to adhere to COPPA and PIPEDA regulations, many DIY media sites err on the side of caution, with results that range from overly restrictive to downright deceptive:

24. Do not use off-the-shelf or blanket privacy policies covering more than the platform provides. Identify the relevant national and international data and privacy policies and apply them appropriately.
25. In addition to securing parental consent (as required by COPPA), obtain children’s assent to privacy policies. If children are being asked to read and accept privacy policies, ensure that the documents are written (or summarized) in age-appropriate language. Develop a system that requires children to discuss privacy policies with a parent or guardian before agreeing.

Be transparent about the opportunities that the platform provides. Children should not be expected to discern whether a website offering DIY media makes good on its claims:

26. Be upfront about the website. Do not position a website as allowing sharing and collaboration if it is, in fact, limited to independent creation.

Copyright Regulations

Copyright concerns play a role in many of the issues influencing children’s participation on DIY media platforms. With respect to creating, children need to be granted (and subsequently understand) copyright; they also need to be given fair dealing privileges for remixing and modding works—especially when they are reusing copyright material:

27. Determine what rights children have over their creations and clearly communicate these rights to them.
28. Treat children as copyright owners rather than potential copyright infringers. The focus on copyright must not be limited to how it serves corporations and platforms.
29. Platforms should be designed with an awareness of how protecting corporate copyright may curtail children’s creativity. Children are often interested in reusing material under

copyright—for example, using television or book characters or retelling stories—and should be permitted to do so to the extent that laws allow.

DIY media platforms should allow children the benefit of fair dealing:

30. Provide children with opportunities to access and reuse copyright material as permitted under fair dealing. Corporate desires to control their products must not override children's legal right to reuse material.

In our work with focus groups, we discovered that many children do not fully understand the concept of copyright. They do not always see their creations as their property, nor do they understand the limits of others' ownership. DIY media platforms have a role to play in educating children about copyright, which starts how the concept is dealt with in terms of service agreements:

31. Collaborate with developers and lawmakers on child-friendly copyright laws for digital DIY media creation. Make sure to take account of how fair dealing exceptions apply to children.
32. Do not use off-the-shelf or blanket terms of service. Ensure that terms of service documents are written (or summarized) in age-appropriate language, and that a system is in place to require children to discuss the terms with a parent or guardian before agreeing.
33. Make sure that terms of service clearly grant children ownership of and rights over their work. Provide children with on-platform opportunities to engage with and learn about their rights and responsibilities as authors and artists.
34. Wherever possible, promote the use of Creative Commons licenses for copyright of DIY media creation. Children's work should be protected by copyright, and children should be encouraged to share their own copyright material with others who want to remix their creations.

A good model for providing children with copyright for their work is Scratch, which takes an actively *open* approach. The site uses Creative Commons Share Alike licensing, and it explains in lay language that anything users post on the site is under this licensing, which means anyone can remix what other users post. The right to reuse material is reinforced through the remixing trees that visualize who has remixed what project; this allows users to trace the origins (and subsequent derivations) of their work (see figure 5). The site reminds users to credit others and to use Creative Commons–licensed material.

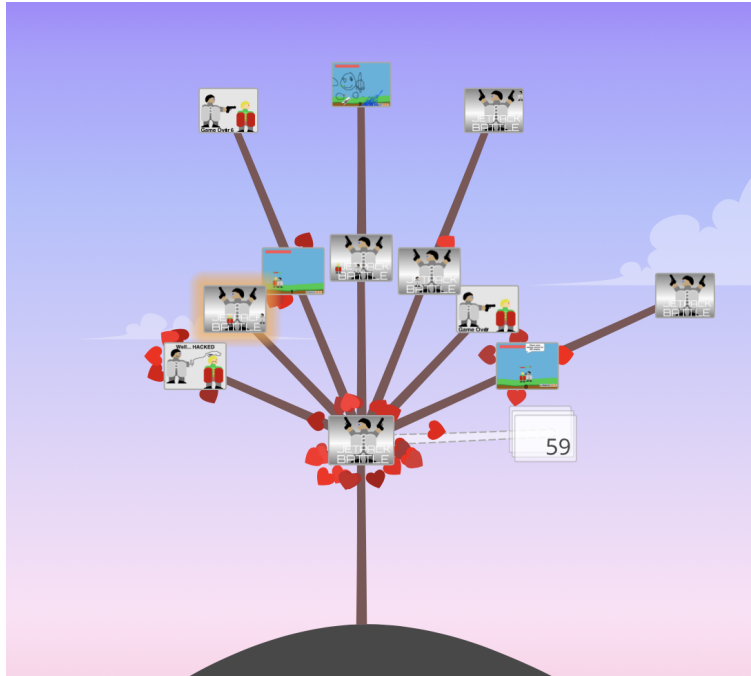


Figure 5. The remix tree in Scratch allows tracing of project versions across users.

Audience Suitability

Designing for the target audience is central to good design. Remember that DIY media opportunities must be geared towards children’s needs. For starters, sites must be age-appropriate:

35. Use kid-friendly, accessible design and language. Make sure that instructions and tutorials are suitable for the platform’s target age and reading level.

Currently, most terms of service and privacy policies use technical language that is not age appropriate for children. Designers of platforms that are geared towards or inclusive of kids have a responsibility to make children aware of their rights and responsibilities:

36. Provide child-friendly terms of service and privacy policies. Understanding the meaning and importance of terms of service and privacy policies when using digital media is part of children’s civic education. Enticing children into accepting agreements they do not understand—or worse yet, will be breaking—is inappropriate.

Platforms must engage with children at their actual age, not at their stated (or pretend) age. Some platforms allow the participation of, or even knowingly design for, children who are younger than the stated minimum age for use:

37. Identify your target age group and develop the platform with their needs in mind. Do not require children to pretend they are older than they are. If the platform is designed for

children under thirteen, do not market it as for older kids to evade legal requirements for platforms for children.

38. Where possible, remove age bans. Remember that children will find a way around them; blanket bans on children under a specific age are often unsustainable and meaningless.
39. Do not require or entice children to use third-party sites for which they are not old enough. For example, platforms for children under thirteen should not require a Facebook account (for which the minimum age is thirteen) for access or sharing.

Because laws become less restrictive as children get older, and because designing age-appropriate resources can be especially challenging for the youngest users, there are limited platforms for DIY media creation for little children:

40. Design opportunities for even the youngest children. Young children are interested in digital DIY media and should be given opportunities to engage with it.
41. When designing age-appropriate platforms, think about improving mechanisms for engaging parents. As parental consent is often required for a child to use an application, make sure that there are systems to facilitate parental involvement.

Child-Friendly Design

The benefits of kids' DIY media platforms—creative, collaborative, collective, educational, and personal—can be made possible by well-designed resources crafted with children in mind:

42. Balance ease of use and complexity of opportunity: make sure that sites are easy for children to navigate but also complex enough to provide freedom to create.
43. Design for your target age group. This means not just providing age-appropriate activities, but also age-appropriate profiles, modes of communication and interaction, and tools for moderation.

The potential benefits of kids' DIY media are great, and we hope that more children will be able to enjoy them. To that end, we encourage designers to build platforms that are inviting and inclusive:

44. Design for users of multiple ages. Remember that children at different ages will use platforms in different ways. A good design should provide opportunities to children across a spectrum of ages.
45. Design for users from multiple demographics. Provide opportunities that will appeal not just to the core group of children's DIY media makers. Look for ways to make the platform accessible to all genders and all socio-economic brackets.

46. Design for a range of user frequency. Not all users will be able to engage with the platform frequently; reduce barriers to involvement for occasional users or those without consistent access to technology.

* * *

Throughout our research, we were fortunate to have regular opportunities to speak with children who use DIY media platforms. Their thoughts on the platforms they use have been invaluable to our project, and their enthusiasm for talking about the process of creation has been unparalleled. If there is one guiding principle, it is *when in doubt, ask a kid*. The users of kids' DIY media platforms—and their parents or guardians—are ideally placed to inform the platforms' future:

47. Invite a diverse range of children and their parents or guardians to participate in the consultative process. Your audience is ideally equipped to tell you what they want and need.

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