Creative expression across media: authorship, revision and useful outputs

A review of media choice, authorship, revision, task fit, retained editable work, outputs and audience. The evidence distinguishes creative outcomes and existing tools without establishing the effectiveness of an integrated studio.

Research by Education Angel Group.
Education Angel Group is developing Snack's Tube and has an interest in the proposed product. This review does not establish its effectiveness.

Current edition reviewed: 2026-10-12. Revision: public-v2.

Earlier editions

- Snack's Tube: expression, revision and the boundaries of sharing

  Research edition reviewed: 2026-09-19. Revision: public-v1.

Making a picture, a story, a recording or an animation involves more than producing a finished file. A creator chooses how to express an idea, decides what to change and needs to understand what remains theirs to revise or use. An attractive result can differ from the intended message; a popular result can differ from a personally worthwhile one. This review examines those distinctions without assuming that more media, more effects or a public audience improves the work.

The central question is what supports meaningful creative choice, purposeful revision and usable retained work across media. Historical remix studies, an abstract-only drawing-transformation study, a physical idea-selection experiment, tool documentation and rights/privacy guidance address different parts of that question. They do not measure one common creativity effect or establish the effectiveness of an integrated studio.

1. Choosing a form and understanding a contribution

A still composition, a narrated sequence and an animation make different demands. Placement, contrast and the relation between words and marks matter in a still image. Order affects a sequence; narration adds wording, pacing and an audible performance; animation adds timing and movement. Recorded media can

also include identifiable people or places. These are analytical distinctions between creative jobs, not a ranking of which medium is best.

Breadth can offer another way to communicate while adding production work. An announcement may need no timeline; an idea carried by sound may lose meaning when forced into a poster. Learning to operate an unfamiliar tool can be worthwhile when media production is itself the goal, but that effort should not automatically be counted as better storytelling. A comparison needs the creator's purpose before interpreting complexity or difficulty.

Zhou and colleagues' 2025 paper is the closest retained source to multimedia drawing transformation. Its institutional and publisher abstracts describe eighty children aged 8-10 randomly assigned to four conditions, with sound, animation or combined transformations used when children were creatively blocked. The abstract reports benefits in positive emotion and creativity. Full measurement details, study location, collection period, duration, effects and analyses were not accessible in the recorded source review. This is a limited lead about assisted transformations of drawings, not evidence that children independently authored all sound and animation or understood every generated change. Zhou et al., S3

Choosing a supplied sound, recording a narration, editing that recording and receiving an automatically transformed drawing are different creative actions. A result may preserve the original intention, obscure it or substitute another system's choices. Appraisal would need to distinguish what the child made, what a collaborator or tool supplied, what changed and what the creator could explain or revise. Polish alone cannot demonstrate authorship or understanding.

Tux Paint's documented sound feedback illustrates another distinction. Audible feedback during drawing is not evidence of student sound composition. Likewise, a GIF export documents an output capability, not a measured ability to construct a narrative in motion. A documented audible or moving element is not evidence for every form of multimedia authorship. Tux Paint README, S4

2. Revision and remix do not have one outcome

Dasgupta, Hale, Monroy-Hernandez and Hill analyzed historical Scratch activity from March 5, 2007 to April 1, 2012. Their archive contained 2,426,894 projects. Within-user analysis focused on 173,053 repeated sharers, with measure-specific exclusions. The observational models associate remixing with programming repertoire and use of exposed concepts. The findings are small and model-sensitive, and copied code does not directly show a creator's understanding. Dasgupta et al., S1, printed pp.3-6 and 8-9

Inspectable reuse can provide a starting point for a technique or idea. That is a bounded inference, not a general multimedia-creativity finding. Moving a stamp, changing a story's order and altering a program have different evidential meanings. A difference needs interpretation against the creator's intention and comprehension; the analysis cannot establish that templates or remixing cause learning in a drawing or sound studio.

Hill and Monroy-Hernandez studied a related historical Scratch community, from March 5, 2007 to April 1, 2011. Their archive included 1,685,353 records before exclusions, with fitted models using 1,239,470 projects. The outcome was peer loveits one year after creation. Reception varied with remixing, code/media intensity and exposure; media-intensive remixes were less favorably received in the relevant comparisons. This is conditional community reception, not a verdict that collaboration always lowers quality. Hill and Monroy-Hernandez, S2, physical PDF pp.7-11, Table 2 and pp.14-16

There is an apparent contradictory sentence on physical PDF page 12. The retained direction follows Table 2 and the surrounding examples, not an invented correction or erratum. More importantly, a social rating cannot decide whether a private revision communicated what its creator intended, taught a technique, or was personally worthwhile. S1 and S2 concern overlapping community context and different outcomes; they are not independent replications of one multimedia intervention.

The construction experiment by van Broekhoven, Belfi and Borghans complicates a simple completion story. In thirteen Dutch primary schools, 403 children aged 10-13 took part during February-June 2019. Children were randomized, 201 and 202, to expecting to construct ideas into products or to a comparison task. Anticipating construction led them to select more feasible and less original ideas. This physical idea-selection task does not estimate a digital revision effect or explain why a creator might stop work. It does show why a task's constraints and expected endpoint deserve attention when interpreting creative choice. van Broekhoven et al., N2, Methods and materials, Results and Discussion

Feasibility, originality, task fit and creator intention can pull in different directions. A creator may deliberately simplify a sequence so it can be finished, or retain an unfinished experiment that still expresses an important idea. An adult's preference for a polished artifact should not automatically override that choice. Conversely, calling every change creative growth can hide a loss of meaning or a task that no longer works. These are appraisal questions, not observed explanations of abandonment in the retained studies.

Evidence	Actual outcome	Interpretation boundary
S1, historical Scratch projects	Programming repertoire and use of exposed concepts	Observational, selected repeated sharers; understanding not directly observed
S2, related Scratch community	Peer loveits one year after creation	Conditional reception, not private craft or learning; overlapping context with S1
S3, children aged 8-10	Abstract-reported assisted drawing transformation	Full measurement appraisal unavailable; not independent sound or animation authorship
N2, physical construction expectations	Feasibility and originality of selected ideas	Physical task, not digital revision or reasons for stopping

These outcomes should remain separate. No common effect scale, pooled benefit or studio forecast follows from their juxtaposition. Intentional revision is not an improvement guaranteed by undo controls, repeated attempts or a more elaborate output.

3. Task fit and adequate existing tools

Tux Paint version 0.9.35, whose README is dated May 26, 2025, documents painting, stamps, text, undo/redo, saving and opening work, slideshow arrangements, GIF export and quit behavior. This is a substantial baseline for playful visual composition and some sequence/output tasks. The documentation was read, not tested: compatibility, accessibility, recovery behavior and output fidelity on a student's actual device remain unknown. S4

The Scratch Community Guide describes creating projects, keeping drafts private, optional sharing, remixing with credit and meaningful changes, comments and reporting. It gives a relevant alternative for projects in its own environment and a documented public-remix community. It does not force every draft to be public. The guide alone cannot establish the current precise posting license or moderation performance, and its own document license must not be mistaken for a license on user projects. Scratch Foundation, S5, physical PDF pp.6-7 and 9

A local combination of paper, a familiar drawing tool, a recorder and an adult-assisted output step is also a legitimate comparison category. No specific combined workflow was operated in this review. It could be sufficient for occasional creative work, particularly where no account, media transfer or public audience is needed. It could also be cumbersome when a student repeatedly moves materials between applications or loses the connection between an editable source and its output. Both possibilities need evidence in the actual setting.

A fair comparison begins with a named creative result, not a feature count. A successful poster export would not prove narrated-sequence retention; a sound preview would not prove that someone can edit narration. Suitable orientation, comparable permitted materials, equivalent intended results and relevant device/input needs matter. Familiarity can explain apparent ease without demonstrating that one tool is intrinsically better.

A familiar drawing tool, direct Scratch use or an offline/multi-tool approach may meet the task with less setup. A combined workspace might help where repeated transfers lose the relation between editable work and output, but it can add accounts, conventions, maintenance and assistance. Neither possibility was measured here. A useful advantage must be assessed alongside the work it creates, rather than inferred from assembling many tools in one screen.

4. Retaining editable work and using an output

An editable project, a preview and an exported file serve different purposes. A still-image output may preserve a composition while flattening its elements. Sound and moving-media outputs introduce timing, compression or compatibility questions that a still image does not have. These are analytical verification concerns, not observed defects in a particular studio. The creator needs to know which object can be revised and which is ready for the intended use.

Retention is part of the creative result. Work that appears saved but cannot be reopened in editable form may defeat the next revision. A wrong-version output may omit a recent change. Interruption, cancellation and recovery therefore belong in a comparison alongside clarity and craft. An appealing file does not settle whether the creator can return to its source without unnecessary adult help.

A poster task can examine changing text or a stamp, reopening editable work and checking a PNG against the intended version. A narrated sequence needs attention to order, audible content and source elements; an animation needs attention to intended timing and movement. These are possible future appraisal tasks, not operating modes or recruited studies. Success in one does not establish success across all media.

Authorship and exclusive ownership should not be collapsed. A composition can combine the student's own marks, a reusable stamp, a licensed sound, another person's recorded contribution and a supplied transformation. The creator's choices remain important, but the resulting file does not automatically make every ingredient exclusively theirs. Creative Commons guidance distinguishes license conditions, adaptations and third-party privacy, publicity and personality rights. Some licensor-held rights are waived or not asserted to the extent specified in CC 4.0; third-party rights are not thereby cleared. Reading a FAQ clears no asset. Creative Commons, S7

The FTC's May 2026 consumer guidance identifies children's image, video and audio within its discussion of personal information for covered U.S. services and under-13 children. The relevant inquiry is actual collection, use, disclosure and applicable consent, not whether an output looks harmless. The guidance does not settle every school or guardian authority question or clear a proposed product. Drawing an imagined character and recording a classmate need not receive the same treatment. FTC, S6

Contributors, sources and intended uses need to be understood without making creation unreasonably burdensome. A missing right or permission can require replacing an ingredient or narrowing a destination. That is not proof that all remixing is unsafe, and it should not be hidden behind an unqualified promise of owned output.

5. Choosing an audience adds a separate decision

A private project can be complete. Choosing an audience adds people, permissions and work beyond composition and export. The Scratch guide makes private drafts and optionally shared remixable projects distinct. Its documented rules and reporting process are a comparator, not a measured safety guarantee.

Peer reception in S2 cannot establish whether a particular classroom or family audience would help or harm a creator.

Changing a caption, adding a recorded voice or replacing an image can alter rights and personal information. Review of an earlier version does not automatically cover the next one. The creator needs to understand who may see the chosen version and what return or withdrawal changes. A downloaded file cannot be promised recall; correction and deletion claims must identify destinations and material actually under the operator's control.

Adult effort belongs in this separate appraisal. Explaining permissions, helping with transfers, checking outputs, reviewing work and resolving corrections can exceed editing time. That work cannot be assumed to fall on a teacher or an imaginary team. A narrower audience, private completion or an existing local tool may be adequate. More public work is not intrinsically more successful work, and no workload benefit was measured here.

Precision dragging, ordering a sequence, listening, reading and inspecting a composition present different access questions. Keyboard support or captions in isolation would not prove an entire studio usable. Relevant input methods, assistive technology, languages, shared-device privacy and suitable non-audible/non-moving routes need practical appraisal. The retained studies do not establish the accessibility of a proposed integrated studio.

6. Relevance to Snack's Tube

Snack's Tube is EAG's planned standalone, playful Kid Pix-style multimedia studio, not a video-viewing feed or poster-only tool. Its intended scope includes drawing, stamps, text, posters, slides, stories, storyboards, sound, animation, recorded media and rights-cleared remixing. Private making and revision precede an inspected supported export or separately permissioned showcase. An editable project, preview, exported output and audience submission remain distinct. Exact modes, devices, ages and formats require actual verification; a poster-to-PNG journey is one proof increment, not the product's definition. A0; A1

The planned showcase adds submission, review, return or approval, defined audience and withdrawal. Submission is not publication. Relevant consent, ingredient rights, moderation and audience authority remain separate responsibilities, not evidence of staff, working safeguards or legal clearance. Account-required paths use intended Runstr identity without granting cross-private access, publication authority or rewards. Create After Class remains a distinct full digital makerspace, and Snacks Orchard has its own adventure-world and character identity. A0; A1

The free core is intended to remain useful. Any premium generation uses separately capped Snack Credits, not reward points; no provider, final terms or available paid feature is selected here. The topic evidence informs questions about expressive choice, meaningful revision, understood retention and audience, not Tube demand, superiority, learning effects or current editor/export operation. No student, staff, moderation, usability or outcome study of Tube is supplied. A1

7. Interpreting a worthwhile creative result

Creator intention and explanation should remain distinct from adult judgments of clarity, originality and task fit. Output count, views, time spent and number of effects cannot substitute for what the creator tried to communicate or could deliberately change. An unfinished private work may be meaningful; an apparently complete export may conceal lost editability or misunderstanding.

A useful future comparison would examine actual intended results, purposeful revisions, recovery, retained sources and inspected outputs with an appropriate existing alternative. Attempted and completed tasks, assistance, accidental loss and wrong-version outputs provide different information. Device and access needs matter. A small convenience study could reveal serious usability problems without establishing population learning or creativity effects.

The retained evidence leaves meaningful uncertainty: media choice can support a purpose or introduce unnecessary work; reuse can expose techniques without demonstrating understanding; anticipated construction can change idea selection; social reception differs from private craft. An adequate simpler tool or private completion can be the better result. Direct authored-media outcomes, contemporary audiences, age/access fit, retention/output fidelity and adult effort remain untested rather than presumed favorable.

Methods, access and edition history

This is a focused narrative synthesis, not a systematic review, meta-analysis, raw-data reanalysis or independent product evaluation. EAG publishes it, is developing Snack's Tube and has an interest in that work. The September 19, 2026 edition examined a product-led private-poster journey. The October 12 full-studio correction is preserved here while the independent questions about media, authorship, revision and output lead the report.

Original-source appraisals recorded October 11, 2026 underpin this synthesis. Full originals or official pages were accessible for S1, S2, S4, S5, S6, S7 and N2, with relevant methods, findings or guidance inspected; S3 remained institutional/publisher abstract and metadata only. This refinement reuses those appraisals without new external retrieval. It does not claim cover-to-cover appraisal of every original or a comprehensive search, participant study, current software operation or correction/retraction registry clearance.

S2's apparent physical-page-12 contradiction remains formally unresolved; the retained direction follows Table 2 and surrounding examples, not an invented erratum. N2's Figure 3 text inconsistently names intervals as one standard error and 95% intervals, so no numeric graphic is reproduced. The additional N1 LEGO/iteration lead remains excluded: abstract-only access and final issue chronology prevent promotion to a full-text finding. No effect from it is used here.

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publication, deposit, measured periods and access dates remain distinct. Fuller access, corrections or changed product definitions should prompt review of the affected claims, not silently redating an old edition.

References

- **S1. Dasgupta, Hale, Monroy-Hernandez and Hill.** Remixing as a Pathway to Computational Thinking. CSCW 2016 pre-publication manuscript. Earlier full-PDF access: printed pp.3-6 and 8-9. Scratch period March 5, 2007-April 1, 2012; selected public sharers and observational proxies limit transfer.
- **S2. Hill and Monroy-Hernandez.** The Cost of Collaboration for Code and Art: Evidence from a Remixing Community. Accepted CSCW 2013 manuscript, later 2015 archive deposit. Earlier full-PDF access: physical pp.7-11/Table 2, p.12 inconsistency and pp.14-16. Scratch period March 5, 2007-April 1, 2011; peer reception, not learning or private satisfaction.
- **S3. Zhou, Li, Barakova, Chen and Zhang.** Enhancing positive emotions and creativity in visual storytelling: the effect of multimedia transformation of drawings. Publisher record, DOI 10.1007/s10639-025-13534-4. April 25, 2025 online; September 2025 issue, 30(14), 20417-20443. Earlier institutional/publisher abstract and metadata only; full text unavailable in the recorded access. Eighty children aged 8-10; measurement, geography, period, duration, effects and analyses unverified.
- **S4. Tux Paint.** Documentation README, version 0.9.35, May 26, 2025. Earlier full-HTML access: drawing tools, Undo/Redo, Open/Save, Slides/GIF Export and Quit. Documentation only, no software or device test.
- **S5. Scratch Foundation.** Scratch Community Guide, undated ten-page guide. Earlier full-PDF access: physical pp.6-7 and 9. First-party rules, no moderation-performance study or verified current project-license version.
- **S6. Federal Trade Commission.** Protecting Your Child's Privacy Online, May 2026. Earlier full-HTML access: What is COPPA? and What are my choices? Official U.S. consumer guidance concerning covered services and under-13 children, not product clearance.
- **S7. Creative Commons.** Frequently Asked Questions, undated first-party guidance. Earlier full-HTML access: adaptations, license conditions, publicity/privacy/personality rights. Jurisdiction- and rights-dependent guidance, no asset-specific permission.
- **N2. van Broekhoven, Belfi and Borghans.** Instructing children to construct ideas into products alters children's creative idea selection in a randomized field experiment. PLOS ONE 17(8), August 4, 2022. Earlier full-HTML access: Methods and materials, Results, Discussion and Limitations. 403 children aged 10-13, thirteen Dutch primary schools, February-June 2019. Physical construction expectations and idea selection, not digital revision, attrition or a Tube trial.

- **A0. Education Angel Group.** Snack's Tube public project context, consolidated September 23, 2026 revision and September 25 amendment. Full-studio product direction; this public context link is not an external empirical source or access to the underlying product-direction record, and does not establish outcomes or implementation.
- **A1. Education Angel Group.** Snack's Tube public project context, approved October 12, 2026 wording. Intended scope, private revision and separate permissions, useful free core and capped Snack Credits; this public context link is not an external empirical source or access to the underlying definition, and does not establish verified availability or product effects.