

The “Day in the Life of a Teenage Hobo” Project: Integrating Technology with Shneiderman’s Collect-Relate-Create- Donate Framework

Justin Reich and Thomas Daccord



(Photographer: John Vachon/Courtesy of Library of Congress, LC-USF33-101-001772-M5)

Boy Hopping Freight Train, Dubuque, Iowa, 1940

Used wisely, academic technology empowers students to take responsibility for their own learning. In *Leonardo’s Laptop*, Ben Shneiderman provides teachers with a powerful framework, *Collect-Relate-Create-Donate* (CRCD), for designing student-centered learning opportunities using computers.¹ Shneiderman developed his model by applying new insights from creativity researchers like Mihaly Csikszentimihaly and Howard Gardner to established methods for creative problem solving.² In particular, Shneiderman’s framework emphasizes the importance of the social aspects of learning in generating creative work. In CRCD projects, students research information, work collaboratively to create a meaningful product that demonstrates their learning, and contribute that project to a larger learning community. Shneiderman designed the *Collect-Relate-Create-Donate* framework as a vehicle for preparing young people for a twenty-first-century world where innovation, creativity, and collaboration will be more highly prized than retention and repetition.

This article provides a case study of how the CRCD framework shaped the development of the “Day in the Life of a Teenage Hobo Project,” a multi-day investigation into the social history of teenage homelessness during the Great Depression. Using the framework, Tom Daccord, a former U.S. history teacher and current academic technology specialist in Massachusetts, designed a project that used multiple technologies—search engines, blogs, and podcasting tools—to help students investigate the political, economic, and social history of the Great Depression.

Starting from Learning Goals

In years past, Tom found that the “alphabet soup” approach to teaching the Great Depression failed to engage his students. His 10th graders struggled to keep track of the WPA, the TVA, the NRA, and other acronyms of the era. More disconcertingly, the history of political bureaucracies dulled the drama inherent in this dark epoch. Searching for a new strategy, Tom stumbled upon the PBS American Experience website “Riding the Rails,” which used multimedia stories, images, and recordings to reveal the experience of the 250,000 teenage hoboes of the Depression.

At this juncture, Tom made an important decision. Rather than simply cut an acronym or two from the syllabus and add a website or video clip to his lesson plans, he recognized that these teenagers’ stories might resonate with his students and provide a perfect vehicle for a new approach to this era. Rather than using technology as an add-on, Tom redesigned his unit to let his students explore the Depression through the lens of teenagers just like—and yet very different from—themselves.

This distinction between technology as add-on and technology in the service of learning goals is critical. While multimedia sources inspired Tom, new learning goals—not new technology—were the driving force behind this unit planning. Tom redefined his unit learning goal from “the ability to explain the federal response to the Great Depression” to “the ability to explain how impoverished teenagers navigated the social, economic, and political conditions of the Depression.” From that new goal, Tom developed a compelling essential question: “What was daily life like for teenage hoboes during the Depression?” Then, he identified teaching techniques to enable his

students to join him in researching that question. Since computing technologies hold great promise for helping students shoulder the responsibility for their learning, these technologies fit well into his student-centered revision.³

Designing Projects with the Collect-Relate-Create-Donate Framework

Once Tom identified his learning goal, he used Shneiderman's framework as a template for creating his new unit. CRCD projects begin with a chance for students to research and *collect* the factual building blocks of their learning project. From there, students *relate* with one another and work together in an effort to *create* a tangible demonstration of their understanding. Students then *donate* their work to a public forum so that their learning can be of service to others.

Tom's unit began with an orientation to the 1930s using a typical set of readings, presentations, and discussions to provide context for the lives of young hoboes. The "Day in the Life" project itself began with an opportunity for students to collect information about teenage hoboes. Rather than let students loose on the Internet, Tom guided his class towards specific online resources from the Best of History Web Sites (www.besthistorysites.net), a site published by the authors of this article. This guided inquiry included the aforementioned American Experience site, specific pages from the New Deal Network, and the National Heritage Museum's exhibition site on Teenage Hoboes in the Great Depression (see page 144 for a list of resources). In this scaffolded research environment, Tom's students focused on analyzing select primary sources rather than sifting through an infinite Internet for a few helpful sites.⁴ For each of these websites, Tom highlighted a few sections where students could find relevant material. In addition, he demonstrated the *Search within a site or domain* field in the Google Advanced search engine (www.google.com/advanced_search). This feature allows students to use the Google

engine to search only within a particular domain, like pbs.org. If students wanted more details about Hoovervilles or railroad bulls, they could search within the selected sites and avoid sifting through unrelated pages.⁵

With a rich set of sources on teenage hobo life, Tom asked students to try an exercise of historical imagination. Each student created a fictional narrative about a teenage hobo, drawing on their historical research. Their assignment was as follows:

A Day in the Life of a Hobo

In this assignment you are to write from the perspective of a teenage hobo who is 'riding the rails.' Use your knowledge of the period and your creativity to create a story (250-500 words) about a day in your life as a hobo.

Here are some questions to help guide your story: How old are you? Where are you from, and why have you left home? Are you traveling alone or with someone? Who? What possessions do you have? What are your plans? What are your concerns? How are you feeling, physically and emotionally? What happened to you today? How did it make you feel?

Post the story to your blog before class on Monday.

Students posted astounding stories. Some were funny, some were poignant, and nearly all of them created a rich historical portrait by using specific details from the students' research into life during the Depression: the Dust Bowl, the Civilian Conservation Corps, and Mulligan stew. One student wrote a heart-wrenching story titled "There's no Aunt Sarah," about a young girl sent away to live with a distant aunt. The girl rides the rails from Kansas to California, only to discover that there is no Aunt Sarah. (The full story appears on page 143). This excerpt demonstrates the student's familiarity both with the historical vocabulary of the 1930s and the

plight of poor teens:

The next mornin' Dadi walked me to the train station. He gave me 20 cents, told me which train to take, and left. I like to think Mama cried when she found out what Dadi'd done the next mornin'.

I made quick friends with a hobo 'bout my age named Jim. He warned me 'bout the railroad bulls and told me where the hobo camps that made the best mulligan stew were on the way from Kansas to California.

Posting stories to blogs has several advantages over hand-writing stories or word processing. By publishing their work online, students had instant access to an audience wider than just "the teacher," including classmates, school community members, and even the public. Teachers who work with blogs find that the expanded audience inspires students to produce higher quality work. Tom's students also could easily collaborate by reading and commenting on their classmates' stories.⁶

The following day, students arrived to class and logged on to each other's blogs using a mobile cart of laptops.⁷ They had a chance to relate to one another by commenting on each other's stories. One student gave this feedback to the author of "There's no Aunt Sarah":

I loved your story Caitlin! Your use of dialect seemed accurate and enhanced the diary-like tone of the story. I also liked how you conveyed the hobo's feelings of helplessness and sadness. You were able to get a lot of the things we had been talking about in class about hobo's in your story ... the mulligan stew, the hunger, the dreams for a new job, etc....

After students commented on and learned from each other's stories, Tom announced that for the following class they would be producing a radio show—since the 1930s were the "Golden Age

of Radio.” He then divided his students into roles: some would be interviewed as teenage hoboes, a few would be newscasters reporting from Dust Bowl states, one would give an FDR fireside chat on the plague of teenage homelessness, and another would supply a Republican response by Louisiana Senator Huey Long. They had the rest of class to collectively research their roles, rehearse, and prepare.

[The astute reader may have noticed at this point that the *Create* and *Relate* phases seem to be reversed in this project. More on that as we discuss evaluation at the end of the article.]

On the day of the radio show, Tom’s classroom was abuzz with excitement and anxiety. The students were about to be tested in a creative, fun, but challenging oral assessment. Tom’s students used built-in and USB microphones to record into Apple’s audio editing software, GarageBand. While a few students went to quiet spaces to record

their newscasts or fireside chats, Tom interviewed several small groups of student-hoboes.⁸

Tom began the first interview by asking the hoboes to describe their background, and an industrious student named Laura joined the discussion. Laura was a solid student with a serious classroom demeanor. Tom was amazed when Laura began recounting her story of life on the rails in a spot-on Southern drawl. It was the sort of moment that student-centered learning enables all the time, where a young student reveals a part of her talents, intelligences, and personality that teachers miss in a routine of lectures and tests. Inspired by Laura’s example, her classmates enacted similarly earnest performances. After a successful, if somewhat chaotic, class period of recording, students electronically submitted their sound files.

Tom then compiled the students’ recordings into a complete radio show. Using GarageBand, he cut and pasted

the individual pieces into a single audio file. He also used GarageBand’s pre-recorded tracks to add intro music and sprinkle in applause. A few days later, he announced the show’s debut and again the room was filled with palpable energy. Students were both eager and nervous to hear themselves broadcasted. Once the show started playing, they listened with rapt attention as their classmates recounted their various perspectives on the social history of teenagers in the Great Depression. During this final presentation, students had a chance to review the important historical concepts embedded in the radio show and take pride in the final product of their collaboration. The program remained available online so that students could revisit the show in preparation for the final exam or other standardized tests, like the SAT subject tests.

Once finished, nearly every piece of the project was donated to the public sphere. Tom posted the assignment



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on Teaching History with Technology (www.thwt.org/historypodcasts.html) so that other teachers could use it in their own classrooms. Students posted their stories and radio show clips on their blogs so that their classmates, school community members, and teachers and students from other schools could learn from their work (see <http://nobles.typepad.com/daccordus>). Indeed, the project was featured for a few months by a prominent English teacher website, WebEnglishTeacher.com, and Caitlin's story received hundreds of views. Students had a positive experience with academic service learning and enjoyed knowing that their efforts had a life beyond their notebook and the teacher's gradebook.

Assessing the Students

Assessing innovative technology projects, where even the teacher is unsure

how things might turn out, presents a thorny challenge. If expectations are unclear, students may flounder or produce substandard work. If expectations are too rigid, then students may not exhibit their full creativity.

For teachers concerned with setting clear expectations, a detailed rubric explaining the criteria for successful projects can help structure student work. Rubistar is a helpful tool for creating rubrics for a variety of assessments (rubistar.4teachers.org). Rubistar allows teachers to modify sample rubrics or create their own. For this project, teachers could borrow categories and benchmarks from rubrics for "digital storytelling," "story writing," and "research reports." For instance, the digital storytelling rubric template includes categories such as "Purpose" and "Voice Pacing" that are applicable to this project. Offering these specific guidelines

helps students understand expectations in an unfamiliar assessment.

Tom, however, was concerned about over-constraining his students, so he opted to give his students more open guidelines and grade each submission holistically. He used a cake and icing metaphor to communicate his expectations. About 85 percent of the grade, the cake, would be based on their ability to demonstrate their understanding by putting specific historical details in the context of a plausible story that reflected the forces at work during the Depression. About 15 percent of their grade, the icing, could be earned through artistic and rhetorical merit. In other words, the icing is fun and tasty, but the cake is the important part. Because of their experience with other projects, Tom's students knew that their final grade would depend on their demonstrating historical understanding more than

There's No Aunt Sarah

My stomach's empty but it don't hurt and my back's near broke but it don't ache. Can't feel nothin' right now—not my tired feet that won't stop bleedin' or the on'rous weight of the dust in my lungs. The physical sufferin' ain't nothin' 'pared to the hurt in my heart.

When you've gotta worry 'bout starvin' and freezin' to death you forget to keep track of what day it is, but I'd estimate today's the 15th of December, year 1932. It took me near three weeks to get here. "Here" is Lancaster, California. I left home in Kansas when Dadi told me he'd got word from Aunt Sarah in California. "Aunt Sarah's got a place for you to stay with her and she's found you a good job in a shop downtown Lancaster," he said. "You go put your things in the bag that I've left you upstairs and I'll take you to the train in the morning." I had never met Aunt Sarah, let alone heard mention of her in our house before the day that Dadi told me I'd go live with her. Things were hard for us then. Not just hard for my family but for all the farmin' families in Kansas that depended on the crops. Ever since the topsoil started blowin' 'way nothin'd wanted to grow. No crops, just dust. It meant no money, empty stomachs, cold bodies.

At 14, I was the third oldest of Mama and Dadi's kids. My brothers Jake, 16, and Tom, 15, left a few months before I did to find work and s'port themselves on account of mama and dadi could hardly feed themselves. Before Dadi'd told me I'd be leavin' too I'd thought about gettin' myself a job. I felt awful guilty all the time 'bout bein' another mouth for Mama and Dadi to fill. It was almost reliev'in' that I'd be leavin'. My absence'd be improvin' for Mama and Dadi

and my sisters. I kissed Anne-Marie, Sue, and Emily goodbye and went to find mama to do the same but Dadi said, "Listen, Sarah, you don't say nothin' to your mother. Good-bye will break her heart so you just let her be." It broke my heart not gettin' to say bye to her but I thought Dadi was right so I let her be like he said to. I put a pair of socks, a blouse, skirt and my doll, Jenny, into the canvas bag that Dadi'd left at the foot of my bed. The next mornin' Dadi walked me to the train station. He gave me 20 cents, told me which train to take, and left. I like to think Mama cried when she found out what Dadi'd done the next mornin'.

I made quick friends with a hobo 'bout my age named Jim. He warned me 'bout the railroad bulls and told me where the hobo camps that made the best mulligan stew were on the way from Kansas to California. I didn't spend more than a day with Jim but he taught me things my life'd come to rely on later.

I spent 'near three weeks ridin' the rails, walkin' on route 66 to get from station to station and stoppin' at hobo camps in between. Pretty much 'came a 'bo myself. Today I arrived in Lancaster, California. The prospect a' my arrival here's what kept me goin' all the time I was trav'lin'. Imagine my disapointment 'pon findin' there really wasn't no Aunt Sarah. That there wasn't no warm place to stay, no good job like Dadi'd promised. I know now that I was a burden that Dadi made up his mind to get rid of. If the poisnin' mulligan stew I've been livin' off the past three weeks don't kill me, this feelin' in my heart will.

technical fluency. Moreover, without a rigid rubric, Tom left the door open for students to produce innovative content beyond what any rubric might anticipate.

Both clearly delineated and flexible approaches to assessment have their advantages and disadvantages, and a thoughtful assessment strategy depends on the makeup and disposition of one's students. Tom's 10th graders in this particular year were a gung-ho group, so he was confident that they would respond well to the challenge. In other years, he might have taken a different tack and chosen to give his students more specific criteria from the beginning. Regardless of where one starts, as projects of this nature mature, teachers can fine-tune rubrics that clarify expectations while leaving room for creative interpretation.⁹

Assessing the Teacher

While the CRCD framework helped Tom thoughtfully design the Teenage Hobo Project, it can also structure an evaluation of that unit. To what extent did Tom's project empower student-centered learning in the four areas of Shneiderman's framework?

The fine-grained historical detail that students used in their stories and interviews suggests that students collected important historical details from the Depression. Students also demonstrated historical empathy for their teenage counterparts, recognizing the

terrible conditions that young people faced in that era. In future iterations of the project, Tom might consider giving students even more responsibility for learning, substituting the first few days of teacher-led lecture and discussion for student-led research and reporting, perhaps using a collaborative learning space like a wiki.¹⁰

It is in the Relate category that the "Day in the Life" project has the most room for improvement. Having the collaborative Relate work happen after the Create work limited the potential for teamwork. While students used blogs to comment on each other's stories and added individual contributions to the radio show, more collaboration could occur if it began earlier in the project. Students could co-write the stories or radio show sections, perhaps using a document sharing platform like Google Docs (docs.google.com), or re-write their stories after receiving online comments from peer editors.

Students certainly created engaging work products, in terms of both their stories and the characters that they created during their interviews. In the early attempts at this project, Tom did most of the radio production work. In a future attempt, students could take on this responsibility. Classes could work in teams to produce sections of the show, or a small group of technology enthusiasts could get extra credit for crafting a show from the raw tape. The more responsibility teachers can

turn over to their students, the more the students are learning.

By building the project on a blogging platform, students could easily donate their work to their colleagues and to others outside the classroom. Students benefited from each other's work and were motivated to put forth their best effort by the project's public nature. Through sharing their stories, they learned they need not wait until adulthood to make intellectual contributions to a wider learning community.

Conclusion

Good theoretical frameworks make practical work easier. Shneiderman's Collect-Relate-Create-Donate framework passes this simple test. While the "Day in the Life of a Teenage Hobo" project involves research, writing, blogging, collaboration, rehearsing, performing, multimedia production, and synthesizing, these diverse tasks can be organized in a pedagogically-sound order using the CRCD framework. The framework provides four important cairns along the path to designing a successful project and serves as a checklist for review and reflection after completing a new unit. It is easy to get lost in the possibilities of emerging technologies, and CRCD guides teachers towards the design of effective units built around student-centered learning goals.

Years down the line, these students may join previous generations of Tom's students in losing track of the alphabet

continued on page 152

RESOURCES

PBS—Surviving the Dust Bowl

An Eyewitness Account: www.pbs.org/wgbh/amex/dustbowl/sfeature/eyewitness.html

An illustrated account of the Dust Bowl by Lawrence Svobida, a wheat farmer from Kansas.

PBS—Riding the Rails

Tales from the Rails Hobos:

www.pbs.org/wgbh/amex/rails/sfeature/tales.html

Seven accounts from young hoboes taken from the *Riding the Rails* documentary, plus dozens of others contributed by visitors to the site.

New Deal Network

Bumming in California: <http://newdeal.feri.org/fwp/fwp07.htm>
A tale of "bumming" through California in the winter of 1931.

School for Bums: <http://newdeal.feri.org/voices/voce02.htm>

A 1931 account of life in the Municipal Lodging House in the East End on New York City.

National Heritage Museum Online Exhibits

Teenage Hoboes in the Great Depression: www.nationalheritagemuseum.org/Default.aspx?tabid=405

Stories and audio recordings from some of the 250,000 teenage hoboes who were on the road during the Great Depression.

HOBOES *from page 144*

soup of the Depression. But after using technology to immerse themselves in the world of teenage hoboes, we are confident that they developed an enduring understanding of the hardships of the 1930s and the grim realities of poverty in our own time. 📺

Notes

1. Ben Shneiderman, *Leonardo's Laptop: Human Needs and the New Computing Technologies* (Cambridge, Mass.: MIT Press, 2002.)
2. For a compilation of creative problem solving methods, see J.D. Couger, *Creativity and Innovation in Information Systems Organizations* (Danvers, Mass.: Boyd and Fraser, 1996). Shneiderman also cites Mihaly Csikszentmihalyi, *Creativity: Flow and the Psychology of Discovery and Invention* (New York: Harper Perennial, 1996); Howard Gardner, *Creating Minds: An Anatomy of Creativity Seen Through the Lives of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Gandhi* (New York: Basic Book, 1993).
3. For more on designing curricula using learning goals and essential questions: Grant P. Wiggins and Jay McTighe, *Understanding by Design*, 2nd ed. (Alexandria, Va.: Association for Supervision and Curriculum Development, 2005); Tina Blythe, *The Teaching for Understanding Guide*, 1st ed. (San Francisco: Jossey-Bass, 1998).
4. Open inquiry, of course, also has its place in the social studies curriculum. For more on guided inquiry projects, see Chapter 4, "Guided Inquiry" in Justin Reich and Thomas Daccord, *Best Ideas for Teaching with Technology: A Practical Guide for Teachers, by Teachers* (Armonk, N.Y.: M.E. Sharpe, 2008), 85-109.
5. For more on searching and using Google's advanced search, see Chapter 5, "Open Research" in Reich and Daccord, *Best Ideas for Teaching with Technology*, 110-126.
6. Tom's students used Typepad blogs (www.typepad.com); Edublogs (www.edublogs.org) is another excellent blogging platform. Two good print resources for blogs include Chapter 2 "Discussion and Communication" in Reich and Daccord, 33-62; Will Richardson, *Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms*, 2nd ed. (Thousand Oaks, Calif.: Corwin Press, 2008), 17-55. A helpful online resource is Thomas Daccord and Justin Reich, "Blogs," *Teaching History with Technology* (Center for Teaching History with Technology, 2008), www.thwt.org/historyblogs.html.
7. Tom's students had access to a cart of laptops, but this task could take place in a computer lab, or the assignment could be spread out over several days to give students more time to blog and comment outside of class.
8. For schools using PC's, they could use the free, open source program Audacity as an alternative to GarageBand. For print resources on audio recording and editing for student presentations, see Chapter 8, "Student Presentations" in Reich and Daccord, 205-221; Richardson, 111-122. An online resource is

- Thomas Daccord and Justin Reich, "Podcasting," *Teaching History with Technology* (Center for Teaching History with Technology, 2008), www.thwt.org/historypodcasts.html.
9. A thoughtful discussion of new approaches to the assessment of new media can be found at Kathleen Yancey Blake, "Looking for Sources of Coherence in a Fragmented World: Notes toward a New Assessment Design," *Computers and Composition* 21, no. 1 (March 2004): 89-102.
 10. Wikis are websites where anyone can edit any page at any time. For an example of a wiki learning project in the social studies, see Jeremy D. Stoddard, Mark J. Hofer, and Molly G. Buchanan, "The 'Starving Time' Wikipedi: Using a Wiki to Foster Historical Inquiry," *Social Education* 72, no. 3 (2007): 144-160. For more on wikis see Chapter 7, "Writing" in Reich and Daccord, 191-198; Richardson, 59-75.

TOM DACCORD is a former social studies teacher and the founder and co-director of EdTechTeacher.org, an organization devoted to providing technology integration training to teachers through on-site workshops, summer workshops, and the year-long Teaching for the 21st Century Program. He is creator of the award-winning Best of History Web Sites portal (<http://besthistorysites.net>) and the Center for Teaching History with Technology (<http://thwt.org>). Tom can be contacted at Tom@edtechteacher.org. **JUSTIN REICH** is also a former social studies teacher and the co-director of EdTechTeacher.org. In addition, he is a doctoral student at the Harvard Graduate School of Education where he researches Web 2.0 tools and the history of world history instruction. He can be contacted at Justin@edtechteacher.org.

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