

Stewart, T. T. & Goodman, J. (2012). Digital diet: Adolescents investigating the politics of food and farming through 21st Century storytelling. *American Reading Forum Annual Yearbook* [Online], Vol. 32.

Digital diet: Adolescents investigating the politics of food and farming through 21st Century storytelling

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The Framework for 21st Century Learning provides a compelling vision for blending the specific content and skills students need to learn to be successful in schools with the more ephemeral things students need to learn to be successful in our ever-changing world. We see this framework as an interesting and useful tool for navigating the complicated landscape of the increasingly standards driven world of U.S. schools. The danger, of course, is that this framework will be seen as simply another iteration of standards-based reform to be adopted in the quest to standardize schools. What is need is a set of powerful, authentic examples of the framework in action that show its rich potential for reforming teaching and learning practices. In this paper, we offer an example of how the principles of the Framework for 21st Century Learning can help teachers and students can work together to create rich learning experiences focusing on multiple literacies in a variety of settings.

The Framework for 21st Century Learning serves as yet another example of reform in modern public education. School reform is a topic that has concerned educators for over a century. As far back as the 1890s “finding ways to modernize [or improve] the public schools was an urgent matter to many citizens” (Lagemann, 2000, p. 19). Much of the talk generated in the late 19th century about school reform was directly related to a movement seeking to include education in the realm of science. As Lagemann argued, this push can be directly linked to early trend of basing decisions about education on “controlled experiments and precise quantitative measurements” (p. 59). While there is much value in empirical research and concrete sets of standards to guide teaching and learning, we believe that frameworks for learning and courses of study are, too often, reduced to prescribed sets of standards that make curricula inorganic. Ultimately education is a multi-faceted and human endeavor that needs to honor the nuances of teaching and learning and individual differences. Therefore, we believe that it is critical to carefully consider how of school reform initiatives can be implemented in ways that attend to the realities of the complex nature of teaching and learning.

Theoretical Framework

We see infinite value in making schools places where students will learn to think critically and be prepared to contribute to a democratic society. We believe that students will be more successful in learning to think critically when they have the ability to learn to answer authentic questions (Nystrand, 1997) instead of questions with prescribed answers that do not allow dialogue to drive the process of making meaning. As Harste (2001) has argued, inquiry-based education can create opportunities for students to explore topics of social and personal interest in a collaborative environment. The importance of allowing students to follow their interests resonates throughout the literature discussing teaching and learning (Beach, Appleman, Hynds, & Wilhelm, 2006; Hillocks, 1982; Lensimire, 2001; Kohn, 2000). Maxine Greene (1978) offered what we see as one of the most compelling discussions of this crucial element of teaching in *Landscapes of Learning* as she pointed out:

Students must be enabled, at whatever stages they find themselves to be, to encounter curriculum as a possibility. By that I mean curriculum ought to provide a series of occasions for individuals to articulate the themes of their existence and to reflect on those themes until they know themselves to be in the world and can name what has been up to then obscure.” (pp. 18-19)

This model of teaching and learning requires that we conceptualize the work being done in our schools as something more than just teaching students to read, write, and answer questions on standardized tests. However, we believe that teachers are unlikely to be successful in creating this sort of classroom environment without a framework and clear examples of its implementation.

The Framework for 21st Century learning provides a road map for helping students engage in dialogue with the world around them. Moreover, this framework has the potential to support a pedagogy that positions education as inquiry. What worries us, though, is that the frameworks that result from reform movements (e.g. the North Carolina Standard Course of Study) reduce the skills and concepts they discuss to discrete entities that fail to connect to real-world learning experiences. With this in mind, we have examined the work we have done with students at an expeditionary learning school in order to demonstrate how truly interconnected the Framework for 21st Century Learning can be if implemented in a thoughtful manner with a project that lets students engage the wider world.

A School Community

Our interest in authentic, project-based learning led us to Arthur Morgan School, which is a small middle school in the mountains of North Carolina with both boarding and day options. Founded in 1962, this school calls itself a “living learning community” and positions real-world work and communal decision making at the center of its curriculum. In fact, Dewey’s (1897) belief that education is a process instead of preparation for living is a guiding principle of the Arthur Morgan School. This focus on process, as well as the overall flexibility of the program, made the school an ideal place to develop a project that might serve as an example for

others of the integration of 21st Century skills in an authentic environment. Thus, with the school preparing for 18-day service learning field trips in the winter of 2011, we began to meet with a group of students who would be traveling and working together on one of these trips. Our goal was to help them develop digital storytelling skills as a part of their plan to document the experiences they had on their trip.

Extended field trips are a mainstay of each year's curriculum at Arthur Morgan School. Each trip has an educational theme, and students spend the first part of the winter learning about this theme and planning and preparing for the trip. The students with whom we chose to work were learning about the politics of farming, issues of food choice, and the consequences of modern approaches to food production and nutrition. In conjunction with this course of study, they would be traveling throughout the Southeastern United States visiting farms of all sorts, from small intensive organic farms to large scale industrial agricultural operations. During their trip, they would interview a variety of farmers, do service projects on farms, and learn first-hand as much as they could about the many of ways food is produced in modern America. In addition, students on this trip would be involved in planning and managing their experience, making contacts with organizations, developing budgets, and planning for food and lodging during the trip. Thus, the project provided a rich context for us to explore some of our ideas about 21st century learning. In particular, we were interested in helping the students and staff use media tools to expand their connection to the people and ideas they would be encountering on their trip and to bring back stories to share with the larger school community.

It is important to note that as we began our work at Arthur Morgan School, we did not set out with the 21st Century Framework explicitly in mind. However, upon reflection, we found remarkable congruence between what happened during this project and the precepts laid out in the framework. This helped us see the value in this document, not as a mandate but as an organizational structure by which one can conceptualize and further develop ideas about effective learning. Thus, this project is useful both as an example of authentic learning in and of itself and as an example of 21st Century Skills in practice in an educational context.

Seeding the Field

One of the key tenets of the 21st Century Framework is: “to be effective in the 21st century, citizens and workers must be able to exhibit a range of functional and critical thinking skills related to information, media and technology.” A significant element in this facet of the framework is helping students learn to create media products that represent their ability to understand and use appropriate media tools. In this context, the media literacy skills students develop are analogous to writing the media. The students' overall increased media savvy would help them analyze—read—the media, which become critical consumers of media messages developed by others. The field trip the AMS students took offered an excellent opportunity to help them learn how to document their learning about a topic of organic interest while also developing the media production and analysis skills required to be responsible citizens in a democratic society.

As the students at AMS prepared for their field trip, we began working with them one day a week to help them learn to use digital tools to document their learning. More importantly,

perhaps, we hoped to help them see these tools as a way to focus their attention on the world around them and make connections to things they would encounter on their journey. We began by introducing the students to digital audio recorders and helping them learn to effectively record interviews with people they would meet on their trip. Sessions included a focus on how to set sounds levels, position microphones, and select recording spaces that would help them capture crisp sound. We also taught the students to use digital SLR cameras to document their experiences. In addition to teaching the technical aspects of using the cameras, we helped them consider what kinds of images would help them tell an accurate and compelling story about what they experienced on their trip. As part of the process, the students practiced recording sounds by interviewing people on campus and, in one entertaining case, the resident dogs at the school. The students also practiced taking photographs of their interview sessions.

During this time, we also engaged the students in discussions about how to develop interview questions that would help them learn about the politics of farming. As the students learned to develop interview questions, they were also gaining the opportunity to critically examine the rationales and agendas that are inherent in the process of conducting research and interviews. We believe this process is inextricably linked to the 21st Century Frameworks' goal of understanding how and why media messages are created. We believe that teaching the students to develop interview questions that would support their inquiry also taught them to develop an awareness of the ways in which the questions an interviewer asks can influence the stories that appear in the media. This awareness is a key aspect of becoming an effective interviewer. Once again, students were also learning to deconstruct and evaluate the media messages that people encounter in their daily lives.

We were excited to see the students' progress in learning to use these tools as a way to focus their attention during each of our weekly sessions with them. However, we became most excited about what was happening at AMS when we took the students to a local organic farm to give them the opportunity to put their new skills into practice in an environment that was similar to what they would encounter during their trip. For one of our final sessions with the students before they set out on their trip, we took them to Green Toe Ground, a local biodynamic farm run by an enthusiastic couple, Gaelen Corazine and Nicole Delcagliano. The students spent the morning exploring the farm, taking photos, and interviewing Galen about his farming practices and his life as a farmer. The students went about the business of documenting their trip, and we were impressed with the seriousness with which they approached the task. There was, of course, the normal adolescent horsing around that you would expect to occur when students find themselves in a new place. This trip helped us see the way that digital tools (e.g. audio recorders and cameras) can help students focus on the experience at hand. Having the audio recorders running and the camera shutters snapping gave the students an authentic purpose for paying attention to what they were doing. It was impressive to watch students walking around the farm with headphones on, checking sounds levels on the recorders, and seeming to hang on Galen's every word. Similarly, as they explored the farm as their cameras, students could be seen attending to details of greenhouse construction, manure piles, and the layout of the barn.

Planning for the Open Road

During the period when students were learning to use the cameras and audio equipment

and practicing interviews, the group was also preparing for the trip in a range of ways, working collectively to make decisions about the trip finances, itinerary, food, and lodging, as well as learning as much as they could about food and food production. This process, like so much of what happens at AMS, can be seen through the lens of the 21st Century learning goals captured under the rubric of “Life and Career Planning.” These skills, loosely organized in the framework by the terms “Flexibility and Adaptability,” “Initiative and Self-Direction,” “Cross-Cultural Skills,” “Productivity and Accountability,” and “Leadership and Responsibility,” are skills that can only be attained by doing work in the world. Indeed, what set our group’s efforts off from many other attempts to integrate life skills into education was that something real was at stake. Theirs was not an imaginary trip with a pretend budget, but a real one, with a van and travel trailer and maps and blocks of cheese. There were people to contact about tours and service projects, and arrangements to be made for camping or sleeping on the floors of school alumni, Quaker meeting houses, or other organizations. Since the group was small – just three adults and eight students – everyone could have a meaningful role in pulling off the trip, and, as the trip came together, even the least confident of them could point to specific aspects of the itinerary that he or she had helped bring into being.

Interestingly, there is one aspect of the 21st Century Skills Framework that did not apply to the work of the school in general – or the farm and foods trip in particular – at least in tone. In the “Life and Career Planning” section of the document, there is a clear indication up-front that part of the rationale for these skills is to help students succeed in the “globally competitive” 21st Century. While students at AMS certainly were gaining skills that would make them competitive, the energy surrounding the preparation for the trip was decidedly cooperative and inclusive. Indeed, there is a subtle paradox in the 21st Century Skills document, where the focus on interpersonal skills and problems solving is rationalized by the suggestion that these skills will make us better suited to the struggle inherent in a globalized economy. The trip leaders promoted a subtly different and more open approach to their work, locating their goals less in the language of competition and more in that of mutual understanding and open inquiry.

Making Organic Connections to Core Subjects

Once the students returned from their trip, we began working with them to create digital stories that would document what they had learned over the course of their 18-day adventure. The creation of these stories offered an excellent opportunity to make concrete connections between the Core Subjects (e.g. English, Science, Geography) and the rest of the Framework for 21st Century Learning. As Dewey (1902) argued, authentic learning is active and “involves organic assimilation starting from within” (p. 9). The digital stories we began helping the students create served as a chance for the students to tell *their* stories. Instead of simply presenting information gathered from a traditional research project, the AMS students had personal research experiences that they could now connect with the traditional Core Subjects that form the backbone of traditional schooling.

The students spent the day with us in one of the computer labs on campus at Appalachian State University as we helped them edit the audio they had captured, narrate their experiences, and use the photographs they had taken to create web-based digital stories that would share what they had learned about the politics of food and farming on their trip. Much like students in a

traditional English Language Arts classroom, the students had to consider the various facets of narrative structure in order to create the stories they wanted to tell. They had to decide on a theme that would serve as a framework for their stories, compose their narrations, edit text they wanted to include, and be clear about the messages their stories would convey. Thus, the process as a whole required the students to demonstrate their ability to engage in the collection of primary source documents and synthesize the information they collected much like they would in a traditional social studies classroom that was based on a framework, such as the North Carolina Standard Course of Study. However, this project extended far beyond these tasks.

The Framework for 21st Century Learning is set up in a way that requires students to move beyond basic competency in core subjects by “weaving 21st century interdisciplinary themes into core subjects” such as Environmental Literacy. This focus goes deeper than one might normally encounter in a traditional science classroom. Instead of helping students simply learn about the environment, this framework asks students to carefully consider human impact on the natural world. The AMS field trip and this project provided students with a unique opportunity to blend learning in their core subjects with an inquiry into how the politics of food and farming influence their environment and society. Creating these digital stories helped the students see the connections between the dietary choices people make, the business of farming, and the environment. At the same time, the students had an opportunity to draw upon their personal research experience to develop arguments for the things they saw as important after meeting and talking with the various people involved with the production and consumption of food. For example, the project connected their reading and research on the politics of meat production with first-hand experiences in an organic slaughterhouse. At the end of the process, students could articulate some of the complex emotional and environmental issues surrounding the consumption of animals.

Long-term Values

Though the trip leaders certainly had a point of view with respect to political and social issues around food, we found it remarkable how open they were to letting students explore these ideas themselves and come to their own conclusions. It was notable that the trip went both to small organic farms and to the agricultural giant Monsanto, whose controversial promotion of genetically engineered crops the students had studied prior to the trip; similarly, students had a chance to work alongside migrant farm workers and to discuss labor issues with farm owners. This chance for students to see multiple sides to an issue, develop ideas on their own, and to express these ideas, is perhaps what was ultimately most valuable about the trip. In fact, we saw these values play out long after the trip was over and students were invited by their language arts teacher to write letters to the editor of the local paper on topics of their choice. Two of the students from this group chose to write about ecological issues they had encountered on the field trip. One of these letters brought on a spirited back and forth in the paper, with a well-known local conservative voice taking on the student and challenging his reasoning. Significantly, in keeping with the school’s attitude about the value of dialogue, the opposing letter writer was invited to the school to present his views to the students in person and to engage in a healthy debate with them. Though on the surface, this person’s values were antithetical to those expressed by the school, several weeks later, he wrote back to the paper to publicly thank the school for their hospitality and for being willing to give him a chance to

express himself to them.

Here again, we find that the 21st Century Skills Framework is useful in thinking through what was happening at Arthur Morgan School. Under the heading “Communication and Collaboration,” we see the goal of getting students to “articulate their thoughts and ideas effectively” as well as “listen effectively” and “communicate in diverse environments.” While these goals were certainly promoted throughout the project, it was heartening to see how they wove their way into the life of the school in the months after students returned from their field trip. This example also shows how an effective authentic learning experience intertwines many of the goals of the framework, as the student letter writer incorporated traditional literacy skills, such as writing for an audience, with interpersonal and problem solving skills, creativity and media savvy.

The Value of Authentic Implementation of a Reform Framework

Over the last several decades, the increased value placed on high stakes testing has led to the development of a narrow view of what counts as learning and teaching in U.S. schools (Franciosi, 2004; Luke, 2004; Nichols & Berliner, 2007; Schultz & Fecho, 2005). This narrow perspective complicates teachers’ efforts to incorporate students’ interests into curricula and create authentic learning experiences. However, we believe that these complications do not have to limit teachers as they seek to make their classrooms places where natural curiosity and the love of learning can flourish. By approaching the current climate of schools with creativity and a framework for learning that values integration of core subjects and relevant 21st century themes, we believe teachers can capture students’ interests and engage them in exciting learning experiences. Our work with the students at AMS demonstrates what can happen when students and teachers engage in the exploration of topics of organic interest while intentionally seeking to make clear connections between core curricular areas and the skills students need in order to grow into responsible and compassionate citizens in the 21st century and beyond.

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