

Report from Consultancy on Incorporating Folklore Into K-12 STEM Curricula
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Introduction

The purpose of this consultancy was to have Heritage Education Resources (HER) explore “best practices” in folklore and education and how they dovetail with “best practices” in the STEM (science, technology, engineering, and math) curricula. Two folklore and education projects served as a lens through which to view these practices: the Padua Center at the University of Toledo, where science teachers were exploring their work through multicultural education’s principles laid out by James A. Banks, and the Center for Food and Culture in Bowling Green, Ohio, an organization devoted in part to traditional foodways in northwestern Ohio and its collection of videos on foodways of various communities (e.g., Mexican, Polish, and others).

After reviewing Padua Center and Center for Food and Culture materials, HER composed activities adhering to the Common Core Curriculum (which all K-12 teachers must follow) that can be evaluated in light of folklore and STEM, and could be replicated.

Given the fact that this consultancy looked at two practices, folklore and education and STEM, this report is organized differently from others. It will address:

1. The distinction between ‘best practices’ in folklore and education and STEM
2. Parallels between content and pedagogy in the two fields
3. The Common Core Standards as the current link between folklore and education and STEM
4. Recommendations for an equitable alliance between folklore and education and STEM, using the Padua Center and Center for Food and Culture as examples

This report will illustrate how folklore and education programming is a form of a “promising best practice” in STEM, a practice that is rarely evaluated and is often not replicated, *but* “magically” produces positive results. In order not to rely on “magic,” folklore and education materials need to be tested and practiced over and over and over, and as a result will become a part of the canon of the field.

Best Practices

In folklore and education, just like other areas of folklore’s work, a best practice often refers to some practice that is replicable. We go to a festival and we see something in it that might go over well in our community. So, we try it out, and it does work. It is then

shared among colleagues via everything from AFS presentations, Facebook, Publore, etc. Through communication, what we do becomes a “best practice.”

In science education, and this applies to STEM, there are three levels of best practice: (<http://www.besteducationpractices.org/what-is-a-best-practice/>):

1. Promising: appears to result in positive outcomes for students. Not systematically evaluated
2. Validating: has undergone rigorous evaluation and is deemed to result in positive outcome for students.
3. Exemplary: demonstrated to be replicable over time and space.

Like our colleagues in other areas of folk cultural programming, we in folklore and education are “exemplary driven.” In academe one either publishes or perishes. In public work, it’s either program or perish. As a result for folklore and education, there’s a lot of material, reference and curriculum, which is accumulating dust because it was put aside to make way for a “new thing” that has been produced or is something we are producing. From STEM’s point of view, our efforts are on the level of a best practice that is promising because they have not been systematically evaluated individually or as a constellation of practices.

Content and Pedagogy

The major thing common for folklorists working in education and science and math educators is a passion for the “stuff” of our work. Folklore and education is passionate about tradition. In this case, K-12 math and science teachers are passionate about their fields. What sets the latter two kinds of teachers from the folklorist in education is teacher training. We want students to be as excited about tradition as we are. But how do we convey that excitement in such a way that it “sticks?” There are programs that do this - - City Lore and the Philadelphia Folklore Project come to mind - - that benefit from teacher-tradition bearers. But few of us are *certified teachers*. And sometimes that is hard for a teacher to take when we come to work in *their* classroom. (See Moonsammy 1991)

The “stuff” is content. Pedagogy is the way the stuff is presented so that it invites exploration and excitement, while encouraging understanding - - almost a visceral feeling of “I’ve got it!” from the student.

What models are available to us in the pedagogy of our passion? Once again, a model from science education presents itself, the “5E Learning Cycle. “ (<http://faculty.mwsu.edu/west/maryann.coe/coe/inquire/inquiry.htm>)

Developed in the early 1970s, this model consists of five phases: engagement, exploration, explanation, elaboration, and evaluation. Originally, this model had three

stages—exploration, invention, and discovery—but the five-stage model stretches out the learning process to engage all who are involved in a study in a manner that is replicable and measurable, and shaping of a learning community. In our case, that community would consist of the teacher, the students, the folklorist, and the tradition bearer (or folk artist), and his or her community. Done with care, this model would ignite in a student the desire to learn more about traditional cultures be they from within the family to in the community.

Looks should not be deceiving. The 5E model is seemingly loose on the one hand and quite structured on the other. It offers us the opportunity to create promising programs that, with evaluation and practice, have the potential of becoming validating and exemplary practices. If we want to dovetail with STEM, this model helps us do it.

What does folklore and education bring to this model? It most definitely brings a “human component” because we are dealing with the stuff in our lives, the stuff we call “tradition” which is a part of human being. The 5E model, as it stands alone, seems rather abstract. But by applying it with the human component, the model becomes alive. Indeed, we can wrap the model around the stuff and come up with a richness that is analyzable through quantitative and qualitative lenses. In sharing this with educators, we have the additional potential of leveling a playing field where competition between teacher and folklorist doesn’t make any sense, and each can see his or her role in a folklore and education project as it applies to folklore itself or works across the curriculum.

Dealing With It: The Core Curriculum Standards

The Common Core Curriculum Standards (the Core) strike fear in the teacher and causes frustration for folklorists working with education. Just what is the Core, and why is it such a burden?

The Common Core is a set of standards that describe what a student *should* be able to do after a lesson or after a cluster of lessons. Every teacher must apply and be accountable for his or her work with the Core - - if he or she wants to keep a job. To that end, there are going to be “highly involved” teachers who can deal with the Core in a creative way, and there are going to be “lowly involved teachers who rest completely on the state approved text book. (Schubert 1992).

The Core is a burden. For one thing, no one likes being evaluated, especially by those who don’t seem to understand the variegated process of education and the relationships between teachers and their students. Second, the Core is unwieldy - - clumsy - - hundreds of pages directing teachers to proceed linearly and quickly. The teacher’s job hangs on the ability to achieve the standards in the Core. And given the fact that students are tested on the Core, teachers are more often than not forced to “teach to the test,” which drives them away from interest and excitement.

Would it be possible to use the Core as a bridge between folklore and education and STEM? For math and science, the Core requires a method for literacy in which students make claims about information, organize it, and report findings, something similar to the basics of ethnography. It would require folklorist and teacher to frame questions that could translate with ease in the Core and in the content of tradition.

To ensure a strong bridge, folklorists working in education must know what teachers are up against with the Core. It isn't enough to know *about* it. We have to access the Core and extract standards that mesh with what the teacher needs to do and what we hope to do. Going through the Core, which often differs from state to state, is time consuming. In Ohio, for example, the Core in math and science alone is 280 pages. All one might need is a couple of pages, but they might be located between pages 130 and 150!

On the other side of the coin, what can we give to teachers that would allow them to see how folklore and education is developing an approach that is replicable and on its way to move beyond the promising and joining with the exemplary?

The *Standards for Folklife Education* (Sidener 1997) consists of Content Standards that outline the stuff of study, and Performance Standards (hands on, brains on) which “teaches the skills and concepts necessary for students to explore cultural participation, first in their own lives, and then looking at others” (p. 5) Instead of creating hypotheses with laboratory experimentation, *Folklife Standards* uses the cultural world observed as its laboratory in a way strikingly similar to how the natural sciences use the physical world observed as its laboratory. Each fortifies such Core standards as “write informative/explanatory texts, including the narration of . . . scientific procedures/ experiments, or technical processes.” (Core Standard for literacy in Science and Technical Subjects, Grades 6 – 12).

At this time, the *Standards* are undergoing rigorous testing in one school district. They are a promising practice as their components are replicable and measurable in content and pedagogy.

Recommendations

The work of the Padua Center at the University of Toledo and the Center for Food and Culture in Bowling Green, Ohio, serves as a springboard in making recommendations on moving toward exemplary practices fitting into science education and defining the same for the field of folklore and education. At this point in time, these organizations' work is making strides into the validating phase of best practices in science education by virtue of the fact that they are developing materials that they are using and refining on a regular basis.

First, some context. In June 2013, Heritage Education Resources Director Jan Rosenberg, PhD visited with Padua Center head Lynne Hamer and Food and Culture's coordinator Lucy Long. After much discussion about what each head wanted, especially in terms of replicable, Core ready activities, Rosenberg was able to review and analyze

the materials provided to her by each organization, which included Food and Culture's on-line videos and scripts on NW Ohio foodways, and Padua's plans for its intensive workshops on multicultural education with science educators. In using the organizations' work, recommendations for creating tighter bonds between the organizations' work and their desire to dovetail with STEM developed. These recommendations are straightforward, and perhaps already exist to a certain degree. But they are always worth repeating in one form or another.

1. Learn the Core. We need to educate ourselves about STEM using the Core. We can't afford to come to the table of STEM empty handed. We need to be open to STEM practices and apply what we can to our work, in a manner that is fitting to our missions.

2. Create advisory teams. An advisory committee is different from a board of directors. We need to create a team of professionals we feel we can learn from. A committee could consist of a science educator, an educational anthropologist, and a community scholar. Obviously, the folklorist is a part of the team. These people make up a valuable sounding board.

3. Create evaluation tools that combine qualitative and quantitative measures. These tools should account for who was engaged in a program (quantitative) and their reactions to it (qualitative). Surveys are good for this.

4. Who's the audience and what good is it? In all evaluations, ask this question. What good is our work for science education? What good is our work for folklore and education? Is this something that can be used with students and a general audience?

5. What needs to be done to make the promising practice an exemplary practice? Work with the advisory team to create ways to test the project and garner findings that can be used to further the project to the next phases of validating and exemplary. It's going to take some time. The questions here are "what works?" and "how." It will make the project more accountable and even valuable.

Conclusions

Folklore and education is a field rich in possibilities. Whether in the classroom or the community, folklore and education is meeting one of its greatest challenges, becoming visible and viable in other K-12 areas, primarily, STEM. But STEM really is nothing new. It has been a part of education practice since at least 1957 with the USSR launch of Sputnik and the commencement of the "space race" which required expertise in science, technology, engineering, and math. We're looking at new wine in old bottles.

America has always prided itself on being Number One in military might and educational presence. Now, with much more might coming from other countries, we have been put in the position of regrouping and facing stronger winds. These days, STEM alone won't work in our cultures. Rather, a meeting between STEM and our understanding of

people's critical response to the world using expressions that have with the tests of time
-- folklore -- is essential.

References

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