

# Technology and Curriculum at ECF: A Roundtable Discussion

*From an online science fiction book club to a hurricane project that taps real-time data, ECF teachers and students are using technology to add an extra dimension to the curriculum.*

MODERATED BY GINGER CURWEN

**MODERATOR:** We are with the classroom technology experts at ECF. They are Beth Beckmann, associate head of school and acting middle school principal; Jay Trevorow, director of technology, who is also teaching eighth grade English this year; and Andrea Marks, our first technology integrator. Let's start out by taking a look at the current state of classroom technology at ECF. Alumni who haven't been to the school in years wonder if everything is computer driven, if all students have access to computers, if all the classroom are wireless. Tell us about the state of the art.

**JAY TREVORROW:** Let's begin the conversation with numbers and then move our way to anecdotes. We have about 750 networked computers at ECF. About 600 of those are student-available in one fashion or another. They are in classes, labs, libraries – they permeate the place. So, sheer access to computers is very impressive; in fact I've often compared this place to a medium-size corporation in terms of technology access. It's very extensive and it's very complex. It's everywhere, but how it's used is what the question is all about.

*At Plimoth Plantation, Ethical Culture fifth graders used iPods to interview the Indians and colonists, then created a Podcast about their experience.*



PHOTO: ERICA POON

**MODERATOR:** So, do students use it for homework? Are the classes wireless? Are they living by computer?

**ANDREA MARKS:** Well, we just saw a language class across the hall. There are kids in there using laptops and this area is wireless. There's some informal use of technology in the classroom, there's some actual technology courses taught in labs, and there are laptop carts that people use with their classes.

**BETH BECKMANN:** I've seen the use of technology grow even in the year I've been in the middle school. Teachers are becoming more comfortable, and they know they can count on support from Jay and 'Drea when they want to try something new.

**MODERATOR:** When we talk about technology, we don't just mean computers, do we? We're also talking about Smartboards, iPods, digital microscopes. Where and how are they being used?

**TREVORROW:** I think when you look at technology in classrooms, one of the most interesting areas of growth is the use of Smartboards. We have about three dozen of them in various classrooms. When you go into a math or science or foreign language classroom, typically what you see is a classroom that is using a projector and a networked computer, projecting images, projecting websites, projecting data up on these Smartboards. The data can be then be captured, emailed to students, put on a teacher's web site – and by the way, now we have about 97 different courses with web presences where teachers and others post information. Next year when the middle school opens, every classroom will have a Smartboard and networked computers available.

**BECKMANN:** I just talked to a middle school science teacher who wants to get some GPS [global positioning systems] units. He wants to do some mapping of

the campus, in conjunction with a study of invasive plants, and wants to document from year to year what's happening in different areas of the campus.

**MARKS:** At Ethical Culture, we had a 5th grade class trip to Plimoth Plantation to the colonial village there, and the kids brought iPods with mic attachments and they interviewed the colonists and the Indians and asked them about life in Plimoth. They came back down with their interviews and edited them and created Podcasts. They also went around with digital cameras too so the Podcasts included audio and images from their trip. The idea is to share the field trip experience with others who weren't able to get there.

**TREVORROW:** Over at Fieldston Lower, the science teacher, Michael Wilkinson, does a hurricane unit where the kids are involved in downloading real time weather data, charting it, graphing it, and building it into a portfolio for this entire project of how hurricanes evolve across the Atlantic and impact North America. But it's all done with real data that computer technology makes available to these kids. It brings a sense of reality to the course: Rather than just studying about hurricanes in a book, you can do hurricanes as they're happening. It's a pretty impressive project, and it's all done with real data.

One of the things you find over and over again is that children really buy into quality when they're doing genuine work, and technology allows that to happen whether you're interviewing people at Plimoth or downloading the track of a hurricane. It's real work, not just play learning.

**MODERATOR:** I understand that many teachers have their own websites – how do they use them?

**MARKS:** We have two “flavors” of websites. One is a Moodle site (written about in “The Moddle Report,” *FieldNotes*, January 2007) and the other are websites



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created with a tool called Manilla. The Manilla sites provide a place to store and make accessible all the course materials – the syllabus, the handouts, the assignment sheets. A more interactive experience happens on Moodle sites; kids are taking parts in conversations about the course content and sharing information in ways that wouldn't be possible without Moodle.

**TREVORROW:** The library at EC has book discussion groups that take place on Moodle. Students are responding to each other's responses about books; they have a science fiction book club and discuss SF books online. It's absolutely astounding. I logged in the other day and saw 77 different contributions from students talking about reading. When you can get that many students talking about reading, you're doing very well, and Moodle enables that. And more importantly for me, if you're talking about a fourth grader, Moodle enables that in a secure environment. Each youngster has an account; he or she can log in and then can participate with everyone else.

My eighth grade English class is doing a project with a class in Los Angeles at the end of the month, and we've created a Moodle site for our joint activity. All the kids will have secure accounts, and we will collaborate on a couple of projects including a conversation around the essential questions of evil and human nature. Plus we'll be doing a series of interviews with adults. And we'll read *Lord of the Flies* and wind up doing a collaborative essay at the end. So it's a site that allows us to work with

other people and for me the most powerful thing is that it's not about computers, it's about networks. And it's not really about networks connecting computers, it's about networks connecting people.

**MODERATOR:** With all this activity, I notice that within the plans for the new middle school, there are no designated computer labs. Does that represent a philosophical shift? Is that common in education these days?

**BECKMANN:** I think it represents a little bit of a shift for us. What we envision is that we will have laptop carts on every floor, so the lab will come to the kids, rather than the kids going to the lab. So whenever the teacher wants the children on computers, he or she will take the laptops and have them right there in the classroom or in one of the academic centers.

**TREVORROW:** Once again, it's a lot like the way the rest of the world works. We move the computers to where the job is – in this case, the classroom.

**MODERATOR:** When it comes to computer curriculum in the high school, do you see the traditional shift of boys more interested, girls less interested?

**TREVORROW:** It's still a reality for us and many, many other schools. First of all, the high school curriculum is still in the process of evolving vis-a-vis technology. Right now we have programming courses at the high school, which are really hardcore

math courses. You can read a lot about gender issues and math generally, but I think it holds true in the area of programming. In the middle school, we want to expand our types of offerings so that we give more people of either gender an opportunity to be involved in different types of activity. I've seen data out there that says that if you give girls projects that matter to them (and the project is the key here), they will use technology. But unlike boys, they won't simply learn technology in a vacuum because it's neat. Girls don't see it that way. It has to relate to their interests. So we need to open up interest-based projects in the middle school and continue that through high school.

**MODERATOR:** ECF has added a technology integrator to the staff this year. What is your role?

**MARKS:** I am someone who is here to work with teachers, I'm getting them comfortable with technology, so that runs the gamut from helping them with their email package to helping develop a fifth grade field trip Podcast. I think studies have shown that without that support, technology will just sit there. Sometimes I feel like a shrink because some teachers are rather phobic about technology or learning something new, so I try to relate to people not as a 'geek' but get to know the teachers, what their goal is in terms of learning technology, and most importantly, to understand their curriculum. Curriculum drives the integration. If the technology can enhance or support what the teacher is doing, then that's what we should be doing. If it's an add-on or a gee-whiz kind of thing, then it's not really valuable.

**TREVORROW:** Just to piggyback on the comment about curriculum. You don't build technology using educators the way you build Ford automobiles. Technology using educators comes into being because other individuals who understand both education and technology spend time

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learning about that teacher's passion and their curriculum. When you do that you begin to have successful integration.

**BECKMANN:** This is a big shift for us to really look at technology from an educational point of view. We built the infrastructure [earlier] and now with Jay's coming last year and 'Drea this year, we've been able to really get teachers using it. And what's so important, as these two have said, is teachers using it in an authentic way. A lot of that happens over the lunch tables, conversations about what they're doing in class, or wandering around. These two have to gather a lot of data from the teachers so, they can interject, as Jay said, how about this, or what if you did it this way. Most of us don't know the opportunities that exist for us. And that's what Jay and 'Drea have done beautifully is introduce us to the possibilities.

*Online in the Tate Library.*



**MODERATOR:** Isn't there curriculum that doesn't lend itself to technology?

**TREVORROW:** I appreciated getting the questions in advance because I've been thinking about this one...

*[Laughter.]*

I think chalk is technology at its lowest level. We have to take a broad view of technology. One of the best teachers I ever knew worked with students in Photoshop to alter their self-portraits; they turned that into a print which they made on a block and then turned the wood chisel to carve that block image out. I thought everything from Photoshop to the block chisel involved technology. As an educator myself, and I'm a teacher long before I got involved in technology, I think technology is very broad, and I think you could see it in ways that might surprise you in any classroom in this place.

**BECKMANN:** I can't think of any area that wouldn't and doesn't use some kind of technology. If you look at the work our kids did in community service in New Orleans ["Hard Going in the Big Easy," Spring 2005 *ECF Reporter*]... they were posting their experiences to a website. They had a blog and they were posting pictures in real time on the school website.

**TREVORROW:** We ran an experiment in the science department with Paul Church last year using handheld technology. That was what the kids in New Orleans used.

It's what you would call a cell phone but I would call a small belt-hung gizmo computer thing, and that's the technical term.

And by the way, when you talk about technology, and people ask should we become a laptop school or a this-school or a that-school? I think we should become first of all a school without an adjective that refers to technology. We should be a good school first. Then I think we can figure out how technology can take its place. But in terms of specific tools, it's not just one way. It may be a laptop or a desktop or a hand held. It's the right tool for the right job at the right time.

**MARKS:** School should model life, and if our use of technology models our real world use of technology, we're doing something right.

**MODERATOR:** I'm glad you mentioned that. At what age now are kids using computers at home, and how does that affect the way you think about integrating technology into the school?

**MARKS:** Jay did a survey recently of the middle school and high school students about their online practices. I turned around and did one down at Ethical Culture. Originally I was going only do just fourth, fifth, and sixth grade because that's where the push is in terms of technology integration and curriculum. But we also surveyed the third grade and we were all bowled over by the results – that 98 percent of them are using the computer for the same uses that the older children are.



*At Ethical Culture, many library activities are online.*

**MODERATOR:** Which are?

**MARKS:** Playing games online. Chatting on line with each other via email, instant messaging, and chatting with their friends and others through these games that they're playing. What that has shown us is that we need to start educating both the children in the younger grades and the adults serving that community about on-line practice and staying safe.

**MODERATOR:** You're anticipating my next question. How do you do that kind of education? And, with the older students, how do you teach them to be skeptical consumers of web information?

**MARKS:** To the first part of the question, the school has an AUP, which is an acceptable use policy, which gives guidelines on

how the computers are used here on campus. That's a wonderful way to start the dialogue, because the guidelines at school should be the same guidelines at home. I'm talking to the principals at EC about doing a Saturday workshop for parents, letting them come to the school, come to the lab, and log onto Club Penguin [a popular site for younger students] and let them see what's it's all about and chat with one another across the room. I'll even set up a Moodle course site because most of the time the parents are unaware of what's going on and they're not given an opportunity to become aware. A great way to do that is to support them and get them talking to their kids.

**TREVORROW:** One of the things that's most exciting to me is this whole realm of surveying from little kids up to 11th graders here. We'd like to take the older kids, who are probably the first generation of digital natives, raised in a digital world (those of us at this table are digital immigrants). They've learned a lot, good, bad, and ugly. We want to tap into the information the older kids have given us and use that as well as employ them in designing a curriculum for younger kids, because kids have a lot of credibility with kids. ■



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