PBS Program -- Digital Media: New Learners of the 21st Century

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[00:00:11]

Brown: Probably the most important thing for kids

             growing up today is the love of embracing change.

[00:00:20]   In a world of rapid change, the need to

             memorize something is a 20th century skill. The

             need to navigate in a buzz of confusion and to

             figure out how to trust the information that you

             find -- if you can feel confident doing that, the

             world is yours.

[00:00:47]

Lehmann: How can we leverage digital media in schools? We

             can stop being driven by fear. We can start to

             understand that this is the world that kids live

             in, and that our schools can reflect that.

[00:01:00]   John Dewey said it best. He said, "If we

             teach today's students the way we taught them

             yesterday, we rob them of tomorrow." And we are

             doing that all over this country.

[00:01:11]

Pinkard: Literacy has always been defined by the
              technology. Before the printing press, your
              ability to orally recite something meant to be
              literate. And so, as technology has made things
              cheaper, we're now saying, "Well, hmm, is someone
              literate if they cannot critique media, take
              media in, if they're only taking in traditional
              text?" That's a question to answer today, but
              what will that mean in 2020? I would venture to
              say that they won't necessarily be considered as
              being literate.

[00:01:37]

Jenkins: We find when we talk about 21st century skills,
              people will often reduce them to skills for the
              workplace and skills involving technology, and we
              really are thinking about skills for creativity,
              for civic engagement, for social life -- the full
              range of experiences that young people will be
              involved in in the future.

[00:01:58]

M Voiceover: If you look around you, young people everywhere -
              - at home, at malls and in school yards, are

texting, tweeting and gaming. They're joining

virtual interest groups, making and uploading

videos to YouTube, and defining who they are to

their friends through their Facebook pages.

[00:02:18]   While many parents are anxious about the

time their children spend on cell phones, on

social networks and playing online games, a

growing number of researchers and educators are

excited about the opportunities these digital

media platforms bring to learning. A cell phone

can be a distraction in the classroom -- or, it

can be an instant connection to the vast

resources of the internet.

[00:02:38]   A digital life may have more virtual

relationships than in-person ones, but it

improves the opportunities to interact with

experts and form groups to support the interests

that young people care most about.

[00:02:52]   To produce the new learners of the 21st

century, educators and others will have to find

the right balance between the perils of being

"always on" and the necessity for young people to

creatively use the gadgets and digital media tools of everyday life.

[00:03:03]   For the next hour, we explore five stories that show how educators inside and out of the classroom are inviting young people to use the digital media tools they value most to direct their own learning, and take a more active role in shaping their experience of the world.

[00:03:21]   TITLE: "Quest to Learn, New York, NY"

[00:03:24]

M Teacher: We like games that are challenging. As game designers, we have to really understand the player is the most important part of your game. The player is the one that tells you whether your game is good or not. Now, you're designing your games for a very critical audience, which is your peers.

[00:03:46]

Jada: My name is Jada.

[00:03:47]

Kennis: My name is Kennis.

[00:03:48]

Nadine: Nadine.

[00:03:49]

Roydiari: Nicholas Roydiari, if you want my full name. And

               I go to Quest to Learn.

[00:03:57]

M Student: Quest to Learn is a school for digital kids.

[00:03:59]

Roydiari: Like a lot of people want to say it's a slogan.

               This school is the future.

[00:04:02]

F Voice: It's mainly what we do here. We learn and we

               read. But we also do a lot of digital things.

[00:04:07]

M Student: We use a lot more technology at this school.

               Umm, we do a lot of hands-on projects. We don't

               sit in front of textbooks.

[00:04:14]

F Student: We learn through gaming and, like, playing games.

[00:04:18]

Roydiari: The teacher also does talk -- tell us things.

               It's like, we just watch a computer all day like

this. It's not like that completely; it's not

all like that.

[00:04:29]

M Student: Really, it's a system-based thinking, trial-and-

error. Lots of stuff that's really fun, and

unlike other schools.

[00:04:37]

Roydiari: We have the basic class of a school, but we give

them different names. Like, math is called

"Codeworlds," science is "The Way Things Work,"

social studies is "BSP" for "Being, Space and

Place," and "Sports for the Mind," it's more like

designing things for that class.

[00:04:52]

F Teacher: Do you want to guide me through your game?

[00:04:54]

F Student: Okay.

[00:04:55]

F Teacher: I want to see your diagram first.

[00:04:58]

F Student: I took out a couple of things that would have

been too cluttered. So, at first you're

presented with three courses, two of which are
wrong. One actually leads to a goal.

[00:05:11]

F Teacher: Okay.

[00:05:11]

M Student: I used to think that, when I was a little kid,
that if you put two video games together in one
system, they would combine the games, so I always
thought it would be really fun to make a game.

[00:05:21]

M Student: Game design is not just like we click on a button
and we have a full game. Game design is all
about trial and error and figuring out all these
things that would make a good game.

[00:05:31]

F Teacher: The more choices you have in a game, what
happens?

[00:05:34]

M Student: Umm, you play it more times?

[00:05:35]

F Teacher: You play it more times, exactly. And it is what?

[00:05:38]

M Student: 'Cause if you, like, only have one choice you're

              only going to play it once and then you're gonna

              say, "Oh, I don't want to do it again."

[00:05:43]

F Teacher: Exactly.

[00:05:44]

Salen: Generally, when we work with kids around making

              games, it's not just you sort of set them loose

              in a game-making program. Umm, there tends to be

              a very structured way in which you, uhh, pose a

              set of guiding questions, like, "Are you engaging

              the player?" "Are you giving the player

              feedback?" "Do they know where to go now?" And

              all of those are, umm, big systems concepts.

              They designing something part-way and then you

              stop them, and you do a kind of assessment, which

              means all of them drawing diagrams.

[00:06:11]

F Teacher: So basically, this is the end, the goal.

[00:06:13]

F Student: Yes.

[00:06:13]

F Teacher: Okay. So, we have two different endings. Do we
              have any dead ends in here?

[00:06:19]

M Student: Umm, I have not put them.

[00:06:20]

F Teacher: Okay. So, this is like a next step for you to
              work, to put a couple of dead ends in there.

[00:06:28]

Brown: I think the construct that has been most
              overlooked now, by the 21st century, maybe in the
              20th century as well, is the power and importance
              of play.

[00:06:44]   Very often, when you're tinkering, it
              doesn't make pure logic sense. It's something
              you begin to feel in your hands as much as your
              mind. Tinkering brings thought and action
              together in some very powerful magical ways. We
              say, "Oh!" and things just suddenly gel. They
              just come together, and it's like an epiphany.

[00:07:04]   Well, that epiphany that happens through
              playing and then seeing something just come

together, umm, never leaves you. That is a

lifelong learning event.

[00:07:25]

M Student: Right now we're working with Little Big Planet, a

PS3 game.

[00:07:29]

Kennis: And we're make ... signing stuff for fables.

Aesop's Fables.

[00:07:36]

M Student: And we have to create a level by using their

"Create Level" template.

[00:07:40]

Kennis: ... which is really cool, so we get to make

characters and sets and stuff.

[00:07:45]

Salen: So they're studying a story and they're looking

at, what does it take to translate the components

of a story into a live 3D game environment? So

it's a little bit like a virtual theater

performance of a story that has come from a kind

of oral tradition of storytelling, moved to a

printed page, moved to a kind of graphic novel

format, now into a 3D game environment.

[00:08:12]

M Teacher: Doing game design in school teachers you to

attack a complex problem into smaller pieces. It

also makes you think on many different levels at

once. By designing games, you see things in a

new way.

[00:08:28]

F Voice: It's kind of nice with the change of background

at the end.

[00:08:31]

Gee: Our old model of schooling, you know, "Let's just

teach you what you're going to know for the rest

of your life," clearly isn't going to work, and

it clearly isn't going to work to have a

population who can't actually solve problems with

their knowledge. So, how do we get people

prepared to learn in the future for things that

don't even exist now, and how do we prepare them

to be able to innovate and solve problems and not

just know a bunch of facts they can't use? And

Quest to Learn is one paradigm of how to do that, and a very thoughtful one because it's based on an analogy, uhh, to games, to how people learn in games.

[00:09:04]   Now, why should it be based on analogy? A game is nothing but a problem space. What is a video game? It's just a set of problems. It could be anything. "Civilization" is problems in history; "Halo" is problems in a fantasy world of fighting; "Harvest Moon" was problems in farming; "Chibi-Robo" is problems in how to [get ??] a 4-inch robot to clean a house.

[00:09:23]   Doesn't matter what the problems are. All a video game is is a set of problems that you must solve in order to win.

[00:09:38]

Salen: And we have a wireless building. The kids use laptops. Umm, and the reason we do that is so that we can put them away when it's actually not the best tool for them to be learning with.

[00:09:50]   But all of the classes use all different kinds of digital media. We've had kids do ...

make digital comics as part of their curriculum.
They've been working, uhh, in a unit on ancient
civilizations, a series of whole collectible
cards that were in PDF form that they, uhh, did
research on and created the cards and then
printed them out and had sort of collectible
decks like Pokemon.

[00:10:09]   Umm, kids produce video podcasts. They use
flipcams.

[00:10:13]   But for us, digital is just a choice of one
tool among other kinds of tools. Umm, but it
something for many kids that actually really
helps them.

[00:10:27]

Roydiari: I'm a daydreamer. I have to try to pay
attention. But sometimes we [INAUDIBLE] and get
cool assignments. Sometimes we get movies. Like
I know in a lot of schools, like, they have,
like, maybe once in a while we get a movie. But
this happens much more often. We get videos from
the internet, so it happens more often. And
since I like to watch TV sometimes, and go on the

computer, so that kind of, I guess, maybe helps

me a little.

[00:10:55]

F Student: Well, it's more entertaining. I kind of get to

engage, and it's like ... it's not like, "Oh, I

have to learn this." It's like, "Oh, this looks

fun. I want to learn it."

[00:11:04]

M Student: When we play games, it has to do with what we're

learning. Like, there's a web site called

"Arcademicskillbuilders.com," and there's a bunch

of math themes that have to do with division,

multiplication, etc., and she lets us play it a

lot, and ... but we're learning from it.

[00:11:24]

Nadine: What motivates me? 'Cause I try to ... like, I

try to win, but while I'm trying ... like, while

I'm practicing, all the games have to do with

learning so I have to, like, study to, like, win.

[00:11:37]

Doyle: So, it's kind of stealth learning. The kids are

learning, but they're having fun learning it. So

they're ... they don't know they're learning.

But we do assess them quite rigorously at every

stage of the process.

[00:11:52]

Shapiro: We have a standards-based curriculum. We follow

the New York State standards to the letter, and

that's our kind of baseline. However, we do have

these other competencies that we believe are

important that ... which include a lot of the

technology stuff. And then there's also social-

emotional learning competencies, which include a

lot of the collaboration stuff.

[00:12:09]

M Teacher: Now, their storyboard ... Who did the storyboard?

Nadine?

[00:12:14]

Nadine: We all did the drawings.

[00:12:14]

M Teacher: We all did the drawings. That's what I like to

see. And who's the set designer?

[00:12:19]

F Student: [sounds like:] Umm, Nicole. (??)

[00:12:20]

M Teacher: I have to say, great work, great work, teamwork,
              and nice results. So now, we're gonna move on
              Team #4.

[00:12:30]

Gee: If a learning system is well-designed, you don't
              finish it without the guarantee you learned it
              already. Now, that's true of a good game. A
              good game -- if you finish it, you're ... you
              learned how to play it. It's designed in such a
              way that you don't get to the next level unless
              you're prepared to learn on that level.

[00:12:47]   So, you can see that we could imagine a day
              where learning and assessment are the same thing.
              That is, we build such rich learning systems,
              they already assess themselves. Think about it -
              - that would be, in the end, cheap, because we
              wouldn't need the testing industry anymore. We
              ... We would just need a learning industry.

[00:13:09]

Salen: A lot of concerns that parents when we start
              talking about games is a concern around

competition. And what they get worried about is,
"Oh, there's this game stuff where kids get
addicted and all they want to do is get better,
better, better, better." And so, we try to
strike a balance with that, umm, to say that,
"Well, what's really awesome about that is that
kids are driven to get better."

[00:13:38]

Jenkins: Well, addiction ... We've got to be careful how
we use the word "addiction" because it really is
a term that's used to police our culture. So a
kid who stays up late reading a book is rewarded
and recognized as having had dedication. A kid
who stays up late trying to beat a video game is
called "addicted."

[00:13:54]   A kid who spends months getting ready for a
school play or a football game is seen as having
seen ... shown real dedication and
accomplishment. A kid who spends that same time
working with his guild in "World of Warcraft" is
thought to have a problem.

[00:14:10]   So, I think there's a double standard here,
                and we're using this term "addiction" to refer to
                things we don't value, but that may in fact be
                deeply valuable for students and young people in
                their lives.

[00:14:27]   Now, there are certainly experts who say
           that there's a limited number of people who may well be
           addicted to games or the internet, but relatively few.
           And in most cases, what we're reading as symptoms of
           addiction are signs of depression that we should pay
           attention to. You know, a kid who's depressed doesn't
           necessarily have a lot of emotional energy, doesn't want
           to get out in the world, may seem socially isolated. But
           we're mistaking cause for symptom when we blame the
           internet or the computer game on that kind of behavior.

[00:14:59] TITLE: "Digital Youth Network, Chicago, IL"

[00:15:03]

Malcolm: Kids nowadays, they ... they watch movies, they
                watch music videos, they look at photos, they

look at graphic arts, you know. So, what's to

stop me from, you know, having a say in why

generation sees or interprets or what they like?

[00:15:21]

Shani: Film has just given me a voice like I didn't know

I had before. It just gave me a new way to

express how I'm feeling, express my ideas, 'cause

I was never really a good writer.

[00:15:39]

Marcus: And music, it's always been something that I

wanted to do. I always wanted music lessons,

like, "Mom, can I get piano lessons?" over and

over again. But I could never really get that.

Malcolm: If I can't access the place where I like to

practice my passion, then where do I go? It's

pretty much a dream deferred.

[00:16:02]

Pinkard: Digital Youth Network was started over five years

ago, really out of trying to understand how we

could support youth in learning to use digital

media for all aspects of their life.

[00:16:18]   We started out as just an after-school
                  program, but we quickly developed in a[n] in-
                  school media arts program.

[00:16:28]   We've also then, in the last year,
                  established a partnership with the Chicago Public
                  Library to open up a high school-only space
                  called "YouMedia," which is a space just for 9th
                  to 12th graders.

[00:16:48]

Marcus: The thing that drawed me in about DYN was a
             studio upstairs. It's a spot for inspiration,
             really, and on top of inspiration it's the spot
             where you have the tools as well.

[00:17:24]

Malcolm: I go in there knowing that I want to shoot in
             this location, but I don't go in and say, "Okay,
             I know for a fact I want this angle, I know for a
             fact I want this angle." I just go out and have
             fun. You know, I talk ... I talk to the people
             I'm shooting. I mean, it's more like a hangout
             rather than an actual photo shoot. It makes

everything feel more comfortable. And my photos

always come out better that way.

[00:17:49]

Malcolm: I look forward to the outcome of each picture,

you know. As I'm showing people my portfolio, I

like to see their reactions because that's

something I like personally.

[00:18:04]

Gee: If your learning is just about what you've

learned now, how much did you master, it isn't

all that useful because in five years from now a

lot of it will be out-of-date or transformed, or

there'll be completely new things for you to

learn.

[00:18:13]   So, in our world, in the 21st century, kids

need to get a deep passion because learning

requires a lot of practice. And it kind of

doesn't matter what passion you get when you're a

little kid because the passion becomes about how

do you become a learner.

[00:18:33]

Pinkard: Malcolm -- he spends a lot of time working and

             learning to do video, but he also decided to move

             in a different direction, and he self-taught

             himself how to do photography and also how to do

             graphic design. I mean, he's definitely gotten

             some instruction from us, but he sort of came

             back to us with the skill set in graphic design,

             and when asked how you ... how you learned to do

             it, he said, "Oh, I found all these videos on ...

             on YouTube and I've taught myself how to do it."

[00:19:01]   And I think there's so many examples like

             him of a kid that, if you put opportunities in

             front of him, he'll take advantage of them. But

             if he doesn't have those opportunities he's going

             to find ways to ... to spend his time that might

             not be the most advantageous for him.

[00:19:17]

Malcolm: This does keep me out of trouble, you know what I

             mean? I don't really have to go out and kick it

             until 4:00 o'clock in the morning all the time,

             you know, just to have a story to tell the next

             day. You know what I mean? Sometimes I could

just, you know, come home, sit, look up different photographers, or I could do some ... I could retouch some stuff myself.

[00:19:42]

Shani: We did a project two years ago called "Division 201" where, over a course of six weeks, we created a really nice 15-minute short on just diversity in the school and how segregated people actually are inside of the classroom.

[00:20:02]   [SCENES FROM VIDEO]

[00:20:18]

Gee: People say, "Oh, you know, digital media is killing reading and writing." Not true at all. It's changing the ecology of reading and writing. Different practices happen; different types of text are produced. But no means is it killing them. Kids are reading and writing more than they ever did, but they're just not doing the type of reading where you sit in your bedroom by yourself reading a novel.

[00:20:43]

Pinkard: Media work builds on top of traditional literacy.
            And if a kid hasn't had art, they don't
            understand color. If they don't understand
            shapes and circles, then it's very hard for them
            to ... to say, "Oh, we want to do graphic
            design."

[00:20:56]   You can't write a movie unless you create a
            script first. Oftentimes, great songs have to be
            written down. So, the final product we're seeing
            is often the video format, but so many
            traditional forms of literacies go on.

[00:21:12]

Shani: Over the course of being a part of DYN, I've had
            to do a lot of collaborating, and I just had to
            learn how to ... sometimes you have to take the
            passenger seat, not the back seat. [LAUGHTER]
            Sometimes you do have to take the passenger seat
            and just go along for the ride.

[00:21:26]

Malcolm: Because we're doing film and media, you always
            have to be open-minded in everything that you
            look at. You learn about ... about people -- how

to connect to them, how to reach them, how to
help them, what to say, what not to say. Like,
it pretty much makes you this very well-rounded
person, and being able to fit in every pocket of
society.

[00:21:46]

Shani: I think my involvement with DYN affects
everything that I get accepted to, because it
looks so good on my application because it's so
extensive, and since I've been with them so long
it shows such a big commitment.

[00:21:58] [SHOTS FROM VIDEO]

[00:22:04]

Shani: I'm going to Oberlin College next year in Ohio.
I'm going to major in Cinema Studies, Mathematics
and Computer Science. And after all of this, I'm
planning to open up my own film production
company with my best friend.

[00:22:19]

Pinkard: Well, many of us as researchers would like to
connect ability to do digital media with being
more engaged citizens, and what we saw is that as

kids got, umm, older -- so as they got to the late part of 7th grade and 8th grade year -- they started applying the skill set more so in the community. So initially, you see them only applying them in the after-school program; then you start seeing them taking them into their home and sharing them with their cousins, with their parents. And then, you see them start doing workshops. We have kids doing workshops in schools, kids doing this work in their ... in their church.

[00:22:58]

Shani: The class I'm teaching is a video editing pod. It's with 6th and 7th graders.

[00:23:09]   [SHANI TEACHING]

[00:23:11]

Shani: I started off as just a student, and now I actually have my own class, when I used to just be a part of the class. I don't know any teenager or a senior in high school that has a class full of students where they get to teach and create their own curriculum.

[00:23:30]   [SHOTS OF CLASS]

[00:23:34]

Ito: Teachers and schools are very well aware of the

           fact that a lot of learning happens outside of

           the classroom.

[00:23:46]   We know that it's the kids who read books at

           home with parents who are highly engaged in the

           learning ... The kids who have interests that

           are supported in the home. These are also the

           kids who do well in school. We know that the

           learning outside of school matters tremendously

           for the learning in school.

[00:24:05]

Rhoten: Every kid has an interest. Sometimes he doesn't

           know what it is; sometimes he can't articulate

           it. But every kid has an interest.

[00:24:18]   In this day and age, the responsibility of

           libraries, museums, schools, after-school

           programs -- the type of institutions we work with

           -- is to help kids identify those interests, and

           then progress through their interest -- become

           more advanced. It's just the same job as a

tennis coach; the same job as a football coach.

It's the academic coach.

[00:24:43]   TITLE: "SMITHSONIAN INSTITUTION, WASHINGTON, DC"

[00:24:44]

Hill: We're gonna find out all of your names. You guys

              introduce yourselves to each other. You'll be

              sitting at these tables together.

[00:24:48]   I think the first thing we need to do is

              just talk about what we're doing today, and

              there's ... there's a challenge involved in being

              in this workshop.

[00:24:58]

McGettigan: But the whole workshop is a game. It's set up as

              a game. Their mission is to create a scavenger

              game for teenagers to play at the Smithsonian

              Institution.

[00:25:12]   This is a cell phone, text message-based

              scavenger. You receive your clues using your

              cell phone.

[00:25:23]

M Student: We have to do a scavenger hunt, so we have to

incorporate a mystery or it's not going to be

that fun because people love mysteries and

problem-solving.

[00:25:42]

F Teacher: Animals. Are we all agreeing on animals? I

think maybe we could be traveling the world

looking for exotic foods.

[00:25:52]

Koshalek: There are a lot of questions being raised now

about cultural institutions, whether they're

relevant to the future, whether they're in synch

with the world as it is changing, whether they

understand young people -- a part of that

pluralistic audience, and whether they can

actually connect with these new audiences.

[00:26:13]

McGettigan: I lot of kids do have a conception that museums

are boring. But when you ... you put a phone in

their hand and you say, "Look, you're the

photographer; you're going to be going through

the museum; you're looking for objects,"
something actually happens.

[00:26:29]   The kids, you know, they look more closely
because they're taking the pictures and it makes
it more exciting.

[00:26:37]

Mathews: When we talk about mobile media, what's
important, I think, for [sounds like:] place-
based (??) play-space (??) learning is really the
idea that it is mobile. You're not tethered to a
classroom. You're actually out and about.

[00:26:48]   With that said, I think another thing about
that is that it's also the idea that it's
pervasive in the sense that you have it with you
all the time, and then it's not that all of a
sudden the book closes on that, right? The
student an hour later, or later that night, or
over the weekend can continue to do some of that
work using the mobile devices.

[00:27:08]

F Student: So, this would be like a wave ...

[00:27:10]

M Student: Oh, it could be you've traveled to a strange

              island.

[00:27:13]

McGettigan: Yeah, you were shipwrecked on an island.

[00:27:17]

McGettigan: The idea is that we give them three cards to

              examine. From those cards they can start to

              decide, "Which theme is going to work for me?"

[00:27:27]

F Student: I think we should use this.

[00:27:30]

F Student: Oh, he could be a zookeeper. Oh, I like that!

              Yeah, he is.

[00:27:36]

M Student: And our project is that we lost a bunch of

              animals and we have to find them and give them

              back to the zookeeper.

[00:27:49]

Hill: The game is having them have to look closer at

              the objects -- have to learn about the objects to

              communicate information in their scavenger hunts,

              and it allows them to be more active and to have

to take a role in their own experience. And I
think the museums have failed, often, visitors by
making it too passive and only exchanging
information one way. So, with the scavenger
hunts, I think the creative process allows them
to get more involved with it 'cause they're
participating. They're creating something using
kind of the raw material of the Smithsonian's
collection.

[00:28:27]

Rhoten: We're trying to help the institutions think about
how to be in the center of a kid's life rather
than asking the kid to be in the center of the
institution's life. It's helping them understand
that when we talk about digital media, it doesn't
mean you have to build a whole new
infrastructure; it doesn't mean you have to
digitize all your content. What it means is,
there are now a set of tool out there, many of
which are available for free, that you can use to
make your assets accessible by a whole new
population -- a population that isn't going to

come to your institution either because they're

too far away, or it's not in their cultural

milieu.

[00:29:10]   So, in fact, it's convincing them that we're

actually expanding your audience.

[00:29:23]

F Student: The story behind the peacocks.

[00:29:24]

M Student: Whistler, I would like you to paint a small part

of the kitchen while I'm gone.

M Student: Okay, sounds great.

[00:29:32]

McGettigan: So, in the museum environment, they're learning

interpretive skills. They're learning visual

literacy -- how to look at objects; how to look

at artifacts; how to interpret them. And also,

how to translate their interpretation, umm, to

the people who are playing their game.

[00:29:47]

Rhoten: One other opportunity here is ... is learning the

content, which is very much the 20th century idea

around education. But in 21st century, it's

learning the tools and the skills of remaking

that content and becoming the creator and the

producer. And I think I would actually go

further and say that more important even than

going from consumption to production, it's going

from production to participation.

[00:30:15]

F Teacher: What does the shape of his head remind you of?

It's a moon.

[00:30:22]

Student: [sounds like:] And that reminds me a moon?

[00:30:22]

F Teacher: That's correct. Well done.

[00:30:23]

F Student: Find the key to the sun.

[00:30:29]

M Student: We're doing the whole thing, but sort of a test

because we're giving each other feedback.

[00:30:34]

F Student: All of your questions were written well. The

rhyming was good, but you shouldn't compromise

the question to make it rhyme. "So, in

conclusion, your scavenger hunt needs more."

[00:30:50]

Brown: I think in a world of constant change, there is

no one expert for most of what you're going to

encounter. What you have to think about is how

do you move from the notion of individual

expertise?

[00:31:07] [STUDENTS LOOKING AT CLUES ON THEIR PHONES]

[00:31:09]

Brown: Most of our learning could very well come from

the interaction with the peers in this particular

collective that I'm a part of because we all know

that one of the best ways to learn something is

to teach something. So, in peer-based

collaboration, you're both learning and teaching,

and that sense of having to explain to other

something is often the way you discover what you

yourself know and don't know.

[00:31:43]

McGettigan: They don't need the facilitator anymore. They

don't need an adult to help them because they're

so excited about the project. They don't even
really realize how much they're learning and,
umm, how much they're gaining. The whole writing
process of story-telling, writing things in a
concise manner, choice of works to make the story
interesting. Learning interpretive skills --
they're learning visual literacy.

[00:32:15]

Koshalek: I think a lot of what's happening with this
program is that the individual student is being
empowered, and they're being empowered to sort of
follow a different course, maybe, or to follow a
very personal sort of path to understanding what
the great artists have always done.

[00:32:38]   When I see how they use the technology, and
I see how they ... with a certain amount of
enthusiasm and excitement deal with this
institution and deal with the collection and the
work of these artists, I think we just started;
we've just scratched the surface of what can
truly be accomplished, and the end result is
going to be they're going to feel more confident;

they're going to be more ... they're going to

believe more in the creative process, and they're

gonna believe more in the fact that they can make

a contribution to this world, uhh, that is

positive, and I think that's what's so important

about all of this.

[00:33:25]

Gee: Humans don't learn from abstractions. They don't

learn from just a bunch of words. They learn

from having experiences and then learning to

generalize eventually from lots of experiences --

find patterns in them and them marry them to

words.

[00:33:38]   So, if I wanted you to have an embodied and

situated learning experience of a electron or an

electromagnetic field, we could make in a game

where you're an electron, or you could make a

game where you're a virus.

[00:33:49]   So, the digital media allows you to have

guided, well-designed experiences better than you

can sometimes in the real world because the real

world isn't quite as malleable as ... as digital

media.

[00:34:05]   TITLE: "MIDDLETON, MIDDLETON, WI"

[00:34:06]

F Student: So, we're doing an augmented reality game,

              walking around downtown Middleton, learning about

              old buildings that used to be here back in like

              the 1900s, around then, and you walk around

              different spots on the GPS, and then they pop up

              and tell you what used to be there.

[00:34:32]

Mathews: I think for me, [sounds like:] place-based (??)

              play-space (??) learning primarily comes from my

              own experience as a learner, particularly in my

              early childhood experiences of being someone who

              lived in a community and in a neighborhood where

              we did a lot of exploration of our own backyard,

              so to speak.

[00:34:49]   From a teaching standpoint, the thing that I

really found that worked well for students about

local is, very often it's about their own

stories, so it really starts with their own

experiences and their own experiences of place.

[00:34:59]

F Student: You want to learn about the history of this

place? I think I can help.

[00:35:03]

F Student: I found an old map of my house a few years back.

I'll share the map with you, but I need something

in return. The last time I traveled back in

time, I left an important photo back there. I

need you to get it for me; it is hanging behind

the bar at the Washington Hotel.

[00:35:20]

Mathews: In augmented, where it's GPS-based, so that when

I get to a physical location and I stand at that

location, I essentially am getting ability to

view a media clip, so it might be watching video;

it might be seeing photographs; it might be

getting some text of some sort.

[00:35:36]   So, our idea is, let's say instead of me talking about for an extended period of time, what we wanted students to do is actually get out in the community, walk around in these different types of neighborhoods, and beginning to see them as designed places, and go from that to thinking about, how might we redesign them to make them more aligned with the values and way of life that we actually want to lead?

[00:36:01]

M Student: Being in the environment, the game that we were actually playing was really helpful in learning the history, and you can actually hold it and compare what it looked like from 1900 to what it is now, and how much has really changed.

[00:36:17]   It made us look at this new style of development is slowly coming up. The small pieces of property which forces people to, rather than kick a ball around in your yard, you can actually go to the park and meet new people and kick a ball with them, or just even go walking.

They had a whole bunch of trails and stuff along the way there.

[00:36:43]

Mathews: And then we went into another, uhh, area of town which is a traditional downtown environment built in the 1800s and has been redesigned and ... and has grown some. And the goal of that was to get students to begin thinking about, "How is it similar to the neighborhood we were just in? How is it different than the neighborhood we were just in?"

[00:37:00]

M Student: We saw a lot of open buildings, like, that aren't really being used right now. So we were trying to check into, like, why that might be.

[00:37:09]

F Administrator: The big complaint I hear about downtown from people in general is just the parking.

[00:37:13]

Wagler: Parking is a big issue, and if parking is the issue, what does that mean? That means a lot of business, right? If you've got empty

storefronts, what does it mean? Not a lot of

business, no. If you've got a lot of business,

are new businesses going to want to move in, or

if there's a lot of emptiness, are new businesses

going to want to move in?

[00:37:29]

M Student: If there's a lot of business they're going to

want to move in.

[00:37:29]

Wagler: Okay. So what's the story here?

[00:37:35]

M Student: Do you feel that parking is an issue here in

downtown Middleton?

[00:37:38]

F: I don't. I don't personally feel that parking is

an issue. I work down here. I'm in and out all

day long. Rush hour, yeah, it may look really

congested down here, but we can at least find a

spot.

[00:37:51]

Wagler: So, which is right?

[00:37:51]

M Student: Well, we're getting two different stories from

              people. We went up to the parking lot and took

              pictures. It looks a little full, but there are

              definitely, like, a lot of spaces open.

[00:37:59]

Wagler: So, we go to Middleton Hills. We go to downtown

              Middleton. And, they were asked to take on

              identities as ethnographers yesterday, as

              photographers, as geographers, and they knew this

              morning, for example, that we're gonna meet with

              the city planner.

[00:38:21]   [MIDDLETON CITY HALL]

[00:38:23]

M Student: Designing or redesigning downtown Middleton, it

              seems that you're confined with space of the

              downtown area. Does that go the same for

              Middleton Hills?

[00:38:31]

F: Another big question. There aren't strict design

              guidelines in the downtown. The downtown has

              redeveloped over time. The city got involved

              back in the late 70s and early 80s, and the idea

was, "Let's create a neighborhood where people of
all incomes, a wide diversity of people can live
there," and, umm, try something different.

[00:38:55]

F Student: Like a lot of people don't hear about all the
events that go on in Middleton, so like maybe if
stuff is advertised more, like maybe put it out
in the schools or, like, and teenagers hang out,
because I've been to a lot of the Middleton ...

[00:39:05]

Mathews: A lot of people always focus on [sounds like:]
place-based (??) learning, and, "How is this
going to help the student? How is this going to
help the student?" In reality, what [sounds
like:] place-based (??) learning really does is,
it helps the community, right? I think it's good
for people in the community to engage with young
people, and it also helps the community because
the work that students are doing is actually
improving the community. They're asking tough
questions. They're investigating real issues,

and they can become the source of some of those answers as well.

[00:39:44] TITLE: "SCIENCE LEADERSHIP ACADEMY, PHILADELPHIA, PA"

[00:39:53]

M Student: We're trying to recreate some projects that we did this year so far. We're going to put it, like, virtually into our laptops on Google SketchUp so other students can see it, and they're going to try to recreate it [INAUDIBLE].

[00:40:07] [INAUDIBLE -- MANY VOICES]

[00:40:27]

M Student: My focus has definitely been with film. It came out of, you know, being bored with your standard work. I mean, I had just gone through four years of middle school where every single project was a paper or a presentation, and the majority of my work was just taking tests, repeating facts. So then, when I was actually given something like a laptop, I was really able to take advantage of it 'cause I rally wanted to take advantage of it.

[00:40:53]

Lehmann: We built schools today as an industrial model.

             Eight-period day, 45 minutes a class, go, go, go,

             go, go; assembly line, modeled after the factory,

             1920 comprehensive high schools. That's how we

             got where we are today. Society has evolved past

             that. Schools haven't yet.

[00:41:12]

Vankouwenberg: The digital media and the social networking

             is just so ingrained in this next generation of

             kids that it had to be incorporated. Ignoring it

             is just being irresponsible as an educator

             because it's such a powerful tool.

[00:41:31]

M Student: In Biotech this semester, the end goal is to

             create bacteria through transfection, which is

             injecting DNA from a virus into the bacteria,

             which then creates bacteria that will eat up the

             plastic. Now we've learned about how to do this

             in theory. We're supposed to create some type of

             metaphor that uses something else that already

exists in nature to explain the process of

transfection.

[00:41:57]

Vankouwenberg: And so, hopefully, what will come from this

is a whole bunch of stories that people can tell

that will explain the science, but make it so you

could even talk to your, you know, 10-year-old

brother, sister, niece, whoever, and they might

have a decent idea of what ... what is going on.

[00:42:19]

M Student: We came up with our idea, and then we started a

Google Doc. I started writing it. Over the

weekend, we all pitched in, finished the script,

and on Monday we were essentially ready to shoot.

[00:42:29]

M Student: ... and scene.

F Student: It's not broken, dear. You just have to change

the filter.

[00:42:38]

Vankouwenberg: Giving students the chance to be producers

of content is great, because when you're

producing the content you have to know it to a

much deeper level than you would as just being a

consumer.

[00:42:51]

M Student: By putting our ideas out there, we are getting

feedback. We can instantly change it, make it

better. You've seen cases where people are found

out through YouTube, or there's even cases where

people gain confidence through YouTube.

[00:43:10]

Pinkard: Everyone wants to be seen and heard, and if you

feel that there's an ability that your work is

going to be shared beyond just your teacher, then

you're more likely to put more energy and effort,

and you iterate more. So I think that's just the

very nature of things, and I think the ways in

which most technologies have been brought into

the classroom in videos and things, they've come

in with a natural audience.

[00:43:34]

Lehmann: So, one of the things that we say about

technology use and therefore digital media, uhh,

at SLA is, technology needs to be ubiquitous,

necessary and invisible. It's got to be

everywhere. If scarcity of the tool become a

resource, then when you use that tool becomes

such a big deal that it overwhelms things. It's

got to be necessary. It's got to be part of what

you do.

[00:43:58]

Laufenberg: One of the skills that I really try to work with

the students on is to choose the right

presentation method for the project that they've

chosen. So, the learning goals are similar for

everyone. The content is of their choosing. But

also, they need to select the right type of

presentation tool for the type of project that

they'd like to, umm, articulate.

[00:44:18]   [IN CLASS] So, what is, or how did the

actions of individuals impact the historical

record, and how influential can one decision be

in the historical landscape? So make sure that

when you're doing this, you're thinking about

individuals, the systems that are changing, and

then also how influential those decisions can be
in time.

[00:44:40]   It's a "what-if" history project. So, all
the students go back through the entire year of
the historical record that we've looked over,
choose a moment from American history and alter
the outcome of it. They then need to produce
primary source documents that evidence this new
history, and then also, umm, be able to
articulate what 2010 looks like as a result of
this new history.

[00:45:02]   [IN CLASS] Where is the law that made it
illegal? Go into Google Scholar, figure out if
you can hit up a source there ...

[00:45:12]   [IN CLASS] You're going to have to tell me
where that starts 'cause I ... I don't have a
working knowledge of that.

[00:45:18]

F Student: ... New Orleans, because there was a main port.
So, I was thinking, if Spain didn't want to sell
that, so they keep it and then the U.S. has to

move north, life insurance, like up towards

Canada instead of moving out west.

[00:45:31]

Laufenberg: Okay. Figure out exactly what breaks down so

that Spain isn't motivated to sell anymore to the

United States.

[00:45:39]   [TO CLASS] Let's talk about a little bit of

your brainstorming, how you're going to present

these. Some people throw up some ideas about how

you're going to present these stories, and we'll

take at look at some of it online.

[00:45:56]   If they're a kid who really is more verbal,

a lot of them go to a podcast and will mimic a

radio show that they've heard. Some kids like to

do artwork all of their own, and we have some

kids sketching out a cartoon, kind of book pages,

and illustrating that themselves, and then we'll

scan that in. I do as much as possible is

digitize all of their artifacts, and I think

that's important so they have a record of what

they've done, and they know that no matter what

it is, it's going to be public.

[00:46:25]

Vankouwenberg: More important than learning specific

content is learning process so that you can be a

lifelong learner, because there's so much

information out there, there's no way that you're

going to be able to learn it all.

[00:46:37]

Herman: [TO CLASS] Last minute. Last minute to write up

your statement and get it up onto the chat.

[00:46:44]

Herman: I would be very strange for me to go back to an

environment where I didn't have the internet

connection everyday in my classroom, or I didn't

have a projector shooting an image onto the wall,

where I didn't have a chat room, where I didn't

have a forum where the kids could post their

commentaries, where they didn't have a chance to

see their own words and comment on their

classmates' words as opposed to this linear

process where, "Oh, here's the assignment; you do

it; I read it; I grade it; I give it back to

you." No one else benefits from that opinion

unless that student has an opportunity, or the gumption and the extrovertedness to share it with everybody.

[00:47:32]

Vankouwenberg: And what this allows for, instead of there just being one conversation going on in the class where you have one person speaking at a time, this forces every student to have their voice heard all the time so that we can have 32 conversations going on at once in the class, and 32 ideas that are being heard all the time.

[00:47:50]

Herman: [TO CLASS] So, we have a couple of messages from Congress. CONGRESS: The Democrats here at the table feel that the Republicans are stalling the very necessary process. So you don't want them to let this bill be passed.

[00:48:00]   For some reasons, the students that have the least level of participation in open discussions in the classroom are the rock stars in the chat. They're the ones that are constantly posting to the forums or constantly leaving messages. You

have a student that never opens their mouth in

class, and they'll have, like, 136 posts.

[00:48:17]   [STUDENTS DISCUSSING]

[00:48:26]

Herman: You get this live immediate gratification of,

"Here's my opinion." Bang, it's out there, and

someone's responding to it. Bang, someone

responds back. And then they get into a little

war of words, but most of the time they police

themselves.

[00:48:37]

Lehmann: Number one, we have to remember that this

movement is in its infancy. This is embryonic.

[00:48:43]   We have to stop thinking that every time one

thing goes wrong -- because things will go wrong

-- and we have to understand that we don't have

all the answers.

[00:49:02]   What do we want our schools to be? What do

we dream for our schools and for our children?

What are the most important things that schools

can teach kids? And wouldn't it be wonderful to

have a national conversation around that, and at

least figure ... start to figure that out. And
then from there start the process of maybe trying
to reinvent education looks like in this country,
and that's what I hope for; that's what I dream
about.

[00:49:27]

Jenkins: It's not about replacing the future with a piece
of technology. Technology is a tool that a good
teacher uses to teach. The technology is nothing
more than chalk and the map, the textbook -- it's
a resource. But the practice of teaching changes
in a world where kids are encouraged to take
ownership of their own learning, to develop their
own expertise, to pool knowledge with other
students, to collaborate in the classroom.

[00:49:51]

Lehmann: The powerful thing is, when we allow kids access
to owning their education, can we say, "You have
to figure out larger pieces of the puzzle than
kids are usually allowed to figure out in
schools." Then they blow you away on a daily
basis.

[00:50:10]

Jenkins: There are individual teachers out there who are
            incredibly innovative, dedicated, willing to
            explore things, willing to think in open-minded
            ways about the future of education, and those are
            the battles that are worth fighting for at this
            point.

[00:50:24]

Gee: We are either going to have two school systems --
            one for the rich and one for the poor, and the
            poor one will be a standardized, accountable
            system that does guarantee you and give you the
            basics, and will suit you for a service job. The
            privileged kids will go to another school system
            where they will learn all the same facts, but
            they'll learn to use them to solve authentic
            problems, and eventually to innovate and produce
            new knowledge, and they will ... they will make
            out well in the global system.

[00:50:51]   Or, we can imagine a system where school is
            not just about what job you're going to have, but
            about making everybody able to participate in the

society, to have dignity, to be able to innovate,

and that we're going to see that everybody gets

that form of schooling. And then we're going to

have to deal with the problem that society is too

smart for some of the jobs, which I think would

be a nice problem to deal with. But this is

going to be a choice for America. I ... I think

that many people believe that second scenario --

that is, an intelligent society where everybody

can produce knowledge and can collaborate with

each other to make a better society would make us

much more successful in the long run in the

global economy.