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Multimedia, Undergrads and The Library

Use of multimedia in undergraduate student learning
and the role of the Library in this process now and in the
future

Vic Divecha
May 19th 2011

Today

- Undergrads & Their Challenges
- Innovative Solutions
- Role of Library: Present and Future
- Prevent “Death by PowerPoint”
 - By not using it as a teleprompter for every sentence I speak... except the end.

About

DAILY CAMPUS NEWS
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FRONT PAGE

ACCOLADES

NEWS BRIEFS

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U-M JOBS

obituaries
police beat
regents round-up
research reporter
letters

ARCHIVES

Distance-learning program grows at SPH

By Kevin Brown

It's nearly 2 a.m. in Japan, time for Tatiana Baranovich to switch on her laptop and join classmates 5,000 miles away for a 1 p.m. Fundamentals of Epidemiology class in Room 2610 in the School of Public Health (SPH) I building.



The graduate student is among 14 other so-called distance-learners, who join 10 on-site classmates to watch and listen to adjunct lecturer Jennifer Beebe-Dimmer for a three-week, accelerated course offered as part of the Graduate Summer Session in epidemiology. Beebe-Dimmer is outfitted with a lavalier microphone and captured on video cameras, lecturing and leading the class

© FAIR USE "Distance-learning program grows at SPH," at http://www.ur.umich.edu/0809/Aug17_09/02.php.

Governance

readiness and completion in the United States. NGLC is guided by the belief that providing investment capital to expand the use of proven and emerging learning technologies, collecting and sharing evidence of what works, and fostering a community of innovators and adopters will result in a robust pool of solutions and greater institutional adoption which, in turn, will dramatically improve the quality of learning experiences in the United States. Many potentially breakthrough solutions are being developed and tested by educators, institutions, technologists, and entrepreneurs, but too often they operate with little access to each other or to opportunities to disseminate their innovations. Support is needed to refine and rigorously test their solutions, to connect with other like-minded innovators, and to develop strategies to broaden their reach and impact.

Today, too few students are ready for college. Consider the following statistics:

- Nearly 30 percent of students do not finish high school. The dropout rate among African Americans, Hispanics, and low-income students is nearly 50 percent.
- Only 42 percent of young people who enroll in college complete a bachelor's degree by the age of 26. Just 12 percent complete an associate degree. Among low-income students, the bachelor's completion rate is just 26 percent, while only about 14 percent earn an associate degree.
- By 2018, 63 percent of all U.S. jobs will require some sort of postsecondary education.
- In 2008, the average wage for adults 25 and older with a four year degree was \$60,954, compared to \$33,618 for those with only a high school diploma and \$24,686 for those with no high school diploma.
- Nearly 22 million new workers with postsecondary degrees will be needed by 2018, but it is estimated that the U.S. higher education system will fall short of that mark by 3 million graduates.



For the Next Generation

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EDUCAUSE Review, vol. 45, no. 5 (September/October 2010): 76–96

Undergraduate Education Challenges

- ❖ Deciding to Not Enroll
- ❖ Developmental & Gatekeeper Courses
- ❖ Engagement
- ❖ Advising
- ❖ Alternative Models of Degree Completion

Undergrads at UM

- ~26000 undergrads, ~16000 in LS&A
- UM doing better than national averages

GRADUATION RATES OF FRESHMAN COHORTS

Four Years After Initial Entry

<u>Race / Ethnicity</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
African American	41.8%	42.5%	44.6%	45.7%	42.6%	45.6%	53.9%	52.3%	50.9%	57.0%
Hispanic American	50.0%	57.4%	56.7%	58.1%	57.2%	61.7%	58.6%	58.9%	67.4%	67.8%
Native American	39.1%	29.4%	44.4%	51.3%	63.3%	66.0%	46.2%	60.7%	62.7%	58.3%
Native Hawaiian / Pacific Islander										
Asian American	68.1%	72.7%	71.7%	75.8%	76.0%	75.1%	75.9%	74.4%	76.0%	79.0%
Two or More										62.3%
White / Unknown	68.1%	69.9%	72.0%	73.2%	73.7%	73.2%	75.1%	74.3%	74.7%	78.2%
Total	65.0%	67.0%	69.1%	70.1%	70.1%	70.2%	72.6%	72.1%	72.5%	76.0%

Five Years After Initial Entry

<u>Race / Ethnicity</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
African American	60.8%	65.2%	66.4%	65.5%	64.0%	65.8%	74.3%	73.8%	72.1%	
Hispanic American	71.6%	74.8%	77.3%	73.8%	80.0%	76.6%	76.9%	82.2%	85.2%	
Native American	56.5%	52.9%	66.7%	65.8%	75.5%	82.7%	80.0%	78.0%	69.2%	
Native Hawaiian / Pacific Islander										
Asian American	84.6%	86.7%	86.4%	87.6%	89.2%	88.7%	89.9%	89.2%	89.8%	
Two or More									82.4%	
White / Unknown	85.4%	87.3%	87.2%	87.1%	88.4%	88.3%	88.8%	89.2%	88.7%	
Total	82.5%	84.5%	85.0%	84.4%	85.6%	85.6%	87.3%	87.8%	87.4%	

Six Years After Initial Entry

<u>Race / Ethnicity</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
African American	66.3%	68.6%	71.6%	71.1%	71.2%	70.6%	77.9%	78.5%		
Hispanic American	75.5%	78.3%	80.0%	78.5%	82.3%	79.6%	82.6%	84.3%		
Native American	60.9%	52.9%	69.2%	68.4%	79.2%	82.0%	84.2%	78.6%		
Native Hawaiian / Pacific Islander								100.0%		
Asian American	86.9%	89.5%	88.5%	90.1%	91.9%	91.3%	91.7%	91.2%		
Two or More								87.1%		
White / Unknown	87.7%	89.3%	88.7%	89.1%	90.3%	90.3%	90.8%	91.1%		
Total	85.2%	86.8%	86.9%	86.9%	88.2%	88.0%	89.5%	90.0%		

Notes: Year shown in column heading indicates the year of each cohort's first fall term.
Includes Summer/Fall Term Freshmen students (regular and Summer Bridge)

For the Next Generation

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EDUCAUSE Review, vol. 45, no. 5 (September/October 2010): 76–96

DIANA G. OBLINGER

Diana G. Oblinger (doblinger@educause.edu) is President and CEO of EDUCAUSE.

Undergraduate Education Challenges

- Deciding to Not Enroll
- Developmental & Gatekeeper Courses
- Engagement
- Advising
- Alternative Models of Degree Completion



Senior Lecturer Brenda Gunderson
(LSA / Statistics)

By carefully selecting and interweaving technologies, instructors can guide large groups of students through challenging material in a way that feels highly personalized. The 1,500 students who enroll in Statistics 250 each semester eagerly engage with a suite of technologies that gives them multiple paths for developing, practicing, and testing their understanding of concepts and relationships.

- **SMART Presentation Tools:** A tablet PC allows the instructor to make the problem solving process transparent and guide students to see connections to earlier material.
- **Lecture Capture Technology (UM Blue Review):** Students can review recorded material multiple times.
- **Clickers:** Difficult questions are paired with peer discussion.
- **PreLab Video Wrappers:** Brief videos made with Jing teach a software feature or introduce an online learning resource.
- **Online Homework + e-Textbook:** Assignments link to the relevant section of the e-textbook. Paperless homework is submitted automatically and returned quickly with tailored feedback from GSIs.
- **GTD™ Lists:** Posted weekly, the Getting Things Done list itemizes what students can do to be better learners.

Together, these technologies let students discover new ways to understand the material. They can receive appropriate guidance both inside and outside the classroom, so that their learning is continuous, not a set of stop-and-go chunks. This innovation is flexible and readily extendable to many large gateway courses at our university and beyond.

Student Comments:

"The integration of technology in the classroom helped make the class feel smaller and more manageable."

"The pre-lab instructional videos, along with the multiple applets really help you to visualize the concepts."

The extensive online homework assignments are "convenient to access and require you to both mathematically and visually demonstrate the knowledge we learn in class."

iTunesU "gives me instant access to explanations of difficult content, a sort of 'on-demand' office hours that helps me better prepare for exams."


Undergrads & Multimedia

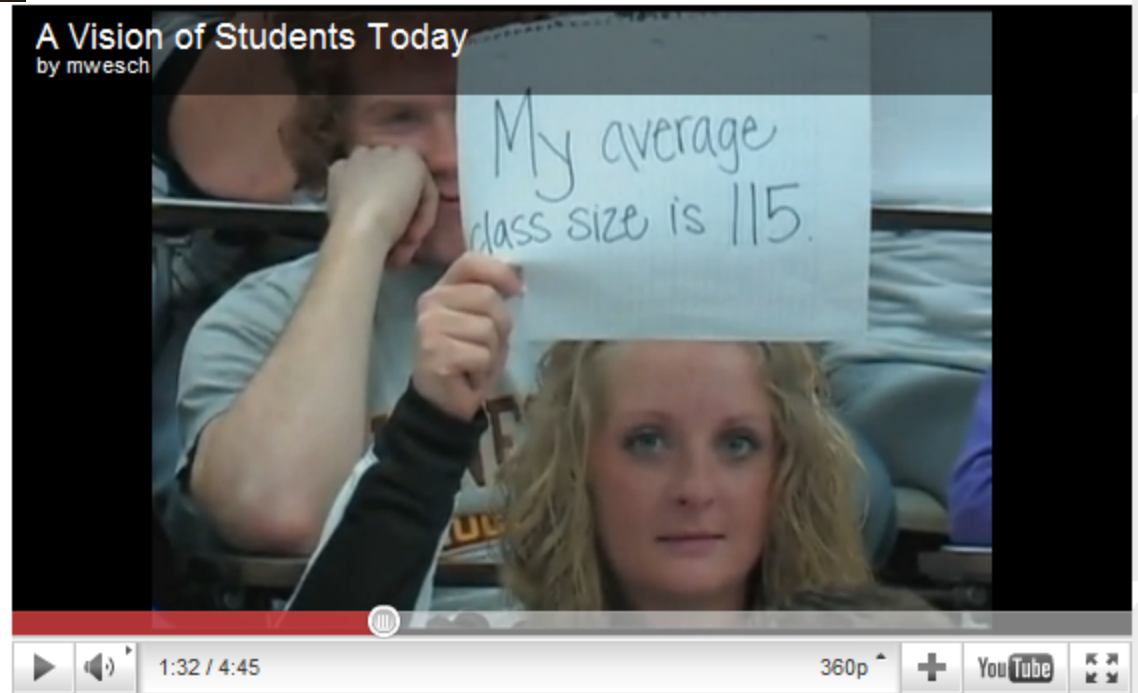
Consumers*

** Consumers of Media, Not Customers*

Undergraduates: Happy Media Consumers?



 Stephen Downes, Flickr



 "A Vision of Students Today," at <http://www.youtube.com/watch?v=dGCJ46vyR9o>.

Profiling Undergrads

EDUCAUSE

CENTER FOR
APPLIED RESEARCH

October 2010

Key Findings

The ECAR Study of Undergraduate Students and Information Technology, 2010

Shannon D. Smith and Judith Borreson Caruso

I love IT. IT is my life. My laptop is my life. Without IT I would be a very unhappy person. IT allows us to do so many things, and those of us who are natural at it wouldn't be the same without it. So far my experience with IT at college has been a positive one. It's an exciting experience.

I don't like all this digital stuff. I don't like all the problems that come along with computers. I don't really understand most of it, and there's always something new to learn right after you get used to one thing.

—Undergraduate students' comments submitted with this year's survey

Device Ownership

Figure 1. Overview of Technology Ownership

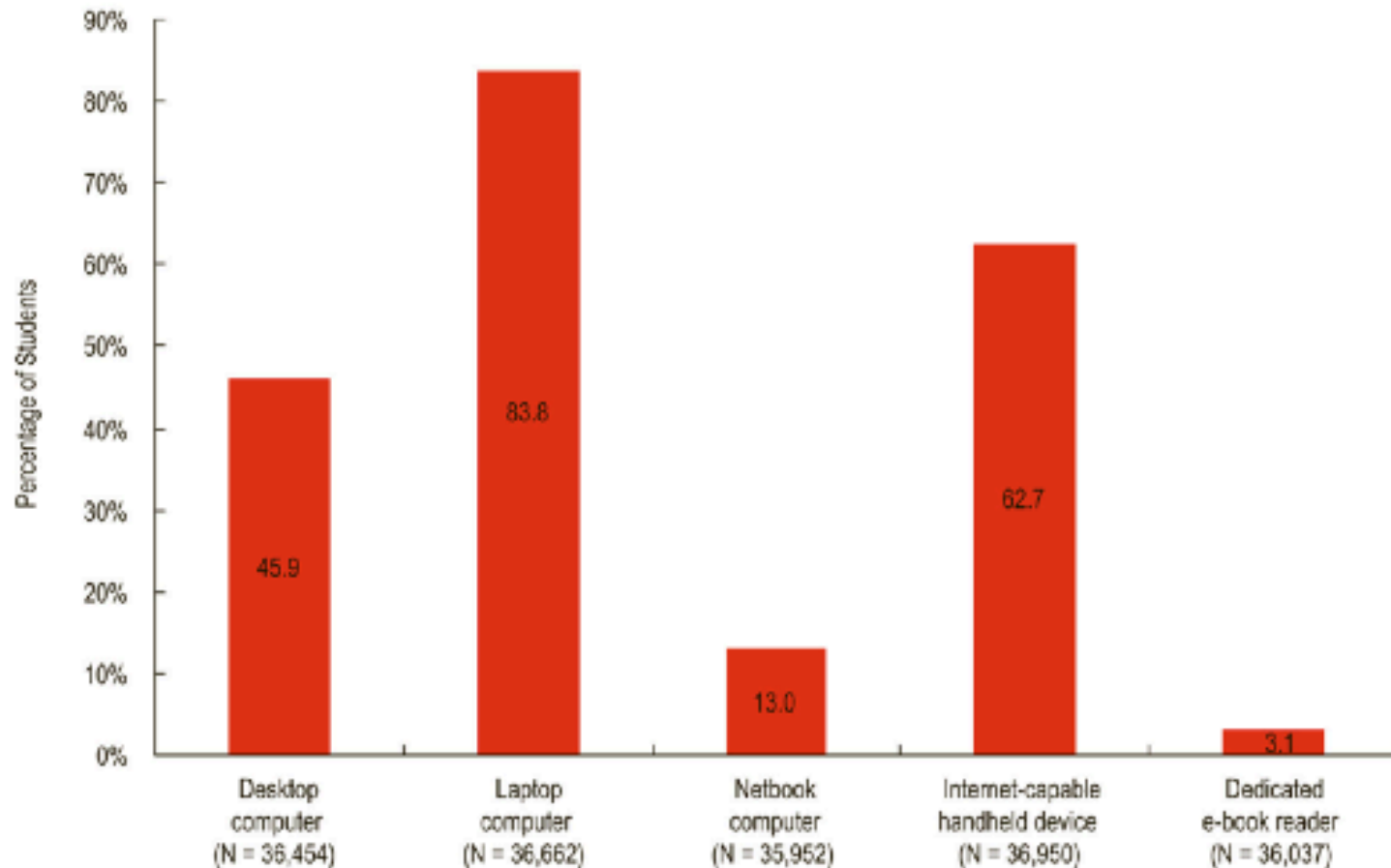
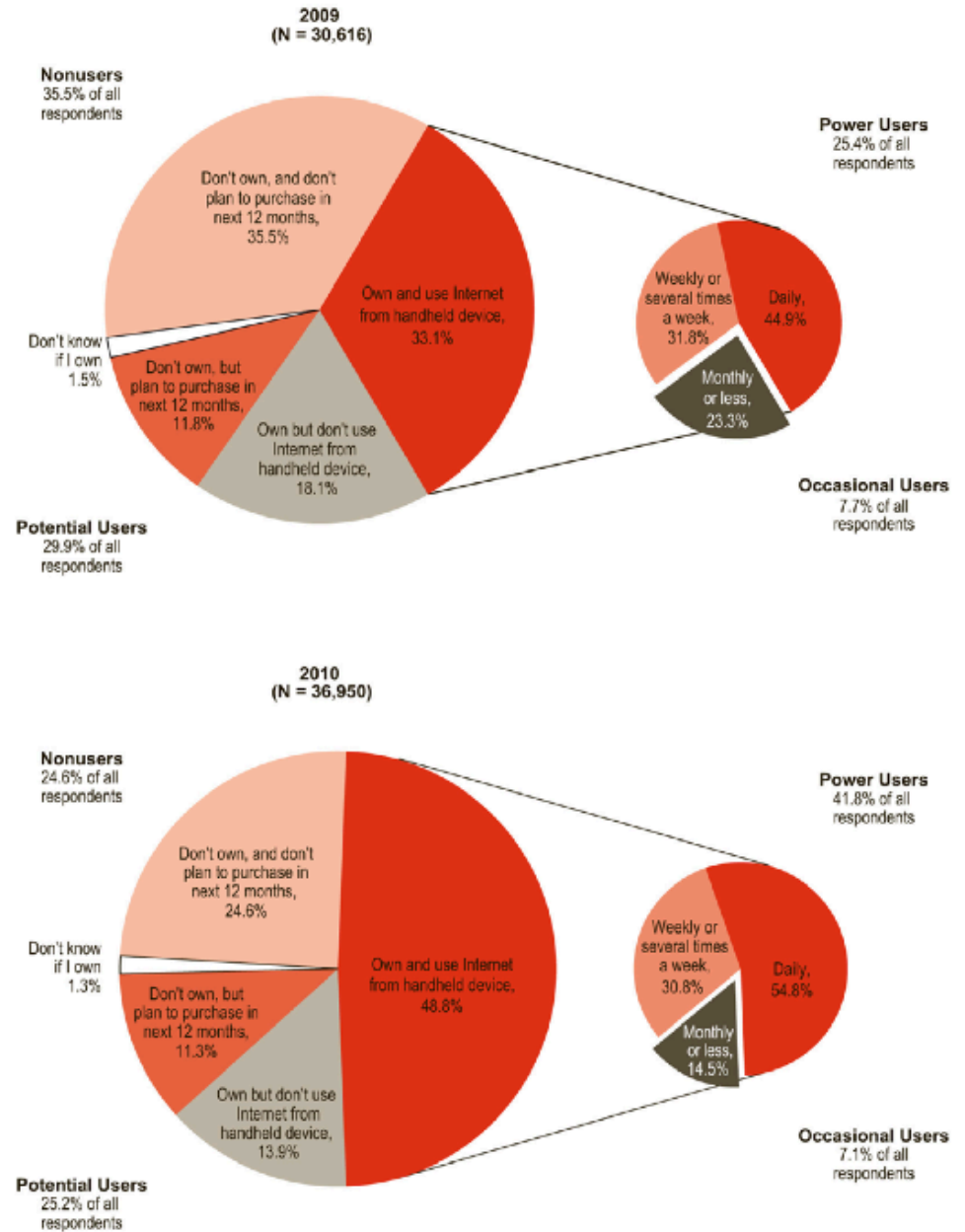


Figure 2. Internet-Capable Handheld Device Users, 2009 and 2010

Mobile Ownership Change



Undergrads & Multimedia

Consumers

Generators

Intended Learning Outcomes for Undergraduate Students at the University of Michigan

As a result of their studies and experiences at the University of Michigan, by the time of graduation students will be able to demonstrate:

- 1) General knowledge of diverse philosophies and human cultures, the arts and humanities, and the physical and natural world.
- 2) Mastery of a specific body of knowledge and mode of inquiry.
- 3) Engagement in the generation of new knowledge in a specific field of inquiry.
- 4) Effective oral and written communication, teamwork, and problem-solving skills.
- 5) Capacity to work effectively across diverse philosophies, cultures, and challenges in a global society.
- 6) Skills for effective citizenship and leadership and for assuming personal and social responsibilities in a diverse and global society.
- 7) Ability to set personal learning goals, to critically self-monitor learning styles, and to make adjustments based on progress and achievement.
- 8) Commitment to the pursue lifelong learning and critical inquiry through postgraduate studies and participation in informal educational settings.
- 9) Ability to address issues of societal concern and human needs through civic engagement.

The University of Michigan will facilitate student efforts to achieve these outcomes by encouraging the development of courses and other educational experiences that promote student progress in these domains, and by developing and supporting assessment methods that assist faculty and students in measuring progress toward these outcomes.

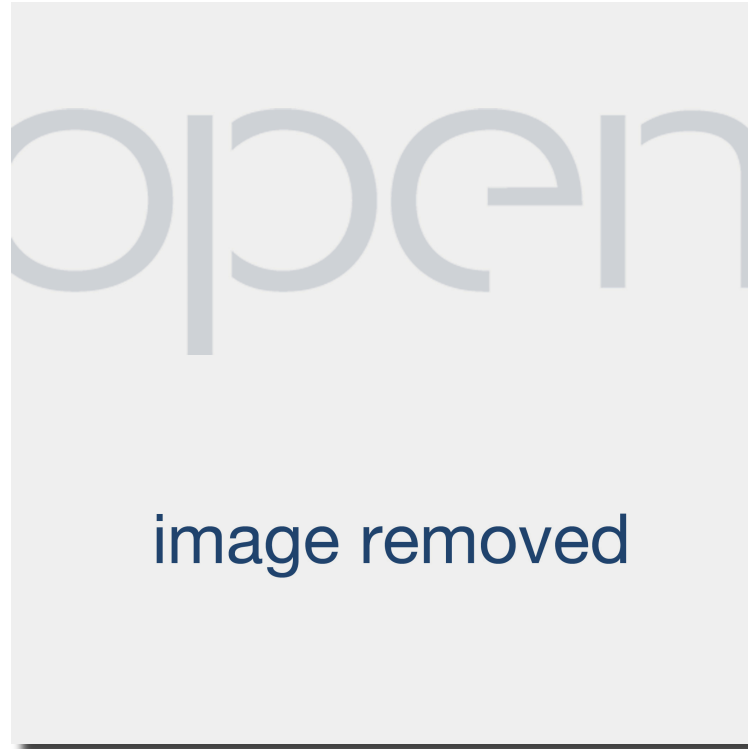
Engaging Students

Health Management & Policy 615

Paper Writing vs. Podcasting

(2 Cr Course / Final Assignment)

Essentials of Engagement: Storytelling



Please see original cartoon at http://www.condenaststore.com/-sp/i-had-my-own-blog-for-a-while-but-i-decided-to-go-back-to-just-pointless-New-Yorker-Cartoon-Prints_i8546224_.htm
New Yorker, 2005


Media Generation - Engaged Storytelling = Boredom

The Engagement Challenge

DIGITAL ETHNOGRAPHY

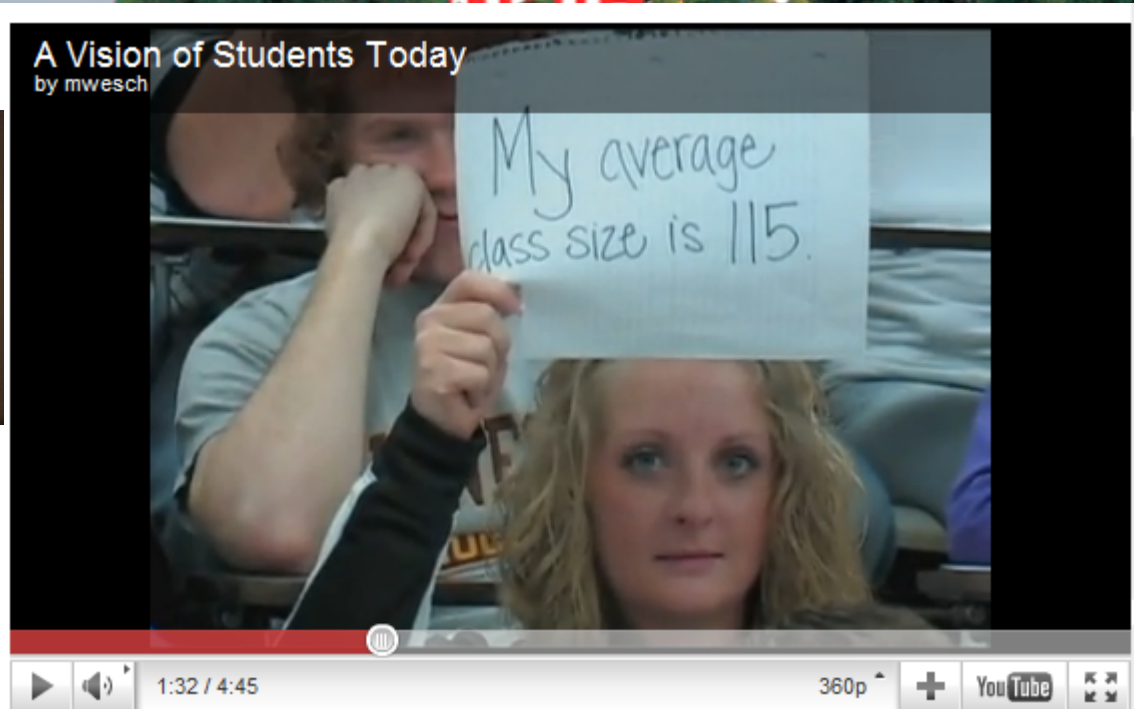
@ Kansas State University

Feed on  Posts  Comments

 FAIR USE <http://mediatedcultures.net/ksudigg/>



 Stephen Downes, Flickr



 FAIR USE "A Vision of Students Today," at <http://www.youtube.com/watch?v=dGCJ46vyR9o>.

The Library's Role

Identify Innovations

Lab to Production Line

Support Media Production: Expertise and Spaces

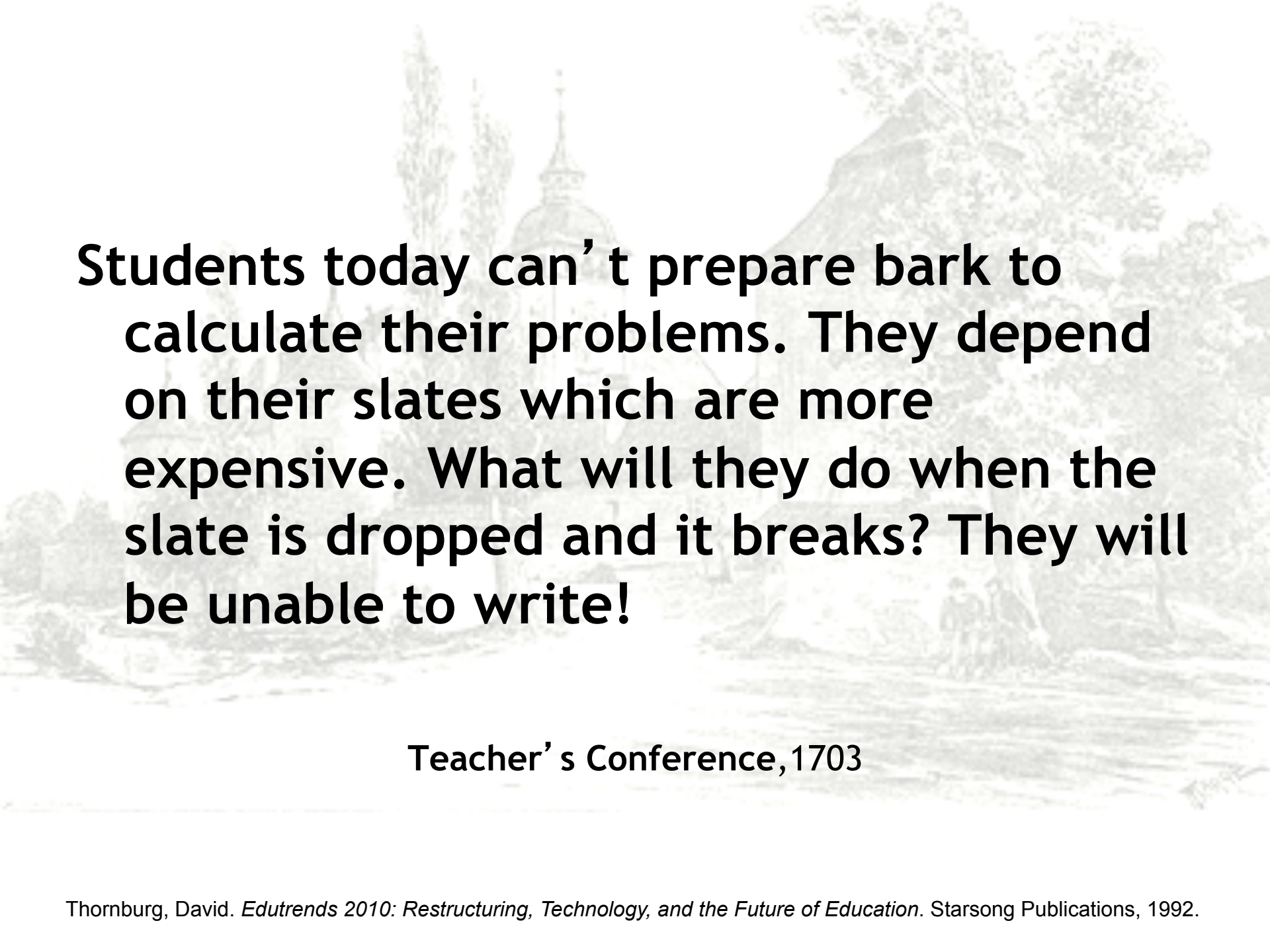
Support Social Collection Management {Metadata, Tagging}

Triage Requests {IP}

Produce Innovators {Training / Consultation}

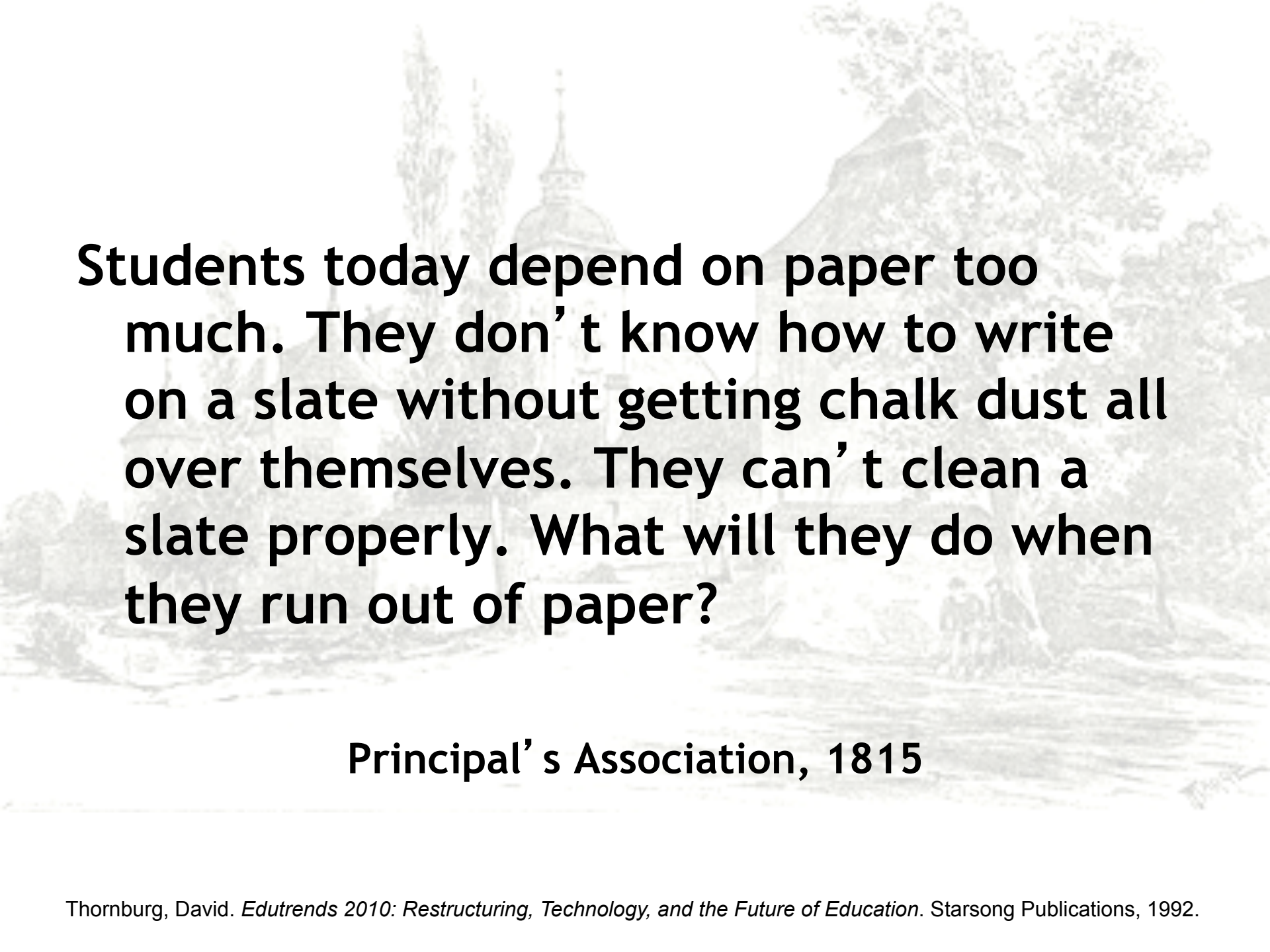
The Future

Is in the past



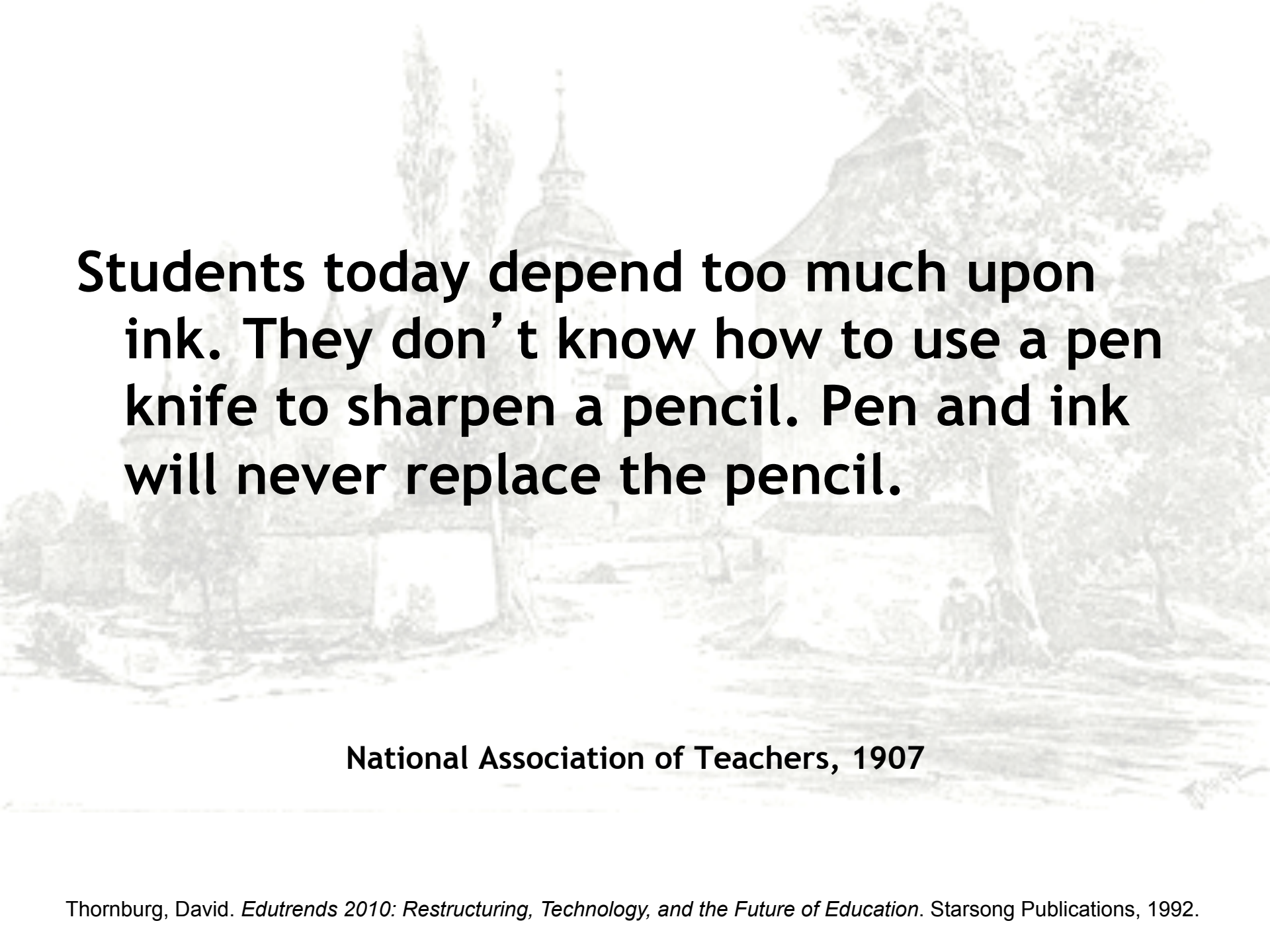
Students today can't prepare bark to calculate their problems. They depend on their slates which are more expensive. What will they do when the slate is dropped and it breaks? They will be unable to write!

Teacher's Conference, 1703



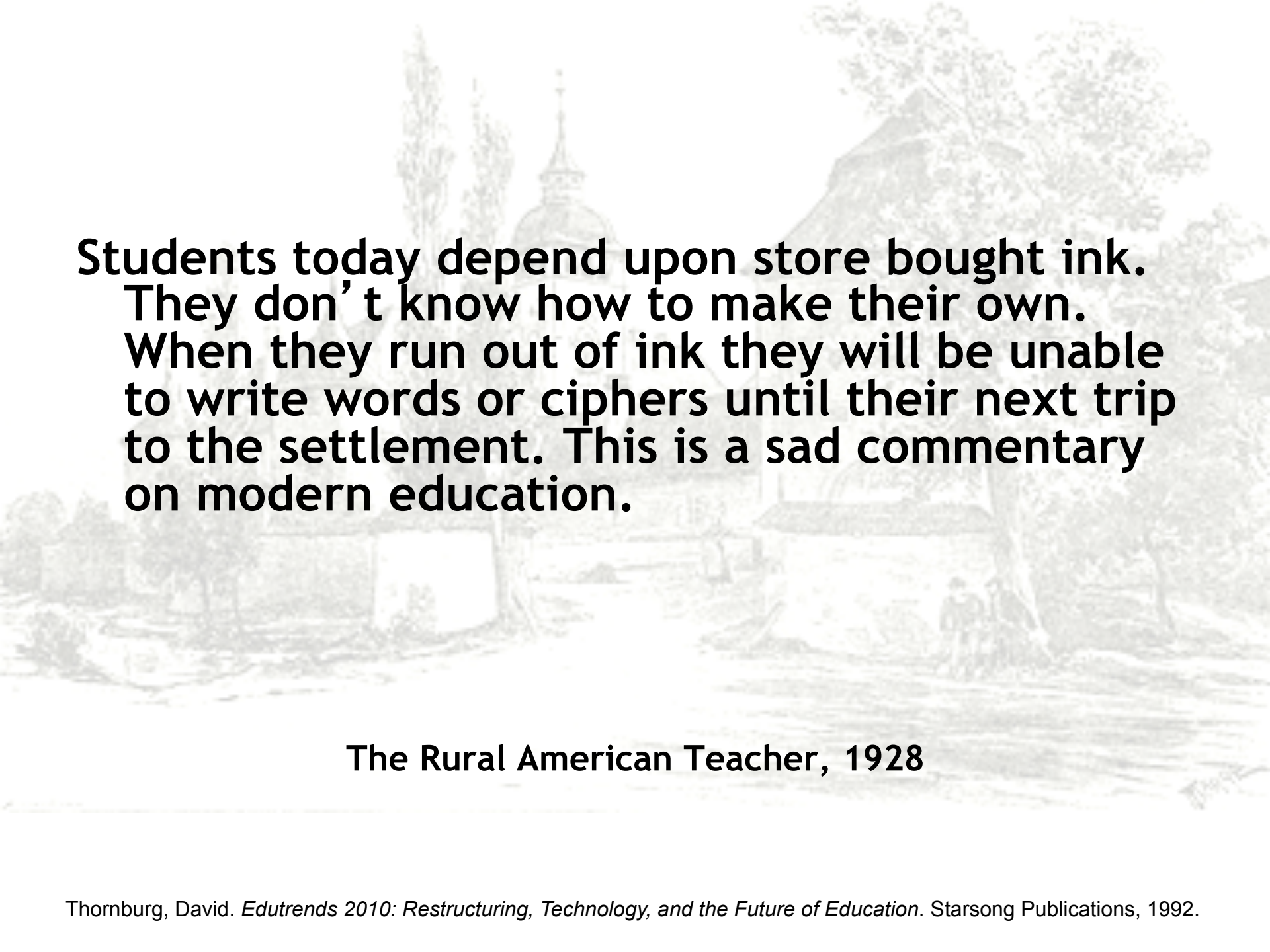
Students today depend on paper too much. They don't know how to write on a slate without getting chalk dust all over themselves. They can't clean a slate properly. What will they do when they run out of paper?

Principal's Association, 1815

A faded, sepia-toned illustration of a village scene. In the background, a church with a prominent spire and a windmill are visible. The foreground shows a dirt path or road with some trees and a small figure of a person. The overall tone is historical and nostalgic.

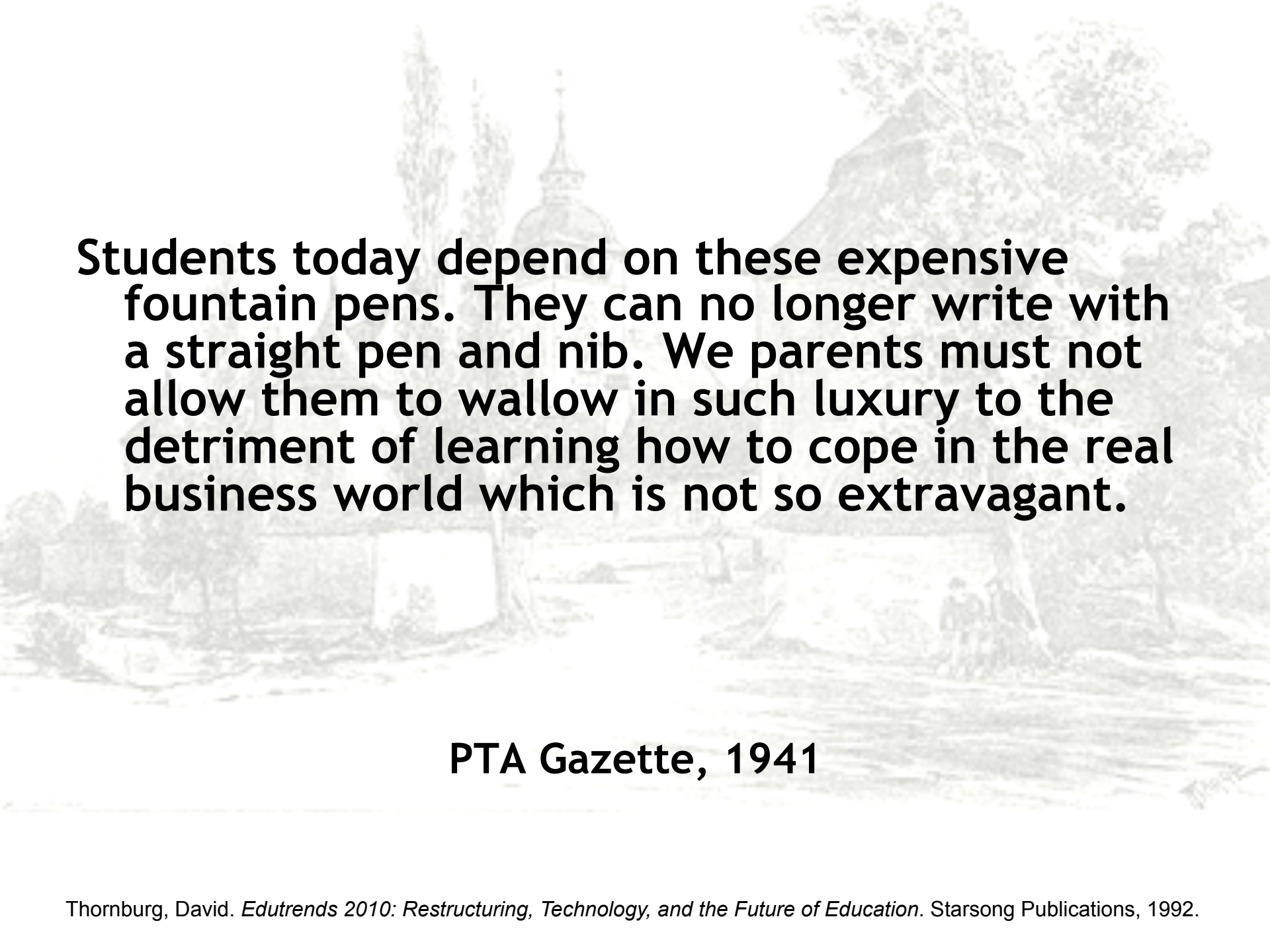
Students today depend too much upon ink. They don't know how to use a pen knife to sharpen a pencil. Pen and ink will never replace the pencil.

National Association of Teachers, 1907

A faded, sepia-toned illustration of a rural settlement. In the background, a church with a prominent dome and spire stands on a hill. To the right, a large, leafy tree is visible. In the foreground, a body of water reflects the scene, with a small boat and a figure standing on the shore. The overall atmosphere is quiet and rural.

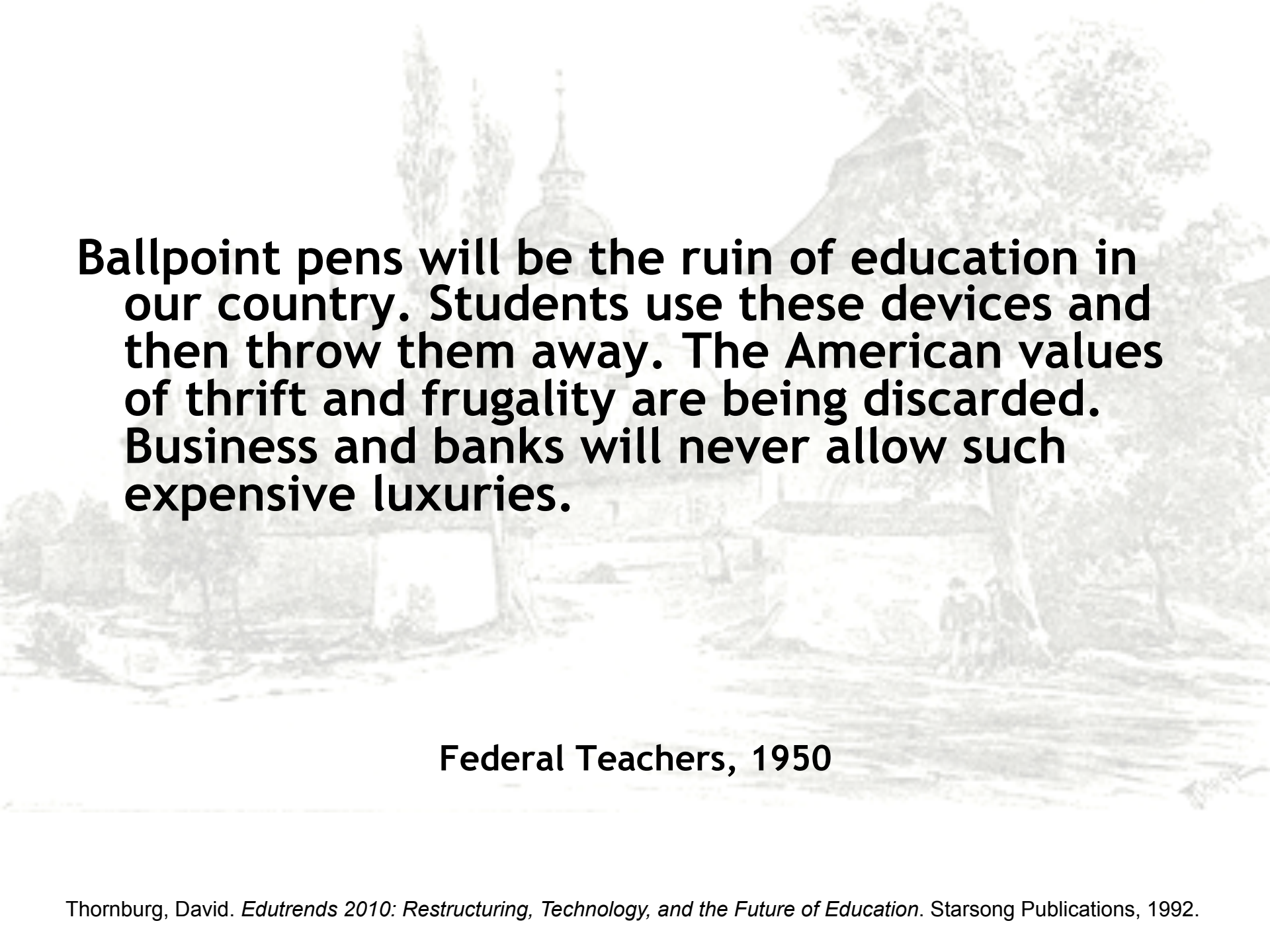
**Students today depend upon store bought ink.
They don't know how to make their own.
When they run out of ink they will be unable
to write words or ciphers until their next trip
to the settlement. This is a sad commentary
on modern education.**

The Rural American Teacher, 1928



Students today depend on these expensive fountain pens. They can no longer write with a straight pen and nib. We parents must not allow them to wallow in such luxury to the detriment of learning how to cope in the real business world which is not so extravagant.

PTA Gazette, 1941



Ballpoint pens will be the ruin of education in our country. Students use these devices and then throw them away. The American values of thrift and frugality are being discarded. Business and banks will never allow such expensive luxuries.

Federal Teachers, 1950



<< Insert Rant >>

<< Insert Ranting Voice, 2011 >>

The Future

Is in Disruption

Identify

Embrace

Mold

Make It Available

Thank You!

Table 1. Students Using Web-Based Technologies in Courses the Quarter/Semester the Survey and Those Using the Technologies Collaboratively in Courses

Web-Based Technology	Percentage Using the Technology (N = 36,950)	Number of Users	Percentage of Users Using the Technology to Collaborate in Courses
Web-based word processor, spreadsheet, presentation, and form applications (Google Docs, iWork, Microsoft Office Live Workspace, Zoho, etc.)	36.2%	13,368	53.0%
Wikis (Wikipedia, course wiki, etc.)	33.1%	12,228	30.7%
Social networking websites (Facebook, MySpace, Bebo, LinkedIn, etc.)	29.4%	10,855	49.4%
College-related review/opinion sites (RateMyProfessors, College Prowler, Unigo, College Confidential, etc.)	27.1%	N/A	
Textbook publisher resource websites (Pearson, PrenticeHall, McGraw-Hill, etc.)	26.1%	9,654	23.2%
Video-sharing websites (YouTube, etc.)	24.3%	8,962	33.4%
Web-based calendars (Google Calendar, etc.)	17.4%	N/A	
Web-based citation/bibliography tools (CiteULike, OttoBib, etc.)	17.2%	6,345	16.9%
Blogs	11.6%	4,279	37.6%
College study support (Cramster, Turnitin, Essay Checker, ShareNotes, etc.)	10.9%	N/A	
Photo-sharing websites (Flickr, Snapfish, Picasa, etc.)	5.4%	1,996	32.9%
Micro-blogs (Twitter, etc.)	4.3%	1,605	40.2%
Web-based to-do lists/task-managers (Remember the Milk, Ta-da, etc.)	4.3%	N/A	
Social bookmarking/tagging (Delicious, Digg, Newsvine, Twine, etc.)	2.8%	1,053	30.5%
Online virtual worlds (Second Life, Forterra, etc.)	1.4%	527	29.4%

Engagement

The Challenge:

Many students cite lack of engagement in and relevance of courses as a reason for poor performance or dropping out. Engagement correlates with improved learning outcomes, including a stronger understanding of concepts, a better retention of learned material, and the ability to apply that learning to different contexts. It also deepens and/or accelerates learning through increased time on task, active learning strategies, and stronger interaction. Deeper engagement has a positive effect on students' persistence, particularly in the first two years of college.

Solutions:

- Faculty and staff at Pennsylvania State University have intertwined the functionality of a course management system with the interactions commonly found in a social networking site in the Penn Open Learning Commons, a platform for online learning. The site allows instructors to combine video, discussion forums, student profiles, blogs, and micro-blogs into course design. Uniquely, the Commons also invites participation from people who are not enrolled in the course, opening the conversation to members of industry and other institutions. After its first pilot, one student reported: "I had never thought about interactions with others, and I thought I would just log in, study, log out, but the interactions with other, amazing, intelligent and insightful individuals from around the world has been a real highlight of the course."³⁰
- Mentira is a mobile, place-based augmented reality game that helps students develop Spanish language skills. The game is set in a Spanish-speaking neighborhood in Albuquerque where fact and fiction combine with simulated characters, other players, and "local" citizens. Players are required to solve a mystery by investigating clues, visiting "local" neighborhoods, and talking to various characters.³¹
- The Wharton School of Business Online Trading and Investment Simulator (OTIS) helps business students master financial management skills by providing them with immersive learning experiences that underscore key concepts taught in the course. Students buy and sell equities, options, and future contracts using real data from the current day's market. Students can then compare their performance with the S&P 500, historical investment returns, and the performance of their fellow students.³²

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Slide 5: Please see original article, "Distance-learning program grows at SPH," at http://www.ur.umich.edu/0809/Aug17_09/02.php.

Slide 6: Please see original article on Next Generation Learning Challenges program at <http://nextgenlearning.org/the-program>.

Slide 7: Original photograph of Diana Oblinger removed.

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Slide 9: Regents of the University of Michigan, accreditation.umich.edu.

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Slide 13: Image 2 (right): Please see original video, "A Vision of Students Today," at <http://www.youtube.com/watch?v=dGCJ46vyR9o>.

Slide 14: Please see Educause article, "The ECAR Study of Undergraduate Students and Information Technology, 2010—Key Findings," at <http://www.educause.edu/Resources/TheECARStudyofUndergraduateStu/217334>.

Slide 15: Shannon Smith and Judith B. Caruso, (2010), The ECAR Study of Undergraduate Students and Information Technology—Key Findings, *Educause*, pg. 4. Retrieved from <http://www.educause.edu/Resources/TheECARStudyofUndergraduateStu/217334>.

Slide 16: Shannon Smith and Judith B. Caruso, (2010), The ECAR Study of Undergraduate Students and Information Technology—Key Findings, *Educause*, pg. 5. Retrieved from <http://www.educause.edu/Resources/TheECARStudyofUndergraduateStu/217334>.

Slide 18: Please see original article on University of Michigan intended learning outcomes in the Student Learning Environment section at <http://www.accreditation.umich.edu/learn/index6.php>.

Slide 20: Please see original cartoon at http://www.condenaststore.com/-sp/l-had-my-own-blog-for-a-while-but-i-decided-to-go-back-to-just-pointless-New-Yorker-Cartoon-Prints_i8546224_.htm
New Yorker, 2005

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Slide 24-30: Thornburg, David. *Edutrends 2010: Restructuring, Technology, and the Future of Education*. Starsong Publications, 1992.

Slide 33: Shannon Smith and Judith B. Caruso, (2010), The ECAR Study of Undergraduate Students and Information Technology—Key Findings, *Educause*, pg. 8. Retrieved from <http://www.educause.edu/Resources/TheECARStudyofUndergraduateStu/217334>.

Slide 34: Diane Oblinger, (2010). For the Next Generation, *Educause Review*, 45(5). Retrieved from <http://www.educause.edu/EDUCAUSEReview/EDUCAUSEReviewMagazineVolume45/FortheNextGeneration/213927>.