

Online Education's Role in the Schools of Tomorrow

Dr. Susan Lowes

Dr. Sheldon Berman

Donna E. Scribner

AASA, March 4, 2007

Who we are:



Dr. Susan Lowes

Institute for Learning Technologies
Teachers College/Columbia University

Dr. Sheldon Berman

Superintendent of Schools, Hudson, MA

Donna E. Scribner

Chief Learning Officer
Virtual High School

Today's Session



- Data on current state of online education
- The influence of Virtual Education on Schools.
- The changes in “brick and mortar” schools with introduction of Virtual Education:
Case study
- Resources
- Questions

Virtual Education Today

K – 12 - Growth



- June, 2005: **21 states** have STATEWIDE online learning programs
- June, 2006: **24 states** have STATEWIDE online learning programs and an additional **14 states** have policies about virtual schooling or Programs
- Currently: **> 50%** of all school districts offer online coursework – 30% increase from 2004

Virtual Education Today

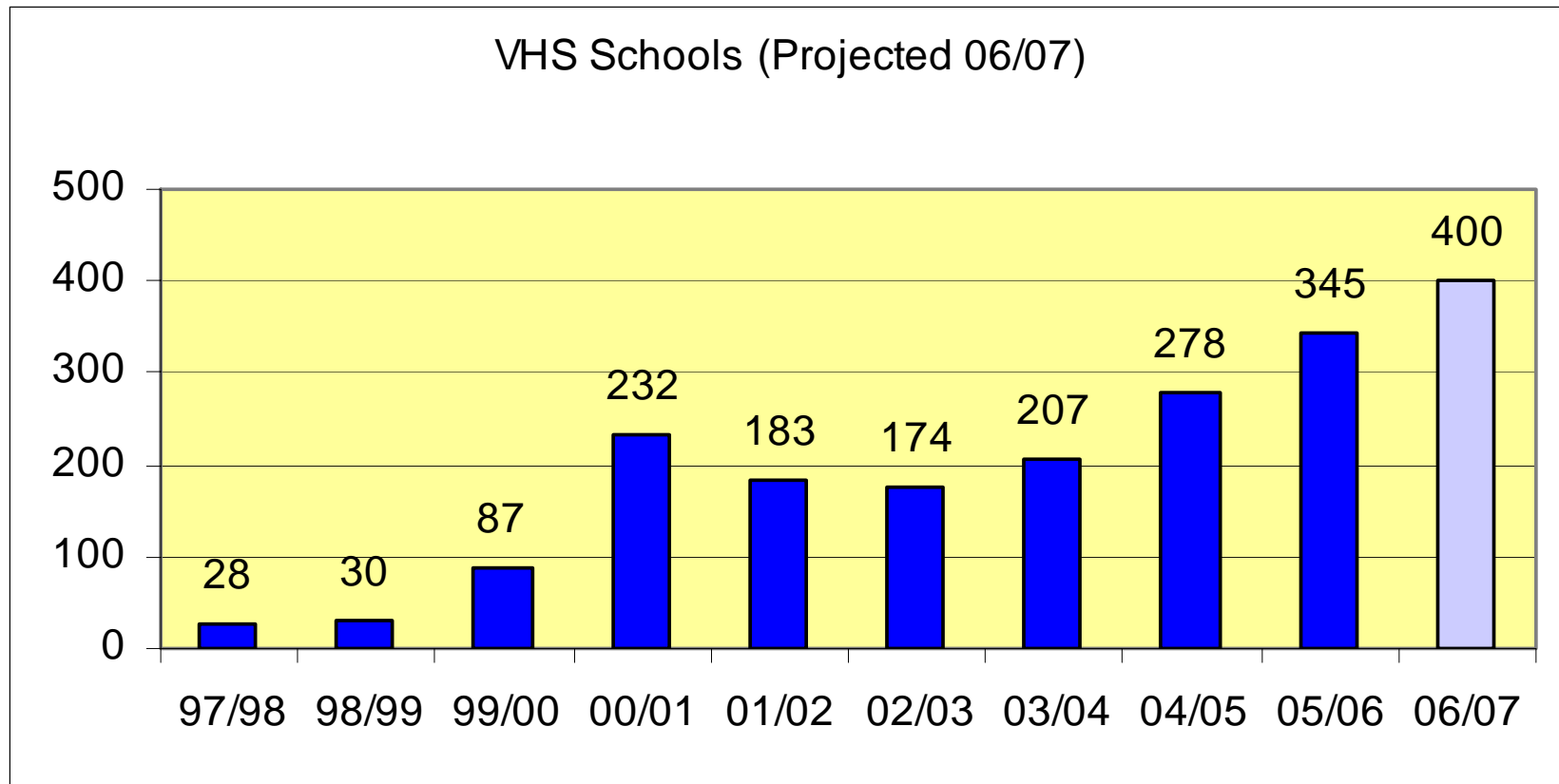
K – 12 – Students Enrolled



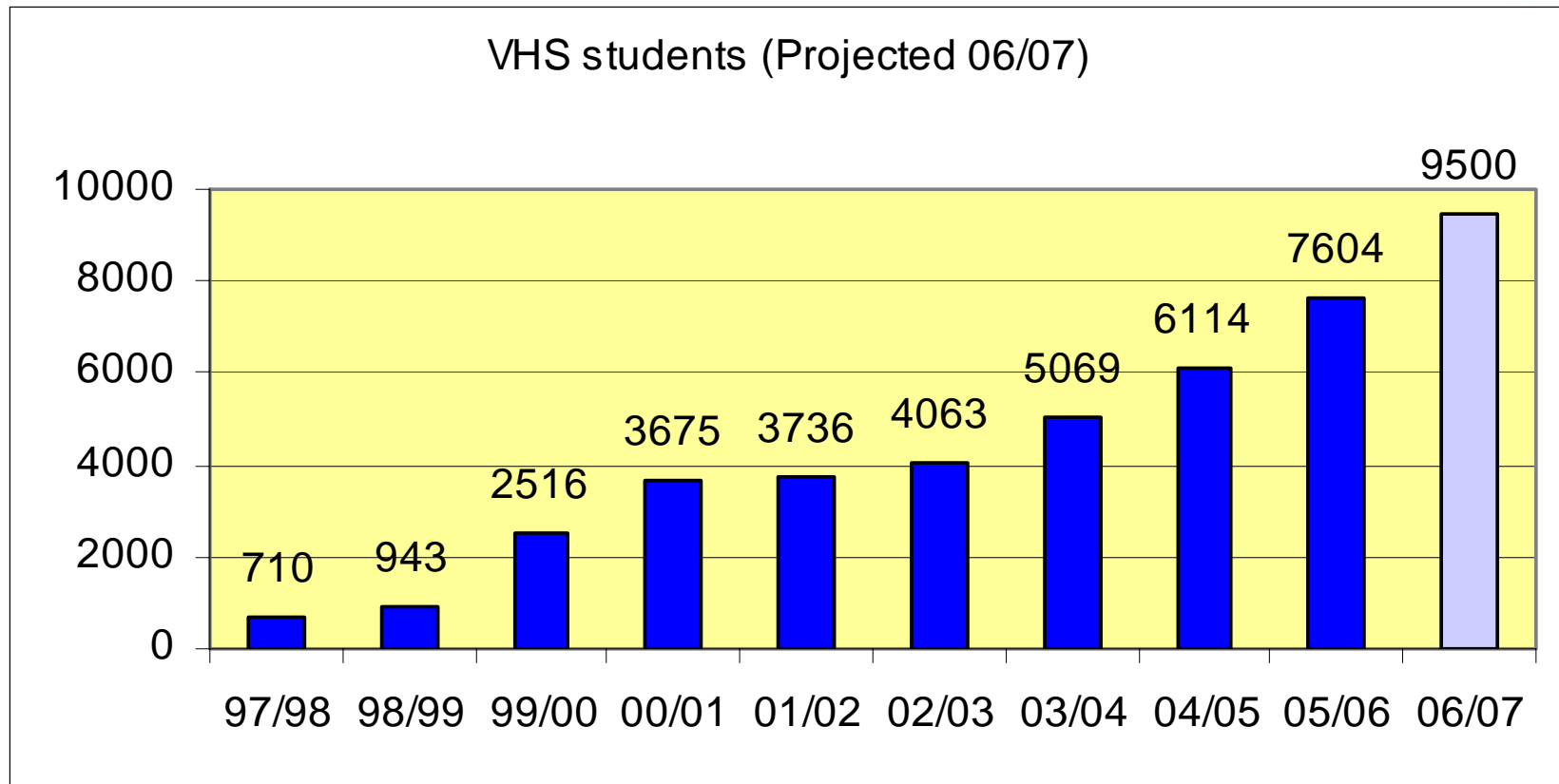
- 2000 – 2001: approximately **40,000 – 50,000**
- 2002 – 2003: approximately **328,000**
- 2005 – 2006: **> 500,000**

Project Growth rate: 30% per year

School Growth



Student Growth



The Relationship Between Virtual and Face-to-Face Classrooms

Dr. Susan Lowes

Research on online learning

- Online and face-to-face classrooms have been studied as two separate worlds
- Most research to date has focused on comparing them—which is better, more effective, etc.
- Has found no significant difference in terms of such measures as end-of-course tests and other test scores
- More recent research is starting to look online learning in its own terms—its strengths, challenges, etc.

The “trans-classroom” teacher



- This research goes a step further and looks at the online and face-to-face classrooms as one **social field** or “**space of possibilities**”
- “Trans-classroom” teachers: teachers who move back and forth between online and f2f classrooms, much as trans-national migrants move between countries
- Research question: What are the transformations, of the teacher and of the course, as the teacher moves—or migrates--from one classroom to the other?

The Migration Path



- Starts with a f2f classroom teacher converting or adapting a course for online teaching
 - This usually involves a professional development course, followed by mentoring and other external support/supervision
- Continues as he/she teaches the course online
 - Where there continues to be mentoring support/supervision
- And finally, the teacher returns to teaching face-to-face after teaching online

Online courses: some important distinctions



- Virtual courses
 - Main interactions are one-on-one: teacher-student, student-content
 - Generally self-paced
- Virtual classrooms
 - Main interactions are whole class: teacher-class, student-student (usually in discussion forums), as well as student-content
 - All follow same weekly scheduled

Converting or adapting a course: What changed?

- Added online readings/resources
- Added whole-class discussions
- Added group projects/assignments
- Added written assignments
- Added peer reviews
- Took out textbook readings
- Took out worksheets and quizzes
- Took out lectures

Issues faced in teaching online

- How do you teach without **personal communication**?
- How do you provide **instructions** that are clear enough?
- How do you know when the students are **confused**?
- How do you get students to **participate**?
- How do you manage **pacing and scaffolding**?
- How do you know if students are **learning**?

How do you teach without personal communication?

- “[One of my greatest challenges was] lack of use of **body language** as a tool to help determine student understanding and as a means of explanation.”
- “... how was I going to adapt the information into a meaningful course on line? How was I going to make **my personality** come alive to my students?”
- “[One of my greatest challenges was] **getting a feel** for the ability of the students strictly from written work.”

How do you provide instructions that are clear enough?

- “I had to make sure **my directions** were extremely clear because I couldn't repeat myself or rephrase my question if a student 'looked' confused.”
- “Another challenge was to **clarify** the definitions of complex concepts without the student questions that prompt the clarification.”
- “I needed to find **more than one way** of asking a question. I often did this by asking several questions instead of only one.”

How do you know when the students are confused?

- “[One of my greatest challenges was] not seeing the **facial expressions** on the kids (this is very valuable to gauge understanding and collect general information about their attitudes and veracity) and not having a good way to determine whether they were doing their own work.”
- “It’s harder to be sure where the students are in their understanding when you **can’t see their faces** when you ask a question.”

How do you get students to participate?

- “I had to develop questions that required **higher order thinking skills** to be used and had to encourage and guide students through the discussion process until they became more comfortable with expressing their opinions, defending their research, etc.”
- “I had to create questions that would generate discussions that would **probe deeper understanding**, that push the students to explain and thus improve their understanding.”

How do you manage pacing and scaffolding?

- “[One of my greatest challenges was] determining the **appropriate amount of work** required each week.”
- “[One of my greatest challenges was] determining **how much text was too much**, how much assignment was sufficient and not overwhelming.”
- “I had to **focus on what was essential**—I had to figure out the most essential problems, the most important problems; and I had to think through the scaffolding very carefully.”

How do you know if students are learning?



- “[One of my greatest challenges was] creating assignments that **truly reflected** student learning/understanding.”
- “It was challenging designing the assessment for the course since it is **difficult to measure** ability level, effort, etc.”
- “[One of my greatest challenges was] getting a **feel for the ability** for the students strictly from written work.”

What changed in f2f classroom?

- Eliminated lessons that now seemed poorly designed
- Designed or redesigned lessons using backward design principles
- Provided more detailed instructions
- Greater emphasis on class participation
- Greater emphasis on independent learning
- Changes in questioning techniques
- Greater emphasis on metacognition/reflection

Class participation

- “If anything, the online class requirements reinforced the understanding that **all students need to participate** in some way.”
- “I am more aware of **who is participating** and who is not. I try to make more eye contact with those not as willing to participate, and to call on them to encourage them to participate more.”
- “I give a **participation grade** to my F2F students now where I didn't before on-line teaching.”

Independent learning



- “I took a stronger stand on independent learning and had **higher expectations** for my f2f students than I did before.”
- “I think I've come to **trust that kids can do more** than I usually realize and that probably influences the way I design our learning time.”
- “I assume **kids can get info on their own** now, where before, I didn't. I felt like I needed to spoon feed them.”
- “... I step back and **let them take control** of their learning. I act more on the side instead of in charge of their learning.”

More on independent learning



- “I like the technique of weekly assignments and then students having the responsibility to **manage their time** accordingly. When possible I do this in my f2f classes.”
- “I have set up assignments that I began in my online classes to work in the conventional classroom... Instead of lecturing on the historical and cultural context of the story, **they find it on their own.**”

Questioning techniques



- “I learned online that my questions have to be very clear and **free of ambiguity**.... My students are getting better questions.”
- “I think I have been able to ask direct questions or **focus students on the topics more easily** ... so they have less misunderstanding about concepts.”
- “I am much more detailed in my questions to make sure my students don't get confused. I also am better at asking **follow up questions** to get my students to dive deeper into the content and to think critically.”

More on questioning techniques

- “My questioning techniques have become more along the line of **reflection** instead of just repeating back the factual information....”
- “I **no longer accept short oral responses** from my students.”
- “I believe that I now ask **more open-ended questions** and I am more content to allow the students to search for their own responses ...”

Less lecturing, more facilitating

- “I think that I assume kids can get info on their own more now than before on-line teaching. ... I don't lecture much at all now, and when I do, it is usually to clarify things student have had to dig out on their own.”
- “I am more willing to act as a facilitator after teaching online. I am more willing to try not to control every aspect of the classroom....”
- “I have begun breaking assignments down into smaller chunks. ... as a result of teaching online I started thinking in terms of smaller bits.”

Metacognition/reflection

- “I allow more opportunities for students to reflect on their work and give me private assessments of the class/their own progress, i.e., private threads.”
- “More use of journals and reflective portfolios; this is something I knew I should do more of anyway but VHS has pushed this issue with me.”
- “I now require all students to respond in writing to a daily ‘exit question’ related to the day's work. My awareness of the role of reflection in learning has definitely increased since I began teaching my online course.”

More on metacognition/reflection



- “Yes ... essentially I just **cut out some of the busy work** ... worksheets, needless vocab and writing assignments ... and made the assignments we do more meaningful and require more reflective thought.”
- “The discussions online also have the added benefit of a person going back and responding later. I now add this to my seminars by **allowing students to return to a previous question** if they have taken notes during a seminar.”

Implications

- Many of the teachers had little knowledge of such curriculum design principles as **backward design, problem-based learning, authentic assessment**
- A key realization is that **classroom time** is not necessarily used well
- Professional development for teaching online can therefore be a **(re)introduction to pedagogy**
- Teachers who have taught online are a **potential resource** for f2f classroom teachers

Questions

- Can we, and should we, find ways to encourage the development of **more trans-classroom teachers**?
- Can we, and should we, find ways to **make nascent “trans-classroom” teachers more so**?
- Can we encourage the **migration of the more successful online pedagogies** back into the face-to-face classroom?

Brick and Mortar Changes: A Case Study

Dr. Sheldon Berman



Hudson School District and VHS



- Founded by the Hudson Public Schools and the Concord Consortium
- A non profit collaborative of nearly 400 high schools offering innovative online courses
- Currently in 10th year of online course delivery
- Originally funded by the Federal DOE through a 7.8M tech. grant – five years of research & development

An expanded Vision



- Expands curriculum offerings
- Provides high quality courses in areas of student interest
- Gives students in-depth experience using technology
- Teaches independence and responsibility
- Enables students to learn about and from students across the country and the world

Hudson Students



- Goal: Every student to have at least one online learning experience
- Four VHS teachers: Astronomy, AP Statistics, Service-Learning, and Music Theory
- Full-time site coordinator
- Approximately 100 students enrolled in VHS courses each semester

Resources



- **Handouts**

- Selective Bibliography
- Top 10 Myths about Virtual Schools – NACOL

- **Organizations**

- North American Council for Online Learning (NACOL): <http://www.nacol.org>

- **Annotated Bibliography by Topic**

- <http://www.netc.org/digitalbridges/online/resources/bib-admin.php>

Your turn:

Questions or Comments?

Thank you!