



From Digital StudyHall to Digital PublicHealth

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Tutored Video Instruction

Video of expert teacher

- Presented with the aid of the facilitator
 Theory: Interaction with the video better than 'just watching TV'
 Initial work: Gibbons, Stanford, 1977.
- Tutored Videotape Instruction
- University of Washington
 - Introductory programming offerings to Community Colleges
 - Recorded UW lectures used by existing community college instructors

Digital StudyHall

- Founded by Randy Wang, ex-Princeton
- Collaboration with Urvashi Sahni, Studyhall School
 Top private school in Lucknow
- DSH Methodology
 Create videos of classes taught by expert teachers to low-income students
 - Train teachers to facilitate videos
- Target rural schools
- Randy Wang timeline
 - Start DSH independently
 - Join MSRI
 - Depart MSRI, continue DSH independently
- Leave India for Intel Shanghai

<page-header> Digital Study Hall Hubs Lucknow Pune Calcuta Bangladesh Pakistan Nepal







Project domain: Primary education in rural India

- government schools in Uttar Pradesh, India
- Rural schools outside of large city
 Introduction of
- methodology to new schools



ural India

Does it work?

- Does the use of Digital StudyHall improve learning outcomes?
 Pre-test / Post-test performance of control and treatment classes
- Does Digital StudyHall lead to pedagogical change in the school?
 - Observe differences in classroom activities between DSH and non-DSH classes
- Does Digital StudyHall improve indicators such as attendance or hours of instruction?
- Is Digital StudyHall sustainable?
- Do schools continue to use DSH on their own with modest supervision and support resources

The main result

There are significant obstacles to scalability and sustainability of Digital StudyHall in Government primary schools in Uttar Pradesh, India

- We believe that the vast majority of government schools would not continue to use DSH without frequent monitoring visits
- Our outcome testing was inconclusive, yielding no meaningful results

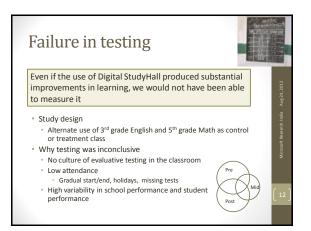
Caveats

- We are not claiming generality of the result
- Other types of schools? Other geographies?Favorable evaluation from teachers and students
- Two of eleven schools wanted to continue after the end of the study
- Example of a successful DSH school from outside of the study area
 - Rural government school in Uttar Pradesh

Study Design • 11 schools (out of 20) selected from the block we had permission to work in • Schools had not previously worked with DSH

- worked with DSH
 Introduction through principals and teacher training workshops
- Regular observation visits
 Interviews
- Year one:
- Pre-test/Post-test with controls
 Year two:
 - No testing
 Expanded observations





Relationship with implementing organization

- Implementing organization: StudyHall, well regarded private school
- Implementation team primarily Indian
- Adequate buy-in from principals
- With official permission
- Teachers generally favorable to implementing organization Trainings, involvement with StudyHall and other teachers a positive
- Students had a very positive view of implementing
- organization
- Novelty
- Disruption





Facilitator understanding and use of methodology Interactive pedagogy

- Activities
- Poems, songs, drama Intervention had goal of changing teaching
- Training of facilitators and monitoring visits
- Observations confirmed use of interactive techniques
- Unexpected
 - Teachers viewing lessons in advance at home



Facilitator buy in to methodology Mixed level of adoption by teachers Issues Urban/Rural split Lack of incentives to teach Alternate usage models Video lessons for review Facilitated by studens Difference between regular teachers and para-teachers

- Education levels

School has been using

Limited monitoring

 School purchased second set of equipment

· Full buy in from school Struggled with DSH

Eventually, championed by principal

Regular use of DSH in many

DSH for six years

classes

introduction

Rural school







Sustainability challenges

- · Evidence of nonsustainability
 - In year one, level of use was strongly correlated with monitoring visits
 - Long interruptions of electrical supplies to schools, where schools did little to restore power
 - Some schools did not want replacement equipment after theft
 - General problems with teacher absenteeism





Evaluating technology interventions

- · Study took an intervention to "next level" of scale
 - New deployment in eleven schools over two years
- Challenging environment, but with very high impact if successful
- We were naïve to think we could measure educational outcomes
- Randomized trials are out of reach for this type of intervention
- There were conflicts between the research project and teaching the kids
 - Example study staff would give lessons to the kids when the teachers were absent
- Recognition of a complex system where a technology intervention is a modest part

DSH Update Randy Wang's involvement severely limited External support from MONA Foundation Existing assets for DSH Lucknow based organizations (~6 people) Lechnical capacity in video production, distribution, and use Base in StudyHall school Content library Several sustained DSH deployments Hired Lucknow based manager

- Shift in strategy
 - DIETs teacher training colleges
 - Girls residential school

DStar

- Original vision Apply Digital StudyHall methodology to multiple domains
- DSH Methodology
- Locally created video
- Facilitated use
- Hub and spoke model
- Content archive
- Digital Green MSRI project by Rikin Gandhi
- Digital Polyclinic DSH Lucknow efforts in health

Digital Public Health

· PATH / UW / Digital Green collaboration

One year pilot starting August 2012

· Goal: demonstrate feasibility

Application of Digital Green methodology to maternal health









Key aspects of Digital Green

- Digital Green supports field based organizations using community video in their agricultural programs
- Key innovations of Digital Green
 - Model for community creation of video content
 - Model for facilitated uses of videos in the community
- Refined video production pipeline and associated technology
- Emphasis on measuring performance

48.96 %

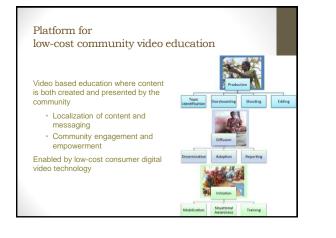
· Platform for community education in multiple domains



SureStart: Improving maternal and child health in India

- Community engagement to support maternal and newborn health
- · Governance and public health interventions
- Mentoring support for accredited social health activists (ASHAs)
- Bill & Melinda Gates Foundation supported
 Maharashtra and Uttar Pradesh, India
- 2006-2011
- Focus
 - Raising awareness around essential maternal and newborn care
 - Scaling up efforts to cover the entire rural and periurban populations of the designated districts
 - Supporting household and community actions to complement other initiatives focused on clinical services and health systems





Digital Green and PATH: Digital Public Health Goal: To test the feasibility of adapting the Digital Green model to health

- ✓ PATH and Digital Green partnership developed
- ✓ Digital Green staff provided training to PATH staff in Bhopal, India in August 2011
- ✓ PATH transferred technology to ongoing project in Udaipur, India to support midwives in providing rural home-based healthcare
- ✓ Video training and dissemination taking place in August 2012

 Videos created locally within two days to accommodate the local language and specialize the treatment of the topics to the area videos



Digital Public Health:

Feedback from rural midwives

- More complete information
- Bridges language barriers
- Patients understanding by seeing rather than telling
- Education beyond patient/provider interaction
- Video extends/supports authority of provider

Identification as powerful tool in video messaging

"In video when we show the patient, the patient understands that there is one more patient like me in the video ...so she feels that ok she is also a patient like me and how I need to take care of myself and my baby." "If there is a nurse...who is very young, the mothers don't take her seriously... who is she telling us this... by showing the video, there is an elder woman in the video, and so they think ok, so there is some doctor telling us this."



don't explain by talking only

and it is very helpful to let her understand."

show the video to the patie



Program Component	Digital Green	Digital Public Health
Program structure	Field based organizations with agricultural mission	Field based organizations with health mission
Message creation	Agriculture experts	Health experts and governing bodies
Content creation	Videos produced by field organization and farmers	Videos produced by field organization, health workers and community
Content Delivery	Facilitated use of video in community groups; use of pico-projectors	Facilitated use of video in groups and one-on-one settings
Content Management	Central video repository	Central video repository
Quality control	Review videos for accuracy and content before use	Multilevel review including details of messaging
Reporting	Dissemination and adoption statistics	Metrics to be determined



Dissemination model

- Mothers' groups
 - Established in Surestart project
 - ASHA's meet monthly with women to teach key health messages
 Women attend while pregnant and for a short time after baby is born
- · Add video screenings to existing group meetings
- May also use Self Help Groups and Village Health and
- Sanitation days

 Experiment with one-on-one showings using mobile phones
- ASHAs on household visits

Message creation

- Problem: balance community input with medical accuracy
- Current process:
 - Group of messages created by area by experts
 - Birth preparedness: Record phone numbers for emergency transport
 - Breast feeding: Begin feeding within one hour of birth
 - Community resource person creates storyboard
 - Storyboard reviewed
 - · Video shot by community resource person

Video review Need to ensure messages are accurate Give correct health advice Compatibility with official guidelines Health messaging may require stricter review than agricultural messaging Project has set up a Community Advisory Board to review videos Multistage review with video check list Important component to get right: Establish procedures that will give credibility to the project Maintain efficiency in production of videos

Measuring Impact

- Health outcomes would require large scale deployment over a long term
- Attributing adoption of specific practices to the intervention is difficult
- Working in a high functioning block (so indicators already good)

Next steps

Phase 1

- · Conduct pilot to develop model and demonstrate feasibility
- 20 villages, one year
- Phase 2
 - Demonstrate impact
 - 80 villages, two years

