From Digital StudyHall to Digital PublicHealth

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The History of D*

- Digital StudyHall pioneered a technology and methodology for remote education with low cost digital video
- D* designated the use of the DSH platform to multiple domains
  - Digital Green (DG) for agriculture
    - Rikin Gandhi
  - Digital PolyClinic (DPC) for health
    - Anna Spessard-Mulhair
    - Julia Lowe
  - Digital Self Employment (DSE) for livelihood
    - Paul Javid

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Themes and distractions

- Technologist led projects for global good
- Relationship between academic ICTD community and the NGO world
- Rapid technological and economic change
- Sustainable and scalable interventions
- How does an ICTD project succeed?
- Technology is only one component of a successful program
- Dominance of consumer/commercial technology

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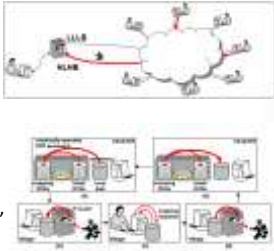
What is Digital StudyHall?

- Support weak schools with video content from expert teachers
- Local teacher mediates the video content
  - Based on the TVI model
  - Provide better content and support teacher development
- Important to match content with target audience
- Cost realism

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DSH History: The Idea

- How can computing systems research be applied to help the very poor?
- Solve the digital content distribution problem to make distance education possible
- Concept paper, Randy Wang et al., Princeton, November 2003

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DSH History: Experimentation

- Minimize cost of video playback in the classroom
- Attempt to use low cost television sets
- Target rural schools with irregular power
- Low cost video and audio production
- Develop video production tools based on open source software

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DSH History: Building the Lucknow hub

- Developed content creation model with a strong school
- Recorded core content for all grades
- Teacher training workshops
- Range of different types of schools
  - Government, private, informal
- Simplification of the technology
  - DVD players instead of computers

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DSH History: Microsoft Research India

- Randy Wang hired as a researcher at MSR India
  - Project remained based in Lucknow
  - Part of the Technology for Emerging Markets (TEM) group
- Development of other HUBs
  - Bangalore, Pune, Dhaka, Calcutta

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DSH History: Independence

- Relationship with MSR ended in 2008
- Activities in Lucknow continued, but many hubs stopped working
- NSF sponsored study exposed challenges in working with government schools
- Randy Wang moved to Intel, Shanghai in 2010
- New set of projects developed by DSH Lucknow with a new manager

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What is Digital Green?

- Video based education for farmers
- Community created videos demonstrating agricultural practices
- Facilitated showings of videos in farmer groups
- Digital Green (NGO) providing technology, training, content archive and advocacy

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DG History: The Idea

- Apply Digital StudyHall to agriculture
- Formative research conducted with Bangalore based NGO (Green)
  - Promote organic farming practices
  - Film extension workers introducing practices
  - Public showings in evenings
- Rikin Gandhi started work at MSRI as a volunteer

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DG History: Experimentation

- Video creation
  - Wide range of topics and video styles
- Screening methodologies
  - In homes
  - In public square
- Process
  - Hire 'animators' responsible for conducting showings and maintaining equipment
  - Follow up from meetings

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DG History: Spin Out

- Studies measuring "cost per adoption"
  - Compare DG with extension agent
  - Emphasis on monitoring
- Microsoft identified forming an NGO as a success criteria for the project
- Support from BMGF to form NGO

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DG History: Building an NGO

- Business model
  - Partner with NGOs implementing agricultural programs
  - Become trainers and managers of content and technology
- Shift focus to low income states in India
- Strengthen process model
- Process innovation:
  - Shift video creation to the community
- Technology innovation:
  - Pico-projector

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DG History: Expansion

- Substantial growth
- Partnership with NRLM in India
- Exploratory projects in Africa
- Identification of other domains
  - Health, Sanitation, Nutrition, Livelihood

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What is Digital Public Health?

- Digital Green model applied to community health education
- Community created video content for externally defined health messages
- Video showings in community to promote behavior change

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DPH History: The precursor – Digital PolyClinic

- Digital StudyHall project conducted by interns
  - Anna Spessard-Mulhair
  - Julia Lowe
- Recorded a women's health workshop at a clinic
- Trained facilitators
- Videos shown in groups in village houses
- Major effort to transport television and car batteries

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DPH History: Building a Partnership

- PATH/DG partnership established
- DG Video Training workshop for PATH staff
- Identification of possible differences between Health and Agriculture
  - Message review
  - Evaluation of impact
  - Dissemination models
- Funding for pilot
- Identification of implementation partner

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DPH History: Project Launch

- Partnership agreement
  - Determine that DPH is consistent with partners goals and capabilities
- Process definition
- Plan M&E
- Training
  - Video production
  - Dissemination
  - Data reporting
- Video production
- Dissemination starts October 1

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Applying the Digital Green model to health

- Digital Green model
  - Participatory process for content production
  - Locally generated digital video database
  - Human-mediated instruction for dissemination and training
  - Regimented sequencing to initiate a new community
  - Integrated performance monitoring

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Surestart project

- PATH led project in UP and Maharashtra
- 2006-2011, BMGF Funded
- Community engagement to support maternal and newborn health
  - Governance and public health interventions
  - Mentoring ASHAs
- Maternal health messaging
  - Danger signs
  - Birth preparedness
  - Thermal care
  - Breast feeding
- Mothers' group
  - ASHA led group of expecting mothers
  - Monthly meeting with activities

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Bacchrawan, Raebareli, UP

- Gran Vikas Sanstham
  - Well established local NGO
  - Active since 1977
  - Demonstration site for SureStart
- High performing district
- Project will cover 20 villages with 54 mothers' groups
- Direct continuation of Surestart
- Supervisory structure already in place

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Message creation

- Health messaging developed by experts
  - Standard messaging that has been adopted by health organizations
- List of messages for a topic given to video team
  - Messages must appear in the video

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Video creation

- GVS employees trained in video production and editing
  - No previous background
- Training includes basics of film
  - Different types of shots
- Video team had creative control on videos
- Developed story lines for videos
- Initial videos produced were of high quality

Review

- Critical to ensure accuracy of messaging
- Community advisory board created
  - Health system and community membership
- Approvals
  - Storyboards
  - Final videos
    - Community and PATH review
- Recommendations from CAB have been included in videos
- Errors in videos have been detected

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Dissemination

- ASHAs trained to use videos
  - Technical training on Pico projector
  - Training in facilitation
- Videos shown in existing mothers groups
  - Substitute videos for learning activities
  - Attempt to keep format the same

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Technology

- Video creation with Kodak playtouch camera
- Edit with Microsoft Movie Maker
  - (sound problems)
- Video sharing for review
- Post to YouTube
- Load on Pico projector for showings

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Assessment

- How do we know if practices are followed
- DG Paradigm – practice demonstrated, follow up to see how many have adopted (with key adoption points)
- Health – not clear
- Will have ASHAs follow up on home visits

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Monitoring and evaluation

- Feasibility study
  - Establish that the basic process works
  - Community acceptance
- Focus on process indicators
  - Videos created
  - Number of screenings
  - Review of messages and videos
  - Attendance
  - Performance of ASHAs

Project goal: To generate evidence on Digital Public Health as a new model for community-driven behavior change communication for maternal/neonatal health issues in a targeted region in India

Objective 1: Adapt the Digital Green model to Digital Public Health model

Objective 2: Strengthen capacity of community-based support through Digital Public Health messaging
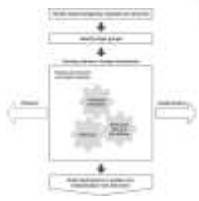
Objective 3: Evaluate proof of concept of integrating the DPH model into a community support program

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Behavior change communication

- Promoting behavior change is much more than just making messages available
- Different models of behavior change for different domains
  - Maternal health vs. lifestyle vs. agricultural practice
- DPH model complementary to centralized initiatives

Maternal, Infant and Young Child Nutrition

National Counselling Cards for facility Health Workers

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Extending DPH deployments

- Groups available for health information disseminations
  - Mother's groups
  - Self Help Groups
  - Village health and nutrition days
- Requirements
  - Community mobilization
  - Facilitation structure
  - Reason for people to receive health content

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Local versus centralized content

- Why not create 20 videos that could cover all of Hindi speaking India?
  - Amortized cost will be lower
- Arguments for local
  - Variation in practices
  - Tailor to local dialect and culture
  - Respond to local needs
  - Community identification, engagement and empowerment
- Will the community prefer local content?
  - Need to do a rigorous evaluation

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Handheld content delivery

- Mobile devices for content dissemination
- Household visits by nurses or community health workers often contain educational activities
- Sensitive topics can be covered in one on one visits

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Evaluating impact

- Phase one: Feasibility
- Phase two: Impact
- Determine if DPH is cost effective for implementing BCC in community programs
- What are the measured outcomes?

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DSH to DPH: Technology vision

- Central technical challenge for DSH was low cost digital video
- Rapid changes in technology have simplified and lowered many costs
- DG technology process adopted by DPH
  - MS MovieMaker
  - YouTube
  - Pico projectors
- Digital backchannel unrealized

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DSH to DPH: Deployment model

- Organizational deployment model
  - DSH focusing on direct implementation of projects
    - Few external hubs
  - DPH starting with a model of field deployment partners
- Differences in structure between schools and community groups
- Training, video archive, technology management common to both

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DSH to DPH: Content creation

- DSH Model:
  - Centralized content creation (educational institution)
  - Common curriculum across deployment
- DPH Model:
  - Community created content
  - Local content to allow message customization and increased engagement

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Comments???

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Acknowledgment

NSF

PATH
A catalyst for global health

digitalGREEN

Vikrant Kumar, Lysander Menezes, Noah Perin, Amit Saxena, Chad Robertson, Paul Javid, Natalie Linnell, Rahul Gupta, Anjana Arora, John Bransford, Tom Anderson, Pratyush Shukla, Sumeet Sobti, Randy Wang, Urvashi Sahni, Esha Nabi, Tanuja Setia, Kentaro Toyama, Kiersten Israel-Ballard, Sita Shankar, Shreya Agarwal, Rikin Gandhi, Vinay Kumar, Melody Kadenko, Julie Svendsen, Amjad Khan, Shivaji Choudhry, Peggy King, Jeff Bernson, Michelle Desmond, Trish Coffey, Anna Spessard-Mulhair, Julia Lowe

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