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-Muhair
  - Julia Lowe
  - Digital Self Employment (DSE) for livelihood
  - Paul Javid

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

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

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

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
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

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

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

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

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

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
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

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

DG History: Expansion

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

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

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

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
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

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

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
  - Monitoring ASHAs
- Maternal health messaging
  - Danger signs
  - Birth preparedness
  - Thermal care
  - Breast feeding
- Mothers' group
  - ASHA led group of expecting mothers
  - Monthly meeting with activities

Bacchrawan, Raebareli, UP

- Gran Vikas Sansthah
  - 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

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

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

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

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

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

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

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

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
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

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

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

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?

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

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
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

Comments???

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