e-Learning, Tablets, K–12 Education and all that stuff!

Naveed A. Malik
Virtual University of Pakistan
Outline

- VUP – A brief introduction
- The state of K–12 education in Pakistan
- The challenges
- Technology to the rescue
- The intervention
Virtual University of Pakistan

- Established – March 2002

- To provide
  - High quality
  - Affordable
  - Uniform

- higher education to all aspirants regardless of their physical location
Virtual University of Pakistan

- The Model
  - Broadcast television/cable/Internet used to deliver pre-recorded video lectures
  - Interaction via a comprehensive Learning Management System over the Internet
  - Assessment through proctored examinations at designated centers
Ten years after...

- Presence in over 120 cities of Pakistan
  - 200 active Virtual campuses
    - VU Operated: 26
    - Public–private partnership: 174

- Enrolment
  - Total: 100,000+
Pakistan

- Ranked 145 / 187 countries in the UNDP Human Development Index
- Unlikely to meet MDG goal of universal primary education by 2015
Ten years after...

- Higher Education
  - Still serving only 7% of relevant age group
  - Mostly concentrated in large cities only
  - Still expensive, rather, more expensive
  - Faculty shortage still exists
K–12 Education

- Punjab – (largest province, 65% of Pakistan)
  - 58,000+ functional government schools
  - 8.4 million children enrolled in grades 1+
  - over 300,000 teachers

- Demand (population) growing but Quality ???
Population trend

Increasing by approximately 3 million per year!
= Additional load on the school system
### Punjab statistics

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Source: Punjab Monitoring and Implementation Unit

*PTC = Primary Teaching Certificate; requires 10 years schooling
CT = Certificate of Teaching; requires 12 years schooling*
K-12 Issues

- Huge, growing demand
- Shortage of properly qualified teachers
- Production of teachers not meeting demand
- Teacher education has quality issues
Why an e-intervention?

- The issues are the justifications:
  - Shortage of properly trained teachers
  - Huge demand / number of students
  - Capacity issues in institutions
  - Cost of education
  - Quality & uniformity
  - Standardization

- The World is going e!
K–12 Pedagogical approach

- Subdivided by age into different levels involving:
  - Entertainment
  - Discovery
  - Construction
The Philosophy

- Get inspiration from everywhere but
  - Design & develop for local conditions

- Fund development of content but
  - Deliver for free (OER)

- Open doors to contribution of content but
  - Publish after moderation/editing – conforming to VU standards
Intervention will require:

- Domain knowledge
- Instructional strategy – (may be domain specific)
  - e.g. STEM requires different approaches as compared to language skills
  - Younger children require a different approach as compared to young adults
- Instructional design
- Content design and writing
- e–Tools and skillsets
- Pilot studies and testing
- Scale–up and deployment
Tools & Skillsets

- **Non-technical**
  - Communication skills – General
  - Writing / Script writing skills
  - Assessment design – Domain + Education

- **Technical**
  - Platform specific tools (e.g. HTML5, web design, scripting etc.) – IT
  - Videography – Professional
  - Graphics design – Professional (influenced by IT)
  - Interactive animations – IT (influenced by Graphics)
  - Incremental publishing (pushing updates only) – IT
  - The M domain!
Technology issues

Platforms

- Browser based
- Mobile implications
- WiFi, WiMax, 3G….
- Collaborative networks….
Planned Projects

- e-Books for school
  - Browser based – (write once, use many)
  - English & Urdu content
  - Tablets
    - Provided free of cost
    - Actual cost includes contribution towards content
  - School/teacher to offer free wi-fi to download new chapters / content

- Test effectiveness through pilot projects then scale
Immediate Project

- Started for grades 11–12

- Developing video content based on BLOSSOMS pedagogy
  - Duet between on–screen and in–class teachers
  - Primary delivery through video topics
  - Drilling and practice through in–class sessions

- Use LMS for practice and formative assessment
  - Includes interactive content

- Use Tablets and create in–class LANs for teacher–led activities and crowd sourcing
Future direction for VUP?

Back to school!!!!!
Thank You