

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

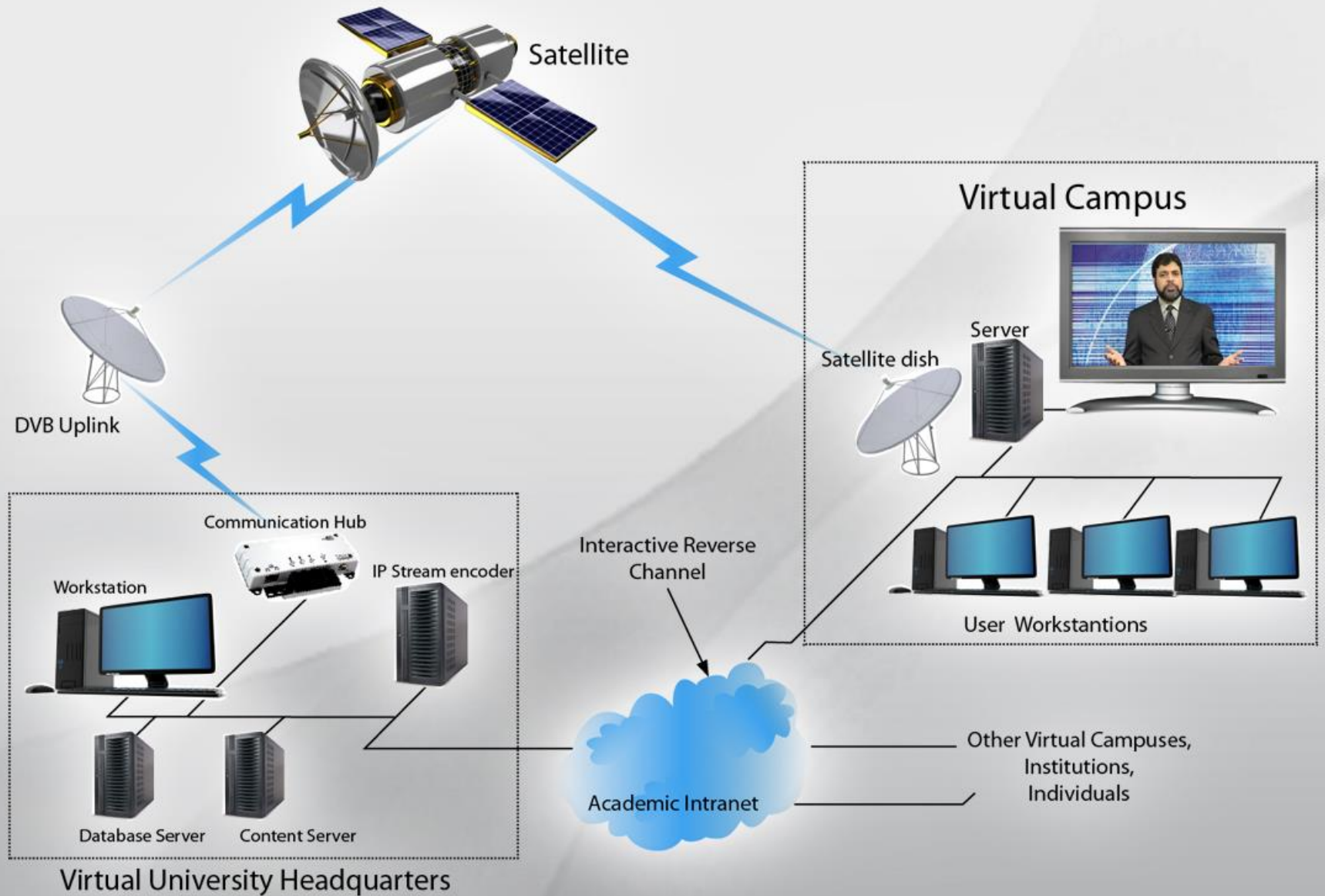
Virtual University of Pakistan

- ▶ 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+

Ten years after...

▶ 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...

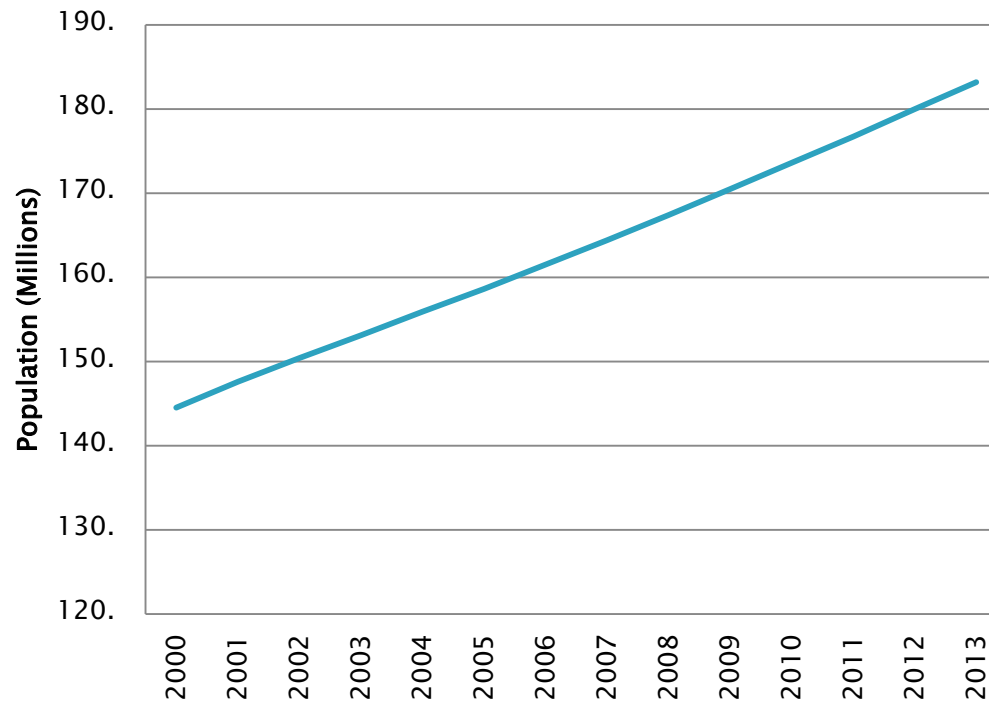
▶ Higher Education

- 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

What about school teachers?

► Punjab statistics

| | | |
|-----|--------|--------|
| PTC | Matric | 61,153 |
| PTC | FA/FSc | 20,683 |
| PTC | BA/BSc | 11,600 |
| PTC | MA/MSc | 1,366 |
| CT | FA/FSc | 13,030 |
| CT | BA/BSc | 16,970 |
| CT | MA/MSc | 2,788 |
| BEd | BA/BSc | 44,097 |
| BEd | MA/MSc | 61,657 |

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

