“Now that I have a college education, maybe I’ll be able to save enough money to pay for my college education.”

www.claybennet.com
India’s USP?

India has one of the world’s largest English-speaking, technical manpower pools:

- $5 \times 10^6$ scientists, engineers and technicians. Over $1.0 \times 10^6$ engineers alone!
- $3.0 \times 10^5$ (6%) engaged in R&D; $4.5 \times 10^5$ allopathic physicians
- $2.0 \times 10^5$ agricultural graduates, $4.0 \times 10^4$ veterinarians
India’s USP?

Graduates: $9.5 \times 10^6$ in liberal arts, $4.5 \times 10^6$ in sciences, $5.0 \times 10^6$ in commerce

Post Graduates: $4.5 \times 10^6$ in liberal arts, $1.0 \times 10^6$ each in sciences and commerce

1100 colleges produce $3.5 \times 10^5$ technologists each year - 60% from four southern states alone!

But…

Degrees dime a dozen

(True for other degrees also)

Harley Schwadron
Finest scholars are emigrating.
Indian students form the largest foreign group in US universities (> 75,000).

Most graduates lack basic communication skills and problem solving capacity.

Higher education and Advanced degrees?
- Low wealth creation
- Educated unemployment

Communication & Problem solving skills!

“Please help ma’am. I need support to write my Ph.D. dissertation on Successful Fund-raising Techniques.”

Harley Schwadron
...yet India faces acute shortage of capacity in health care, education, justice delivery, law and order.

• **Huge mismatch between societal needs and human resources**

• **Primary function of higher education - to add real value to human resources, produce wealth creators and genuine problem solvers.**
The Vicious Cycle

- Lowered university standards
- Collapse of higher education
- Denial of good teachers to schools
- Poor school education

Functional literacy itself quite low ~ 20%
Positive Factors - Opportunities

- Youngsters ambitious, hard-working, highly motivated
- Parents willing to pay for good education
- Indian tradition treasures learning and scholarship

“But Father, I don't want to study space time temporal theories in relation to collapsing pulsars, I want to do my own thing!”

Hagen, Ralph
How and where to reform?

Higher Education Reform should focus on five key areas:

• Resources and infrastructure
• Teaching and Mentoring
• Course content and syllabus
• Examination system and testing mechanisms
• Accountability and standards

• Research, problem-solving, community interaction

Focused non-monetary reforms could have a huge impact
Teaching and Mentoring

- Quality of teaching appallingly low
- ‘In-breeding’ in universities; no cross-fertilization of ideas
- Political patronage, in-fighting, caste-prejudices
- Need for mentoring, not mere lecturing

Simple, non-monetary solution:

University graduates need to be placed outside their *alma mater*
Designing appropriate courses!

Med School 101... “Affordable Diseases”
Med School 302...“Unaffordable Diseases”

Harley Schwadron

- Rigid, inhibiting academic set-up
- No opportunities for both students and teachers to express creative talent
- Students, teachers have little say in course and syllabi structure. No ownership in classrooms.
- Knowledge artificially segregated into water-tight disciplines
Course Content and Syllabus

• Excessively narrow technical focus
• Still, lack of conceptual clarity
• Humanities and Communication Skills increasingly being ignored

Elective System offers way out. Designed by Charles Eliot of Harvard University in the 1870s.

Our own IITs offer humanities, ‘minor’ degrees for students.

“How 1 Best seller on college campuses. How to say “send money” in 101 languages.”
Harley Schwadron
Examination System and Testing Mechanisms

• Exams – even at varsity levels – test rote memory.

• Need to redefine academic ‘success’

• Test analytical skills, application of knowledge, problem-solving capacity and innovation

• Evaluating communication skills also vital

“I really crammed last night.”

Hagen, Ralph
Accountability and Standards

• Student evaluations
• Peer- and Management- Evaluations
• ‘Independent metrics’ to grade competency and performance – research publications, research projects and funding

Interaction with Community

• Addressing real-world problems
• Generating creative solutions
• Integrating curriculum with real-world problems
“Well, don’t just stand there boy! Start supporting yourself!”

www.bized.ac.uk