

# Universal<sup>#</sup> higher education in 25 years

## Vision 2047

**Andrew Thangaraj**

Professor, Electrical Engineering, IIT Madras  
Coordinator, NPTEL, IIT Madras & National MOOCS Coordinator,  
SWAYAM

Coordinator, IIT Madras BSc in Programming & Data Science

<sup>#</sup> Coverage with high quality

# Higher Education in India: Vision 2047

01

Where are we now?

- Numbers
  - Yet to achieve necessary scale
- Survey results
  - Are we meeting student goals?

02

Where should we be in 2047?

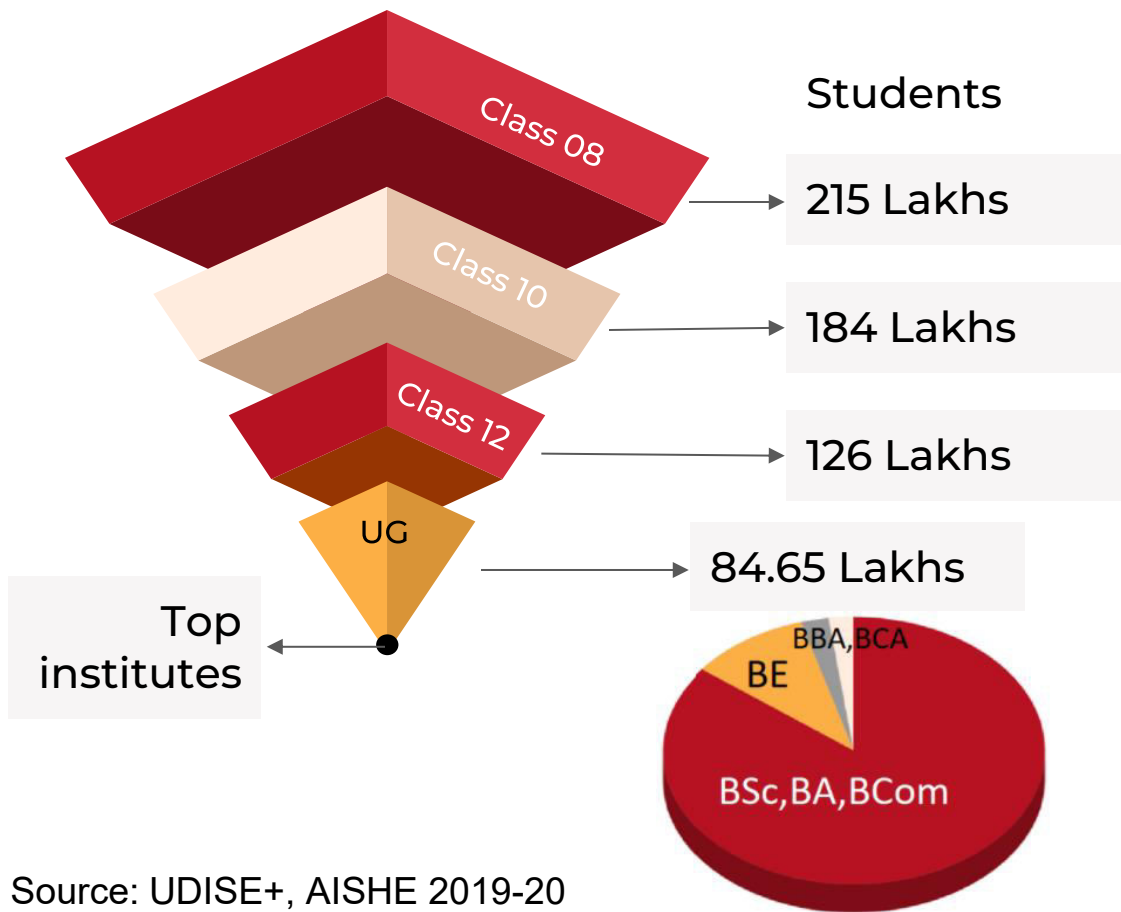
- **Anyone, who wants to, can join college**
- **Be inspired, engaged and enjoy learning**
- **Fruitful, fulfilling careers**

03

How do we get there?

- Digital mode in the short term
  - Learn to scale with quality
- University “smart cities” in long term
  - Digital operations

# Higher Education Landscape: Now



## Issues:

Extreme competition for top institutions,  
High costs of quality private institutions,  
Low employability,  
Low GER



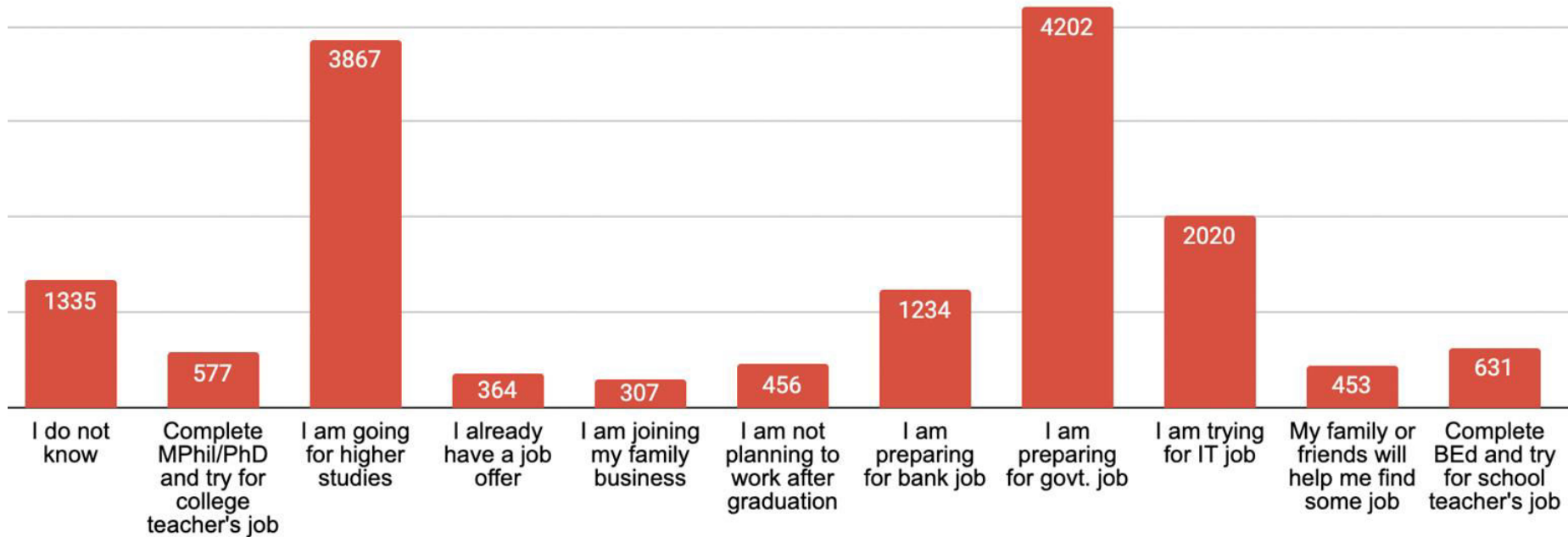
## Needed:

A reimagination of the bachelor's degree

Employment-oriented,  
High quality, Large scale

# Survey of 11000+ arts/science students: Mar 2022

## *Plans after graduation*



# Targets for 2047

## 70% GER “Universal ”

About 210 lakh to enter higher education every year

- Is mere enrolment sufficient?
- How to ensure a wide variety of students benefit from higher education?

## Happy learners

Engaged and eager to learn

- Students should study in areas of their liking
- Degrees should play a role in career

## Skilled graduates

Highly employable, well-prepared for higher studies

- Companies should eagerly hire graduates
- Those going for PG to shine in research

# Digital Education Landscape: Now

**SWAYAM:** Nearly 1000 courses every semester from 100+ organizations



**25**

**lakh+**  
enrol and learn for free



**3.5**

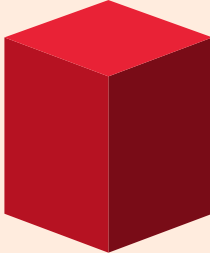
**lakh+**  
write in-person exams



**2**

**lakh+**  
credit transfer into degree programs

## UG DEGREES



**Large scale:**  
IIT Madras BSc in Programming and Data Science (12000+ in 1 year)

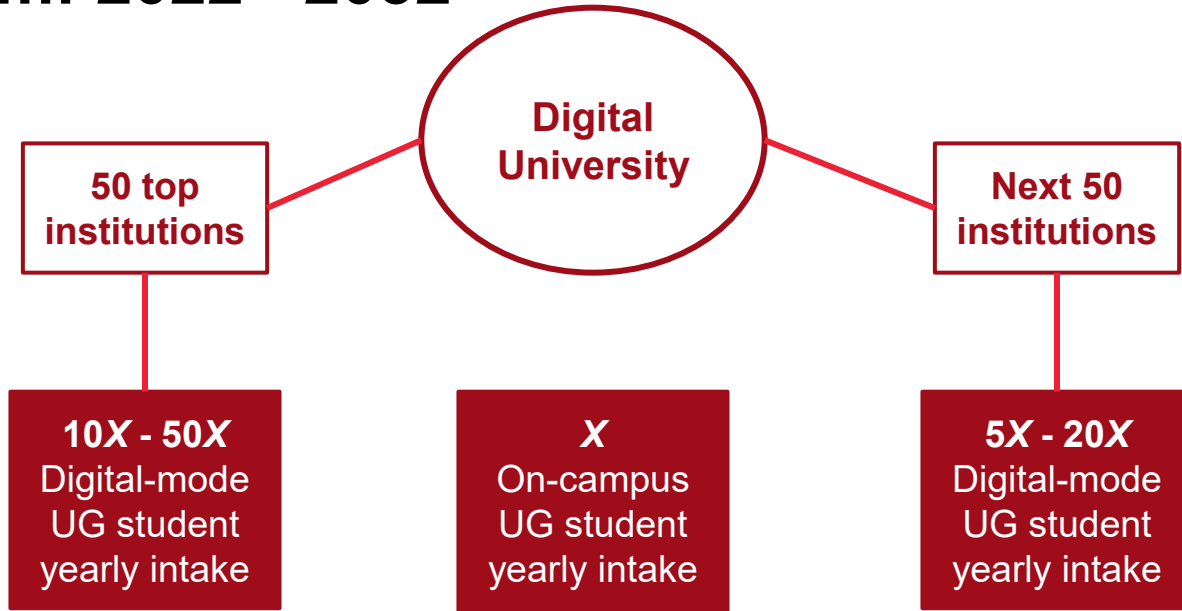


**Smaller scale:**  
Few universities through UGC's online degree regulations and other means

**We know digital-mode teaching/learning at scale now, but we need to master it!**

Many private portals: typically do not target large-scale UG education now, expensive

# Short term: 2022 - 2032



- Self-financed, digital-mode programs, job-oriented
  - Online instruction, **In-person exams**
  - 1 or 2 Faculty + many Instructors/Tutors per course
    - Scaling with quality and rigour
- Co-exist with traditional system
  - Existing colleges can affiliate to digital-mode offerings

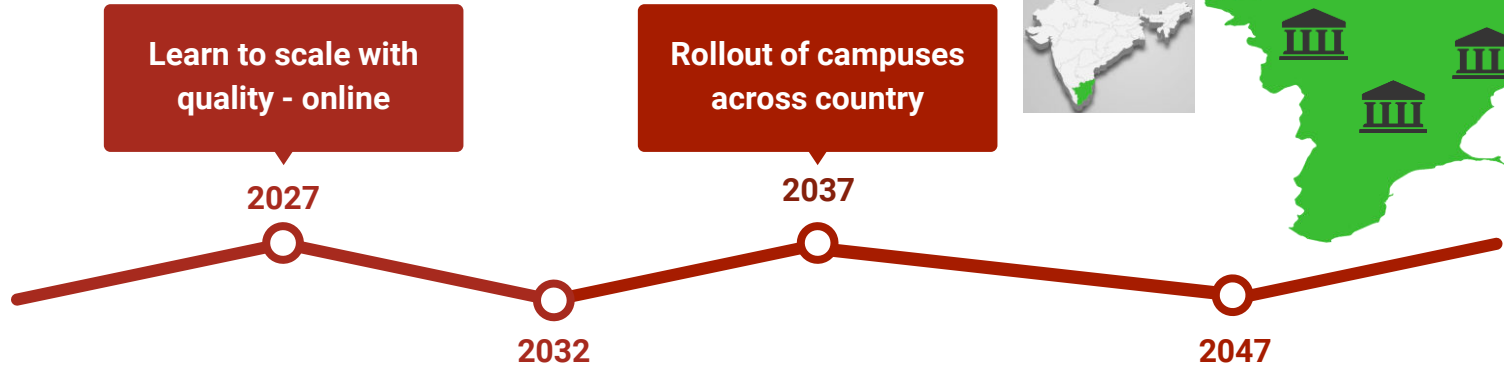
**“Digital University” can formulate and confer multi-institutional degrees**

# Long term: 2022 - 2047

## Large state schools

Ex: University of TamilNadu

@Kanchi, Thanjai, Madurai, Kovai



Learn to scale with  
quality - online

2027

Rollout of campuses  
across country

2037

2032

How to build a campus  
for a Digital University?

2047

- 50000+ students
- ~50 faculty, 250 tutors
- University “smart city”

