



# REALIZING SDGs THROUGH HEIs FOR ENSURING INCLUSIVE & EQUITABLE QUALITY EDUCATION



SOUTH ZONE VC MEET 2022 IN ASSOCIATION WITH UN NATIONS

## Contribution of HEIs in Actualizing Inclusive and Quality Technical and Professional Education

அன்ன சத்திரம் ஆயிரம் வைத்தல்;  
ஆல யம்பதி னாயிரம் நாட்டல்;  
அன்ன யாவினும் புண்ணியம் கோடி  
ஆங்கோர் ஏழைக்குழுத்தறி வித்தல்

Prof. R. Velraj,  
Vice Chancellor – Anna University

- If we need to understand the capability of someone it is possible through inclusion & not by elimination

# Agenda 2030: Goals, Targets, Indicators



17 Goals

## Goal 4: Quality Education

- 4.1 Quality primary & secondary education
- 4.2 Early childhood & pre-primary education
- 4.3 Equal access to TVET & higher education
- 4.4 **Relevant skills for work**
- 4.5 Gender equality & equal access for all
- 4.6 Youth and adult literacy
- 4.7 Global Citizenship Education

- 4.a Learning environments
- 4.b Scholarships for higher education
- 4.c Teachers

169 Targets

244 Indicators

### Target 4.4: Relevant skills for work

Indicator 4.4.1:

*Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill*

# SCIENTIFIC ANALYSIS ON SOCIAL POLICY

## K Kamarajar | EDUCATION

- Kamarajar **abolished Hereditary Education policy** & **introduced free & compulsory education** upto the **11th standard**.
- During his tenure, **no village** remained **without a primary school** and **no panchayat** without a **high school**.
- **Poor rural students did** not have to walk beyond **3 miles** to reach their **nearest school**.  
Nadu.



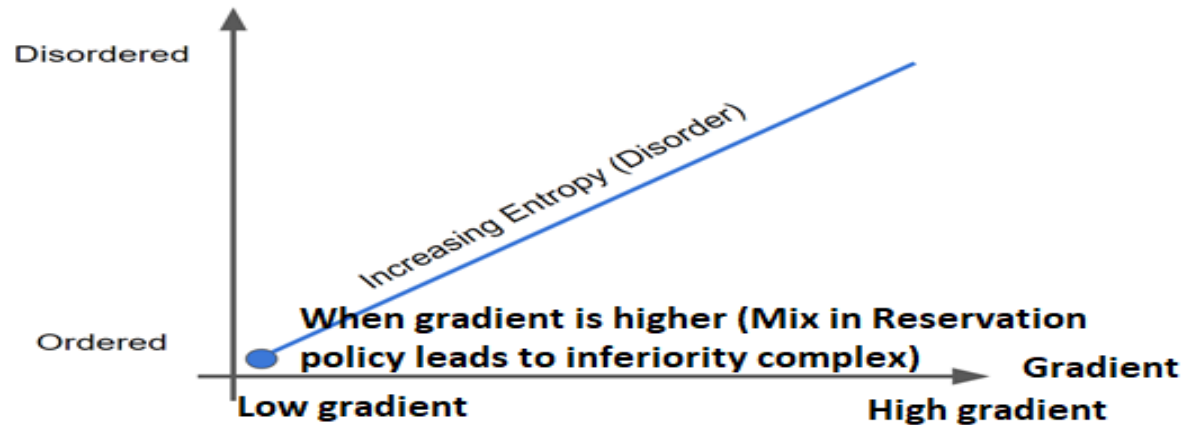
## Do increase in GER brought quality in Education

GER – 51.45%, leads USA – 43% & India – 27%

Male GER in TN – 52.3% & Female GER is 50.6

SC category GER in TN – 41.6 & ST category GER in TN – 37.8

## Reservations are psychological crutches? – Social Entropy



HOW TO ATTAIN EQUILIBRIUM?

# SOCIAL ENTROPY IN POLICY MAKING

- The policy makers realized that there are several communities in state that are socially discriminated against sharing positions associated with power and policy making.
- Now, the policy makers should understand the reaction of mismatched mix in Universities & conceptualize to correct this skewed & psychological imbalance.

## Do we need to isentropic Policy framework?

- As per the understanding of Entropy, a policy such as the Reservation Policy, that is intended to encourage equality must be associated with increase in the Entropy of the society.
- In my understanding, the policy in its present form, is designed to increase the entropy of the society on one side in the short-term scenario but we really need to implement is an isentropic policy in the long term.

## TO UNDERSTAND THE EFFECT OF GRADIENT EVEN IN POLICY MAKING THROUGH OHM'S LAW



DRIVING POTENTIAL	RESISTANCE FACTORS
Difference between Teacher's interest + knowledge & students' interest + capability	1. Time of lecture 2. Nature of subject 3. Ambience (conduciveness)

However, higher *potential difference* leads to increase in *entropy*

# OVERCOME SOCIAL ANXIETY THROUGH UNBIASED SELECTION

**Major Challenges faced by students through reservation owing to the prevailing policy & system:**

**“Our objective may fail in creating a good engineer / doctor / good professional;  
However it should never fail in creating a good citizen”**

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- Psychological fear
- High level of stress
- Lack of self confidence
- Losing even the existing capability
- Turning as anti social element

**Solution for the above challenges:**

- Recruitment of meritorious faculty members with good attitude & human values
- Possessing good skill sets / Knowledge
- Unbiased selection of faculty members only through open competition

## PATHWAY TO ATTAIN SOCIAL EQUILIBRIUM – A DAY SHOULD COME NO RESERVATION.....

- World class infrastructure
  - Highly qualified intellectual Faculty members
  - Best Facilities
  - Good practices & training pedagogies
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- More focus on Curricular, co – curricular & extra curricular activities
  - Specialized library, Labs and sports facilities
  - Separate care to Differently able students
  - Unbiased treatment with inclusion & equity

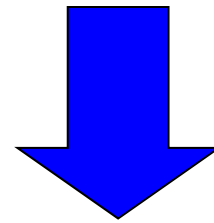
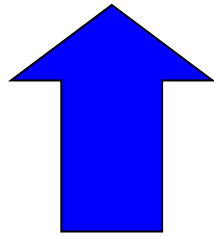
### என் கனவு

- **போட்டி நிறைந்த உலகத்தில், சமநிலை அடைய முதலில் புகழ் பெற்ற கல்வியாளர்களை கொண்டு சமூகத்தில் பின்தங்கியவர்களுக்கு எல்லா வசதியோடும் பள்ளிக்கூடங்கள் அமைக்கப்படவேண்டும்**

- கல்வியின் கலாச்சாரமானது தன்னம்பிக்கை தர வேண்டும்!
- படிக்க எதுவாக எல்லா வசதிகளும் பாகுபாடு இல்லாமல் வேண்டும்!
- அவர்களின் சுகாதாரம் மிகவும் முக்கியம், போதிய மின்சார வசதி, இயந்திரமயமாக்க பட்ட நூலகம் மற்றும் பிற வசதிகள், பிள்ளைகளின் உடல் நிலை சீராகும் உடற்பயிற்சி, விளையாட்டு இவைகளுக்கு முக்கியத்துவம், யாவுமே வேண்டும்!
- ஆண் பெண் குழந்தைகள் என்ற பாகுபாடு இன்றி, வசதிகள் வழங்க பட வேண்டும். மாற்றுத்திறனாளி குழந்தைகளுக்கு முழு பாதுகாப்பு மாற்று வசதிகள் வழங்கப்பட வேண்டும்! இவை என்றதுமே இருக்குமானால் அது மாணவர்களின் சொர்க பூமியாக இருக்கும் கல்விச்சூழலை உருவாக்கும்.

# Levels of Quality assurance

Internal quality assurance within the  
higher education institutions  
(units at the department/faculty and/or university level)



External quality assurance of higher education  
(non-national and national agencies)

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# AJNEWINITIATIVES

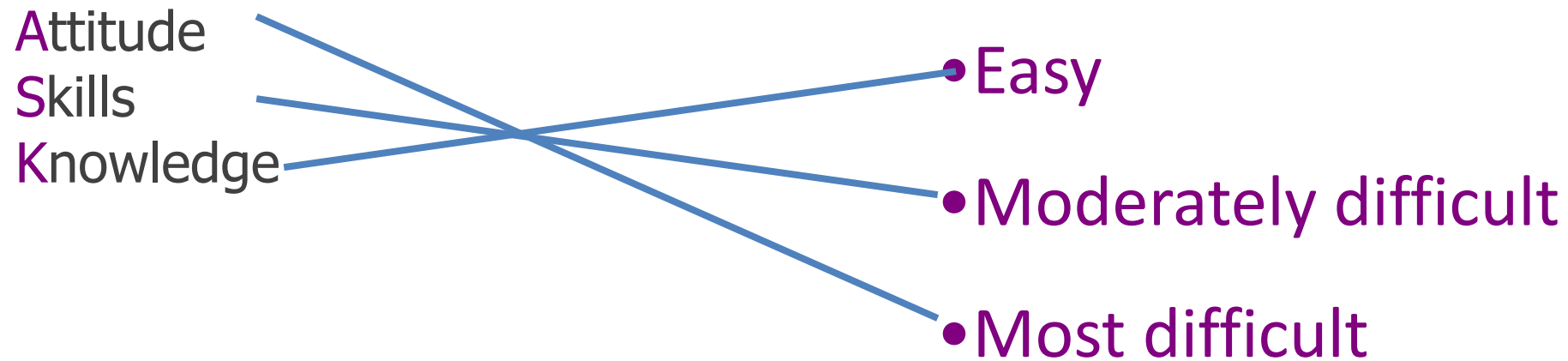


# Quality domains identified for AU



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Rank **ASK** by difficulty to develop in people



# CURRICULUM MISSION

1 To accommodate the needs of all Students



2 To provide more, diversified choices

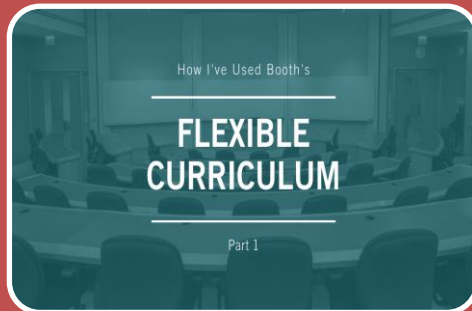
3 To allow students to select up to 60 percent of variation in their courses

# ACADEMIC CURRICULUM REVAMPING – MEASURES IMPLEMENTED



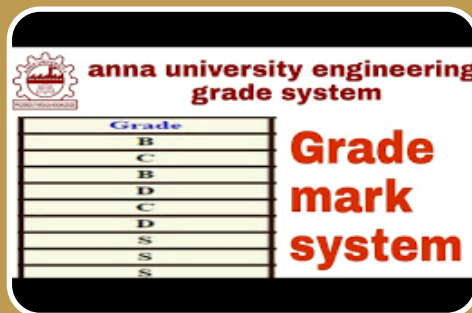
## Induction and Orientation program for first year students

- Campus tour visits
- Gaming Activities for team spirit development
- Support to understanding the subjects and grading systems
- Classes and training apart from curriculum understanding and college life management practices



## Revamping in Curriculum

- Introduction of Flexi Curriculum by introducing industry based curriculum
- Award of Hons by earning additional 18 credits in the same field
- Minor programs by earning additional 18 credits in the other disciplines
- allow engineering students to do two online courses in Mooc courses



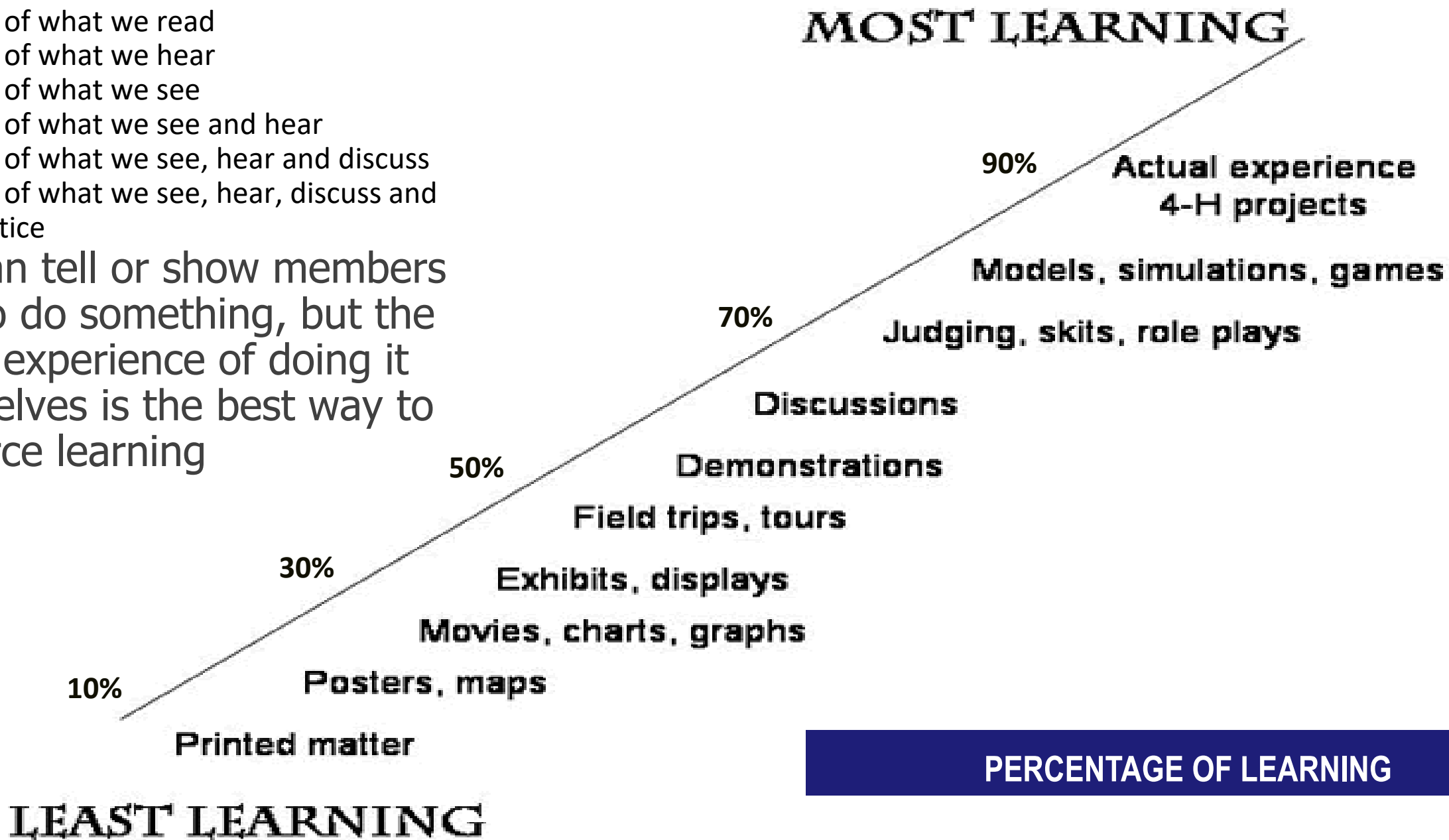
## Equity and Streamline of Evaluation system

- Common method of grading system method in all the University Colleges, Constituent colleges, & affiliated colleges bringing equity among students and this is applicable to students from New regulation of 2021.

# We remember:

- 10% of what we read
- 20% of what we hear
- 30% of what we see
- 50% of what we see and hear
- 70% of what we see, hear and discuss
- 90% of what we see, hear, discuss and practice

You can tell or show members how to do something, but the actual experience of doing it themselves is the best way to reinforce learning



## 'Industry does not need high scoring students for every job'

Anna University is carrying out major reforms in engineering education including introducing a flexible curriculum and six-month industry internships for all students to improve employability. In an interview with Ragu Raman, vice-chancellor R Velraj says industry experts have been roped in to frame the syllabus. Excerpts

■ Niti Aayog says 48% of engineering graduates are unemployed. Tamil Nadu produces the highest number. How can we improve employability?

Anna University is revamping its curriculum to meet industry needs. We are focusing on three domains to train the students — those who aspire to join industry, others who want to excel in teaching and research, and those who want to become entrepreneurs. We will introduce a flexible curriculum and introduce internships for all students.

TALKING TO TOI

■ What do you mean by flexible curriculum?

From the third year, students will study only six or seven courses, instead of up to 15 derived subjects. The syllabus for third year students is being prepared by ex-

perts based on industry needs. For those interested in research and teaching, there will be BE, BTech with honours. A student with 75% or 80% marks till fourth semester will be allowed to study additional courses from ME, MTech during the final two years. A student can get honours by clearing six extra

courses or 18 extra credits. To prepare students for industry automation, Anna University will offer BE, BTech with minor degrees. Students from mechanical engineering can earn a minor

degree in artificial intelligence or machine learning. For students interested in administrative service or entrepreneurship, there will be courses in economics, public policy from the third year. This flexible curriculum will come into force when the present first year students move to the third year. We also plan to amend rules to make



some of the changes applicable to the current second year students.

■ Won't unsupervised online exams have an adverse impact?

Industry knows how to identify talent and hire. The semester exam scores were used only to shortlist students for campus interviews.

Companies have their own hiring process and students who clear that get jobs. Industry does not need high scoring students for every job.

■ How will you differentiate bright students from the rest in unsupervised tests?

In the unsupervised exams from February 1, the question papers will have various difficulty levels to differentiate top performers from the rest. About 60% of questions would test knowledge, 20% would assess understanding, and 20% would be application-oriented. This will help identify intelligent students. Application-oriented questions cannot be answered from textbooks.

■ The chief minister has urged universities to offer degree programmes in emerging areas.

AICTE and Nasscom have identified AI, robotics, machine learning, data science, Internet of things

and cyber security as emerging areas. We have to make sure all engineering students have knowledge in these areas. We propose to start new centres in emerging areas. We already have many since the 1980s, which gives us an edge over IITs in research. We are focusing on creating an ecosystem to translate research into product development and business promotion. Drones, bio-medical, e-vehicles, energy and environment have been identified as core areas.

■ About 100 engineering colleges have less than 10% admission and poor infrastructure and faculty. Will the university improve quality or close them?

We inspect colleges, issue notices to improve facilities. We also rank colleges to create awareness among students. Still some students join these colleges due to lack of awareness.

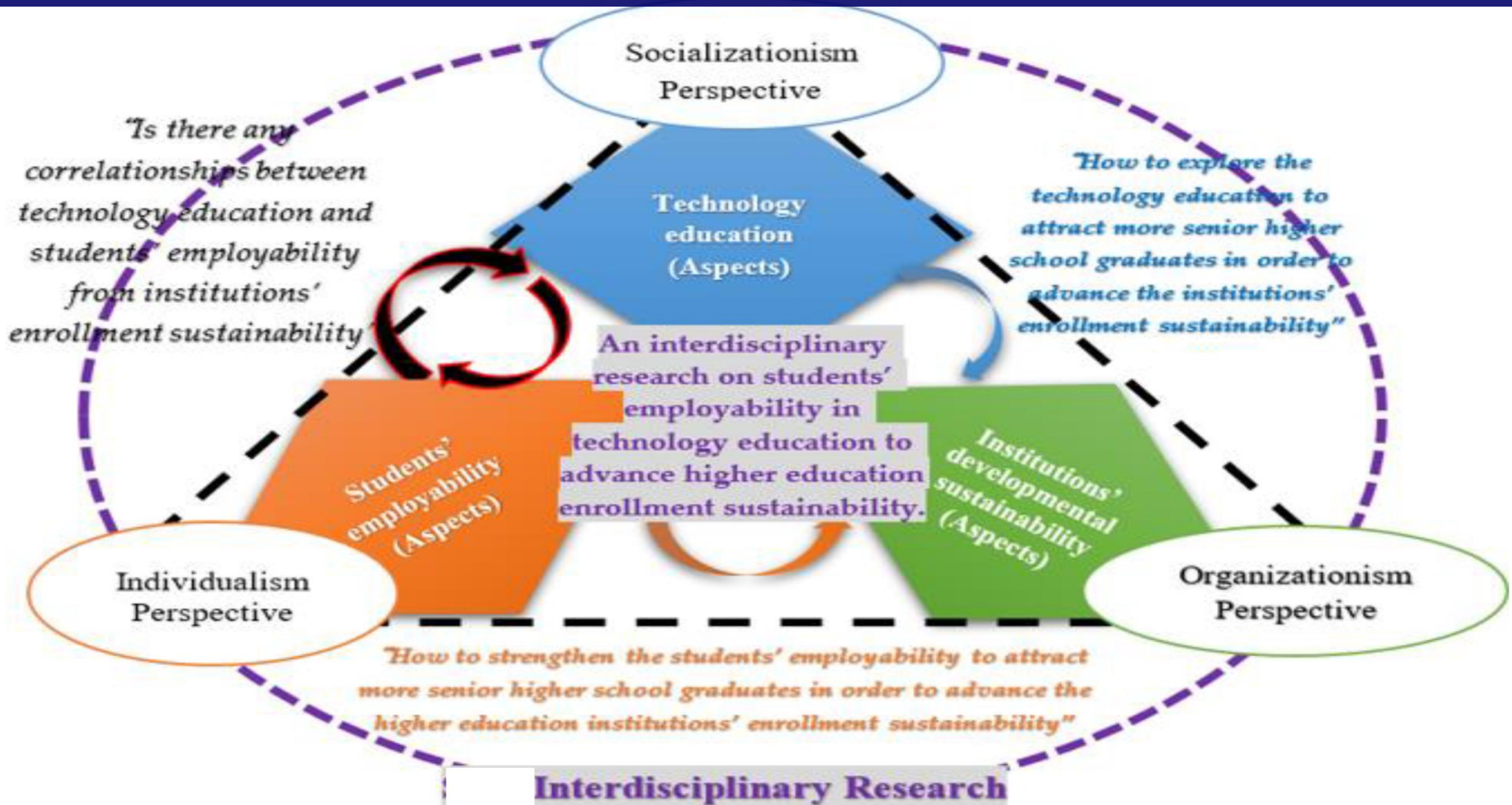
## be positive and stay ahead



## Skills shortage creates increased demand for job-ready graduates

The first wide-ranging study of work-integrated learning in Australia has been completed and reveals the benefits and challenges of this widespread approach to university teaching. BY PENNY FANNIN

# PERSPECTIVE ON INTERDISCIPLINARY RESEARCH & NEEDS



# NEW RESEARCH CENTRES ESTABLISHED

## Centre for Liberal arts

- To introduce subjects like Political Engineering, Economic Data and Analysis, Art of communication and writing
- To up take the support of linguistic experts in regional languages and developing regional based engineering curriculum

## Institute for Fundamental Research

- To bring together physicists, chemists, astronomers, cosmologists, mathematicians, biologists, and basic fundamental researchers under one roof,
- To put a long term seed for creating Nobel laureates from Anna University

## Centre for Emerging Technologies

- To involve modern technologies such as artificial intelligence (AI), robots, [block chain](#), [internet of things \(IoT\)](#), 3D printing and biometrics
- To create new markets with employment opportunity for students

## Centre for Energy Storage

- To specialize in combining psychological developmental research models
- To train our individual faculty, students and staff members with required yoga and meditation practice

## Centre for E-Vehicles

- To Promote research in Vehicles
- To utilise the RUSA 2 research fund Effectively

## Centre for Sustainable Goal Development (ICSGD)

- To integrate the 17 SDGs and to recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability.

## Centre of E-Governance

- It is a Digital Workplace Solution that comprises of various modules like File Management System (e-File) and e-Knowledge Management System (KMS).
- To transform finance & purchase section are one major department to be first implemented as e-office and later other departmental offices.

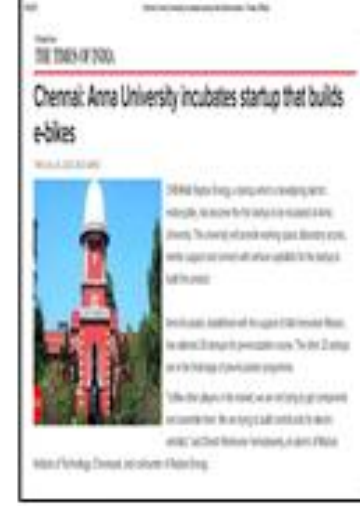


# STARTUPS FOR SOCIAL WELFARE



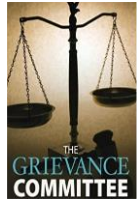
MyGovIndia @mygovindia

The founder of myharvest, Archana P Stalin believes in creating healthier and happier farmers. Let's congratulate her for winning startup of the year award in the Agri Tech Category. #ShriShakti



19 Startups from our incubators

# CONSTITUTION OF NEW COMMITTEES



**GRIEVANCES COMMITTEE**



**COMPLAINTS INVESTIGATION COMMITTEE**



**EO ADVISORY COMMITTEE**



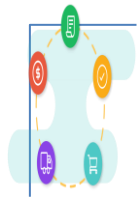
**PEOPLE DEVELOPMENT COMMITTEE**



**WASTE – WEALTH COMMITTEE**



**RENEWABLE ENERGY COMMITTEE**



**UNIVERSITY SOFTWARE PROCUREMENT COMMITTEE**



**UNIVERSITY MICRO CLOUD DEVELOPMENT COMMITTEE**



**UNIVERSITY NETWORKING COMMITTEE**



**DATA COLLECTION & MANAGEMENT APP**



**16 COLLEGES PURCHASE COMMITTEE**



**E- GOVERNANCE & WEBSITE DEVELOPMENT COMMITTEE**



**ACADEMIC COURSES COMMITTEE  
NOMINATED WITH ACADEMIC  
EXCELLENCE MANAGER**



**COMMITTEE TO RE-  
FORMULATE STATUTES**

# Five Dimensions of Inclusive Excellence AU STRATEGY

## Intrapersonal Awareness

- Actively commit oneself to the process of self actualization through mentoring for faculty and proctoring for students
- Critically examine own ideas, assumptions, and values, and how those beliefs have an impact on one's pedagogies.

## Interpersonal Awareness

- Create opportunities for interpersonal dialogues where multiple perspectives are valued.
- Be aware of all sorts of communication with value added courses & soft skills
- Develop and practice conflict resolution skills

## Curricula Transformation

- Integrate multiple identity groups into the curriculum through inclusion of cultural histories, local histories and contributions.
- Reflect lab based, Project based, experiential learning & work integrated programs.

## Inclusive Pedagogy

- Recognize students' personal experience as worthy knowledge.
- Elicit and build on students' knowledge.

## Inclusive Learning Environment

- Build opportunity for authentic interactions among students
- Demonstrate caring through attitude, expectations and behaviors
- Demonstrate respect through inclusion of multiple identity groups.

**Our vision is to see all students leave formal education with the knowledge, skills, attributes, and values needed to create a more just and sustainable future for all.**

## Learn or develop new skills

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Time management, organisation, communication skills, interpersonal skills, networking, negotiation, independent learning, budgeting, analytical skills, report writing, team work, meeting deadlines, tact & diplomacy, problem solving, adaptability, leadership, research skills, cross-cultural understanding,

...

*+ personal growth and development*



Thank You!



WE DO NOT  
LEARN FROM  
EXPERIENCE...  
WE LEARN FROM  
REFLECTING ON  
EXPERIENCE

- John Dewey