

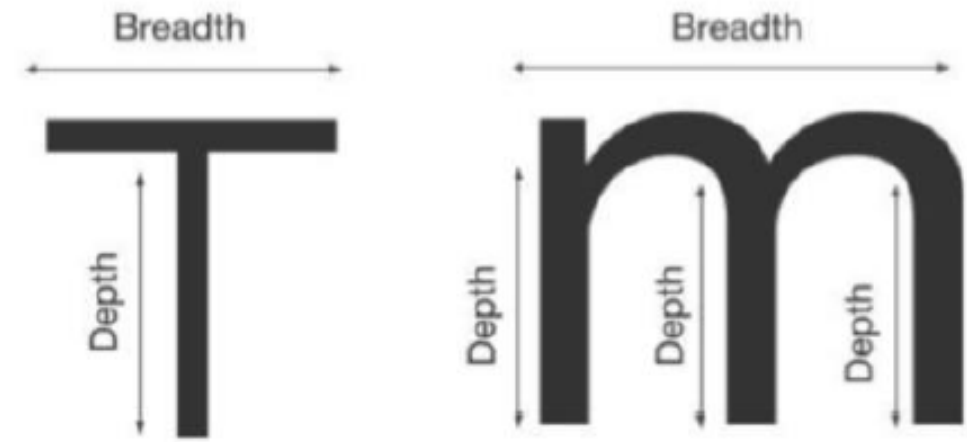
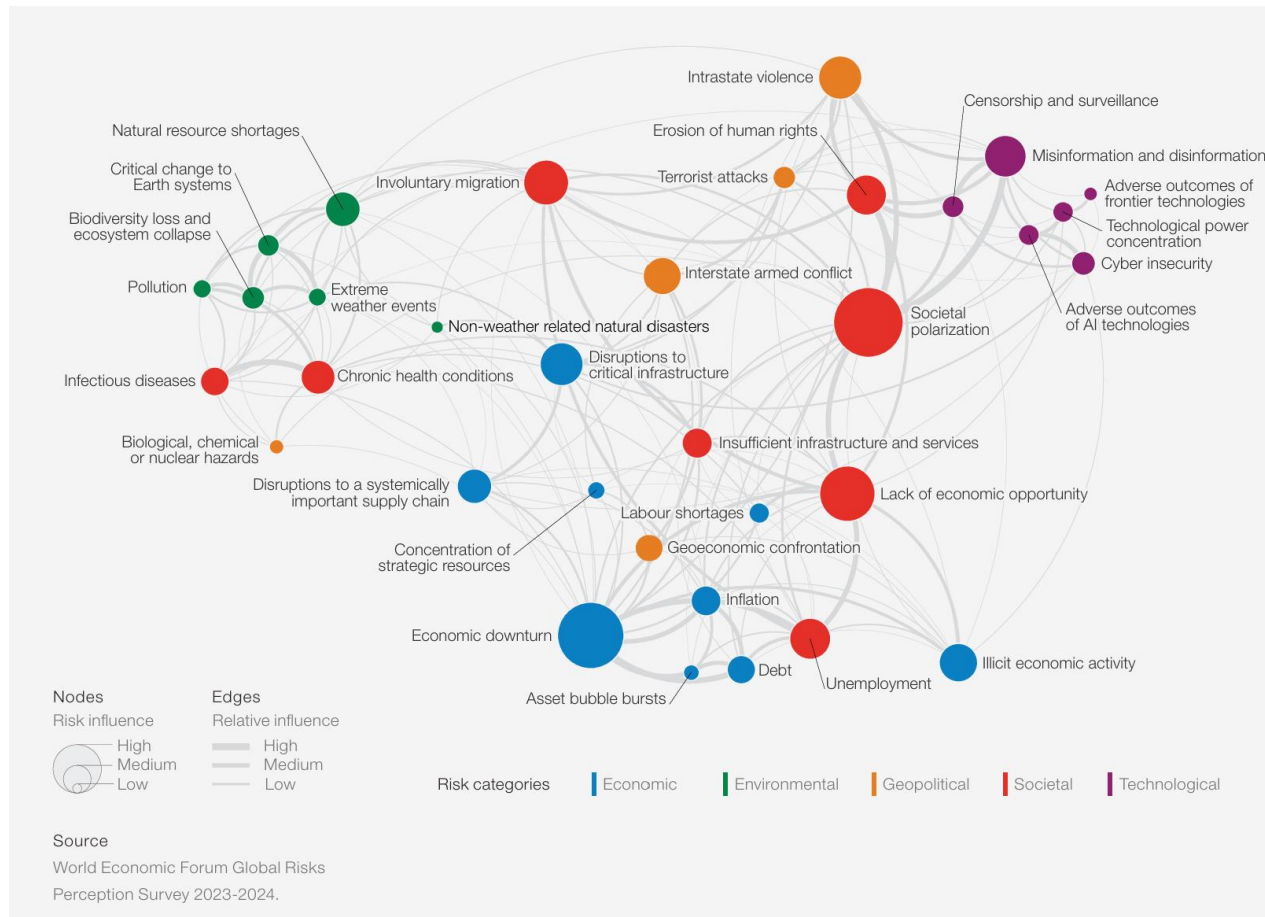
# Technology & Education- Leveraging the Symbiotic Relationship

Dr. Farid Ahmed, American Institute of Integrated Thought

## Outline

1. How should our curriculum evolve in a world that is changing so fast?
2. How can technology pave the way for 'Integrated Education'?
3. What are some immediate first things to leverage technology in enhancing education?

# Education in a complex, fast-changing world



T-shaped and M-shaped person, for comparison.

Source: CCR based on Spohrer.

Need versatile learner capable of both depth and breadth; Changing landscape calls for an m-type learner.

Curriculum should be Adaptive, Modular, and rapidly Customizable

# Industrial Revolutions and the Race of Technology and Education



Timeline of Industrial Revolutions with Relevant Technologies

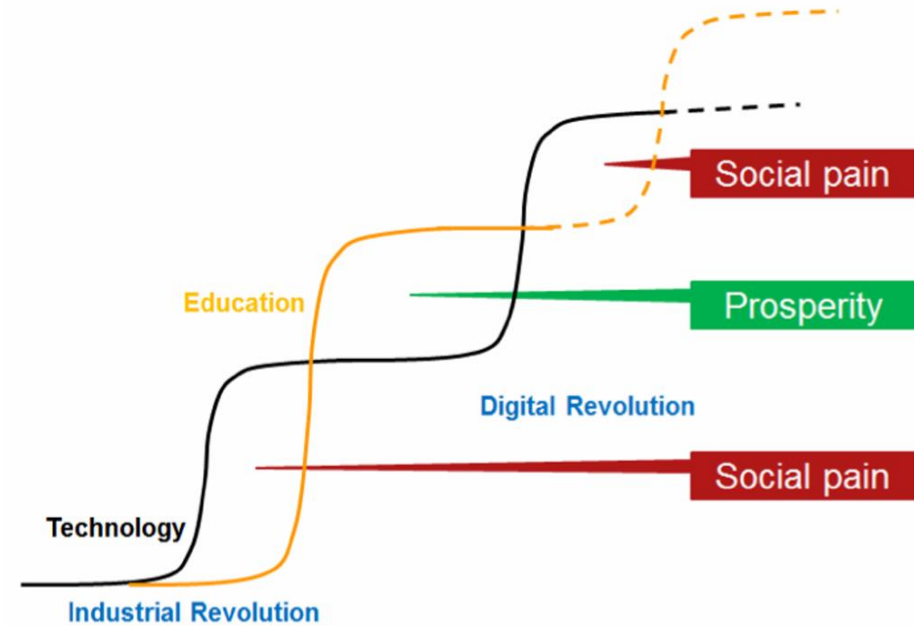
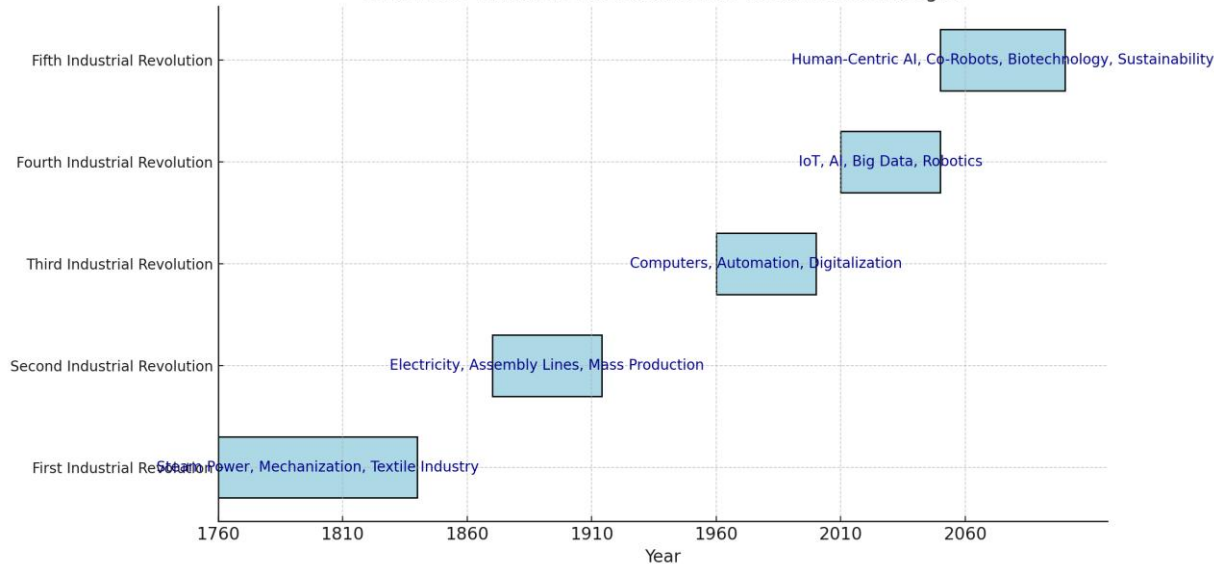


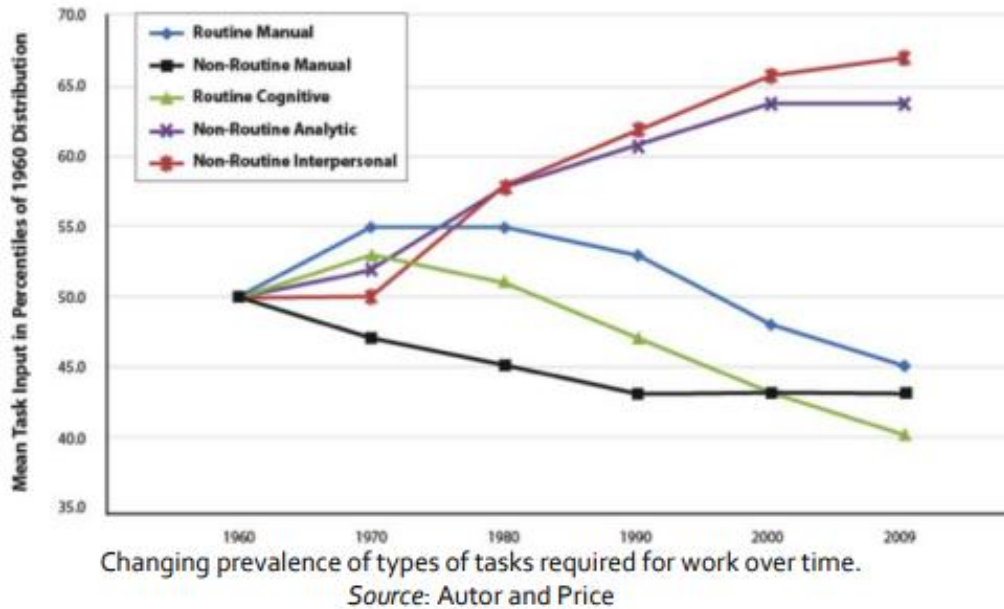
Figure 1.12 Technology and Education  
Source: CCR (inspired by *The Race between Technology and Education*.)

“If we teach today’s students as we taught yesterday’s, we rob them of tomorrow.” — John Dewey

When Education lags behind technology, unemployment/underemployment, technology-divide, income gaps lead to social pain.  
How do we get to ‘Prosperity’ phase?



# Impact of Technology on Education and Employability



TRANSFORMATION  
ENHANCEMENT

## Redefinition

Tech allows for the creation of new tasks, previously inconceivable



Explain Everything



Aurasma



Bai Board



Book Creator

## Modification

Tech allows for significant task redesign



Edmodo



Educations



iMovie



Thinglink

## Augmentation

Tech acts as a direct tool substitute, with functional improvement



Pixlr Express



Haiku Deck



Google Search



VideoFx Live

## Substitution

Tech acts as a direct tool substitute, with no functional change



iBooks



Calculator



Dictionary.com



Pages

Extended Thinking

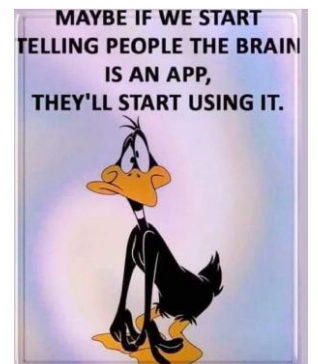
Strategic Thinking

Skills and Concepts

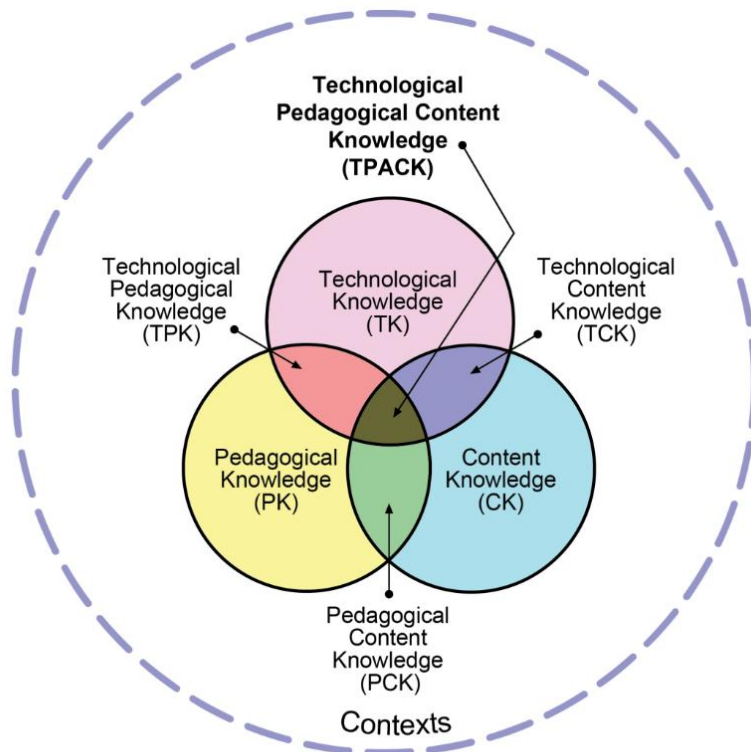
Recall and Reproduction

Substitution, augmentation, modification, and redefinition model (SAMR).

Adoption of Technology allows better use of skills and concepts [Enhancement] as well as strategic and extended thinking [Transformation]



# Integration of Technology in curriculum Frameworks



THE COMPONENTS OF THE TPACK FRAMEWORK (FROM TPACK.ORG)

Instructor view

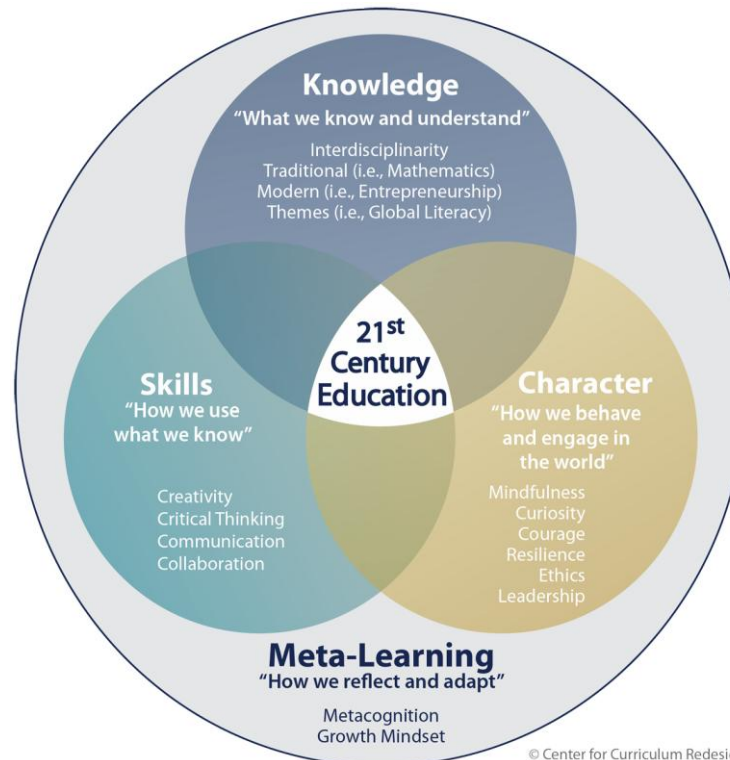


Figure 2.10 The CCR Framework  
Source: CCR

Learner view



Yes, they address  
Maslow's Hierarchy of Needs

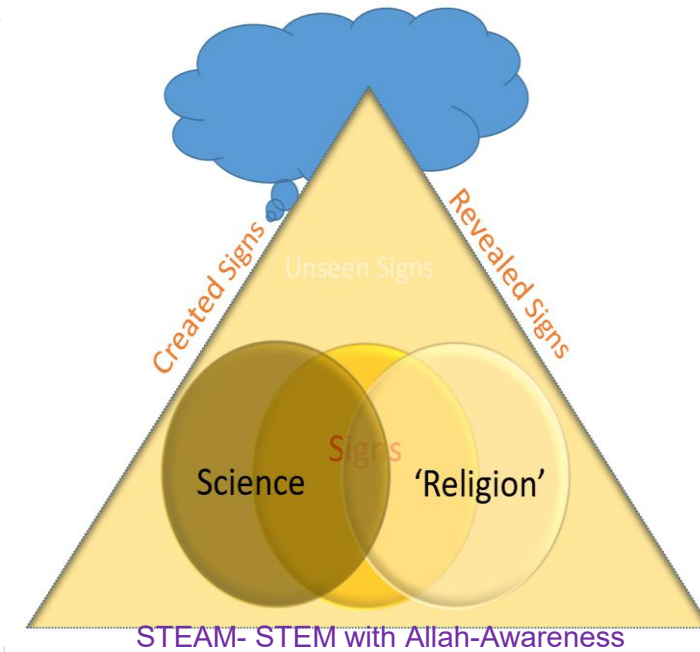
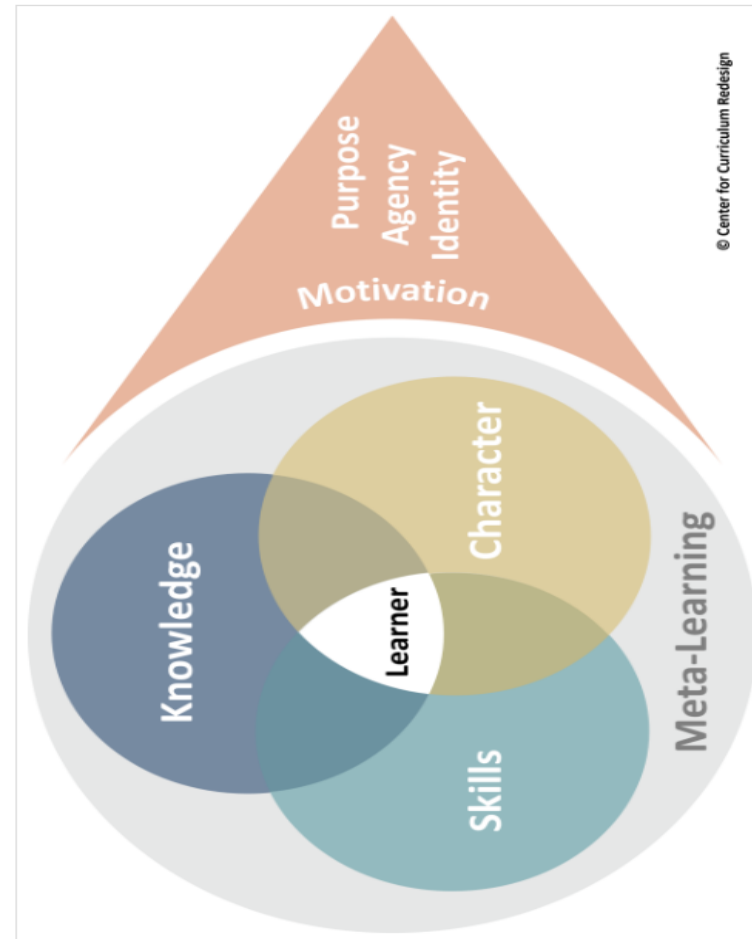
## Outline

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# Towards Holistic Education



Substitution, augmentation, modification, and redefinition model (SAMR).



A Holistic education, where learners can leverage technology to focus more on the creative part -  
Tafakkar, Tazakkar, Tadabbar,  
with True purpose and context



# Integrated Education



Grounded in: Tauheed- Monotheism– root of integration

Blended Goal: Success Herein and Hereafter

Synergy of: Created Universe and Revealed Universe

Holistic Development of: Body, mind, and soul

Well rounded graduates: Skill & trustworthiness (Qawiyuun Ameenun)

Balanced Curriculum: Baked with ethics, morality, and social responsibility

Enhanced with Research: Mix of Tazakkar, Tafakkar, Tadabbar

## Outline

1. How should our curriculum evolve in a world that is changing so fast?
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# Technology Mindset



- A great Gift from Allah swt (45:13, 3:110). Privilege plus responsibility
- Prophet Ibrahim's Integration perspective- Signs and Science lead us to Truth; Faith and Action

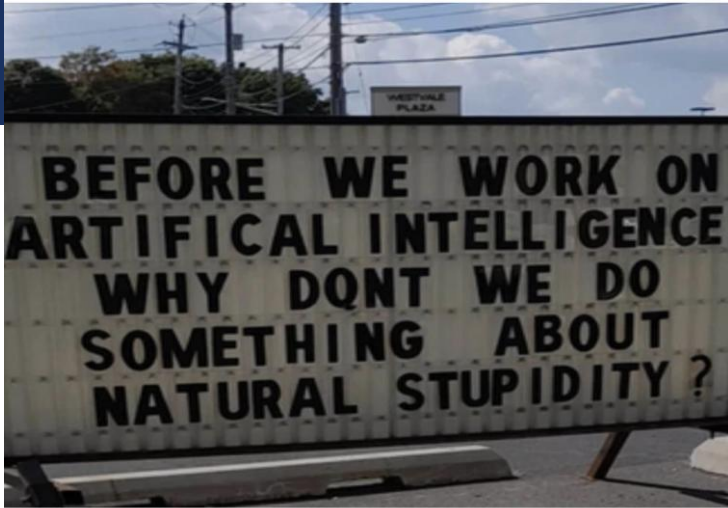
وَإِذْ قَالَ إِبْرَاهِيمُ رَبِّ أَرِنِي كَيْفَ تُحْيِي الْمَوْتَى ۖ قَالَ أَوَلَمْ تُؤْمِن ۖ قَالَ بَلَىٰ وَلَٰكِن لِّيَظْمَنَنَّ قَلْبِي [2:260]

Sometimes the thing that is holding you back is all your mind.



Whatever you use it for, Technology can potentially enhance and transform to something better

# Yes, but ....



- Bias, Misuse, Corporate greed, Distrust
- Digital Divide
- Expectation gap - Is AI panacea for all?
- Technological limitations: Lack of transparency  
Safety/security/privacy concerns etc.
  - [The AI Risk Repository \(mit.edu\)](https://riskrepository.mit.edu/)
  - [Artificial Intelligence Incident Database](#)

- Proper AI Mindset
- Guardrails– Ethics, Morality, and Social responsibility
- Responsible AI, Ethical AI: [Responsible AI Toolkit \(tradewindai.com\)](https://tradewindai.com/)
- Choose Truth. Use Quality Data.
- Technological Mitigations

As Muslims, we have a greater responsibility and accountability here



# AI in Education- Best of the both worlds?

- Does AI make students cheaters?
- How can students make both ethical and productive use of an AI tool?
  - Write an essay for the student or with the student?
- Will AI take my job?
  - *“You wont be replaced by an AI, but you might be replaced by someone who is using AI”- Andrew Ng*

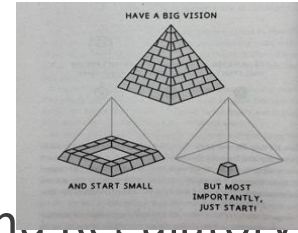


It has to be a  
Symbiotic relationship

Automation, efficiency and productivity of ‘Artificial Intelligence assistant’ must work in collaboration with wisdom, experience, faith, and compassion of ‘Real Intelligence being’, such as those requiring creativity, emotional intelligence, and complex decision-making.

## Summary/Next Steps

- Have Appropriate Technological mindset
  - Think Big, Act small, Accept change
- Implement Appropriate set of Policy, Governance, and regulatory frameworks
- Adapt/Adopt lessons learned from others
- Institute Mass Awareness programs for Technology Literacy campaign
- Work together on customized, integrated curriculum
- Promote Lifelong learning (m type)
- Train the Trainers- Upskilling to address underemployment, efficiency
- Evaluate whether Technology is really working
- Partnership
  - AllT as a partner



*“Technology gives us power, but it does not, and cannot, tell us how to use that power”- Jonathan Sacks*

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- [AI in Education | Center for Curriculum Redesign | Education for the Age of AI](#)
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