SEAMEO

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University of Tsukuba

MEXT
MINISTRY OF EDUCATION,
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Keynotes for Challenges and Diversity in Industry 4.0

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México

Challenges for education in industry 4.0

- Countries can no longer remain confined within their borders but must become citizens of the world.

- In this new era we will need to be critical thinkers, problem solvers, and be able to interact across the globe.

- In short, it also means asking the right questions and correlating that to better outcomes for all.

- We need inequality to be eradicated.

Ethics , values and Digital technologies

- Morals: purpose, empathy, attend inequality

- Values: securityd (ata privacy) and inclusive to achive its full potential

- Ethics: technology has no ethics it never questions the meaning of an action

- Humanity: we must keep the ability to take a step back and reflect, to question, to negotiate, to develop and selfcorrect them. Human values cannot be digitized.

Skills needed to thrive in the Fourth Industrial Revolution.

- Creativity
- Negotiation and flexibility
- Emotional intelligent
- Complex problem solving
- Highly trained in the emerging technologies Vs technological literacy
- Ability to develop the technology and to know whether, when, and where to use that technology.
- They must be able to see beyond the technology at play to the implications for society for the use of that technology.
- Proactive in up-skilling and retraining people so everyone can benefit from the Fourth Industrial Revolution.

New cicle

- Learning

- Earning and

- returning

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How we Will define words like

- Learning

- Curriculum

- Certification

Type of work

- Non-routine cognitive
  - Complex tasks (perception and manipulation
  - Creative Jobs (creative intelligence)
  - Social competence (teacher, social worker, nurse, coach, …)

- Non –routine manual creativity
  - Personalized design
  - Human emotion

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- The bases then, which have to be taught first, for eventually reaching the top of the hierarchy, are:
- traditional coding
- variables
- control structures
- data structures
- control Flow
- …

- mathematical thinking

- practising mathematical modelling through

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