



Merdeka Belajar Untuk Semua



# Konsep transformasi digital dalam pengembangan pembelajaran online

Paulina Pannen  
ICE Institute, Universitas Terbuka  
2022

JAKARTA, 23-24 NOVEMBER 2022

SIMPOSIUM PTP REGIONAL

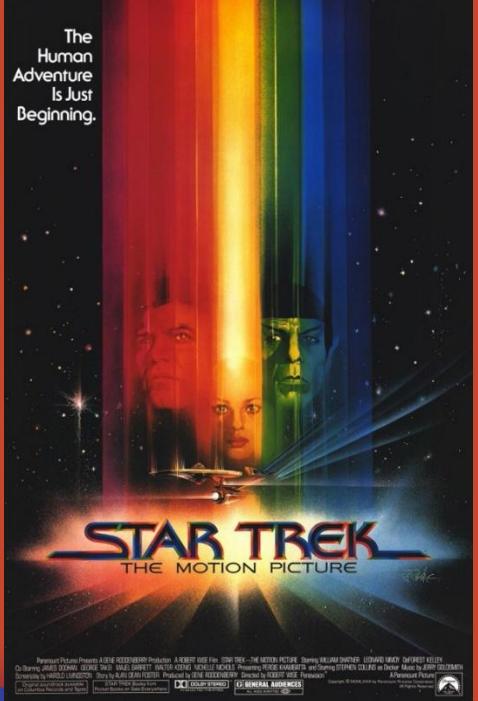


# STARTREK



STARTREK

USS ENTERPRISE  
SPACESHIP



STARTREK

1<sup>ST</sup> MOVIE 1979



STARTREK

Boldly go where no  
man has gone before.



NASA

Spaceship designed  
after Startrek USS  
Enterprise.

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# Dunia di tahun 2050



The World In 2050

<https://youtu.be/ABrjdyavqkl>

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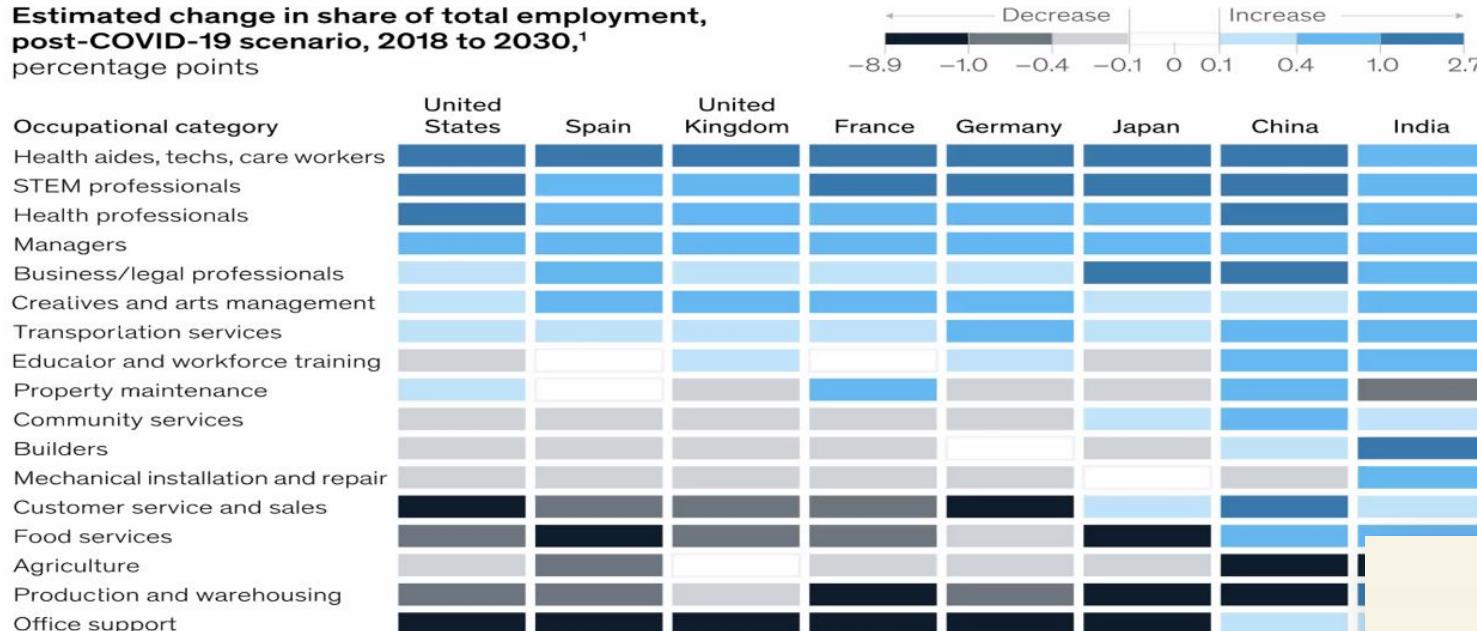
# Transformasi dunia kerja

LIVE on YouTube

<https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19>

**The mix of occupations may shift by 2030 in the post-COVID-19 scenario.**

**Estimated change in share of total employment,  
post-COVID-19 scenario, 2018 to 2030,<sup>1</sup>  
percentage points**



<sup>1</sup>The pre-COVID-19 scenario includes the effects of eight trends: automation, rising incomes, aging populations, increased technology use, climate c infrastructure investment, rising education levels, and marketization of unpaid work. The post-COVID-19 scenario includes all pre-COVID-19 trends accelerated automation, accelerated e-commerce, increased remote work, and reduced business travel.  
Source: McKinsey Global Institute analysis

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*... never stop learning...*

10 SKILLS FOR THE FUTURE



01 SENSE-MAKING

02 SOCIAL INTELLIGENCE

03 NOVEL & ADAPTIVE THINKING

04 CROSS-CULTURAL COMPETENCY

05 COMPUTATIONAL THINKING

06 NEW-MEDIA LITERACY

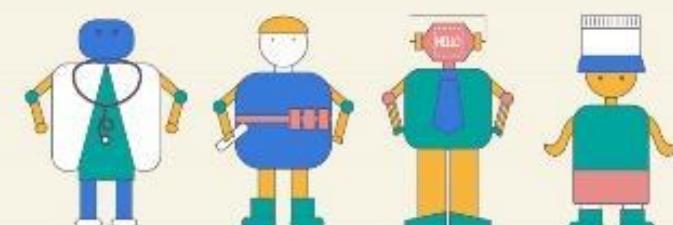
07 TRANSDISCIPLINARITY

08 CREATIVITY AND INNOVATIVENESS

09 COGNITIVE LOAD MANAGEMENT

10 VIRTUAL COLLABORATION

9



WILL A ROBOT TAKE YOUR JOB?

# Robot Teachers/T trainers

The Jakarta Post

NEWS BUSINESS SE ASIA OPINION LIFESTYLE TRAVEL MULTIMEDIA LC

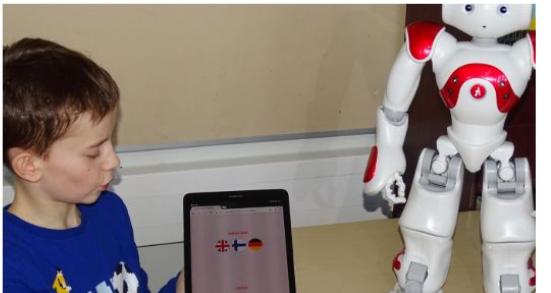
YOUTH

**Techno teachers: Finnish school trials robot educators**

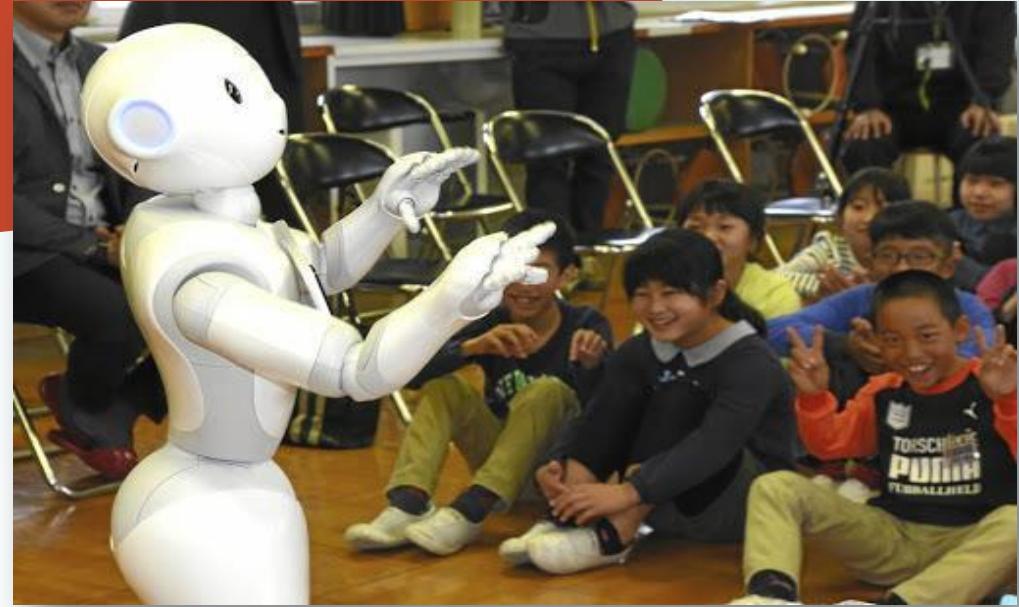
News Desk

Reuters

Tampere, Finland / Wed, March 28, 2018 / 10:01 pm



Robot Teachers  
<https://youtu.be/O1qTVtFUxjw>





"Ternyata (Sophia) nggak pinter-pinter amat....."  
ungkap **Rudiantara** di Jakarta, Selasa (17/9/2019).

Sumber: *Detik.com*

JAKA



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# Transformasi Digital



Dr. Robot Watson

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**RAISA**  
Robot medical Assistant ITS-UNAIR

"Robot pelayan kesehatan untuk membantu tenaga medis dalam melayani pasien terinfeksi COVID-19 pada ruang isolasi. Robot ini digunakan untuk meminimalisir kontak antara tenaga medis dengan pasien terinfeksi COVID-19."



**Setelah Raisa, ITS-RSUA Hadirkan Violeta**

Ciptakan Robot Sterilisasi Ruangan dengan Sinar UV

SERANGKAIA, Jumat 22 Oktober 2021, Institut Teknologi Sepuluh Nopember (ITS) dan RSUA kira-kira mengembangkan robot Violeta. Robot tersebut berfungsi untuk meminimalisir kontak sular khusus di RSUA dengan memfasilitasi sterilisasi ruang isolasi (RV). Dengan begitu, risiko terhadap kesehatan (infeksi) terhadap Covid-19 semakin berkurang.

Tim robotik ITS memperkenalkan robot Violeta kali pertama di Gedung Robotika ITS (GRITS) (24.4). Didampingi Wakil Rektor IV Bidang Riset, Inovasi, Kerja sama, dan Kehumasan ITS Bambang Pramujati, kemampuan bergerak robot tersebut coba dengan pengontrol malaii remote oleh Achmad Zidan Akbar.

Achmad Zidan Akbar, programer tim robot Violeta, mengatakan bahwa robot tersebut memang dibuat untuk mensterilisasi ruang isolasi.

> Baca Setelah... Hal 23



Jadi, bisa digerakkan dari jauh. Manusia tetap aman dari efek buruk sinar UV."

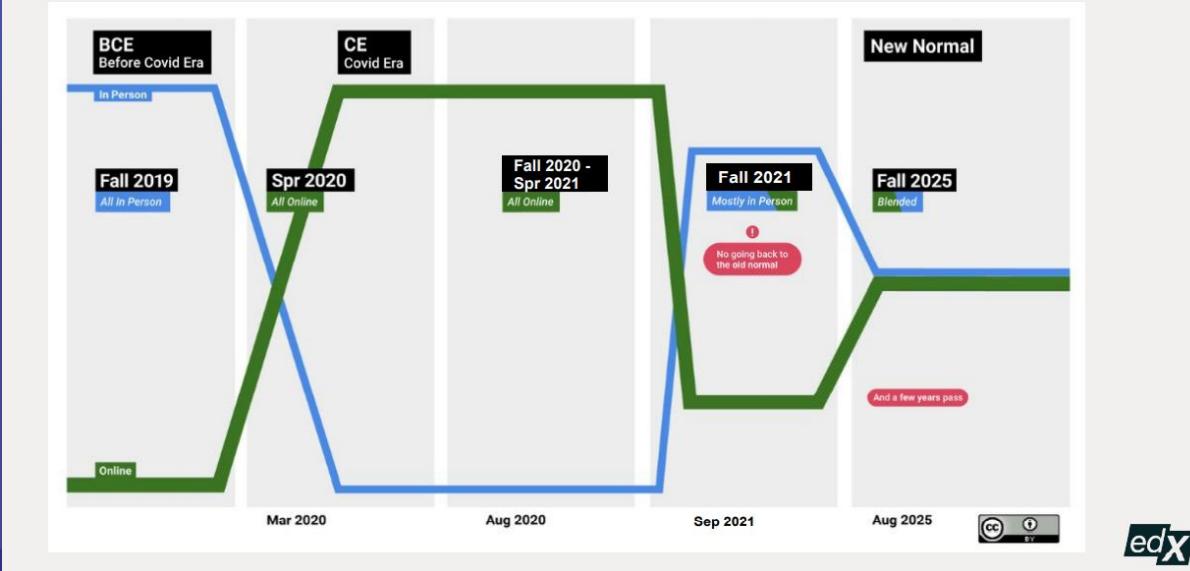
BAMBANG PRAMUJATI  
Wakil Rektor IV ITS



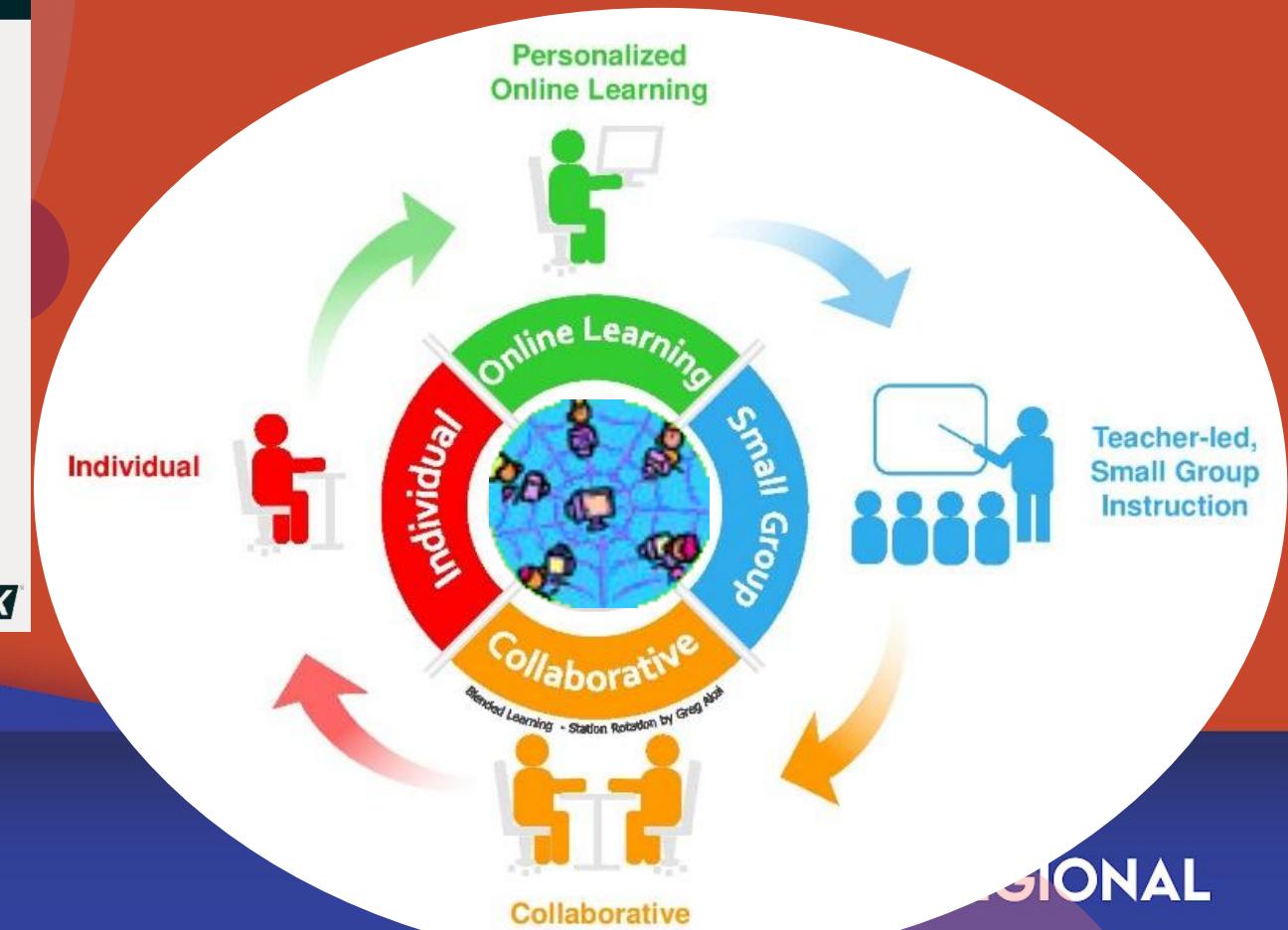
# Transformasi dunia Pendidikan



## The New Normal will be Blended



Agarwal, A. (2021) The New Normal of Education. Presented at the 4<sup>th</sup> Cyber Education Forum Webinar, ICE Institute, 29 July, 2021.



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SIONAL



# Transformasi Belajar



teman, dosen, keluarga, dll

New Learning Process  
(Mobius ribbon – Michael Fullan)

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Mandiri, berbagai alat



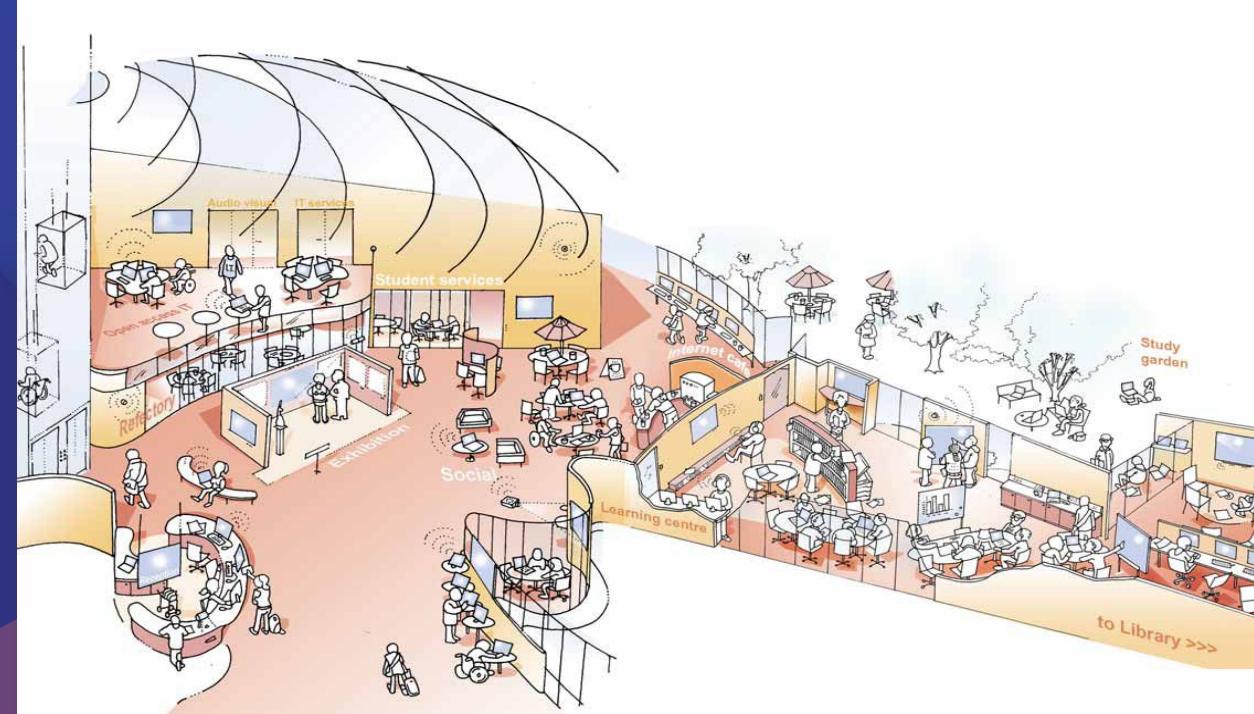
Laboratorium dll.



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# Ruang Belajar: Nyata/fisik vs Maya/virtual vs Metaverse



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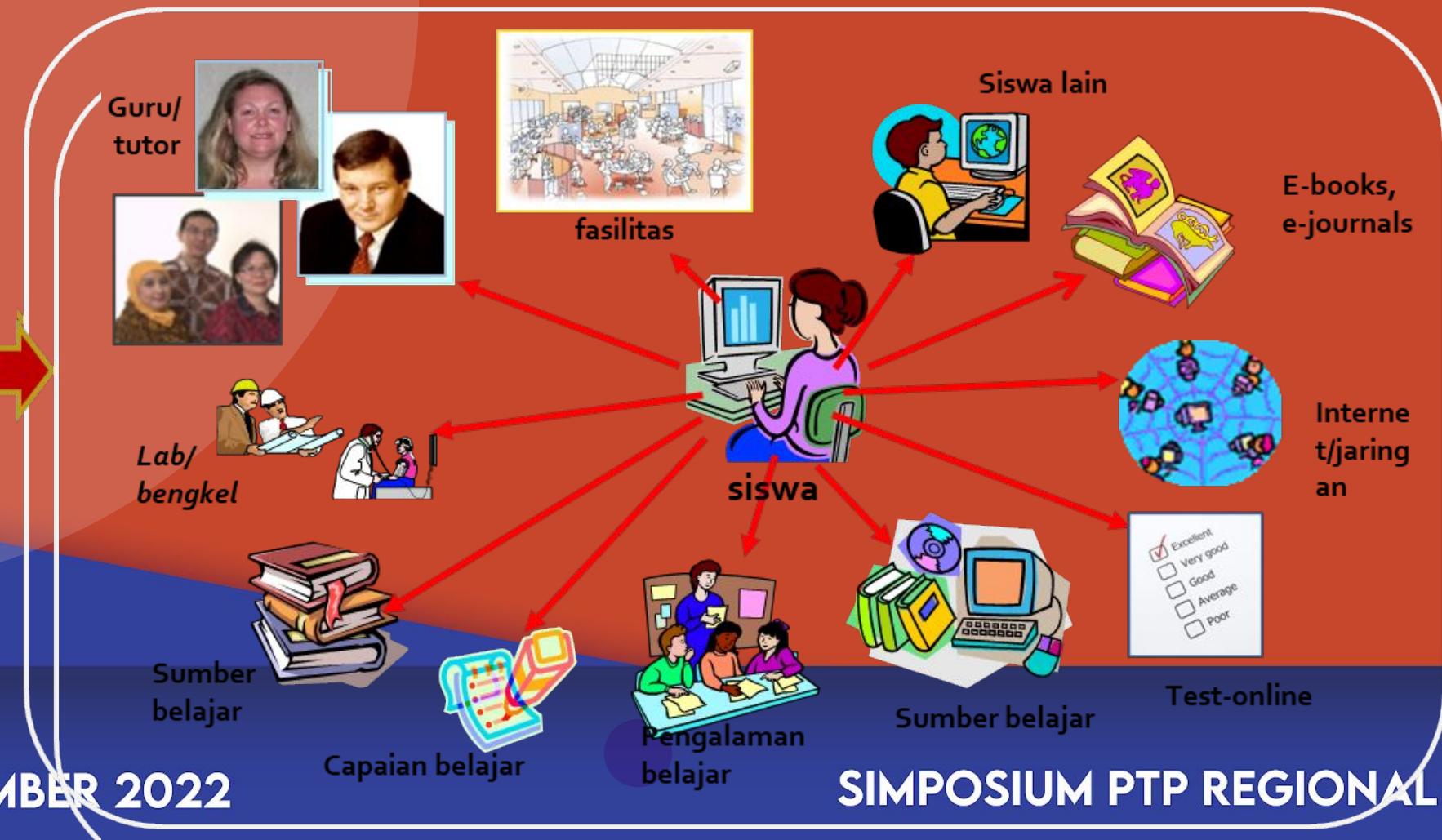
KONTAN/Muradi



# Transformasi Belajar Mengajar:



*Dari Sekolah menjadi Dari Rumah/mana saja, Mengajar menjadi Belajar*



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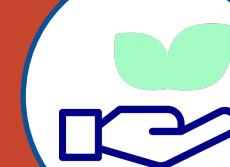
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# Transformasi diri kita



Pola pikir baru (*new mindset*)



Perilaku baru (*new attitude*)



Budaya dan cara kerja baru (*new way of doing things*)

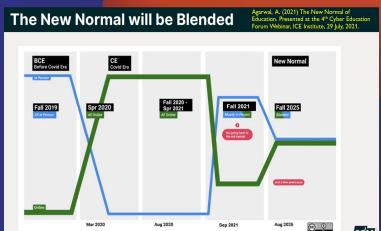
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# Trend pembelajaran di Indonesia

Blended Learning



Connectivity



Artificial Intelligence



Immersive Curriculum



Learning Spaces



Sustainability

Economic  
Social  
Cultural

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Kampus  
Merdeka  
INDONESIA JAYA



Merdeka Belajar Untuk  
Semua

Freedom Learning for All

28<sup>th</sup> July 2021

(soft launching 2019)

# Indonesia Cyber Education Institute

*a marketplace of online courses in Indonesia*

- mata kuliah daring berkualitas, bersertifikat, dan berasal dari berbagai PT
- Pengalaman virtual: belajar, pertukaran pelajar
- Sertifikat Digital
- Flexilearning



<https://www.youtube.com/watch?v=nc6m9WM3Gyw>

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✉ sekretariat@icei.ac.id

✉ ice.institute\_

✉ ice.institute

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[www.icei.ac.id](http://www.icei.ac.id)



# Merdeka Belajar Kampus Merdeka



- Mahasiswa diperbolehkan untuk:
  - mengambil 20 sks dari prodi berbeda di satu PT
  - mengambil 40 sks dari berbagai PT/institusi/Lembaga/industri, termasuk PT Luar Negeri.

- Independent Study
- Students Exchange (Virtual)
- Microcredentials

- 1420 courses from EdX
- 568 courses from ICE-I Consortium
- 60 courses from XuetangX.com

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✉ ice.institute\_

✉ ice.institute

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# ICE Institute - [www.icei.ac.id/](http://www.icei.ac.id/)

**SELAMAT DATANG DI  
INDONESIA CYBER EDUCATION INSTITUTE**

[baca lebih lanjut](#)

**APA ITU ICE INSTITUTE?**

Indonesia Cyber Education Institute atau bisa disebut ICE Institute, merupakan pusat kuliah online dari banyak Perguruan Tinggi dan penyedia pembelajaran daring yang terakreditasi oleh Kementerian Pendidikan dan Kebudayaan. Tujuan utama dari ICE Institute adalah untuk memfasilitasi penyediaan pendidikan berkualitas sekaligus menjamin kualitas layanan pembelajaran daring dan pendidikan jarak jauh.

[baca lebih lanjut](#)

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[baca lebih lanjut](#)

**UNIVERSITAS PARTNER**

- ITS** Institut Teknologi Sepuluh Nopember
- IPB UNIVERSITY**
- PRADITA UNIVERSITY**
- BINUS UNIVERSITY**

[Lihat Universitas](#)

- **1420 mk dari EdX**
- **368 mk dari ICE-I Consortium**
- **60 mk dari XuetangX**
- **26 mk international**
- **28 mk untuk game developer**

XuetangX DM-ME <b>Introducing Marine Engineering</b> Starts: Sep 1, 2022	XuetangX SCUT_CN <b>Computer Networks</b> Starts: May 30, 2022	XuetangX JAU-AIAC <b>An Insight into Ancient Agricultural Civilization</b> Starts: Jun 10, 2022	XuetangX SST-EEPSD <b>Ecological Environmental Protection and Sustainable Development</b> Starts: July 30, 2022
XuetangX SCUT-FB <b>Food Biochemistry</b> Starts: Jun 6, 2022	XuetangX JCU-ATCCA <b>Appreciation of Traditional Chinese Ceramic Art</b> Starts: Jul 1, 2022	XuetangX DUFE-M <b>Management</b> Starts: Jun 1, 2022	XuetangX MU-SE <b>Software Engineering</b> Starts: Jun 6, 2022
XuetangX TH-TC <b>Tsinghua Chinese: Start Talking with 1.3 Billion People</b> Starts: Jan 26, 2022	XuetangX SCUT-CI <b>Calculus I</b> Starts: Jun 1, 2022	XuetangX ZT-DFD <b>Draping for Fashion Design</b> Starts: Jun 1, 2022	XuetangX Ca-FCTL <b>Frontier Comprehensive Transportation &amp; Logistics</b> Starts: Sep 1, 2022

**MATA KULIAH**

<b>KALKULUS 1</b> Starts: Aug 6, 2021	<b>Pertanian Inovatif</b> Starts: Aug 16, 2021	<b>Mikrobiologi</b> Starts: Aug 16, 2021	<b>Matematika dan Berpikir Logis</b> Starts: Aug 16, 2021
<b>Analisis Peluang Bisnis</b> Starts: Aug 16, 2021	<b>Keamanan dan Sanitasi Pangan</b> Starts: Aug 16, 2021	<b>Syn-Ekologi Hutan</b> Starts: Aug 16, 2021	<b>Pengantar Ilmu Politik</b> Self-Paced

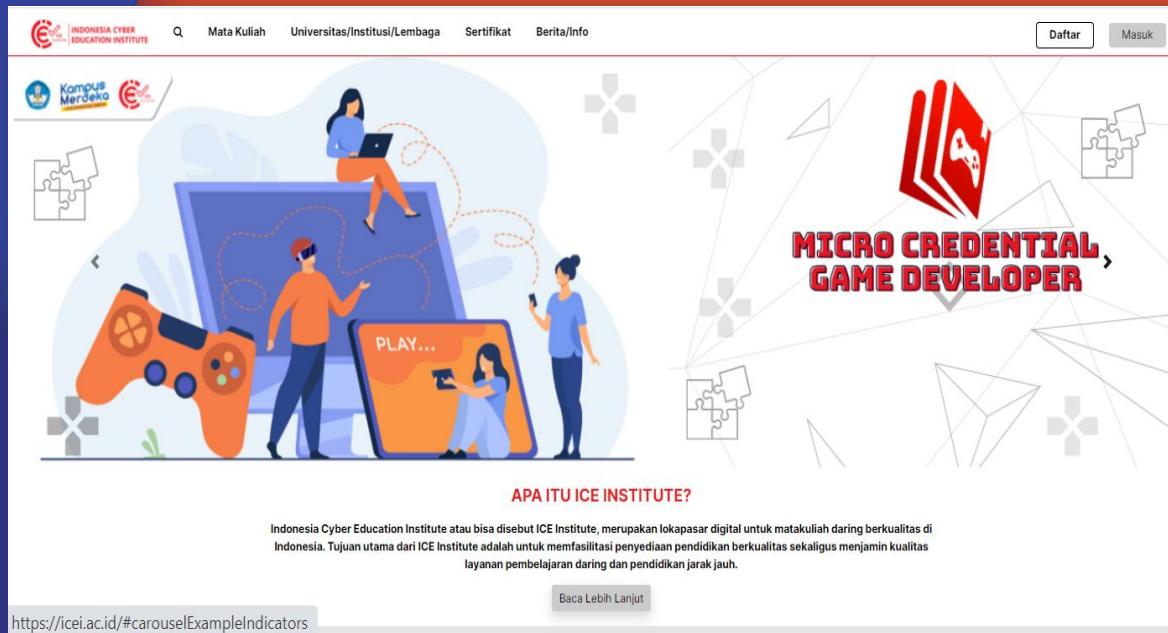
Showing 40 of 1192.

<b>Basics of Computing and Programming</b> New York University \$199 • Available Now <a href="#">A la carte</a> <a href="#">Business</a> <a href="#">Education</a>	<b>Mental Health and Nutrition</b> University of Canterbury \$149 • Starting Soon <a href="#">A la carte</a> <a href="#">Business</a> <a href="#">Education</a>	<b>Python: aprender a programar</b> Universitat Politècnica de València \$49 • Available Now <a href="#">A la carte</a> <a href="#">Business</a> <a href="#">Education</a>	<b>Early Childhood Development: Global Strategies for Implementation</b> Harvard University \$99 • Available Now <a href="#">A la carte</a> <a href="#">Education</a>
<b>Technology Entrepreneurship: Lab to Market</b> Harvard University \$149 • Available Now <a href="#">A la carte</a> <a href="#">Business</a> <a href="#">Education</a>	<b>AI for Everyone: Master the Basics</b> IBM \$149 • Available Now <a href="#">A la carte</a> <a href="#">Business</a> <a href="#">Education</a>	<b>Excel for Beginners</b> Davidson College \$149 • Available Now <a href="#">A la carte</a> <a href="#">Business</a> <a href="#">Education</a>	<b>Trading - Fundamentals of Technical Analysis</b> New York Institute of Finance \$149 • Available Now <a href="#">A la carte</a> <a href="#">Education</a>



# Program Mikrokredensial Game Developer

(15 + 5 credit hours)



The screenshot shows the ICE Institute website with a banner for the "MICRO CREDENTIAL, GAME DEVELOPER". It features illustrations of people playing video games and a large orange game controller. Below the banner, there's a section titled "APA ITU ICE INSTITUTE?" with a detailed description of the institute's mission and a "Baca Lebih Lanjut" button.

<https://icei.ac.id/#carouselExampleIndicators>



<https://gamedev.icei.ac.id/>

Petualangan Mandalika <https://youtu.be/KSAYB1T9jmU>

Twin the Light Neo <https://www.youtube.com/watch?v=YwX5sQJ942k>

Game Words Kid <https://youtu.be/hJiAXuoeZyU>

Petualangan Mandalika <https://youtu.be/KSAYB1T9jmU>

Twin the Light Neo <https://www.youtube.com/watch?v=YwX5sQJ942k>

Game Words Kid <https://youtu.be/hJiAXuoeZyU>

Indahnya Indonesia <https://www.youtube.com/watch?v=e-2veKf18rk>



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[sekretariat@icei.ac.id](mailto:sekretariat@icei.ac.id)

[@icei.institute\\_](https://icei.institute_)

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# Research Collaboration

UGM, UT, UNJ,  
UBINUS

Learning  
Analytics Model  
Development

Upadita, ITS, UNJ, UT,  
SEAMOLEC

Learning Engagement  
Model In Virtual  
Environment

UI, UT

Student Success  
Prediction using Machine  
Learning Model

ITB, UT

Softskills Development  
in Online Learning  
(April 29, 2021)

1

UPH, UNNES, UT,  
ITS

Open and Distance  
Education  
Governance and  
Quality Assurance

2

UI, UT, SEAMOLEC  
Online Self-Regulated  
Learning

3

UGM, UT  
Micro-Credentials  
Model Development  
for SDG's competencies  
in Indonesia

4

5

UBINUS, UT  
AI (teacherbot)  
for online  
learning  
(May 27, 2021)

6

7

8

1. Development of Online Course for  
Professional Teacher Training based  
on Tpack-Idle  
UT, UNS

2. Transformers 1.0: Automatic  
Grading System for Bahasa Indonesia  
Essay Test. UT, UNDIP

3. SCHAFÉ- Smart Chatbot For  
Education to support independent  
learning.  
UT, UNDIP

4. Pricing Strategy for Online Courses  
UT, ITB, UI, BINUS

5. Engaging Learners Online: Use  
Interaction Gamification To Increase  
The Quality Of Learning,  
Independent, Interactive, And Fun On  
ICE Institute Online Course  
UT, UNM, UPI, UNESA, UNS

6. Engaging Online Discussion Using  
the Community of Inquiry Framework  
on ICE-Institute's Massive Open  
Online Course  
UT, UNJ, UI, BINUS, UNTIRTA

7. Personalisation System in Online  
Learning  
UT, BINUS, Pradita

8. Transcollege: Online Learning  
Readiness and Preparation for  
students with Disability  
UT, BRIN, UB, UNS

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# Cyber Education Forum

**WEBINAR SERIES**

*in commemoration of teacher's day*

The 18<sup>th</sup> Cyber Education Forum

Online Course Development Based on  
the TPACK-IDLE Model for Professional  
Teacher's Programs

Wednesday  
**November 23, 2022**  
**10.00 AM** (Jakarta Time/ UTC + 7)

**Open to public**  
**E-Certificate**

**Opening Remarks**  
**Prof. Paulina Pannen, M.L.S.**  
Head of ICE Institute  
ICE Institute

**Moderator**  
**Siti Hadianti, S.Pd., M.Pd.**  
Universitas Terbuka

**Speakers**

**Prof. Liz Johnson**  
Deputy Vice-Chancellor,  
Academic & Alfred Deakin  
Professor  
Deakin University

**Dr. Nur Arifah Drajati, M.Pd.**  
Faculty of Teacher  
Training and Education  
Universitas Sebelas Maret

**REGISTER NOW** > <http://link.icei.ac.id/daftarCEF18>

<https://link.icei.ac.id/CEF18th>

<https://link.icei.ac.id/StreamingCEF>

A collage of images from the 'The 10th Cyber Education Forum'. It includes a large banner for the forum, several headshots of speakers, and logos for various educational institutions and sponsors.

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 sekretariat@jcei.ac.id



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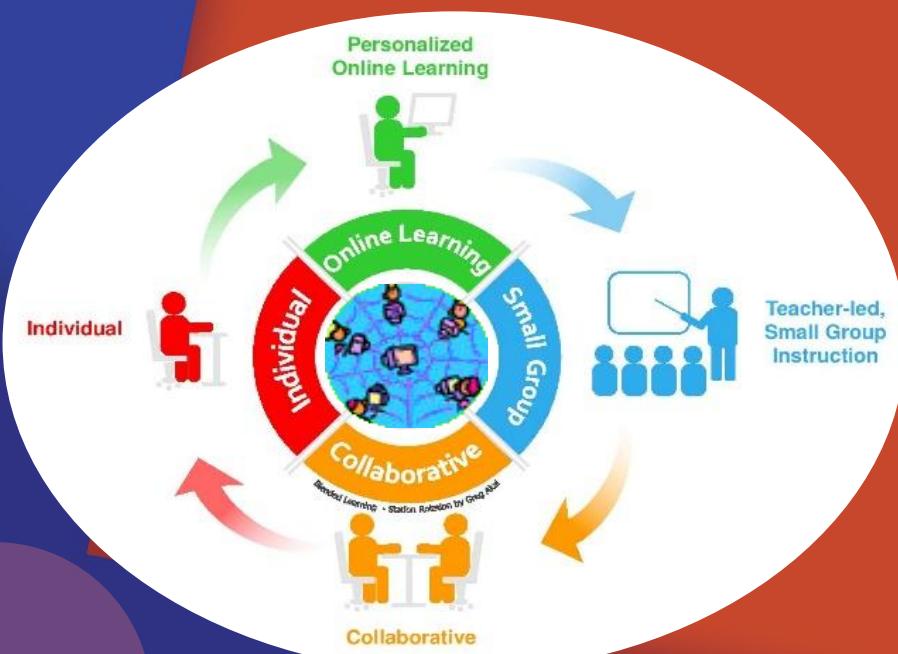
 [ice.institute](#)

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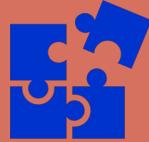
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# Issues & Challenges



access  
equity  
quality



bundled vs  
unbundled



Educational  
Technology



New  
Literacy



Design &  
Development  
(3 learning spaces)



UI/UX



Online  
Engagement



testing &  
assessment



recognition &  
transferability

- digital certificate
- digital badge
- digital credential
- microcredential





# Ayo bergabung

...



**Panduan Pendaftaran Melalui  
Perguruan Tinggi**  
<https://link.icei.ac.id/genap23>

**Panduan Pendaftaran Umum**  
<https://link.icei.ac.id/mbusbatch4>

**Katalog Mata Kuliah**  
<https://link.icei.ac.id/kataloggenap23>

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*Merdeka Belajar Untuk Semua*



# TERIMA KASIH

... to boldly go, where no man has gone before....



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