


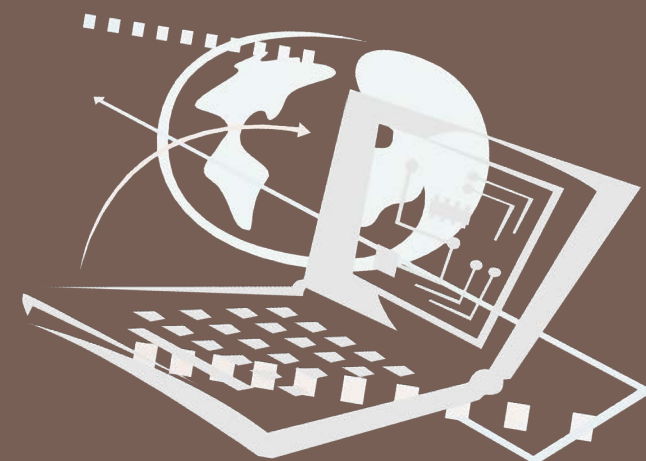


# PENGGUNAAN TEKNOLOGI BARU DALAM PEMBELAJARAN

Prof. Herman Dwi Surjono, Ph.D.  
Universitas Negeri Yogyakarta

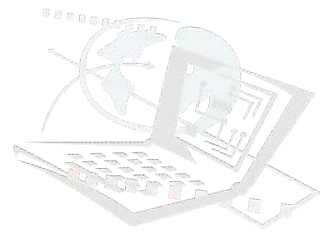
 [bit.ly/YThermans](https://bit.ly/YThermans)

   [hermands.id](https://hermands.id)

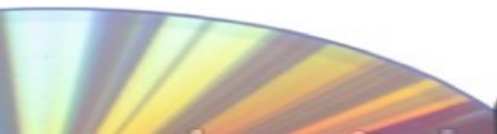


**SEMINAR FKIP UNIVERSITAS AHMAD DAHLAN**  
**4 Maret 2023**

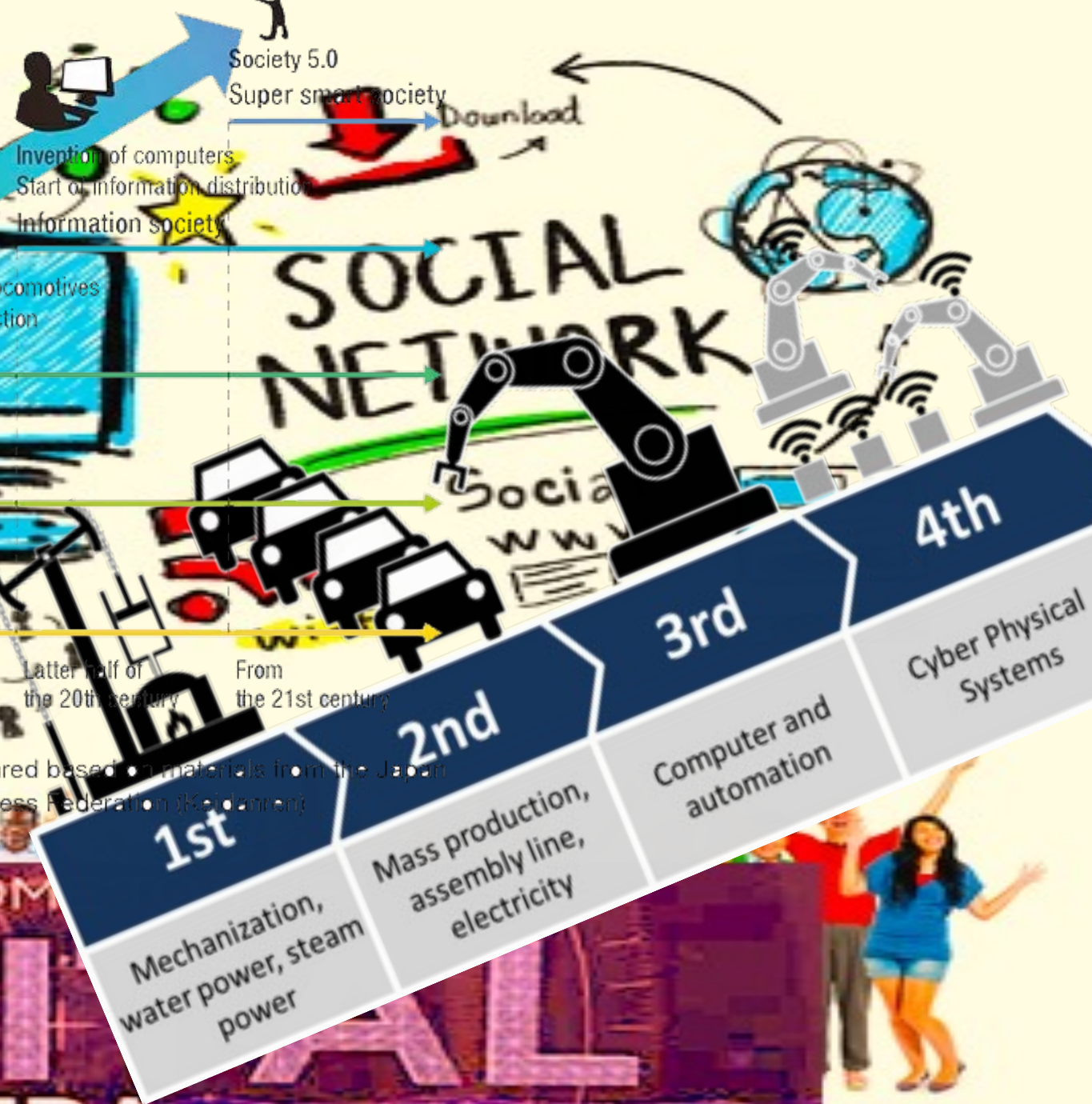
# Outline



- ✓ Perkembangan Teknologi
- ✓ Teknologi dalam Pembelajaran
- ✓ Penggunaan Teknologi (1) → Online Learning
- ✓ Penggunaan Teknologi (2) → Media Pembelajaran



# Fenomena Teknologi Baru



Economic and social innovation by deepening of Society 5.0

Source: Prepared based on materials from the Japan Business Federation (Keidanren)



JAN  
2023

### ESSENTIAL DIGITAL HEADLINES

OVERVIEW OF THE ADOPTION AND USE OF CONNECTED DEVICES AND SERVICES

**NOTE:** PLEASE READ THE IMPORTANT NOTES ON COMPARING DATA AT THE START OF THIS REPORT BEFORE COMPARING DATA ON THIS CHART WITH PREVIOUS REPORTS



TOTAL  
POPULATION



**276.4**  
MILLION

URBANISATION

**58.2%**

CELLULAR MOBILE  
CONNECTIONS



**353.8**  
MILLION

vs. POPULATION

**128.0%**

INTERNET  
USERS

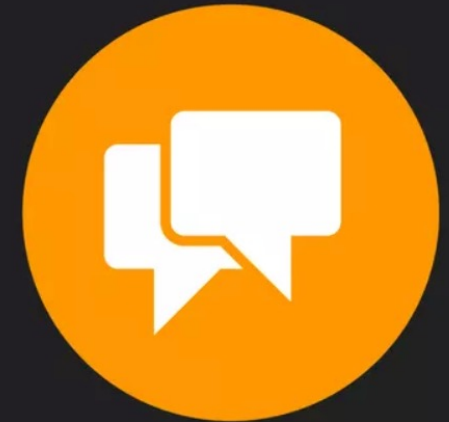


**212.9**  
MILLION

vs. POPULATION

**77.0%**

ACTIVE SOCIAL  
MEDIA USERS



**167.0**  
MILLION

vs. POPULATION

**60.4%**



JAN  
2023

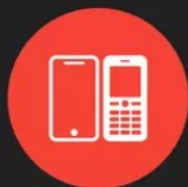
## DEVICES USED TO ACCESS THE INTERNET

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 WHO USE EACH KIND OF DEVICE TO ACCESS THE INTERNET



INDONESIA

MOBILE  
PHONE (ANY)



GWI.

**98.3%**

YEAR-ON-YEAR CHANGE  
**+4.5% (+420 BPS)**

LAPTOP OR  
DESKTOP (ANY)



GWI.

**60.7%**

YEAR-ON-YEAR CHANGE  
**-14.9% (-1,060 BPS)**

SMART  
PHONE

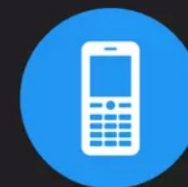


GWI.

**97.7%**

YEAR-ON-YEAR CHANGE  
**+4.7% (+440 BPS)**

FEATURE  
PHONE



**4.3%**

YEAR-ON-YEAR CHANGE  
**+13.2% (+50 BPS)**

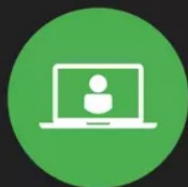
TABLET  
DEVICE



**14.3%**

YEAR-ON-YEAR CHANGE  
**+0.7% (+10 BPS)**

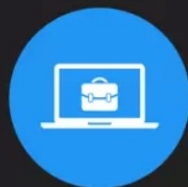
PERSONAL LAPTOP  
OR DESKTOP



**57.6%**

YEAR-ON-YEAR CHANGE  
**-13.0% (-860 BPS)**

WORK LAPTOP  
OR DESKTOP

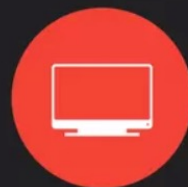


GWI.

**17.4%**

YEAR-ON-YEAR CHANGE  
**-14.3% (-290 BPS)**

CONNECTED  
TELEVISION



**19.4%**

YEAR-ON-YEAR CHANGE  
**-2.5% (-50 BPS)**

SMART HOME  
DEVICE



GWI.

**7.0%**

YEAR-ON-YEAR CHANGE  
**+18.6% (+110 BPS)**

GAMES  
CONSOLE



**6.8%**

YEAR-ON-YEAR CHANGE  
**+7.9% (+50 BPS)**



JAN  
2023

### DAILY TIME SPENT USING THE INTERNET

AMOUNT OF TIME THAT INTERNET USERS AGED 16 TO 64 SPEND USING THE INTERNET EACH DAY

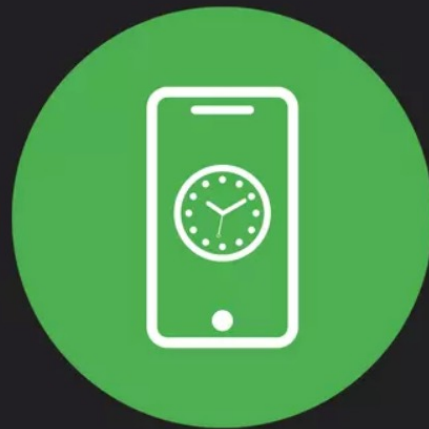


DAILY TIME SPENT USING THE INTERNET ACROSS ALL DEVICES



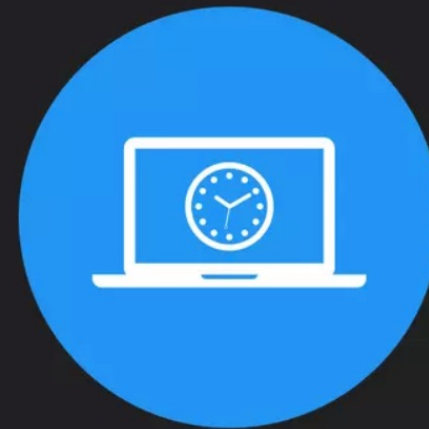
7H 42M

TIME SPENT USING THE INTERNET ON MOBILE PHONES



4H 53M

TIME SPENT USING THE INTERNET ON COMPUTERS AND TABLETS



2H 49M

MOBILE'S SHARE OF TOTAL DAILY INTERNET TIME



63.4%

GWI.



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2023

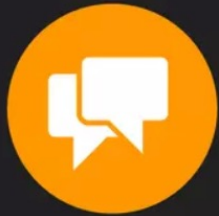
### OVERVIEW OF SOCIAL MEDIA USE

HEADLINES FOR SOCIAL MEDIA ADOPTION AND USE (NOTE: USERS MAY NOT REPRESENT UNIQUE INDIVIDUALS)



INDONESIA

NUMBER OF SOCIAL  
MEDIA USERS



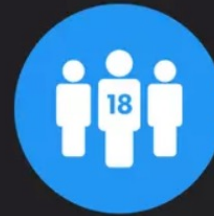
167.0  
MILLION

SOCIAL MEDIA USERS  
vs. TOTAL POPULATION



60.4%

SOCIAL MEDIA USERS AGE 18+  
vs. TOTAL POPULATION AGE 18+



79.5%

SOCIAL MEDIA USERS  
vs. TOTAL INTERNET USERS



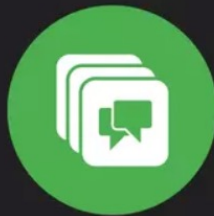
78.5%

AVERAGE TIME SPENT USING  
SOCIAL MEDIA EACH DAY



3H 18M

AVERAGE NUMBER OF SOCIAL  
PLATFORMS USED EACH MONTH



8.4

FEMALE SOCIAL MEDIA USERS  
vs. TOTAL SOCIAL MEDIA USERS



46.8%

MALE SOCIAL MEDIA USERS  
vs. TOTAL SOCIAL MEDIA USERS



53.2%



JAN  
2023

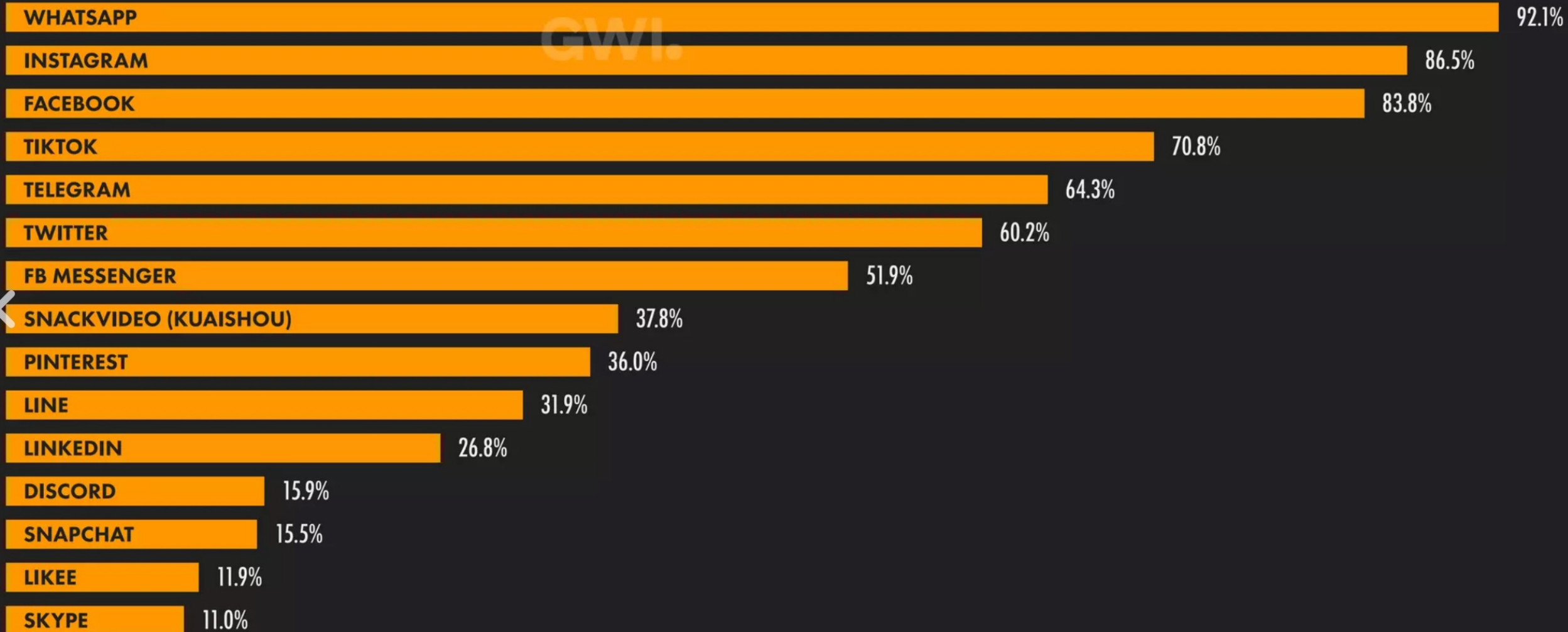
## MOST USED SOCIAL MEDIA PLATFORMS

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 WHO USE EACH PLATFORM EACH MONTH

NOTE: YOUTUBE IS NOT OFFERED AS AN ANSWER OPTION FOR THIS QUESTION IN GWI'S SURVEY, SO IT WILL NOT APPEAR IN THIS RANKING



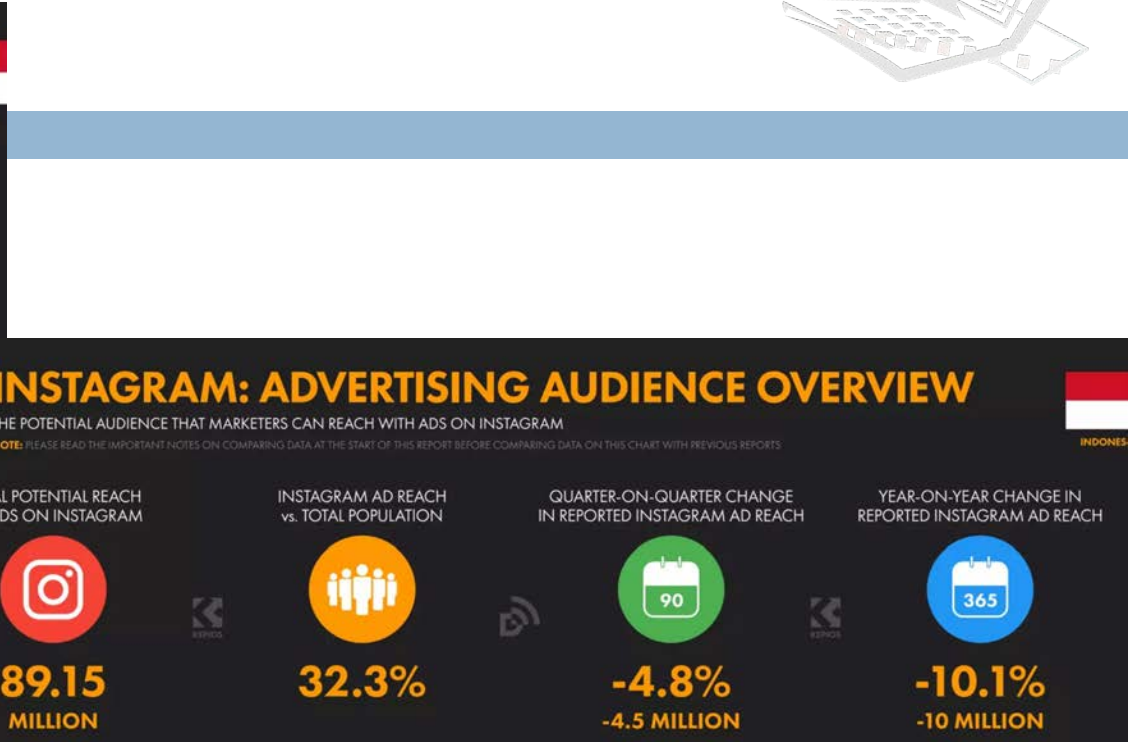
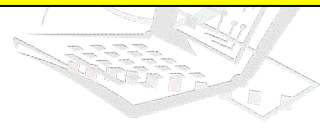
INDONESIA



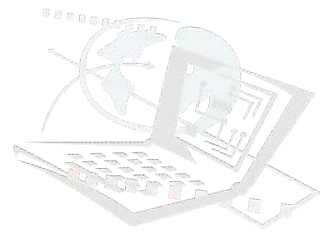


# Digital in Indonesia 2023

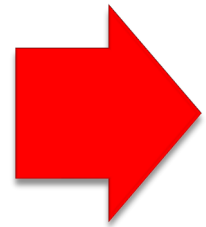
## Fenomena Teknologi Baru



# Teknologi dan Pembelajaran



**Teknologi (digital)**  
- Terjangkau  
- Mudah digunakan



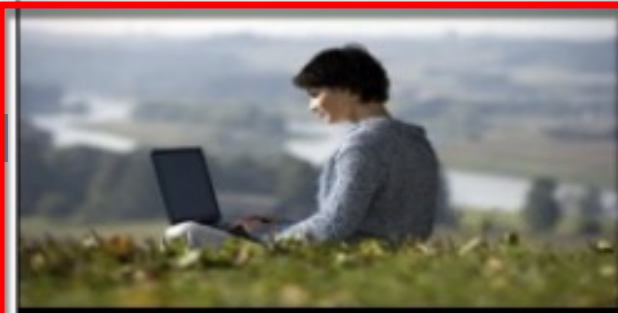
**Pembelajaran (jarak jauh)**  
- Tujuan tercapai  
- Menyenangkan



**INOVASI  
Digital Learning**



# What is Education 4.0?



**Anywhere Anytime**



**Personal**



**Flexible Delivery**



**Peers and Mentors**



**Why/Where not What/How**



**Practical Application**



**Modular and Projects**

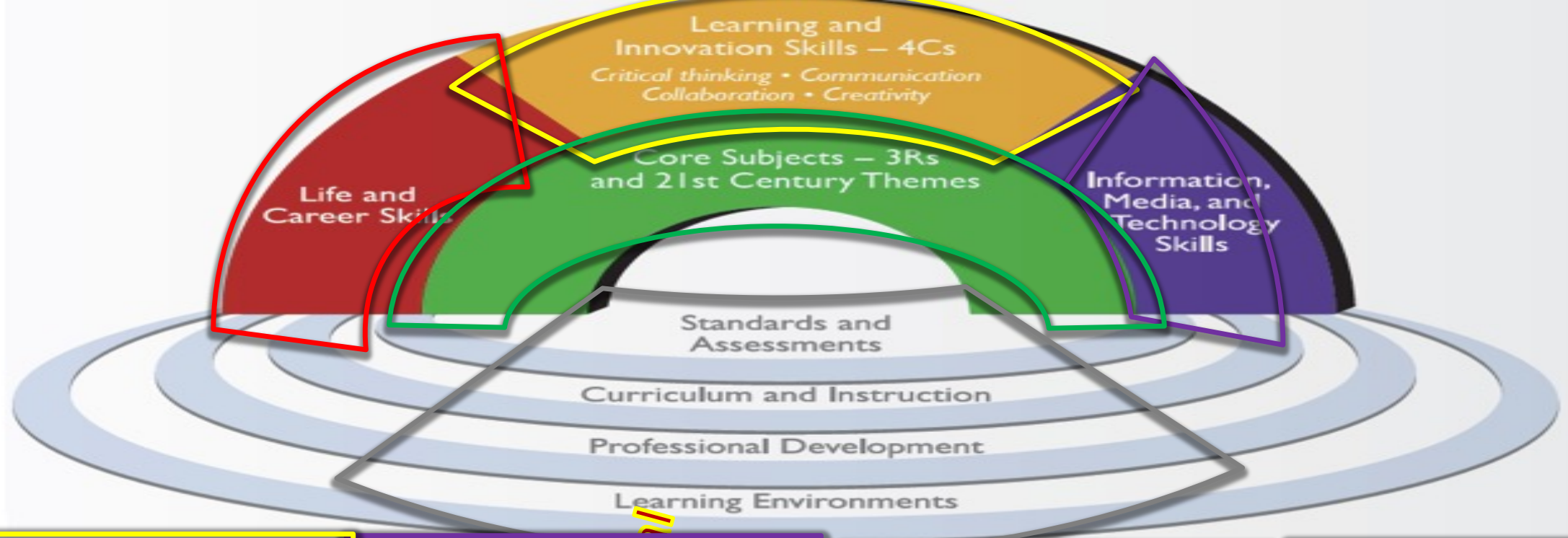


**Student Ownership**



**Evaluated not Examined**





**Creativity**

**Critical Thinking**

**Collaboration**

**Communication**

**Media Literacy**

**Information Literacy**

**Information Communication Technology Literacy**

**Productivity & Accountability**

**Leadership & Responsibility**

**Flexibility & Adaptability**

**Social & Cross Cultural Skills**

**Initiative & Self Direction**

**Environmental Literacy**

**Global Awareness**

**Financial Literacy**

**Health Literacy**

**Civic Literacy**

*Literasi Digital*

Keterampilan abad 21<sup>st</sup> dan pendukung

# Kompetensi Literasi Digital



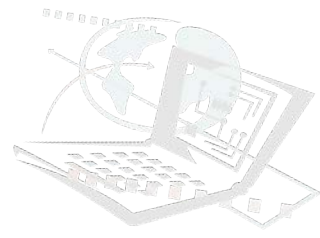
<https://youtu.be/DZ-q6A0lg74>

Kemampuan menggunakan TIK untuk:

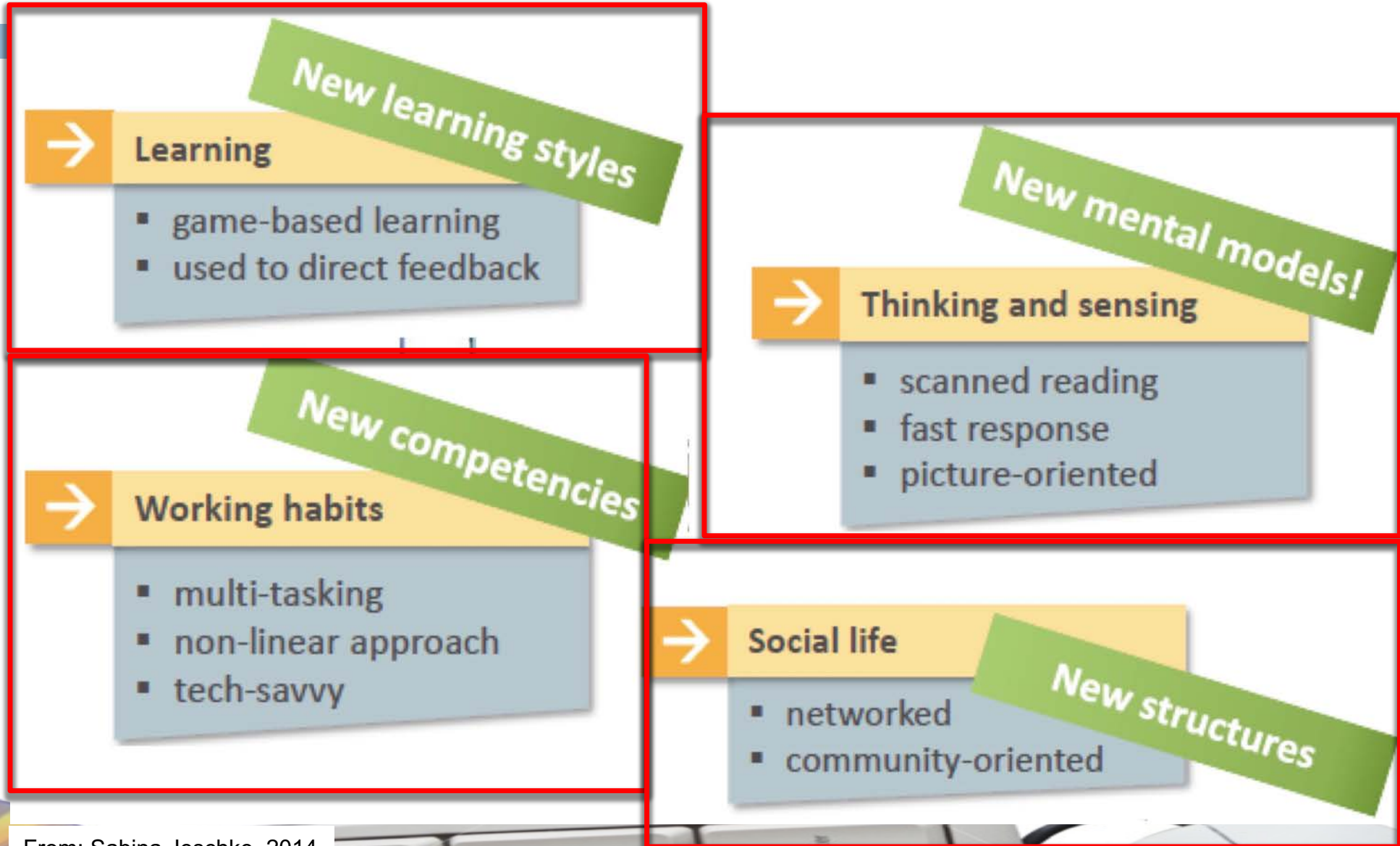
- Mencari
- Mengevaluasi
- Membuat
- Mengkomunikasikan

**KONTEN  
DIGITAL**

(Sumber: American Library Association).



# New Learning for Digital Natives



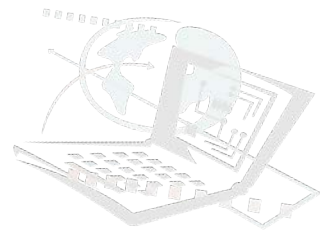
# Penggunaan Teknologi (1) → Online Learning



- Pembelajaran melalui TIK (Internet dan PC/Laptop/HP).



# Konsep Pembelajaran Online (e-Learning)



⇒ e-Learning memungkinkan ANYONE belajar ANYWHERE, ANYTIME.

⇒ Menggunakan TIK

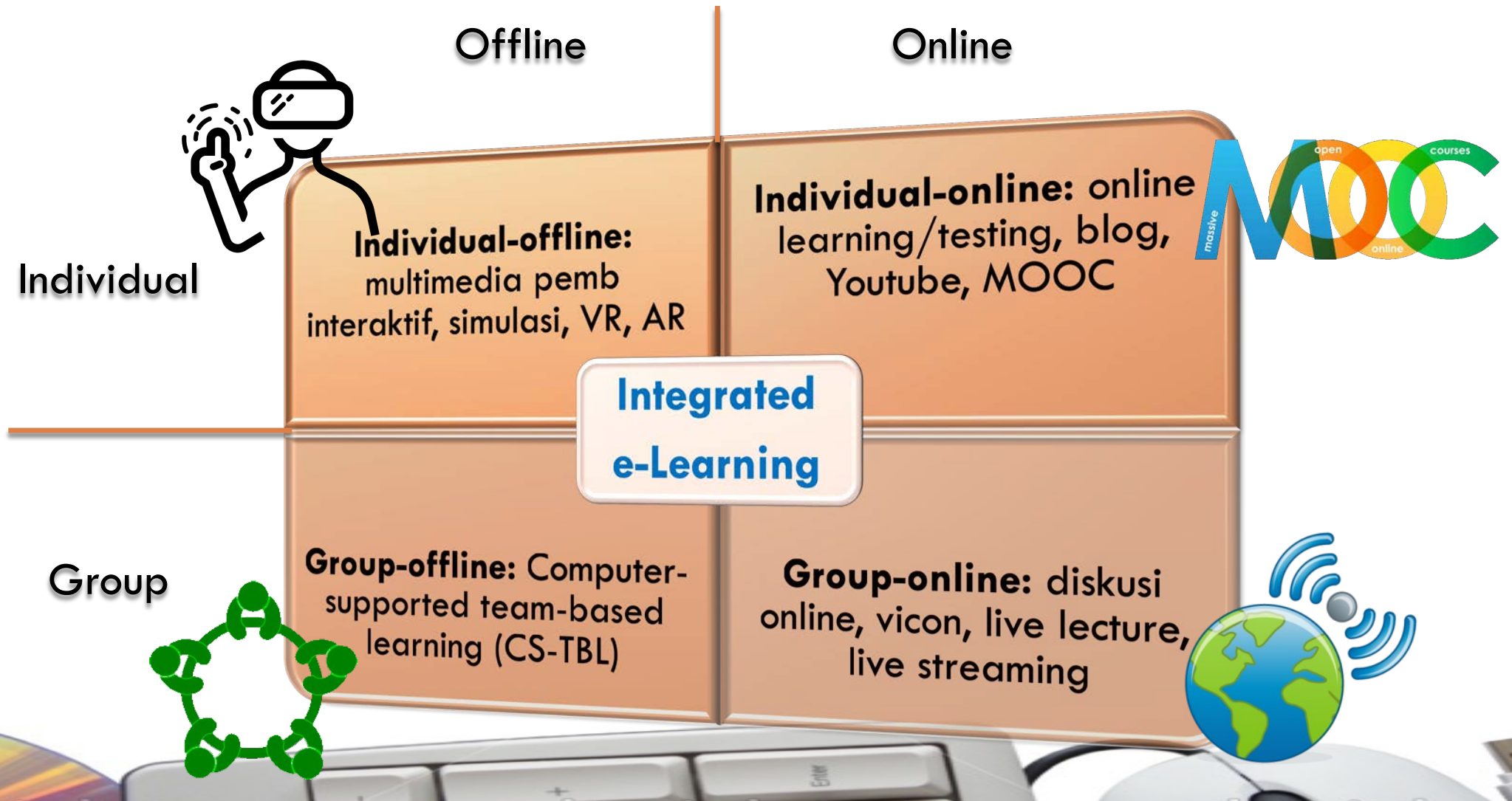
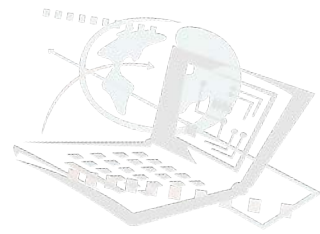
**Mode:**

⇒ Sinkron dan Asinkron

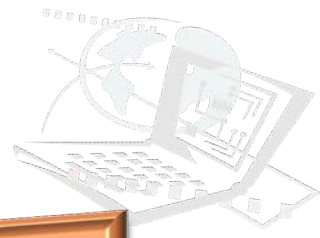




# Kerangka e-Learning



# Syarat Pembelajaran Online (E-Learning)



**Harus Ada:**



## **KONTEN**

- Materi Pembelajaran, Bahan Ajar
- Interaksi, Aktivitas



## **SDM**

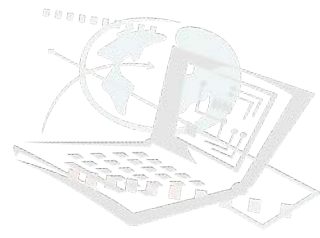
- Dosen/Guru, Tutor
- Mahasiswa/Siswa
- Teknisi, Admin



## **TEKNOLOGI**

- Perangkat (PC, Laptop, HP, dll)
- Internet (kecepatan, BW)
- LMS (Moodle, G-CR, Edmodo, dll)
- Tools (Zoom, WA, BBB, dll)





# Konten e-Learning

## □ Learning Resources (Sumber Belajar/Media)

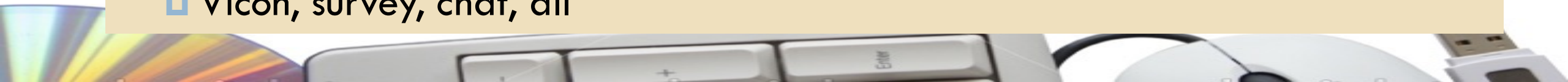


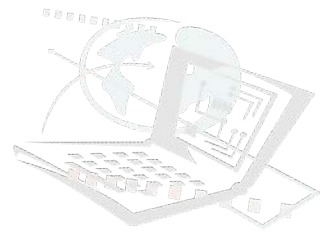
- Materi/bahan ajar berbentuk multimedia (teks, images, animasi, video) (Slide presentasi, LKS, modul, dll)
- Bahan pendukung (Kurikulum, Silabus, RPP, dll)
- Link untuk pengayaan

## □ **Aktivitas/Interaksi**

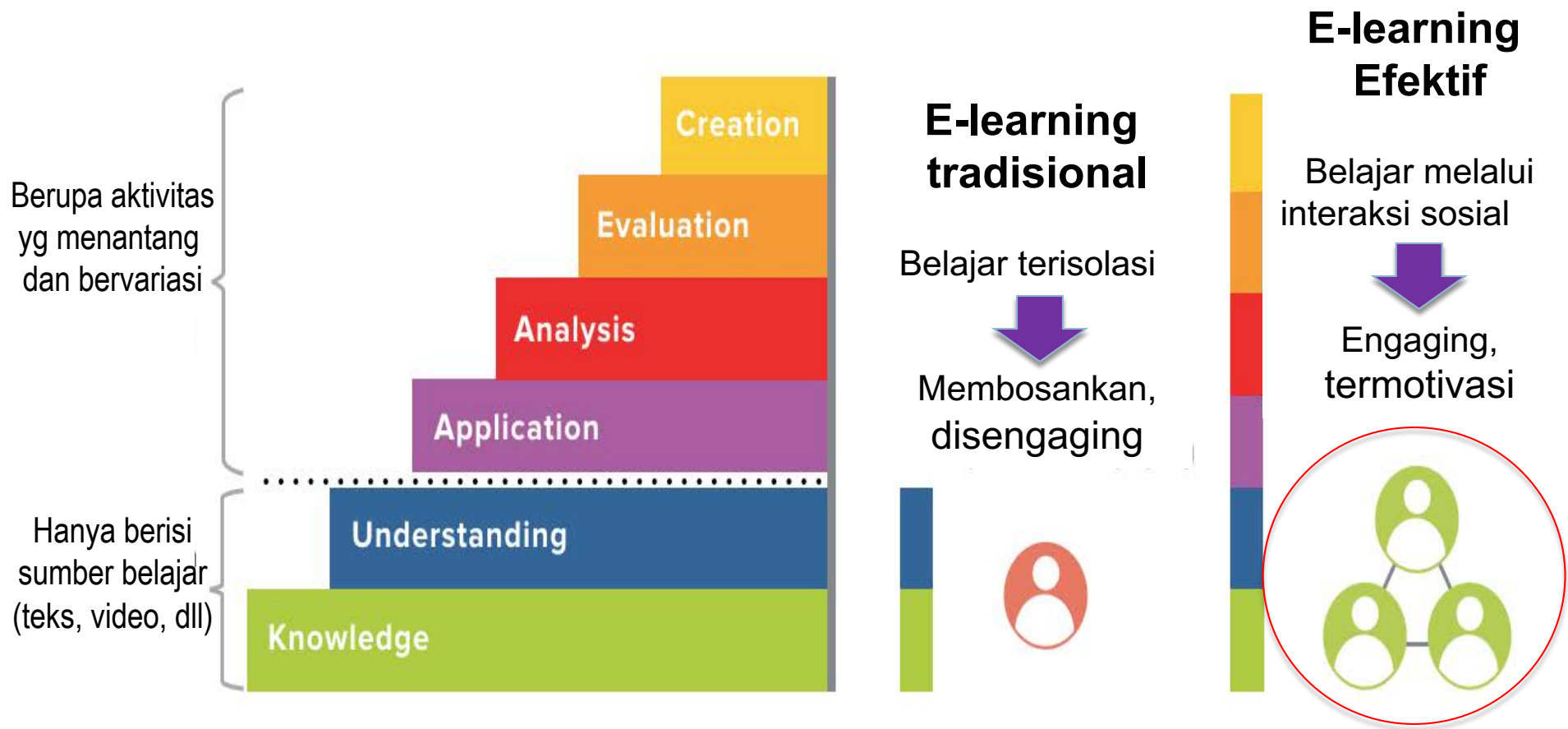


- Forum (diskusi, perkenalan, refleksi, informasi)
- Tugas (tugas essay, tugas online, tugas offline)
- Quiz (PG, BS, isian, mencocokkan)
- Vicon, survey, chat, dll





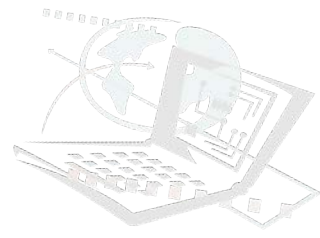
# Optimalisasi Digital Learning → Efektif



Sumber: <http://iversity.org/>





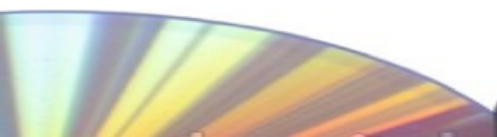
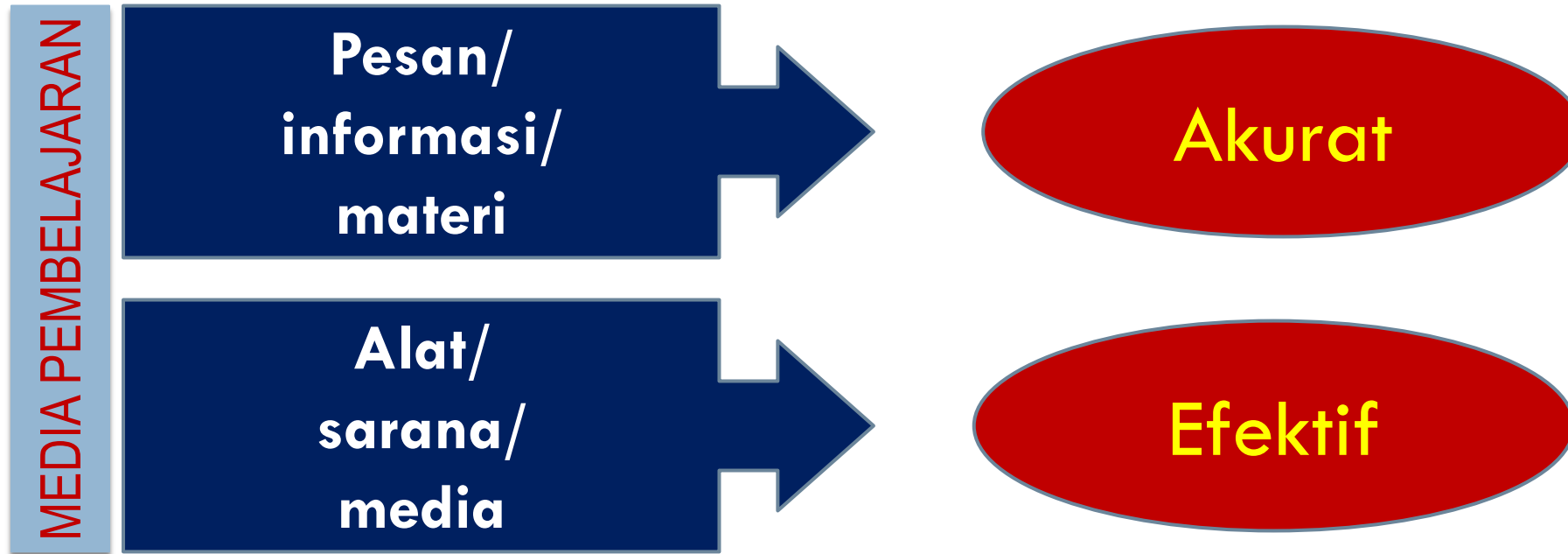
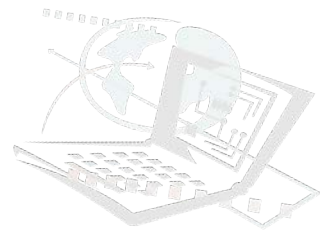


# Media Pembelajaran Digital

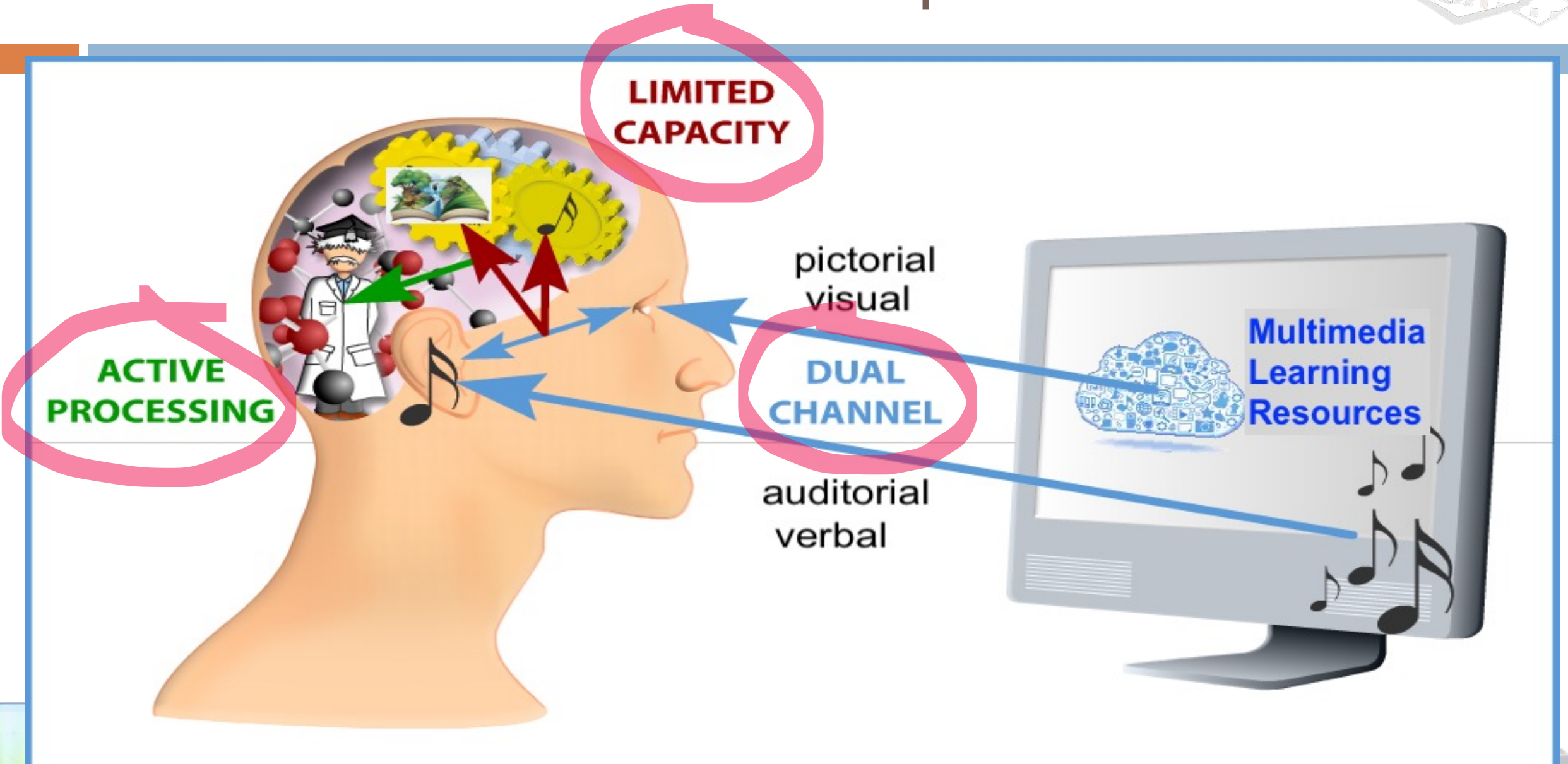
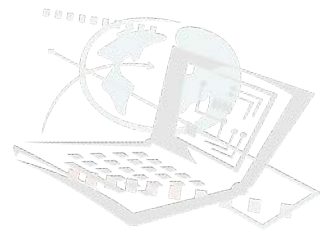
Segala sesuatu dalam format digital yakni teks, gambar, suara, animasi, video, dll. yang berisi pesan untuk **mempermudah** proses belajar mengajar dan **mencapai tujuan** pembelajaran.



# Kriteria Media Pembelajaran Digital



# Asumsi Multimedia Pembelajaran



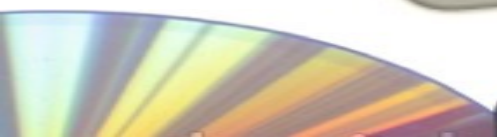
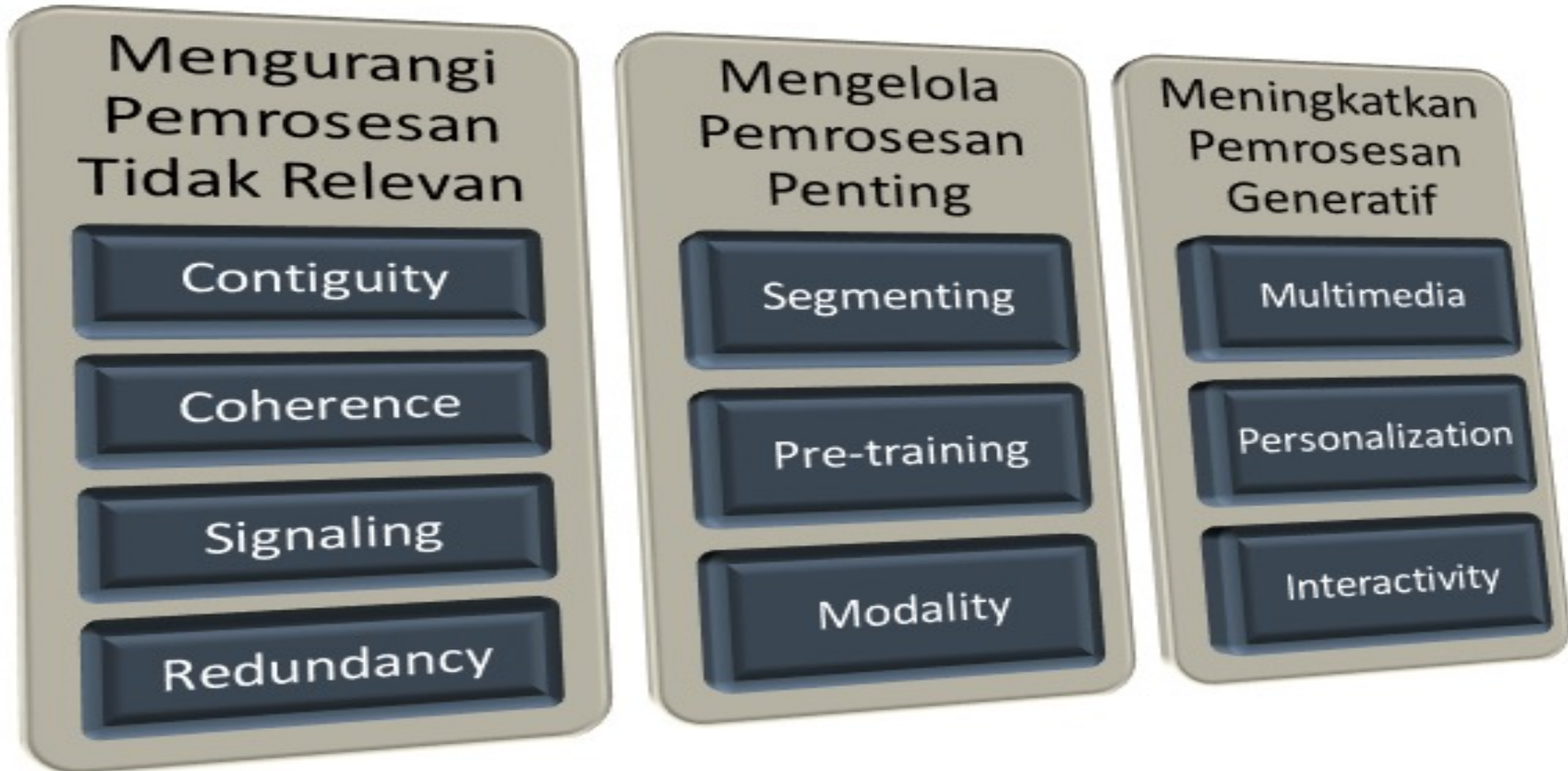
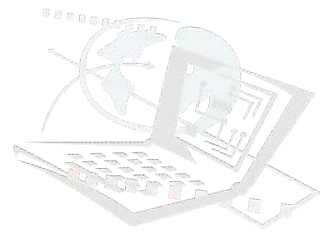


# Beban Kognitif

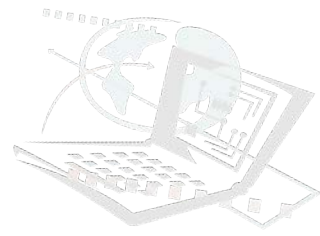


- ➔ **1. Essential processing**  
Pemrosesan kognitif dasar yang relevan dengan tujuan pembelajaran.  
Meliputi proses selecting dan organizing.
- ➔ **2. Generative processing**  
Pemrosesan kognitif mendalam relevan dengan tujuan pembelajaran.  
Meliputi proses organizing dan integrating.
- ➔ **3. Extraneous processing**  
Pemrosesan kognitif yang tidak relevan dengan tujuan pembelajaran.

# Prinsip Multimedia Pembelajaran



# Kesimpulan



- ➡ Perkembangan teknologi baru menuntut peserta didik menguasai keterampilan abad 21.
- ➡ Pembelajaran dapat dioptimalkan melalui penggunaan teknologi baru.
- ➡ Penggunaan teknologi baru dalam pembelajaran: e-learning dan media pembelajaran digital.



# TERIMA KASIH

