

**Forum Ministériel Africain sur**  
l'Intégration des TIC dans l'Education et la Formation

**African Ministerial Forum on**  
ICT integration in Education and Training

**Smart media in education:  
Is it a blessing or a curse?**

**Peck Cho**

**Distinguished Professor, Dongguk University  
KOREA**

**peckcho@mtu.edu**

**9 - 10 - 11 Décembre 2013  
Hotel Ramada Plaza, Gammarth, Tunis, Tunisie**

# Korea today...



# The same place back in the 50's





# 1940's

## During Japanese Occupation



# 34 years of devastation



**1940's**

**During Japanese Occupation**



**Women trucked to  
military camps as sex slaves**



**1940's**

**During Japanese Occupation**



**Goods and cultural heritage  
shipped away to Japan**

# 1950's

## During the Korean War

**2.7 million military casualties**

**2.5 million civilian casualties**

**3.2 million refugees**

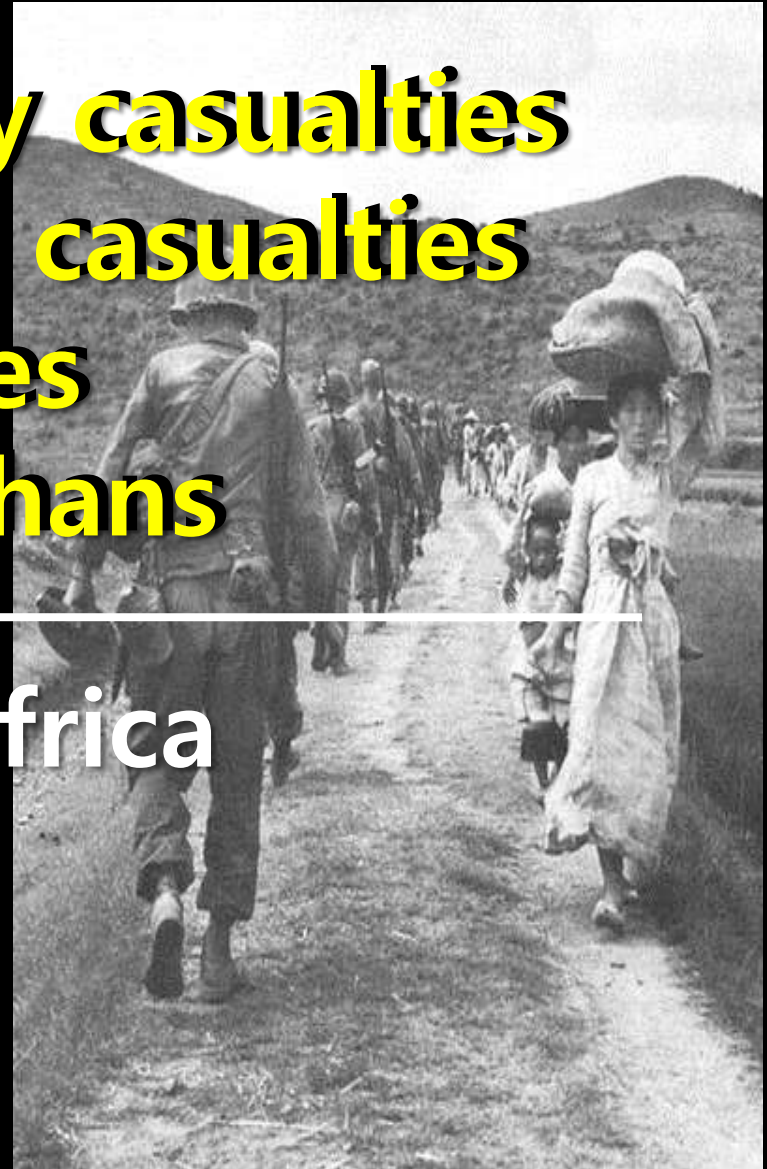
**100 thousand orphans**

---

**UN forces from Africa**

**Ethiopia**

**South Africa**



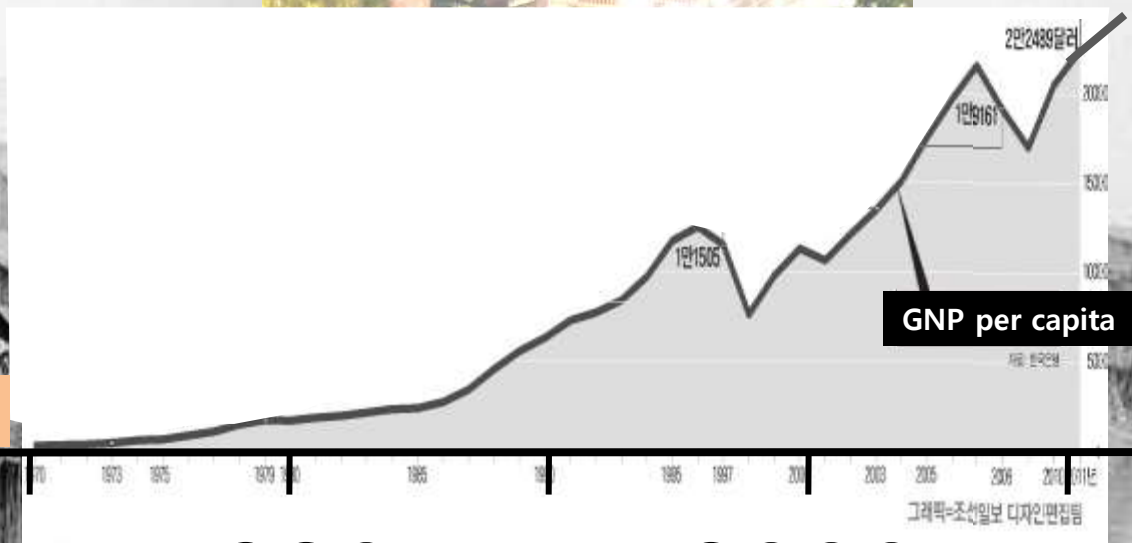


# Success Story: The “Miracle of Han River”

From one of the poorest nations to one of the most dynamic economies.  
This change in just one generation.

US\$67

US\$24,000



1960

1980

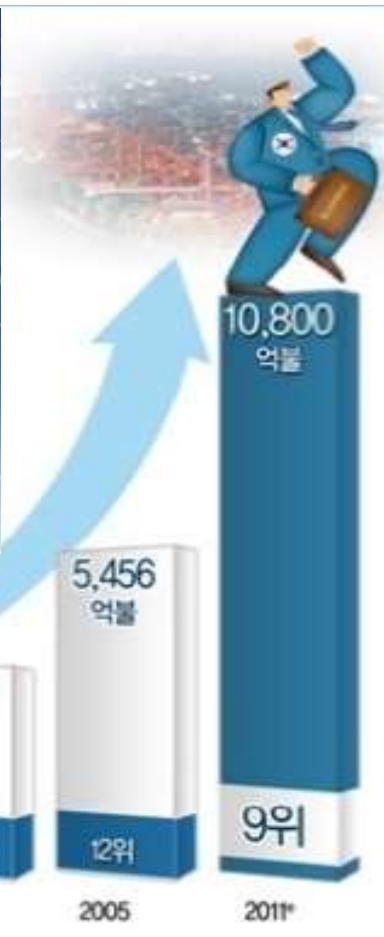
2000

2020



# Success Story: The “Miracle of Han River”

Korea is 9<sup>th</sup> nation w/ US\$1 trillion in export



US\$24,000

2020

# Success Story: The "Miracle of Han River"

Korea is 9<sup>th</sup> nation w/ US\$1 trillion in export



US\$24,000

Korea is 7<sup>th</sup> in GDP pc US\$20,000 & 50M pop

20-50 국가들의 내수시장 규모 2011년 기준. 단위: 달러



그래픽= 박상훈 기자 ps@chosun.com

무역규모  
무역순위

20-50 클럽 진입국가 진입시기	일본 1987년	미국 1988년	프랑스 1990년	이탈리아 1990년	독일 1991년	영국 1996년	한국 2012년
1인당 소득	2만366달러	2만821달러	2만2003달러	2만151달러	2만2693달러	2만990달러	2만3680달러
인구	1억2203만명	2억4497만명	5671만명	5669만명	7998만명	5816만명	5000만명

※진입국가 현황은 돌파 당시를 기준으로 함

자료: OECD(경제협력개발기구), 통계청



# Success Story: The "Miracle of Han River"

Korea is 9<sup>th</sup> nation w/ US\$1 trillion in export



US\$24,000

Korea is 7<sup>th</sup> in GDP pc US\$20,000 & 50M pop

Korea is 5<sup>th</sup> nation to host all 4 major sports events

Italy      Germany      Japan      France      Korea



# Success Story: The “Miracle of Han River”

## By land size (km2)

100	 Malawi	118,484 (45,747)
101	 Eritrea	117,600 (45,400)
102	 Benin	112,622 (43,484)
103	 Honduras	112,492 (43,433)
104	 Liberia	111,369 (43,000)
105	 Bulgaria	110,879 (42,811)
106	 Cuba	109,884 (42,426)
107	 Guatemala	108,889 (42,042)
108	 Iceland	103,000 (40,000)
109	 South Korea	100,210 (38,690)
110	 Hungary	93,028 (35,918)
111	 Portugal	92,090 (35,560)
112	 Jordan	89,342 (34,495)

## By population

19	 Democratic Republic of the Congo	67,514,000
20	 Thailand	65,926,261
21	 France <sup>[9]</sup>	65,834,000
22	 United Kingdom	63,705,000
23	 Italy	59,859,996
24	 Burma	53,259,000
25	 South Africa	52,981,991
26	 South Korea	50,219,669
27	 Colombia	47,365,000
28	 Spain	46,704,314
29	 Ukraine	45,455,065
30	 Tanzania	44,928,923
31	 Kenya	44,354,000



**Key to success is: Education**

**NATIONAL CONSENSUS  
on the importance of education**

**PARENTAL WILLINGNESS  
to invest in the future of children**

**Key to success is: Education**

# 3W learning

**Whenever  
Wherever  
Whoever**

1

0



**Key to success is: Education**

3

# 3S learning

**Same time**  
**Same place**  
**Same age**

1

0

# Key to success is: Education

## 3S learning

11,000 schools  
483,000 teachers

199 four-yr. colleges  
132 two-yr. colleges

1945 0 four-yr. colleges  
29 two-yr. colleges

**Key to success is: Education**

# 3S learning

**100% attend K-6**

**99.8% move onto 7-9**

**99.6% move onto 10-12**

**97.9% literacy rate**

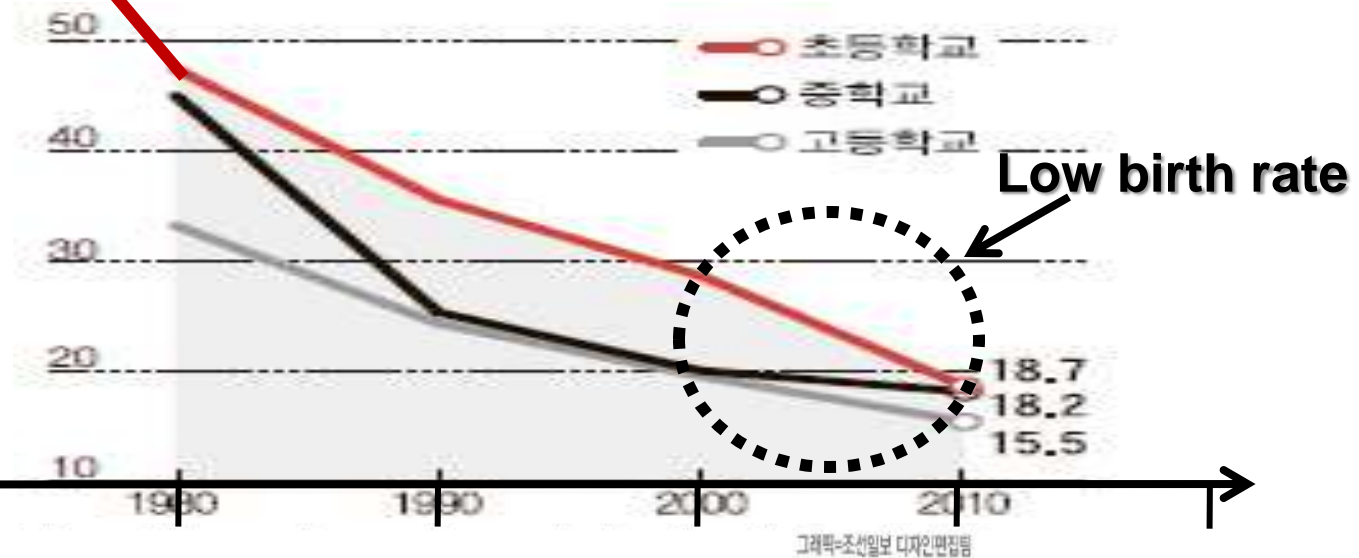


# Key to success is: Education

90  
3W learning

3S learning

No. of students per teacher



1960

Whenever  
Wherever  
Whoever

1980

Same time  
Same place  
Same age

2000

2020

# Key to success is: Education

**3W learning**

**3S learning**

## 2013 PISA result:

(Program for Int'l Student Assessment)

**Korea is the best  
among 34 OECD nations  
in Math, Science and Reading**

## MATH Rank

1. Korea ←
2. Japan
3. Switzerland
4. Estonia
5. Finland
6. Canada
7. Poland
8. Belgium
9. Germany
10. Austria
11. Australia
12. Ireland
13. Slovenia
14. Denmark
15. New Zealand
16. Czech Republic
17. France
18. United Kingdom
19. Iceland
20. Luxembourg

1960

**Whenever  
Wherever  
Whoever**

1980

**Same time  
Same place  
Same age**

2000

PBS April 14, 2009



# ICT

US\$67



# 1960

# 1980

# 2000

# 2020

Whenever  
Wherever  
Whoever

Same time  
Same place  
Same age

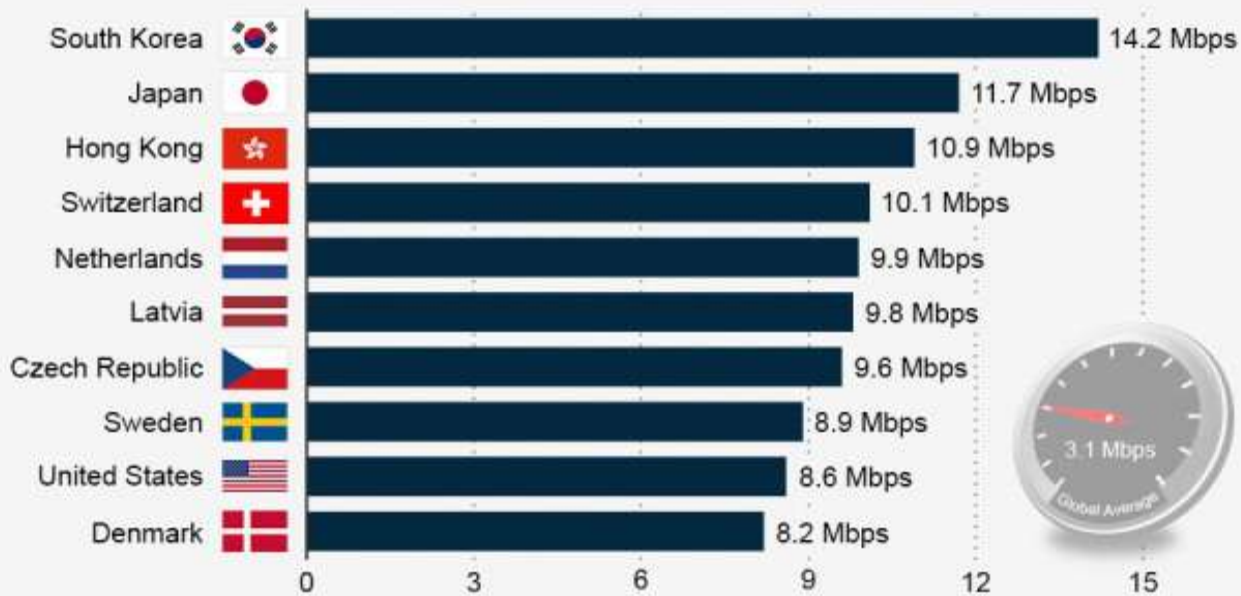


PBS April 14, 2009

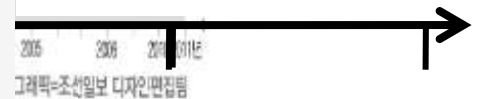


## South Korea and Japan Top Internet Speed Ranking

Average measured internet connection speed in Q1 2013



# ICT



그래픽=조선일보 디자인편집팀

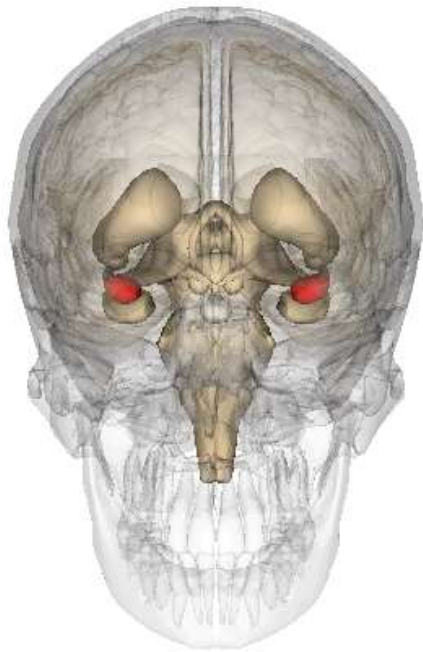
# 2020

# e-learning (ICT 1.0)

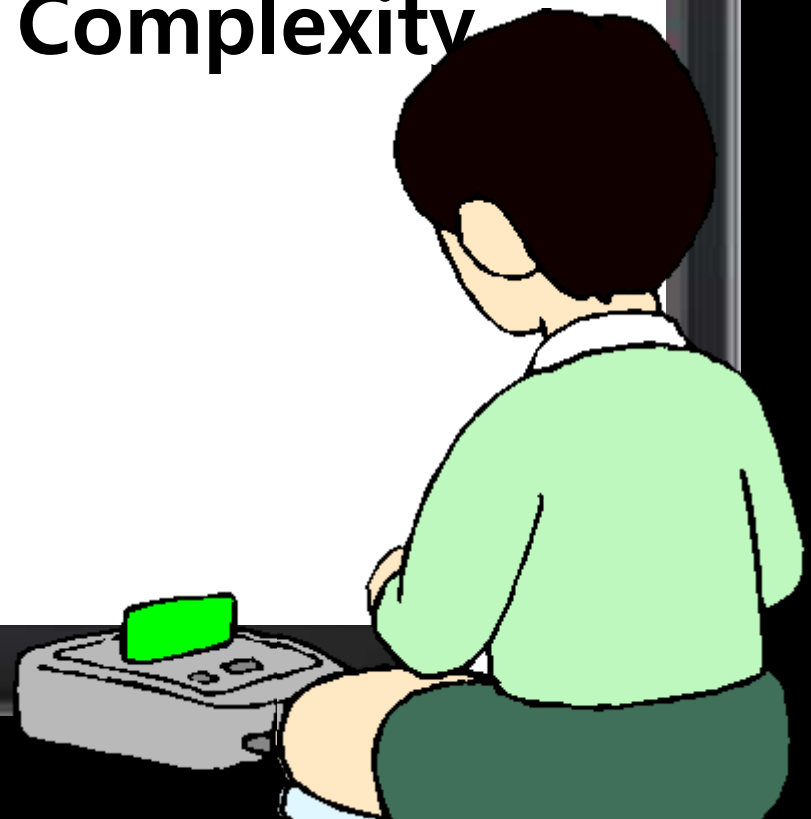


**Internet  
Computer  
TV & AV**

# e-learning (ICT 1.0)



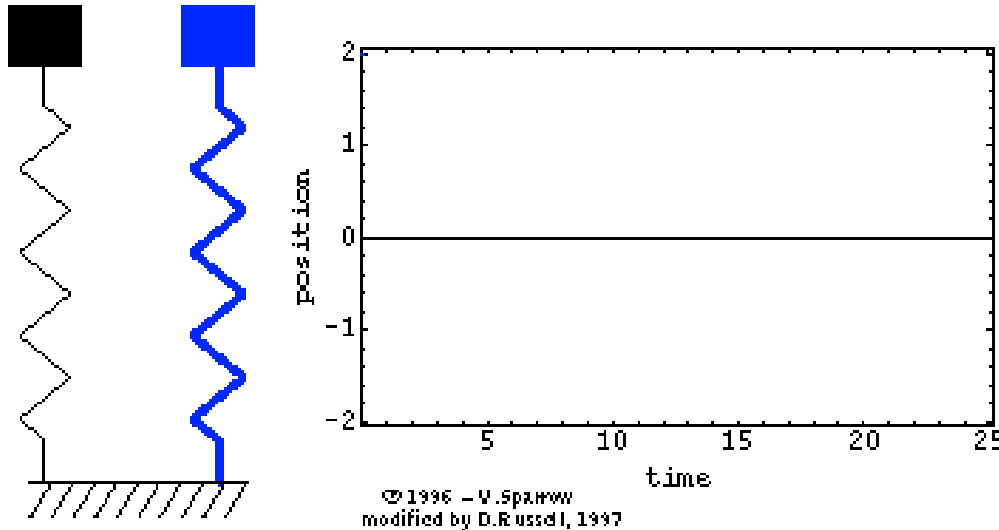
**Helps  
to show  
Complexity**



SAMSUNG



# e-learning (ICT 1.0)



**Helps to explain  
difficult concepts**

SAMSUNG

# e-learning (ICT 1.0)



# smart media (ICT 2.0)

*It's mobile and ubiquitous.*





smart media (**ICT 2.0**) is a great **enabler!**



**Accessibility**

**Social impact**

20 yrs in class

2 wk online

1 yr online

4,000 students

4,000

**40,000**

# Key to success is: Education

## 3W learning



US\$67

## 3S learning



## 3A learning ICT 2.0



### 1960

Whenever  
Wherever  
Whoever

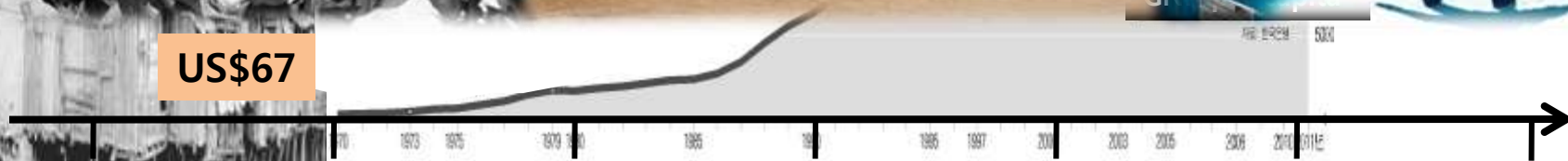
### 1980

Same time  
Same place  
Same age

### 2000

Anytime  
Anywhere  
Anyone

### 2020



# e-learning (ICT 1.0)

Internet  
Computer  
TV & AV

**ICT 1.0 is obsolete!**

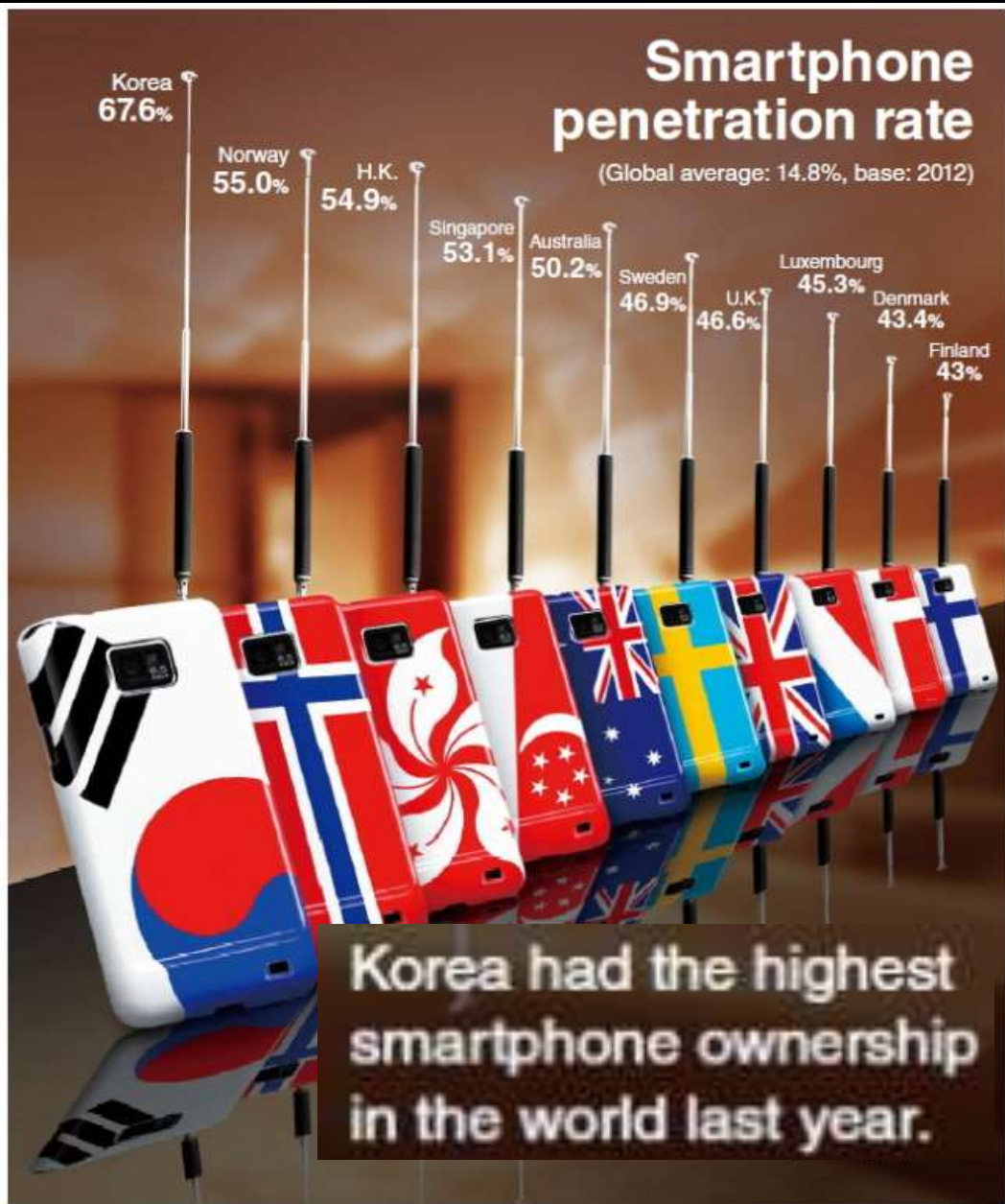


# smart media (ICT 2.0)



**Smart  
Mobile  
Ubiquitous**

# smart media (ICT 2.0)





# smart media (ICT 2.0)

Smart  
Mobile  
Ubiquitous



## Percent of South Korean Students Owning Smartphones

Source: Ministry of Education Survey released July 29, 2013

Regional category	Elementary	Middle School	High School	Total
City	49.2	85.4	83.7	69.6
Rural (farming/fishing villages)	46.6	83.1	83.7	66.5

Korea had the highest smartphone ownership in the world last year.



# smart media (ICT 2.0)



# smart media (ICT 2.0)

**5 TV channels dedicated to learning**

**General audience**

**Elementary school children**

**Middle school students**

**College preparatory**

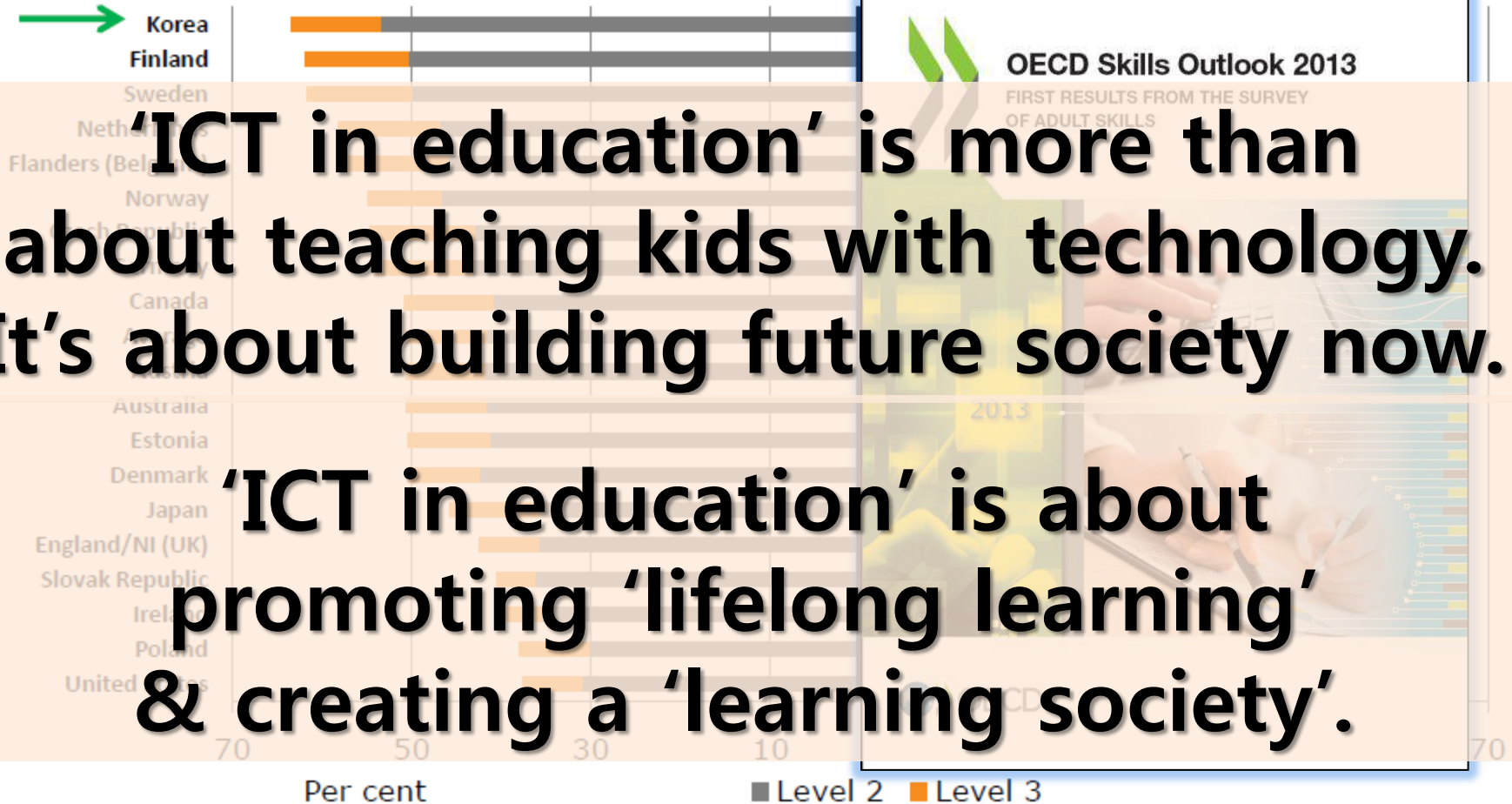
**English Education**

1997



# Proficiency in problem solving in technology-rich environments

Young adults (16-24 year-olds)



**'ICT in education' is more than about teaching kids with technology. It's about building future society now.**

**'ICT in education' is about promoting 'lifelong learning' & creating a 'learning society'.**



## Obama Praises Korean Education Again

U.S. President Barak Obama has lauded South Korea, again, to encourage Americans to do more on the educational front.

In a speech he delivered in Las Vegas on Friday, he said America cannot succeed in science if India and South Korea produce more scientists and engineers.

### Obama Cites Korea for Educational Excellence

U.S. President Barack Obama on Tuesday cited Korea as an example when he called for reform of public education. "The challenges of a new century demand more time in the classroom. If they can do that in South Korea, we can do it right here in the United States of America," he said in a speech at the Hispanic Chamber of Commerce in Washington, D.C.

In March last year, only one month into his assuming president, for example, he called for the United States to look to South Korea in adopting longer school days and after-school programs for American children to help them survive in an era of keen global competition.



# Key to success is: Education

**3W learning**



**3S learning**



**3A learning**



**\$ \$**

**> \$ \$**



**1960**

**Whenever  
Wherever  
Whoever**

**1980**

**Same time  
Same place  
Same age**

**2000**

**2020**

**Anytime  
Anywhere  
Anyone**



# Key to success is: Leapfrogging

## 3W learning



## 3A learning



1960

Whenever  
Wherever  
Whoever

1980

Same time  
Same place  
Same age

2005 2006 2010 2015

그래픽=조선일보 디자인면집팀

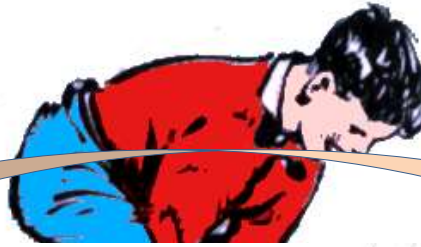
2020

Anytime  
Anywhere  
Anyone

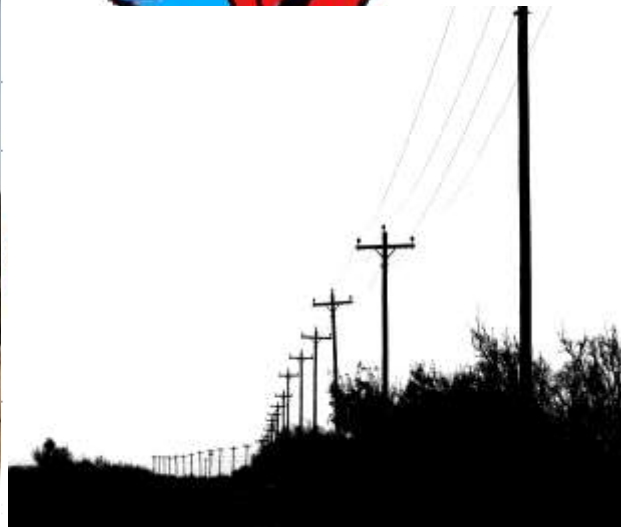


# Key to success is: Leapfrogging

## 3W learning



## 3A learning



1960

Whenever  
Wherever  
Whoever

1990

~~Same time  
Same place  
Same age~~

2020

Anytime  
Anywhere  
Anyone

# Key to success is: Educational Leapfrogging

## 3W learning



## 3S learning



## 3A learning



1960

Whenever  
Wherever  
Whoever

1980

Same time  
Same place  
Same age

2000

2006 2010 2015  
일보 디자인엔지니어링

2020

Anytime  
Anywhere  
Anyone

# Key to success is: Leapfrogging

1. ICT in Classroom
- 2.
- 3.
- 4.

**We must embrace technology and integrate it into our education**

**We no longer need to invest heavily in building “traditional schools.” Instead, invest in ICT.**

**Technology is expensive, but cheaper than building schools.**



# The teacher teaches!

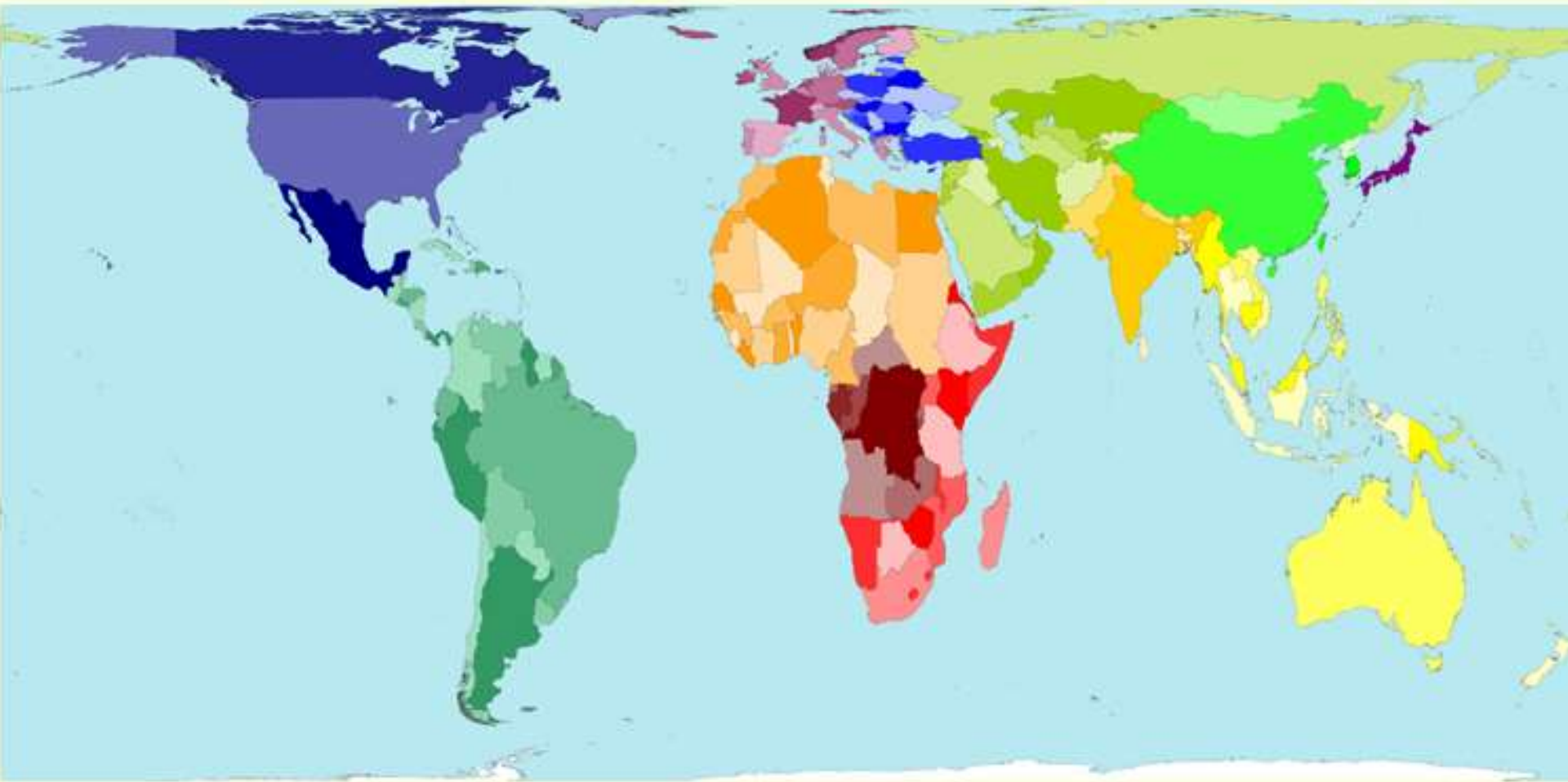


# The **dumbest use** of smart media

**No creativity!**



# The world map as we know





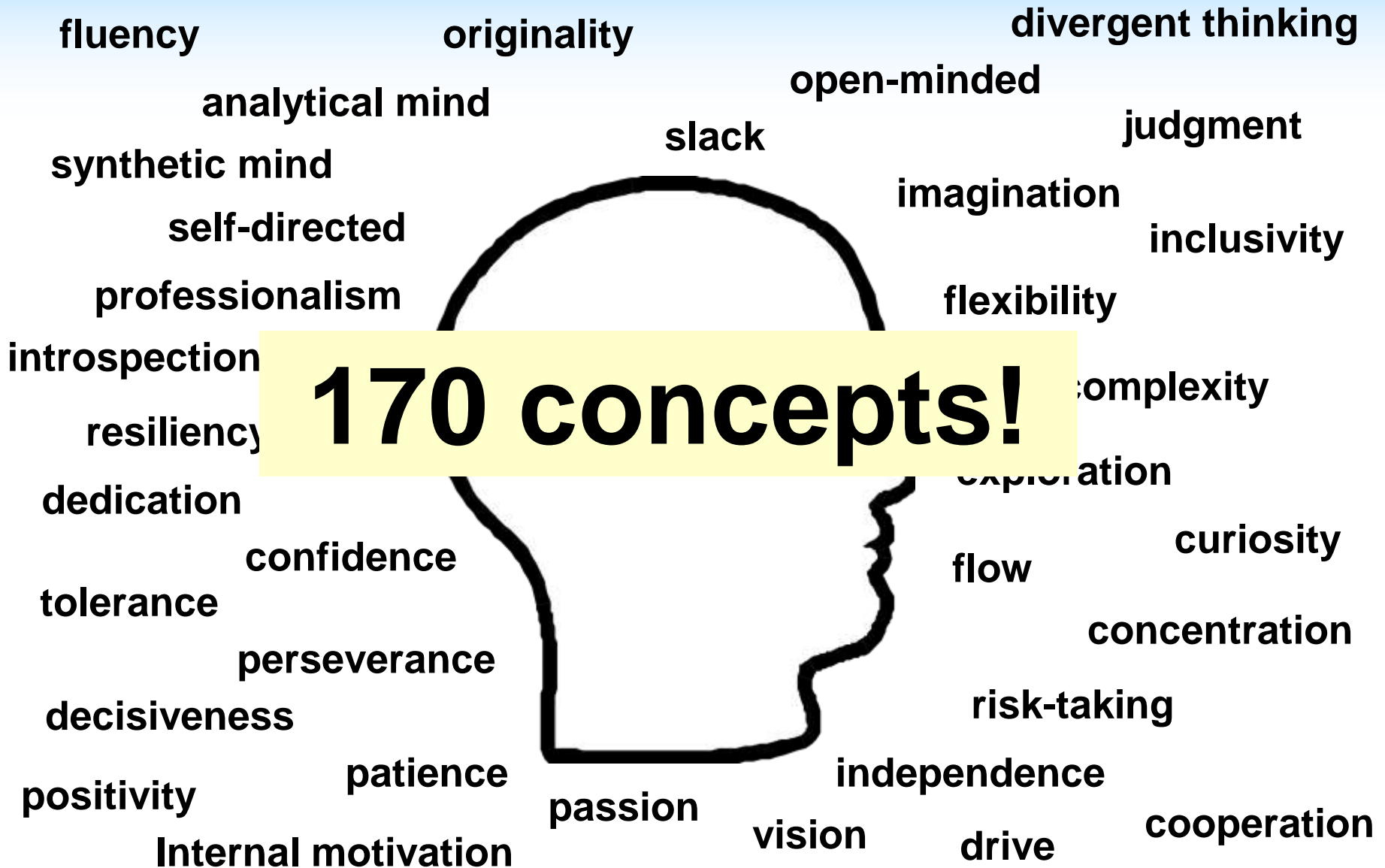
# World according to creativity (IP)



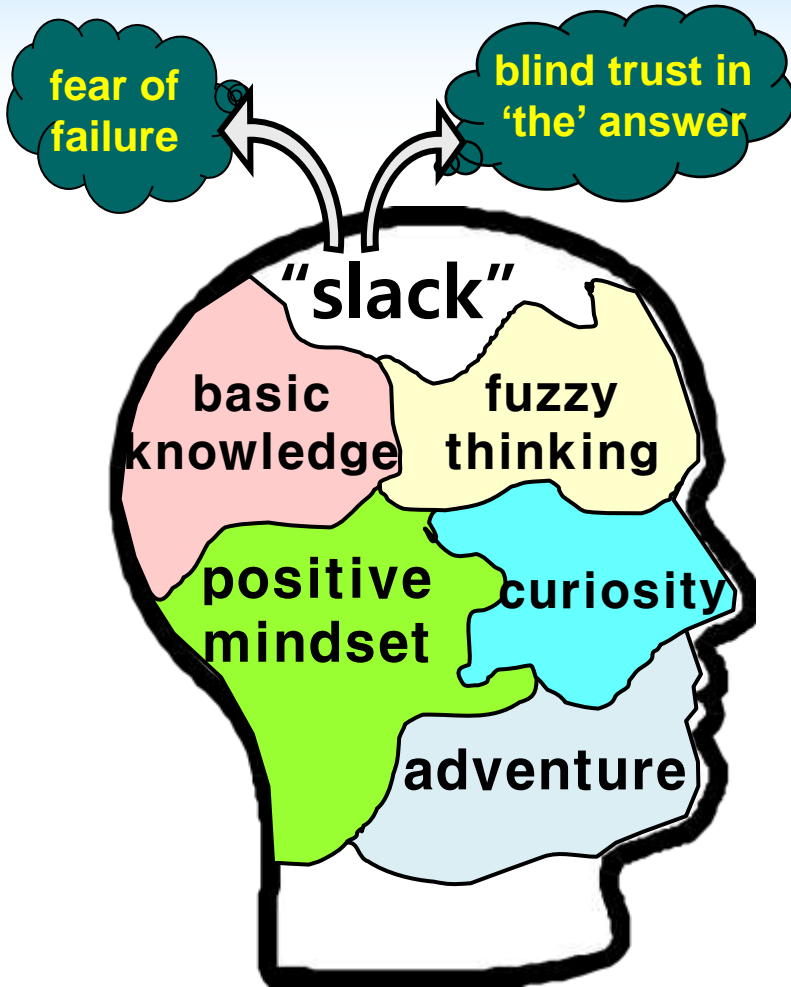
**Creators of ICT**

**Consumers of ICT**

# Creativity



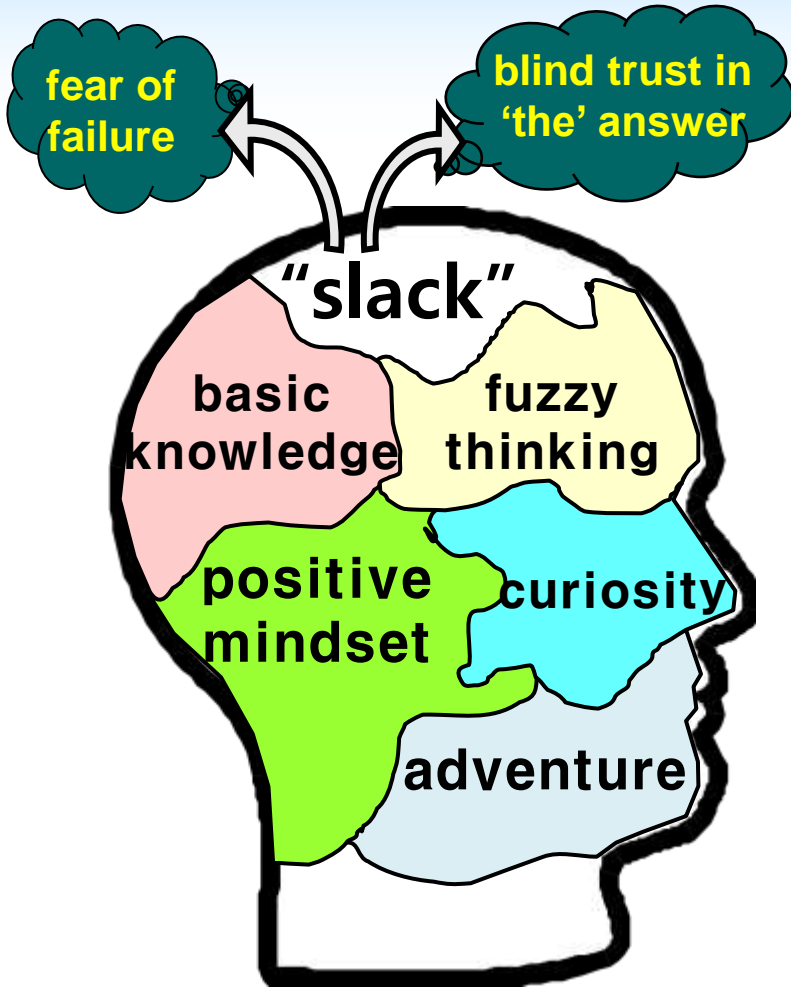
# Creativity



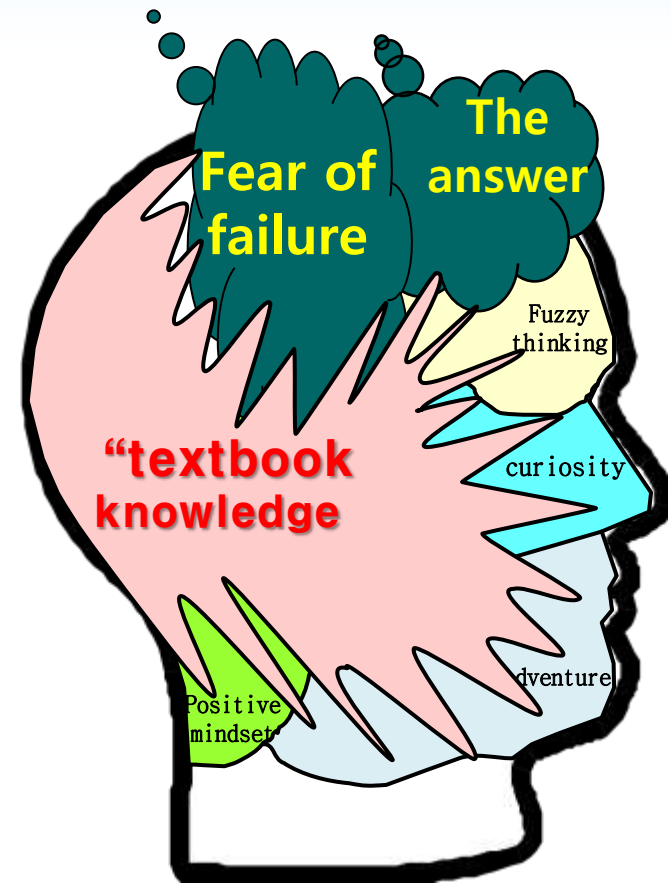
ability to  
accommodate & assimilate  
new thoughts



# Information Age

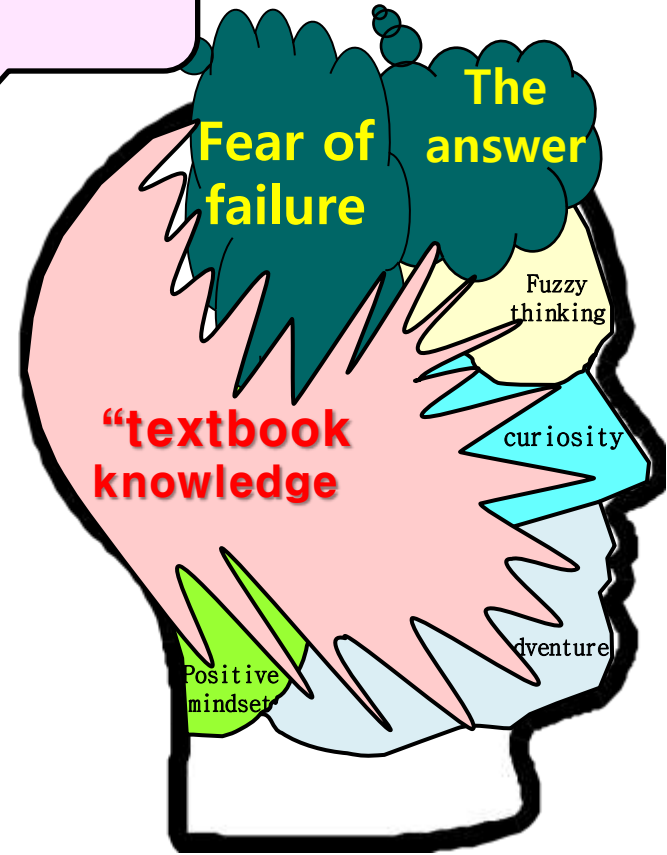


# Pre-information Age



# Information transfer!

*Just do it. No questions asked!  
Don't even think about it!*



All it does is do the same more & faster!

*Just do it. No questions asked!  
Don't even think about it!*

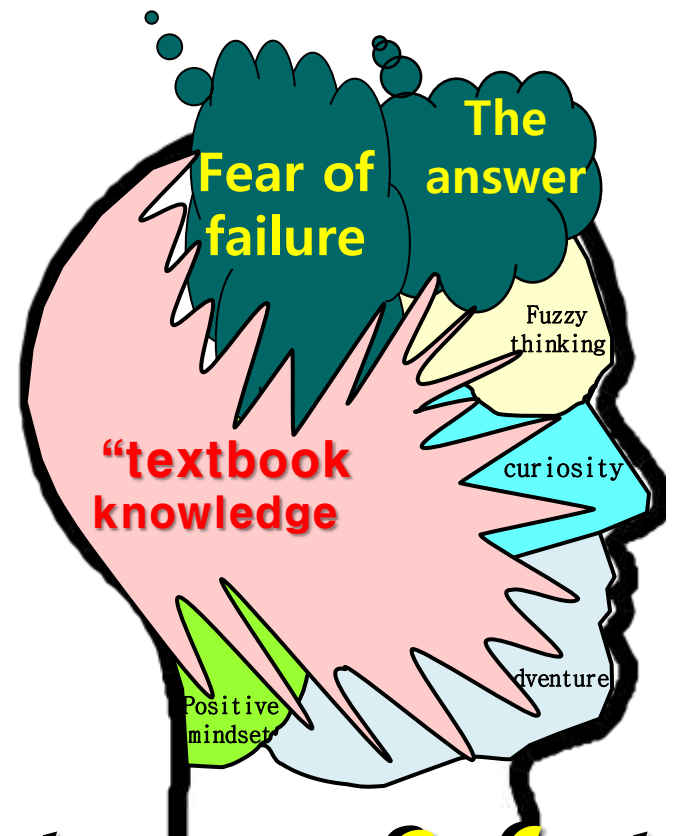
**ICT 1.0**

***Just more & faster***

*mydaily*



# All it does is do the same more & faster!



***Just more & faster***

# All it does is do the same more & faster!



**ICT 2.0**

ICT

CBT

IBT

TEL

Oh, God. He says only one word... "next, next"



***Just more & faster***

# Blessing

## Proficiency in problem solving technology-rich environments

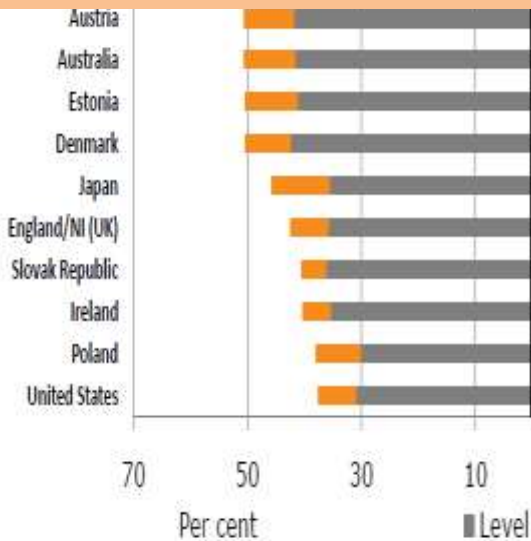
Young adults (16-24 year-olds)



## PISA Rank

1. Korea
2. Japan
3. Switzerland
4. Estonia
5. Finland
6. Canada
7. Poland

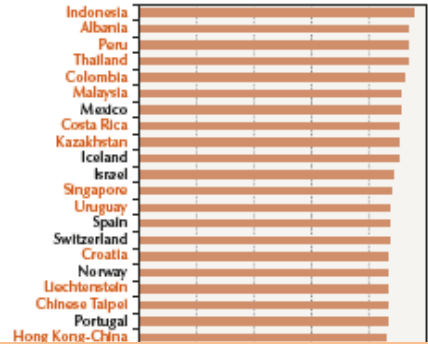
World TOP in  
technological proficiency  
& academic achievements



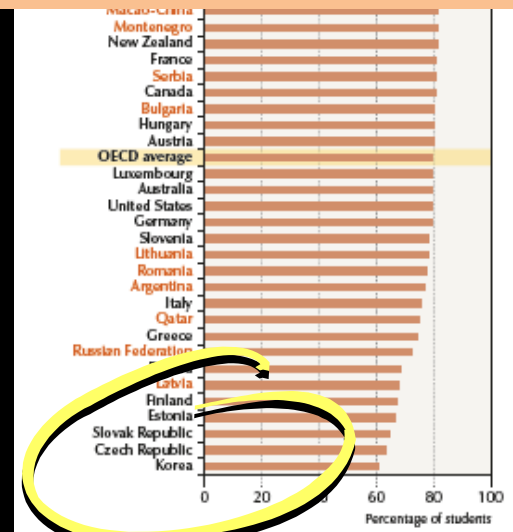
12. Ireland
13. Slovenia
14. Denmark
15. New Zealand
16. Czech Republic
17. France
18. United Kingdom
19. Iceland
20. Luxembourg

# Curse?

## Percentage of students who reported being happy at school



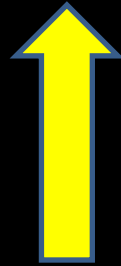
Dead LAST in  
student  
happiness



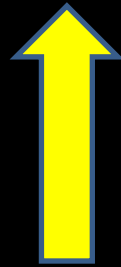


# Curse?

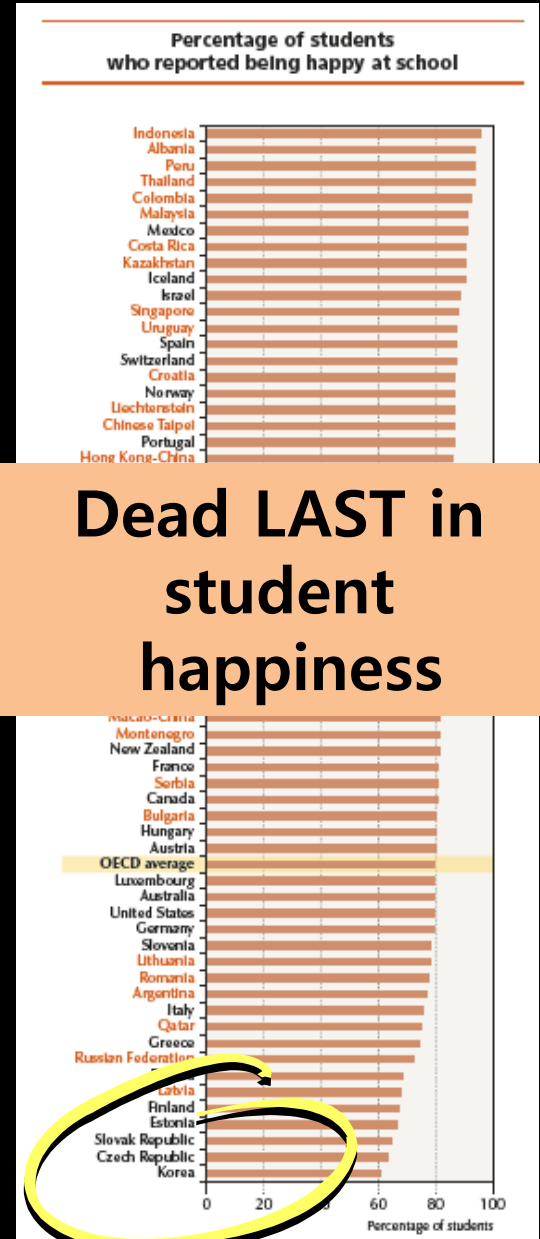
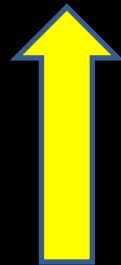
School dropout



Cyber bullying

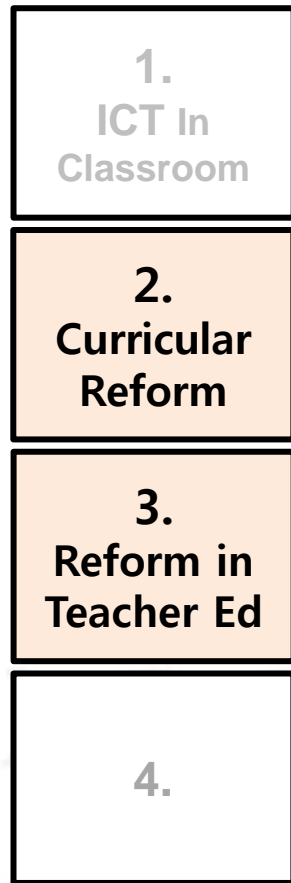


Game addiction



Dead LAST in student happiness

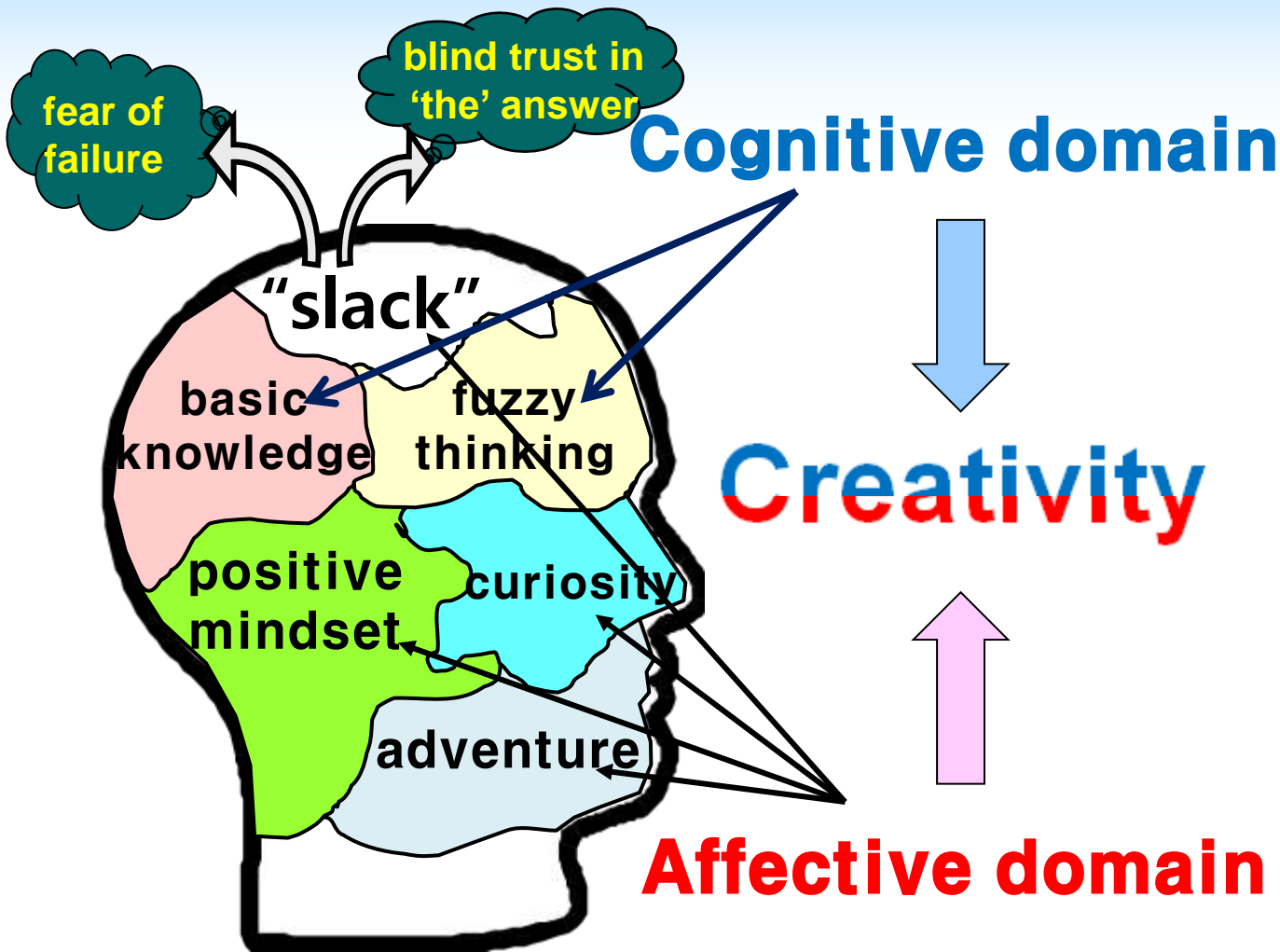
# The **most advanced** form of smart media reinforcing the **worst** form of teaching.



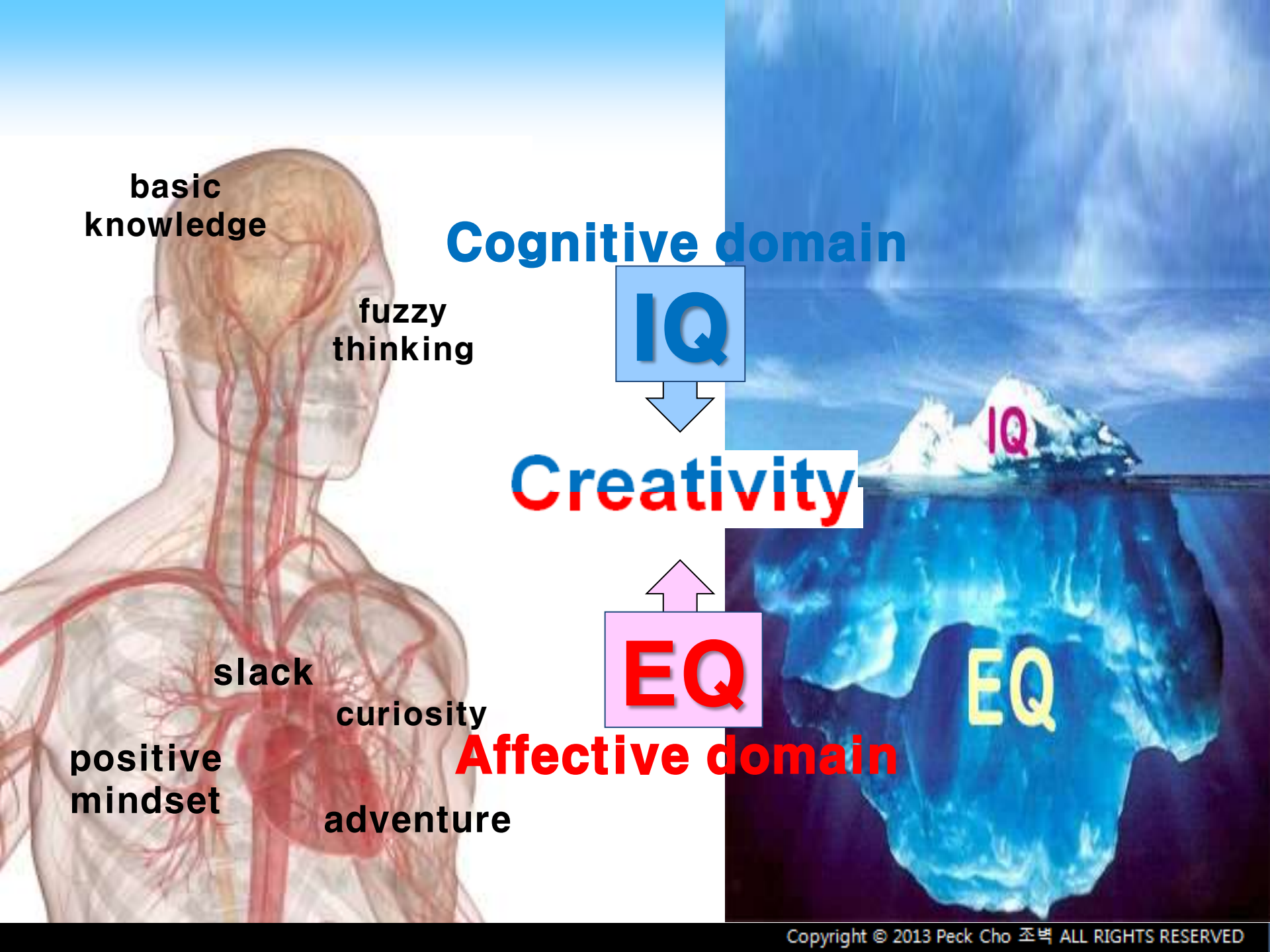
**What good is smart media if...  
all it does is do the bad education  
more and faster?**

**'ICT in classroom' must be  
accompanied by 'Curricular Reform'  
& 'Reform in Teacher Ed'**

**(Emphasis on the hardware aspect of  
ICT is not good enough.)**







basic knowledge

Cognitive domain

IQ

fuzzy thinking

Creativity

EQ

Affective domain

slack

curiosity

positive mindset

adventure

# We need to focus on both aspects of **e**-learning:

**e**lectronics  
hardware  
technology

**e**mpowerment

**e**motion  
software  
heart

**e**xperience

# **e-learning:**

**e**lectronics  
hardware  
technology

**e**motion  
software  
heart

**e**mpowerment

**e**xperience

**ACCESSIBILITY & CONNECTIVITY**

to  
information  
&  
knowledge

between  
teachers  
&  
students



**For teachers to become enablers,  
they need to learn to design...**

**not just academic curriculum  
but learning experience, too.**

content  
methods  
procedure  
process  
material

**COGNITIVE DOMAIN**

***more & faster***

doing  
creating  
changing  
cooperating  
dreaming

**AFFECTIVE DOMAIN**

***better & smarter***

# Smart media (ICT) in education: Is it a blessing or a curse?

1. ICT In Classroom
2. Reform in Teacher Ed
3. Curricular Reform
4. Leadership In Education

It depends on whether we have **'LEADERSHIP'** in education

**PRIORITY**  
(Values, Political will)

**Decision was made by leaders 50 years ago...**

**B**uild national consensus  
**E**ducation as dream-making  
**S**uccess through technology  
**T**eachers are Nation Builders

**Whether to make the change or not**





In memory of a great teacher...

*It always seems  
impossible until it's done.*

- Nelson Mandela

