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?

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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.

GNP per capita

1960 1980 2000 2020

US$67 

US$24,000
Success Story: The “Miracle of Han River”

Korea is 9th nation w/ US$1 trillion in export

US$24,000

2020
Success Story: The “Miracle of Han River”

Korea is 9th nation w/ US$1 trillion in export

Korea is 7th in GDP pc US$20,000 & 50M pop
Success Story: The “Miracle of Han River”

Korea is 9th nation w/ US$1 trillion in export

Korea is 7th in GDP pc US$20,000 & 50M pop

Korea is 5th nation to host all 4 major sports events

SUMMER
FIFA
For the Game. For the World.

WINTER
IAAF Athletics
## Success Story: The “Miracle of Han River”

### By land size (km²)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Land Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Malawi</td>
<td>118,484</td>
</tr>
<tr>
<td>101</td>
<td>Eritrea</td>
<td>117,600</td>
</tr>
<tr>
<td>102</td>
<td>Benin</td>
<td>112,622</td>
</tr>
<tr>
<td>103</td>
<td>Honduras</td>
<td>112,492</td>
</tr>
<tr>
<td>104</td>
<td>Liberia</td>
<td>111,369</td>
</tr>
<tr>
<td>105</td>
<td>Bulgaria</td>
<td>110,879</td>
</tr>
<tr>
<td>106</td>
<td>Cuba</td>
<td>109,884</td>
</tr>
<tr>
<td>107</td>
<td>Guatemala</td>
<td>108,889</td>
</tr>
<tr>
<td>108</td>
<td>Iceland</td>
<td>103,000</td>
</tr>
<tr>
<td>109</td>
<td>South Korea</td>
<td>100,210</td>
</tr>
<tr>
<td>110</td>
<td>Hungary</td>
<td>93,028</td>
</tr>
<tr>
<td>111</td>
<td>Portugal</td>
<td>92,090</td>
</tr>
<tr>
<td>112</td>
<td>Jordan</td>
<td>89,342</td>
</tr>
</tbody>
</table>

### By population

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

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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

1960
1980
2000
2020

US$24,000
Key to success is: Education

3S learning

Same time
Same place
Same age
Key to success is: Education

3S learning

11,000 schools
483,000 teachers
199 four-yr. colleges
132 two-yr. colleges
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

3W learning

3S learning

No. of students per teacher

1960 1980 2000 2020

Whenever Wherever Whoever

Same time Same place Same age

Low birth rate
Key to success is: Education

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

3W learning
Whenever
Wherever
Whoever

3S learning
Same time
Same place
Same age
The key to success is: Education

Whenever, Wherever, Whoever

Same time, Same place, Same age

US$67

ICT

PBS April 14, 2009
e-learning (ICT 1.0)

Internet
Computer
TV & AV
e-learning (ICT 1.0)

Helps to show Complexity
Helps to explain difficult concepts

e-learning (ICT 1.0)
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 3S learning 3A learning

US$67

1960 1980 2000 2020

Whenever Whenever Anytime
Wherever Wherever Anywhere
Whoever Whoever Anyone

Same time Same place Same age
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)

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

Smartphone penetration rate
(Global average: 14.8%, base: 2012)

<table>
<thead>
<tr>
<th>Country</th>
<th>Smartphone penetration rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>67.6%</td>
</tr>
<tr>
<td>Norway</td>
<td>55.0%</td>
</tr>
<tr>
<td>H.K.</td>
<td>54.9%</td>
</tr>
<tr>
<td>Singapore</td>
<td>53.1%</td>
</tr>
<tr>
<td>Australia</td>
<td>50.2%</td>
</tr>
<tr>
<td>Sweden</td>
<td>46.9%</td>
</tr>
<tr>
<td>U.K.</td>
<td>46.6%</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>45.3%</td>
</tr>
<tr>
<td>Denmark</td>
<td>43.4%</td>
</tr>
<tr>
<td>Finland</td>
<td>43%</td>
</tr>
</tbody>
</table>

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smart media (ICT 2.0)

Smartphone penetration rate
(Global average: 14.8%, base: 2012)

Percent of South Korean Students Owning Smartphones
Source: Ministry of Education Survey released July 29, 2013

<table>
<thead>
<tr>
<th>Regional category</th>
<th>Elementary</th>
<th>Middle School</th>
<th>High School</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>49.2</td>
<td>85.4</td>
<td>83.7</td>
<td>69.6</td>
</tr>
<tr>
<td>Rural (farming/fishing villages)</td>
<td>46.6</td>
<td>83.1</td>
<td>83.7</td>
<td>66.5</td>
</tr>
</tbody>
</table>

Korea had the highest smartphone ownership in the world last year.
smart media (ICT 2.0)
5 TV channels dedicated to learning

- General audience
- Elementary school children
- Middle school students
- College preparatory
- English Education

1997
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 produces 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
Whenever
Wherever
Whoever

3S learning
Same time
Same place
Same age

3A learning
Anytime
Anywhere
Anyone
Key to success is: Leapfrogging

3W learning
Whenever
Wherever
Whoever

3A learning
Same time
Same place
Same age

Anytime
Anywhere
Anyone
Key to success is: Leapfrogging

3W learning
Whenever
Wherever
Whoever

3A learning
Anytime
Anywhere
Anyone

1960
1980
2000
2020

Same time
Same place
Same age
Key to success is: Educational Leapfrogging

3W learning
Whenever
Wherever
Whoever

3S learning
Same time
Same place
Same age

3A learning
Anytime
Anywhere
Anyone

1. ICT In Classroom
2. Curricular Reform
3. Reform in Teacher Ed
4. Leadership In Education
Key to success is: Leapfrogging

1. ICT in Classroom

We must embrace technology and integrate it into our education.

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

3. 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

170 concepts!
Creativity

ability to accommodate & assimilate new thoughts

fear of failure
blind trust in 'the' answer
"slack"
- basic knowledge
- fuzzy thinking
- positive mindset
- curiosity
- adventure

positive mindset
Information Age

- Fear of failure
- Blind trust in ‘the’ answer
- “slack”
- Basic knowledge
- Fuzzy thinking
- Positive mindset
- Curiosity
- Adventure

Pre-information Age

- Fear of failure
- The answer
- “textbook knowledge”
- Fuzzy thinking
- Curiosity
- Positive mindset
- Adventure
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
All it does is do the same more & faster!

ICT 2.0  
ICT  
CBT  
IBT  
TEL

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

Oh, God. He says only one word... “next, next”

ICT 2.0
ICT
CBT
IBT
TEL

Just more & faster
Blessing

World TOP in technological proficiency & academic achievements

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

Curse?

Dead LAST in student happiness

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

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

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School dropout
Cyber bullying
Game addiction

Dead LAST in student happiness

Curse?
The most advanced form of smart media reinforcing the worst form of teaching.

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

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.)
Cognitive domain

Creativity

Affective domain

- Fear of failure
- Blind trust in 'the' answer
- "Slack"
- Basic knowledge
- Fuzzy thinking
- Positive mindset
- Curiosity
- Adventure
IQ (Intelligence Quotient)

Cognitive domain

basic knowledge
fuzzy thinking

Creativity

EQ (Emotional Quotient)

Affective domain

slack
curiosity
positive mindset
adventure
We need to focus on both aspects of e-learning:

electronics

emotion

hardware

software

technology

heart

empowerment

experience
We need to focus on both aspects of e-learning: electronics, hardware, technology, and empowerment; emotion, software, heart, and experience.

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.

cognitive domain
content
methods
procedure
process
material

affective domain
doing
creating
changing
cooperating
dreaming

more & faster
better & smarter
Smart media (ICT) in education: Is it a blessing or a curse?

It depends on whether we have ‘LEADERSHIP’ in education

PRIORITY
(Values, Political will)
Decision was made by leaders 50 years ago…

BUILD national consensus

EDucation as dream-making

SUCCESS through technology

TEACHERS 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