지속가능발전교육(EDUCATION FOR SUSTAINABLE DEVELOPMENT)을 위한 스마트교육 전략 제안
Sustainable Development Goal 4 - “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”

With the stand-alone Goal 4 on education and its related targets, the 2030 Agenda for Sustainable Development recognizes that education is essential for the success of all sustainable development goals (SDGs). Education is also included in goals on health, growth and employment, sustainable consumption and production, and climate change.
Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

124 million children and adolescents are denied the right to education.
Gloomy Goals: Education vs Literacy

- Jomtien Decade started in 1990:
  - From Literacy for All to Education for All by 2000 (1990-2000 one decade), but delayed again
  - “universal access to basic education by 2015 !” in 2000 at Dakar WEF
- Six-year basic primary education seems to have reached at least in reports by 2015
- However, 1 in 5 of world population are still illiterate, 2/3 are women
A world map showing the literacy rates

http://wikieducator.org/images/8/82/World_literacy_rate_map.png
ICT use in Education

Literacy rate for women older than 15
Percentages
- 12 to 30
- 31 to 50
- 51 to 80
- 81 to 97
- 98 to 100

Unavailable data

Most recent data: 2000-2006

Progress in literacy rate for young women (15-24 years old)
- More than 10% increase between 1985-1994 and 2000-2006

Gender differences in schools
- Over-representation of males in primary and secondary schools (less than 95 girls per 100 boys)
Delaying Goals: Incheon Declaration for 2030

“...we will ensure the provision of 12 years of free, publicly funded, equitable quality primary and secondary education...”

“...urge ...allocating efficiently at least 4 - 6% of Gross Domestic Product and/or at least 15 - 20% of total public expenditure to education...”
EDUCATION IS THE PROBLEM?
CAN READ
BUT CANNOT COMPREHEND
British surprised at higher adult literacy in Myanmar than in London when they came in 1890s!

However, One Example: Myanmar Report on Education
ICT use in Education

From Myanmar maybe to all others

Lack of interest get bigger reason as higher grade.

Matriculation test at grade 12 in English and Science and Maths taught in English …..

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**Reasons for Dropout, Per IHCLS & CESR SES School Survey**

<table>
<thead>
<tr>
<th>Reason for non-entry, dropout or exit:</th>
<th>IHLC Responses (Parents)</th>
<th>CESR Secondary School Survey (Teacher Responses)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No primary dropout (1)</td>
<td>Primary dropout (2)</td>
</tr>
<tr>
<td>Share of cohort</td>
<td>3.8%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Cumulative share of cohort</td>
<td>3.8%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Share of completers not transitioning</td>
<td>23.4%</td>
<td>12.8%</td>
</tr>
</tbody>
</table>

- IHLCs (parent responses): “lack of interest” overtakes costs as lead reason for non-completion of SES
- SES school survey (teacher responses): close correspondence in ordering, w/ “lack of interest” most likely to be cited as 1 of top 3 reasons
- “Good news”: teachers’ recognition of weak quality may be an asset in curriculum reform
Secrets of Korean Success

- Hangul
- Chinese character and translated modern/world knowledge
- Hands with private sector for meeting social demand of education
- And Many other unknown secrets.....

- One quiz of ‘no matriculation test’?
  - easier test for reducing study load
  - wider door toward upper level education
WE NEED A DISRUPTIVE SOLUTION!

“THE HUMAN HISTORY OF TECHNOLOGY”
첫 번째 만남: 글자
청각장애와 시각장애 중 누가 더 힘들까요?
위대한 글자: 써기문자와 훈민정음
훈민정음의 위대함

1. 훈민정음은 인류최고의 발음기호이다.
   - 15세기 중국어 한자의 발음기호
   - 초성복자음의 신비함을 비롯하여
   - 양성모음과 음성모음의 조화 등등....
2. 훈민정음은 한국인의 구강발음기관을 발전시켰다
   - 영어를 가장 원음에 가깝게 발음할 수 있는 한국인들
   - “아이는 엄마의 입술움직임을 보고 말을 배운다!”
3. 훈민정음은 한국교육기적의 원천이다.
   - 해방 10년만의 문맹퇴치 기적
   - 글자를 배움이 학습의 시작이다

子曰 弟子入則孝하고 出則則弟하며 謹而信하며
汎愛衆紳이니 而親仁이나 行有餘力이어든 則以學文이나라.
두번째 만남: 종이
코란의 기적: 종이와의 만남
한국인보다 스마트한 유대인 교육의 원천: “하부루타”, 도대체 무엇일까?
세번째 만남: 인쇄술
직지와 구텐베르그: 승자는?
승자는 칠판과 분필이었다!
오늘의 만남: 컴퓨터와 스마트기술
스마트폰, 구글글라스, ....... 어디까지 갈 것인가?
POST-HISTORY:
기록은 더 이상 없다!

ROBIN WILLIAMS

THE FINAL CUT
DEIN TOD IST ERST DER ANFANG

YouTube
무엇을 가르칠 것인가?
무엇을 배울 것인가?

사물이 알아듣는 말?
There was one smart challenge, 2011 in Korea!

Definition of SMART Education
SMART Education aims to build an intelligent customized learning system for strengthening competencies of learners in the 21st century and to be a driving force for innovating educational system, including educational environment, content & methods, and assessment.

- **Self-directed** (Self-initiated)
  - (Past) curricular composition led by teachers
    - ‘Self-directed learning’ planned and performed by students for themselves

- **Technology Embedded** (Using IT)
  - (Past) Educational opportunities limited to classroom & home
    - ‘Technology-based learning’ creating identical educational environment anytime anywhere
  - (Past) Paper textbook-centered education
    - ‘Rich educational content-centered learning’ using digital content & online learning courses

- **Motivated** (with fun)
  - (Past) Lecture-type lesson using typical textbook
    - ‘Experience-based creative learning’ using various activities & content

- **Resource Enriched** (Rich resources)
  - (Past) Uniform lessons with 1 subject & single course
    - ‘Flexible & individualized learning’ considering each student’s level & aptitude

- **Adaptive** (Levels & aptitude)
스마트교육: ET와의 대화
Some Suggestions…

1. Top priority on learning efficacy: “learning/literacy is the goal, while education is the technology/institution”
2. Mother tongue based education first, but recognition of its distance from world knowledge and skill
3. Basic literacy of 3Rs based on Letter and number are not the only way of learning/literacy/education
4. ICT/smart media must be adopted as the disrupted solution to solve the global illiteracy
5. and let us join……
WHAT WE CAN DO?
Some Best Practices…

3. http://www.ted.com/talks/shukla_bose_teaching_one_child_at_a_time
ICT use in Education

www.ted.com/talks/sugata_mitra_the_child_driven_education

Sugata Mitra: The child-driven education
TEDGlobal 2010 • 17:13 • Filmed Jul 2010

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2,231,295 Total views

TED Talks are free thanks to support from

Education scientist Sugata Mitra tackles one of the greatest problems of education — the best teachers and schools don’t exist where they’re needed most. In a series of real-life experiments from New Delhi to South Africa to Italy, he gave kids self-supervised access to the web and saw results that could revolutionize how we think about teaching.
ICT use in Education

www.ted.com/talks/conrad_wolfram_teaching_kids_real_math_with_computers
1. http://www.ted.com/talks/shukla_bose_teaching_one_child_at_a_time

Educating the poor is more than just a numbers game, says Shukla Bose. She tells the story of her groundbreaking Parikrma Humanity Foundation, which brings hope to India's slums by looking past the daunting statistics and focusing on treating each child as an individual.
ICT use in Education

oer.moeys.gov.kh
• GLOBAL SOCIETY CALLS FOR KOREAN EDUCATION!

• DISRUPTING ALL SLOGANS: LFA JOMTIEN DECADE EFA MDG SDG EF POST-2015 MUSCAT AGREEMENT INCHEON DECLARATION,,,,,

• THE NEW ONE BY THE DISRUPTIVE TECHNOLOGY FOR GLOBAL CONNECT BY 2030: UN EDUCATION COMMISSION & SMART EDUCATION IN 2016, KOREA