infolIutionZERO: Shaping Policy towards a Green Digital World

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The Heart of Education
Learning to Live Together

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www.infolIutionZERO.or.kr
The Power of ICT Education Policies

“The role of ICT in education is to support teaching and learning practices, enhancing the ways through which educators can nurture human potentials”

- Provide a platform for sharing policy, experiences, good practices, and lessons;
- Strengthen the network of ICT in Education stakeholders and policy makers in member states;
- Raise awareness of some of the useful tools through participatory workshop sessions to help Member states build capacity in developing robust ICT policies;
- Initiate focused reflection on key issues and concerns on ICT for education as well as future activities on the application of ICT to achieve education for all.
infollution = information + pollution

THE NEXT-GENERATION OF POLLUTION

Violent Video Game  Cyber-Bullying  Obscene Content  Viral Rumors  Technology Addiction  Privacy Invasion
Example: Violent Video Game
Proliferation of Harmful Things

Virus in the Body

Infollution
Our infolluted digital world

Private Moment Made Public, Then a Fatal Jump

Taiwan teenager died after playing computer game non-stop for 40 hours

Online pedophile communities operate unchecked

The recent kidnapping and rape of a 7-year-old girl has highlighted the danger of online communities of possible pedophiles running unchecked on the Internet.

Parents: Cyber Bullying Led to Teen's Suicide
We urgently need solutions

Children start using the internet and video games from 3 years old
100%

Use Swear words in their everyday language
90%

First exposed to obscene materials before the age of 12
60% Cyber-bullied others on the internet

Source: http://www.etimes.net/
50%

Have played violent online games rated R
40%
Habitually post malicious comments
30%

Sexual crime offenders under 19
25%

Juvenile sexual crime offenders who imitated online porn
20% Have spread false information or obscene material
15% Addicted to the internet or online games

Source: http://www.etimes.net/
Precious lives are lost every day

Digital world is our world

http://www.foxnews.com
Internet Regulatory Framework
Importance of digital citizenship education

“The focus should be to work within teenagers’ cultural frame, encourage empathy and help young people understand when and where drama has serious consequences. **Interventions must focus on positive concepts like healthy relationships and digital citizenship** rather than starting with the negative framing of bullying. **The key is to help young people feel independently strong, confident and capable** without first requiring them to see themselves as either an oppressed person or an oppressor.”

-Microsoft Research, 2011

www.nytimes.com
Households with access to the Internet

Percentage of all households (2011 or latest available year)

Source: OECD 2012, Singapore IDA 2012

China Will Have Nearly Twice the Number of Internet Users as the U.S. and Japan

China Internet Watch

Source: BCG
## Case Study: Overview of Internet-related Government Regulations in South Korea

<table>
<thead>
<tr>
<th>Ministry</th>
<th>Policies</th>
<th>Year</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of the Gender Equality &amp; Family</td>
<td>Cyber Ethic Index</td>
<td>2005</td>
<td>+) New quantitative measure for youth protection from cyber dangers&lt;br&gt; -) Failed due to lack of ISP participation</td>
</tr>
<tr>
<td></td>
<td>Online Game Shut-down Law</td>
<td>2011</td>
<td>+) Initiative to reduce internet/video game addiction among youth&lt;br&gt; -) Not successful due to resistance from game industry and game consumers&lt;br&gt; -) Not effective due to lack of technical and systematic regulation&lt;br&gt; -) Reverse discrimination against foreign game companies</td>
</tr>
<tr>
<td>Ministry of Culture, Sports and Tourism</td>
<td>Selective Online Game Shut-down Law</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>Korean Communications Commission</td>
<td>Limited Personal Identification Law (Internet Real name usage law)</td>
<td>2011</td>
<td>-) Abolished by the Constitutional Court&lt;br&gt; -) Not effective and has raised privacy concerns</td>
</tr>
<tr>
<td></td>
<td>Youth Protection Officer Law</td>
<td>2001</td>
<td>+) Imposes corporate social responsibility on large ISP companies&lt;br&gt; -) No regulation towards small and medium size ISPs</td>
</tr>
<tr>
<td></td>
<td>Cyber Insults Restriction Law</td>
<td>2008</td>
<td>-) Conflicts with Freedom of Speech&lt;br&gt; -) Criticized as abuse by government authorities</td>
</tr>
<tr>
<td></td>
<td>Prohibited Language Law</td>
<td>2004</td>
<td>-) Not effective.</td>
</tr>
<tr>
<td></td>
<td>Mobile App Regulation</td>
<td>In plans</td>
<td>+) Gov. seeks to filter inappropriate contents&lt;br&gt; -) Conflict with Freedom of Speech</td>
</tr>
</tbody>
</table>
Case Study: Limitation of Internet-related Government Regulations in South Korea

- Systematic limitation of strong government-driven regulations
- NGOs: Sporadic campaigns and non-professional counselling
- Parents and Teachers: Lack of ICT knowledge and controls
- Private Sector: Passive response from Internet Service Providers
- Academy: Underdeveloped human and academic resources
Building Green Digital Culture through collaborative effort of multiple stakeholders

- **Light touch regulatory framework**
- **Encourage industry self-regulation**
- **Promote online safety awareness through public education**

**Professional watch-dogs**

**NGOs**

**Strong support and fast response**

**Government**

**Theoretical and practice-based research**

**Academia**

**Strong ethics and proactive self-regulation**

**Private sectors**

**Empowered with knowledge and controls**

**Parents and Teachers**

**Digital citizenship**

**Youth**
Case study: Integrated approach for “Cyber Wellness” education in Singapore

Inter-Ministry Cyber Wellness Steering Committee (ICSC)

- Ministry of Information, Communications and the Arts (MICA)
- Ministry of Education (MOE)
- Ministry of Community Development, Youth and Sports (MCYS)
- Ministry of Defence (MINDEF)
- Ministry of Home Affairs (MHA)
- Infocomm Development Authority (IDA)
- Media Development Authority (MDA)

$10 million for 2009-2013

4-year longitudinal study to understand students’ cyber behaviours, evaluate training programs
Professional counselling and cyberwellness training
Holistic digital citizenship Intervention program
MOE Cyberwellness school programs and web portal
infolutionZERO (iZ): Main Activities

- **Awareness:** Green Digital Campaign
- **Education:** iZ HERO Project  
  Bridge Digital Divide
- **Research:** Infolution index  
  Infolution cost/benefit  
  Green digital culture
Innovative ITC Education Platform
to Empower Children with
21st Century Digital Leadership!

2011. 1st Generation, KOREA  ➔  2013. 2nd Generation, SINGAPORE

Traditional Media
• Comic Book
• Parental Guide Book
• Peer mentoring program

New Media
• Digital Interactive Exhibition @ Singapore Science Centre
• Web Game

Research
• NIE Experimental study

Organizers:
infollutionZERO  INKISA

Sponsors:
Inter-Ministry CyberWellness Steering Committee (ICSC)
infolutionZERO Media Coverage
Mentioned over 70 times by mass media outlets in Korea in 2011
Research: Cost and Benefits of the Korean Online Gaming Industry

<table>
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<th>Korean Game Industry Statistics</th>
<th>Cost/Benefit Ratio</th>
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<tr>
<td>Social Cost due to Heavy Users</td>
<td>$5.8 Billion</td>
</tr>
<tr>
<td>Economic Benefits from Heavy Users</td>
<td>$2.7 Billion</td>
</tr>
</tbody>
</table>

218.60%

- Benefits are calculated with average values based on Service industry coefficients and Communication and Broadcast segment coefficients.
- Revenue of game industry and number of game users from ‘2011 White Paper on Korean Games’ (Lee, 2011).
  This data is released from ‘Korea Creative Content Agency’ in 2011.
- Production and value-added inducement coefficients obtained from ‘2009 Inter-industry relation table’ (BOK, 2011).
SPECIAL THANKS TO

iZ Educational Advisory Board

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CEO & Co-founder of infollutionZERO & Asia Director, President’s Office, NTU

Dr Angeline Khoo: PI of CyberWellness Research
Associate Professor, Psychological Studies Academic Group, National Institute of Education (NIE)

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Nanyang Associate Professor, NTU

Dr Kim Nayoung: Game Designer of iZ HERO Project
Assistant Professor, Dept. of Game and Digital Media, Hong-ik University

iZ Key Partners:

Internet Service Provider Code-of-Conduct

NAVER

Academic Research

Digital Literacy Initiative

Green Digital Campaign