Advancing Gendered Innovations in S&T Research in Korea

Heisook Lee
Center for GISTeR

GS17_EU
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http://gister.re.kr/#!/main
Shaping Research and Interventions Agendas for the next 10 years

24-25, June, 2020, Seoul, Korea

Guest of honor & Plenary speaker
Mr. BAN KI-MOON,
Former Secretary general of the UN

Goal of GS-Global for SDGs is to bring together key players organizations that are actively advancing knowledge & practice for effective implementation of SDG targets, even if the topic of gender is not at this stage given the priority it should, as demonstrated by scientific evidences.
See you all in Seoul, Korea on June 24-25, 2020
Why Gendered Innovations? To fix knowledge gender gap

Technology reflects developers, investors view

Many technologies made by men & tested on men
Gendered Innovations Initiatives in Korea

GISTeR’s Initiatives: Promote Gender Inclusive R&D in Korea
Gendered Innovations introduced in Korea in 2013: WISET – KOFWST – GISTeR

Gender Equality in STEM in Korea focused on
-Fix the number
-Fix Institutions

Introduction of GI to Korea
Pilot Project
Expansion of Studies
GS 6-Asia Pacific
Establish GISTeR

1. Initiatives on GI in research contents added to the gender equality policy in STEMM fields in Korea
2. The first case study report on GI led by H. Paik published
3. Harnessing GI in STEMM Research by case studies
4. Connecting GI to UN SDGs
5. Establish GISTeR

Oct. 2013
Nov. ‘13 – Feb. ‘14
Mar. ‘14 - July ‘15
Aug. 2015
Feb. 2016 ~
Case Study Team led by Hee Young Paik

- 18 case studies in 4 areas developed;
- currently 14 research topics
- ~25 scientists (PI Level) have participated
- ~40 papers published in peer-reviewed journals

Initiatives for Gendered Innovations in Korea

Research Activities of GISTeR (2016-2019)

GISTeR supports Research meetings:

1. Develop ICT for informed climate change adaptation solutions in South East Asia
2. Gender Bias in AI
3. Addiction and Gender
4. Smart City and Gender
Activities for Policy development and diffusion of GI in Korea

Policy Research Team led by H. Lee

- Proposed legal basis needed to implement GI sustainably
- Made Research funding policy recommendation
- Dissemination of GI and Guideline development
- Made recommendation to KOFST for journal publication
- Curriculum development for higher education

Amendment of Framework Act on Science and Technology (Moved by Hon. Rep. S.M. Lee) in process

NRF introduced Funding policy integrating Gender dimension to Bio Medical Sciences in 2019

Guidelines for researchers and experts published

Policy recommendation to KOFST (support for Journal publication) is in action since 2019

- Graduate course in Gender-based Medicine
- Introducing of GI to Eng. Course In 5 colleges

GI included in the 4th Framework for supporting Women in STEM(2019-2023) as one of the 4 main strategies. Not enough because GI is not women’s issue but a ‘paradigm shift’ for better science and technology
Diffusion strategies of Gendered Innovation: need all stakeholders

Governments, public & private sectors: Vision setting, Legal basis. Policy instruments including funding, demand from industries & customers
- Proper incentives

Researchers and academia:
Awareness & willingness to integrate gender dimension into research and education,
- Proper incentives
Incentives for promoting GI in R&D

2. Based on the legal system
Explicit / non-Financial / Actionable Incentives
Case: Awards

3. Based on internal evaluation of ST, Implicit/ Non-Financial /Unplanned Incentives
Case: achievements recognition

4. Based on internal evaluation of ST Implicit / Financial / Unplanned Incentives
Case: Excellent Products & Increased Sales

1. Based on the legal system
Explicit / Financial / Actionable Incentives
Case: Proper Funding

Preference

Research/Academia
Industry
Managing part
Society

Impact

Research/Academia
Industry
Managing Part
Society
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation criteria of policy</th>
<th>Researcher (chronological order)</th>
<th>Importance of GI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urgency</td>
<td>If the result of the policy satisfies the value, priority, and demand of the group in a proper timing</td>
<td>Dunn(1994), Ammons(2014)</td>
<td>important</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>How much was achieved by the result or the valuable outcome. To what extent the achievement of the result resolved the problem</td>
<td>Dunn(1994), Ammons(2014)</td>
<td>important</td>
</tr>
<tr>
<td>Efficiency</td>
<td>What degree of effort is required to reach a high achievement of the result</td>
<td>Dunn(1994), Ammons(2014)</td>
<td>important</td>
</tr>
<tr>
<td>Feasibility</td>
<td>If the policy cost and benefit between two groups is evenly distributed. If the desirable outcome is useful and valuable. If the process is based on the agreement between interest groups or citizens.</td>
<td>Dunn(1994), Ammons(2014), Leach, Pelkey &amp; Sabatier(2002)</td>
<td>important</td>
</tr>
<tr>
<td>Criteria</td>
<td>Urgency</td>
<td>Effectiveness</td>
<td>Efficiency</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------</td>
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<td>------------</td>
</tr>
<tr>
<td>Vision planning establishment</td>
<td>0.53</td>
<td>0.58</td>
<td>0.52</td>
</tr>
<tr>
<td>Impact evaluation</td>
<td>0.47</td>
<td>0.42</td>
<td>0.48</td>
</tr>
<tr>
<td>R&amp;D advanced mediation</td>
<td>0.37</td>
<td>0.43</td>
<td>0.47</td>
</tr>
<tr>
<td>R&amp;D Survey, analysis. evaluation</td>
<td>0.22</td>
<td>0.20</td>
<td>0.20</td>
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<tr>
<td>Reflective assessment and planning</td>
<td>0.41</td>
<td>0.37</td>
<td>0.33</td>
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<tr>
<td>Exclusive budget installation</td>
<td>0.56</td>
<td>0.59</td>
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<tr>
<td>Purchase contract system</td>
<td>0.15</td>
<td>0.16</td>
<td>0.16</td>
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<tr>
<td>National standard system</td>
<td>0.29</td>
<td>0.25</td>
<td>0.24</td>
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<tr>
<td>Modification mechanism</td>
<td>0.45</td>
<td>0.47</td>
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<tr>
<td>Specialized agency management</td>
<td>0.31</td>
<td>0.33</td>
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<tr>
<td>Organization performance evaluation</td>
<td>0.24</td>
<td>0.20</td>
<td>0.21</td>
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</table>
## Priority list in the field of regarding National S&T standard classification system using AHP

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Urgency</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Feasibility</th>
<th>Priority lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural science</td>
<td>0.14</td>
<td>0.13</td>
<td>0.17</td>
<td>0.17</td>
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<tr>
<td>Engineering</td>
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<td>0.19</td>
<td>0.23</td>
<td>0.19</td>
<td>0.20</td>
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<tr>
<td>Biomedical/brain science</td>
<td>0.38</td>
<td>0.39</td>
<td>0.33</td>
<td>0.35</td>
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<tr>
<td>Society of humanity &amp; convergence in arts</td>
<td>0.12</td>
<td>0.12</td>
<td>0.11</td>
<td>0.12</td>
<td>0.12</td>
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<tr>
<td>Personnel infrastructure</td>
<td>0.16</td>
<td>0.17</td>
<td>0.16</td>
<td>0.17</td>
<td>0.17</td>
</tr>
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</table>
priority list of planning contents of national R&D project by AHP

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Urgency</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Feasibility</th>
<th>Priority list</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of technology environment</td>
<td>0.28</td>
<td>0.23</td>
<td>0.22</td>
<td>0.22</td>
<td>0.24</td>
</tr>
<tr>
<td>Current technology evaluation</td>
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<td>0.24</td>
<td>0.22</td>
<td>0.26</td>
<td>0.22</td>
</tr>
<tr>
<td>Technology needs evaluation</td>
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<td>0.29</td>
<td>0.33</td>
<td>0.28</td>
<td>0.30</td>
</tr>
<tr>
<td>Impact evaluation of technology result</td>
<td>0.25</td>
<td>0.24</td>
<td>0.23</td>
<td>0.24</td>
<td>0.24</td>
</tr>
</tbody>
</table>
Conclusion

Implications for improvement in the legal system of S&T for gendered innovation:
• An interagency of sustainable GI of research system support is expected to be constructed by offering legislative requirements for GI in S&T.

• The global issue of S&T should be utilized in the aspect of knowledge creation and the contents of research innovation, including the overall agenda.

• The legal system should be improved for social recognition and research to enable the proliferation of GI

Implication for S&T policy instrument and National R&D Management System
• The GI in S&T are expected to not only provide growing competition with policy research and social proliferation regarding the necessity of gender dimension, but also lead to the improvement of policy instruments.

 Awareness of the gender dimension and GI is most important
Thank you!

Equality  →  Equity  →  Justice