

Measuring and Monitoring Gender Equality in the Academia

A Comparative Approach of Recent European Gender Equality Plans

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Context

- EU Starting point: the under-representation of women in STEM
- Numerous reports since 2000: ETAN, WIRDEM, Meta-Analysis, ACUMEN, etc.
- *She Figures* since 2003 (updated every 3 y)
- **Recent projects to implement « structural change » and GEP or GAP in 4 to 5 years and to propose « toolkits » to share the experience as INTEGER, GENIS LAB, GenderTime, EGERA, TRIGGER, etc. (2012 to now)**

Aim of this paper

- To analyse the contents of the GEP / GAP
- To analyse the « toolboxes » proposed by the projects: gender-oriented actions, achievable, replicable, easily included in usual procedures
- **To analyse the methodological tools used for:**
 - the state of the art,
 - the monitoring of the implementation process
 - The evaluation of the impact
- **To propose a critical perspective** (work in progress, based on the GenderTime WP6)

1. Analyse of GEP/GAP contents (1)

- Systematic collection of data (quanti and quali)
- Surveys (questionnaires or interviews)
- Regular reports on the outcomes
- Events: workshops, mentoring sessions, conferences, courses
- Changing procedures: quotas in boards and committees, better transparency and formalised processes for recruiting and promoting, fellowships, ...
- Changing regulations: maternity leave, part-time and flexibility, child care, double careers, ...
- Promoting gender in the content of research (new topic)
- Sharing knowledge, disseminating

1. Analyse of GEP/GAP contents (2)

- GEPs domains:
 - Horizontal and vertical segregation
 - Gender pay gap, salaries
 - Gender culture, gender awareness, Impact of academic work ideals and values, well-being at work
 - Work-life balance
 - Access to decision-making bodies / gate-keepers
 - Career development and support, recruitment and retention
 - Dissemination, knowledge sharing

1. Analyse of GEP/GAP contents (3)

- Critical issues:
 - Different local contexts: disciplines, size, more or less institutional autonomy
 - No common framework (e.g. domains), hard to compare
 - Time frame: Systemic change hard to measure in 3 to 5 years
 - Multi-layered dimensions, interactions with the overall context: hard to measure the impact of GAPs
 - Does not address the core academic activity : publications, project funding, time allocated to different academic tasks, because lack of data
- Difficult to go beyond case studies and recommendations

2. The « toolboxes » (1)

- Only 2 projects finished: INTEGER and GENIS Lab
- Inspiration: quality insurance management (ATHENA Swan program in the UK, ADVANCE in the US?)
- Recommendations, Tables, surveys, based mostly on self-assessment and questionnaires
- Labels, qualifications awarded by an external evaluator (GESIS in INTEGER)
- Statistical and quantitative approaches more or less abandoned.

2. The « toolboxes » (2)

- GenderTime work in progress:
 - Not the more or less similar toolkit after INTEGER
 - Two-folded toolkit:
 - Part 1 based on statistical approaches inspired by EIGE adapted to academia
 - Part 2: interactive open web portal with tags to facilitate browsing across the data and focus on methodological issues and knowledge sharing

3. Analysis of the methodological tools (1)

State of the art, description of the situation

- Access to data, plus retrieving, cleaning etc, confidentiality issues
- Lack of harmonised categories when comparisons. Case of *She Figures*. What is a A position?
- Impact of sampling and definitions of categories:
 - Disciplines: mono or pluri-disciplinary samples
 - Definition of categories: « faculty of science » including biology or not? « Technology » including architecture or not?

3. Analysis of the methodological tools (1)

State of the art, description of the situation (2)

- Data based on the data provided by the HRM and the payroll: good quality, **but does not address what is specific to research** as publications, access to funding, directions of labs, teaching and collective duties, evaluation assessments, ...
- Lots of useful data are sometimes available but time consuming to retrieve. Cf (Wennerås & Wold, 1997), (Van den Brink, 2010) (Leslie et al. 2015)
- Lots of interesting data does not exist (on time allocation, on cultural climate, on well-being), supplied by “cultural surveys” or questionnaires, but poor participation and/or biased samples, or by case studies (limited results)

3. Analysis of the methodological tools (2)

Tools for monitoring the implementation

- Short time-framework, interactions with other issues (as budget cutting) and small numbers (in some cases) do not allow observation of changes in numbers (or make it very risky)
- Tools inspired by quality insurance management: forms and questionnaires, based on self-assessment (with or without the help of the evaluator).

3. Analysis of the methodological tools (2)

Tools for monitoring the implementation (2)

- Methodological issues:
 - Granularity and scales
 - Integration of the time frame: finished / on progress / planned / abandoned
 - Interactions with other issues: demography, budget cutting
 - Lots of data is unavailable or under exploited
- No common classifications, no visualisation tools, hard to circulate in the data. For the moment, hard to compare and to visualise the progress

3. Analysis of the methodological tools (3)

Tools to evaluate the impact

- Apart QI insurance tools, almost nothing. Efficiency is more or less taken for granted, or considered as impossible to measure.
- Almost no longitudinal data or studies: snapshot visions, no dynamic vision (or very poor)
- Lack of explanatory theoretical framework to interpret causal relations between the sets of data or not enough exploited (Mathieu-Matilda effect)

3. Analysis of the methodological tools (3)

Tools to evaluate the impact (2)

- The illusions of the leaky pipeline:
 - Not the same persons are in the pipeline!
 - Constant moves from an institution to another
 - All doctors are not equal: heavy representation of graduates from some universities among the professors (see “Systematic inequality and hierarchy in faculty hiring networks” Clauset et al. Sci. Adv. 2015)
 - Even if an institution is “virtuous”, not sure to get positive results locally

4. Critical perspectives and conclusions (1)

- **At the same time drawn in data and lost in terra incognita:** lack of common classifications, lack of reliable data addressing academic life issues, lack of visualisation, lack of explanatory framework, underexploited data
- **Poor connections with related fields:**
 - scientometrics and bibliometrics (apart ACUMEN)
 - statistical gender index as EIGE
- Lots of positive and self-satisfying assessments, but blind and good-willing implementation is not enough. Need for more research.

4. Critical perspectives and conclusions (2)

- **Academic terra incognita to explore more systematically:**
 - More data could be collected systematically by institutions: publications, project funding, research leaves, fellowships, well-being at work through systematic and compulsory surveys, gender as a research topic, etc.
 - Focus on STEM and HSS, almost nothing on medicine, law, economy, philosophy etc.
 - Data from PhD and habilitation reports, evaluation reports, recruitment reports, lab reports to exploit more systematically
 - Better focus on the academic specificities :
 - sexism and nepotism (Wennerås & Wold, 1997)
 - having the right stuff (Van den Brink, 2010) (Leslie et al. 2015)

4. Critical perspectives and conclusions (3)

- **Building bridges with related research:**
 - Statistical index to measure gender equality as EI GE
 - Bibliometrics and scientometrics, academic rankings: ACUMEN and CTWS in Leiden
 - Modelisation: could overcome the lack of longitudinal studies (simulations) and contribute to the definition of a theoretical framework.
 - “Systematic inequality and hierarchy in faculty hiring networks” Clauset et al. Sci. Adv. 2015
 - Evolutionary game theory applied to scientific collaboration, see Cailin O’Connor works.