GENDER BASED DISCRIMINATION AFFECTS LEARNING OUTCOMES IN HIGHER EDUCATION

GROUP ASSIGNMENT

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Contents

Abstract

Inequality in the teaching environment of a university can be harmful to students and employees. Our aim is to, through a review of scientific literature, highlight the effects of discrimination based on gender in higher education. Our search is restricted to data from Europe and special focus is given to the Swedish framework which is guided by the Discrimination Act. We also specifically discuss the strategies employed by Lund University to mitigate inequality as this is the workplace of the authors. We found that awareness and parity of recruitment have been the most concrete actions, especially in Europe. Our own university presents strategic plans and goals towards a more gender equal seat of education, yet we noted a lack of well-defined strategies to accomplish such. Furthermore, protocols need to be established and constantly evaluated to guide the actions against discrimination. Preventive work, such as implementing mandatory courses and workshops about equality for professors, staff and students could be a good solution to this recurrent problem.

1 Aims

Our aim is to identify what effects discrimination based on gender can have on student learning in higher education. Furthermore, we want to study possible strategies designed to eliminate these issues and to improve learning. This will be investigated particularly within a European and Swedish context, and specifically within Lund University. We will also analyse our own teaching and evaluate what strategies we can implement to promote equal treatment regardless of identity.

2 Background

2.1 The Swedish framework

Inclusive teaching is what will drive innovation and research forward in a world that is quickly becoming more global. To start to detangle what implications discrimination can have on learning and how measures can be implemented to improve the situation, one needs to know what discrimination means and what it covers. Looking at this in a Swedish context, the Swedish Discrimination Act (2008:567) divides the definition of discrimination into Direct discrimination, Indirect discrimination, Inadequate accessibility, Harassment, Sexual harassment and Instructions to discriminate. It also states and defines seven grounds for discrimination as follows:

- Sex: that someone is a woman or a man.
- Transgender identity or expression: that someone does not identify herself or himself as a woman or a man or expresses by their manner of dressing or in some other way that they belong to another sex.
- Ethnicity: national or ethnic origin, skin colour or other similar circumstance.
- Disability: permanent physical, mental or intellectual limitation of a person's functional capacity that as a consequence of injury or illness existed at birth, has arisen since then or can be expected to arise.
- Sexual orientation: homosexual, bisexual or heterosexual orientation.
- Age: length of life to date.

The purpose of this act is to fight discrimination along with promoting equal rights and opportunities for all people. Turning to the higher education system, there are further regulations put up by The Swedish Higher Education Act (1992:1434), stating that equality between the two sexes should always be taken into account and be promoted in higher education institutions. This formulation in itself could be viewed as quite problematic as the word "sex" usually refers to biological sex and thus only includes biological males and females. Therefore, in this report we will use the term "gender" when discussing individuals of different identities as it is a more inclusive term and use "sex" only when reporting data which was actually based on this parameter.

2.2 Experiences and Effects on Learning in Higher Education

One might think that such a framework would mean that gender based discrimination does not occur in higher education, however, this is unfortunately not the case as discrimination is still a wide-spread phenomenon in the higher education system. As pointed out by Grant and Zwier (2011), teachers are unaware of the problems related to bias and discrimination which may in turn perpetuate the issues. For example, a survey among Swedish doctoral students showed that 4% of the male students and 23% of the female students had experienced discrimination based on their gender during their doctoral education (Gröjer et al., 2016). In higher education, a great deal of focus is given to research rather than teaching, yet many researchers are expected to teach (Smith, 2008). One implication of this unequal division of resources is a severe lack of knowledge of existing gender biases, as well as of methods to make teaching more inclusive. The absence of adequate teaching education may be where the system fails and thus students suffer the blow.

Changing to a more local perspective, the project Tellus focused on experiences at Lund University. This project is a 3 year study that was born as a response to the #METOO movement. The study started in 2018

and was published in 2020. The results show, in numbers, how sexual harassment occurs inside the university (Agardh et al., 2020). These numbers show that sexual harassment was experienced among employees and PhD students; 25% of all women and 7% of all men. Among university students these numbers were 27% of the women and 11% of the men. This situation happened during their time of employment or studies at the university. According to the report, the episodes of harassment were frequent rather than isolated situations and a long term effect highlighted by affected employees was the quality of life. Interestingly, university students who had not experienced any biases or discrimination tend to minimise, or fully disregard, the likelihood of themselves being subjected to these issues (Smith, 2008; Agardh et al., 2020).

Ultimately, it is not only psychologically straining to experience biases and discrimination during one's education, but it also affects learning. A teacher with biases is likely to give more attention and space in the learning environment to their favoured (by bias) students, thus providing unequal opportunities for the class. One's motivation might, for example, decrease as an effect of feeling unwelcome or excluded and decreased motivation is in turn one of the most common reasons why doctoral students drop out from their program when not feeling happy within their educational environment (SOU2011:1). Gender based biases and discrimination, where women are usually drawing the shortest straw, might also play a role in why more women than men drop out of the academic career the higher on the hierarchy ladder we look (SOU2011:1). An example of this drop-off is the number of women in economy institutions among Swedish universities; 55% among students, 44% among PhD students, 34% among lectors and finally, a paltry 18% of all professors are women (Allbright, 2019).

2.3 Strategies employed by European Universities

To mitigate the effects of gender biases on learning, active and systematic approaches must be employed. As described in the position paper written by the League of European Research Universities (Buitendijk et al., 2019), awareness and formal prevention plans presented by individuals in leader positions are key to facilitate the elimination of inequality and to ensure equal learning opportunities for all identity groups. LERU proposes a four step plan that aims to make higher education more inclusive. In brief, this plan describes the importance of (1) acknowledging the scientific evidence on the effects of bias, (2) using qualitative and quantitative studies to examine the current situation in the learning environment, (3) developing a strategy that considers inequality issues and presents solutions for said issues, and (4) individuals in high standing leader positions communicating the need for change.

LERU's member universities are urged to follow this type of workflow in order to identify university specific issues, as well as to formulate local initiatives that facilitate equal opportunities for all groups of identities. The position paper (Buitendijk et al., 2019) provides case studies from each of the 23 member universities where they present the measures taken by each university, as well as the observed outcomes. Here, we choose to present the measures taken by the University of Geneva, Leiden and Zurich, as we perceived their efforts towards a more gender inclusive seat of education to be among the most concrete.

Along with workshops and campaigns aimed to raise awareness about gender equality and sexism, the University of Geneva has established an Equal Opportunities Office (EOO) that actively works with questions regarding equality, diversity and inclusion (EDI). The EOO organises several annual events, including conferences and "The Female Professors' Breakfast", during which the university rector is present. Thus, they are in regular contact with the rector, which is an excellent measure to promote awareness among individuals in higher positions. Furthermore, the university works actively towards equal recruitment and has formed "The Equality Delegation" which consists of five professors (two women and three men) whose goal is to ensure equal and bias-free treatment of both men's and women's job applications. In addition to these efforts, as well as courses that touch upon the implications of gender biases, the Institute for Gender Studies organises an annual Gender Award which aims to motivate students to take on research questions regarding gender issues.

Similar to the University of Geneva, the University of Leiden has implemented several strategies to further their gender equality initiative. These measures include workshops, events and courses that aim to raise awareness among staff. Most prominently, their efforts have been siphoned toward promoting gender consciousness during recruitment. In fact, since adopting such an approach, there has been a 27% increase in

female professors in 2018, compared to the 21% increase in 2013. Another university that has implemented measures towards a more equal seat of learning is the University of Zurich; following the elimination of the gender-dependent difference in mean time required for promotion from associate to full professor within one faculty, the initiative went on to be adopted by the entire university.

2.4 Strategies employed by Sweden and Lund University

Strategies for equal opportunities across genders can also be found in other contexts within academia. On April 10th 2014, the board of the Swedish Research Council established a list of goals to promote gender equality within the work that they do, as well as in their own work space (Swedish Research Council, 2014). These goals included striving to have an equal distribution of women and men in their evaluation panels, ensuring that the success rate for accepted grants are the same between them, as well as making sure that the distribution of women and men who apply for grants should correspond to the distribution of women and men which exist within the field.

Lund University provides through its official channels many resources and documents related to the guidelines, core beliefs and actions with the aim of improving equality of opportunities and reduce discrimination in its environment. Starting with the information presented in the Staff web-page (Lund University, 2021a), the University states that improving equal opportunities and reducing discrimination is a duty shared by the Vice-Chancellor, all managers and each faculty group for equality. A tool that is presented is the University Council for Gender Equality and Equal Opportunities (Lund University, 2021b), responsible for preparing and updating documents following the requirements of Horizon Europe. The Horizon Europe is the ninth European Research and Innovation Framework program (2021-2027), that includes guidelines to "decrease gender inequality and intersecting socio-economic inequalities throughout research and innovation systems" (Horizon Europe, 2021). The Lund University staff web-page also has links for other types of resources as for example the contact for the University equality ombudsman. Furthermore, the staff page information regarding victimisation, harassment and sexual harassment (Lund University, 2021c) talk about the discrimination act and give some examples of harassment. It also includes guidelines to report victimization. The guidelines state that one should expose the situation to the manager and the manager is then obligated to start an investigation. However, it lacks details on how to proceed. In general terms, the manager is supposed to have a role as a mediator.

Moreover, Lund University has a policy for gender equality, equal opportunities and diversity. This policy states zero tolerance to all forms of discrimination, advocates focus on awareness, employment of more women as professors and supports a balance between parenthood and work. Lastly, part of the university strategy is stated in the document "Systematic preventive work against discrimination". This document cites the Discrimination Act and explains what is considered discrimination according to the law. It also cites four steps to achieve an environment with less discrimination and more equality but the measures are vague (Lund University, 2021d). Essentially, the crucial questions that we perceive are missing in the University strategy are (1) what protocol the university follows in case of discrimination, (2) how it protects the victim and promotes disciplinary measures to the perpetrator, and (3) details regarding what type of preventive work is made with the staff.

Lastly, we analysed a recent draft of the strategic plan from the department at which we are employees. The draft of the strategic plan for the Department of Biology has an established time-frame spanning from 2020 to 2026 and includes short and long term actions aiming to improve equality. The points we find most concrete in the action plan are (1) recruitment of research and teaching staff to achieve gender equality, (2) certify that individuals in leadership positions have the right skills to deal with discrimination and work related stress, (3) clarify procedures for reporting bullying and harassment. We notice that the topic of infrastructure plan does not approach inclusive design.

3 Method and evaluation

We performed a literature review on gender biases in higher education with a focus on the effects on learning. We also looked at what measures have been taken among some universities in Europe to improve their

respective situation. In relation to this literature, we have identified biases in our own teaching and would like to implement several strategies to improve the situation. One important aspect that is repeated in the literature is how awareness about biases and discrimination helps with improving the current state (Grant and Zwier, 2011). We could implement this in our own teaching by having a discussion on the topic among the teachers in the beginning of each course and follow up on how we could improve after the course is done.

We believe that in addition to these discussions, each individual teacher could be given a standardised self-evaluation sheet where they, prior to teaching, reflect upon what biases they themselves believe that they may have. This should be followed up post teaching with an evaluation of the actual biases that appeared, their effect on the students, and how one can work against them. To maximise the efficacy and value of such self-reflecting, the university should allocate time specifically for this purpose in the course schedules. This may be a strategy to identify subconscious biases, can help raise awareness, and will subsequently improve one's teaching and students' opportunities to succeed. Furthermore, having an "observer" (T. Brage, personal communication, November 25, 2021) (and preferably an observer with some knowledge on biases) during one or a few of one's own teaching occasions could really help with an analysis and give insight to potential structural problems with the teaching methods.

Another measure could be to make all reports and exams anonymous so that the risk of gender based bias is diminished when grading (Saul, 2013). Another effect this implementation would have is that possible discussions about reports between lab assistants would be restricted to a general basis. When knowing which student has handed in which report there is a risk that the lab instructors talk and influence each other which could then be reflected as a bias when grading. Furthermore, the teacher's views about the student performance during the experimental lab should not be shared with other lab teachers. This could influence the lab dynamic, producing prejudice or expectations that are not connected to reality. We agreed that we as teachers should not talk about the students to each other, unless of utmost necessity.

Furthermore, we could evaluate representation in our teaching (Anthony, 2004). If we give examples of researchers we could make sure we mention researchers of different genders. If we talk about sex or gender in any way (for example when talking about our animal organisms) we could reflect on how we present and talk about them.

Another issue is student biases towards the teacher or towards each other. The teacher may experience that the students treat them differently based on their gender; men are sometimes viewed as more assertive and firm whereas women are often perceived as more docile and easier to sway. Bias towards other students can be related to the capacity to use tools (e.g. experimental equipment, computers, plotting data) and performing experiments.

It is not uncommon that some students feel that they are not as able or that they have inferior skills in relation to their colleagues. We specifically believe that this is true for female students. They tend to retract and not engage on the practical activities during laboratory exercises. For example - as in one of our own labs - this happens during dissection of an insect where they show insecurity to handle the animal. As a strategy to overcome this situation of self-doubt we can slowly engage the student to experiment, try to make them comfortable and divide tasks inside the student groups. By being calm and patient the students tend to relax and feel more comfortable to execute the experiment.

Another specific stereotype that can easily be perpetuated through laboratory work is the notion that how much space you take is dependent on your gender. For example, this could lead to a specific student dominating the discussions. To solve this, one could direct questions to students so everyone has the chance to engage in the discussion, and ask about their experiences with the subject so the students feel less intimidated to talk.

To assess how effective the implementations of strategies into our own teaching are, one could for example look at grade differences between students of different gender identities before and after the implementations. However, grades alone might provide a quite vague means of assessment. Rather, one could keep a sort of score sheet with clear connection to the intended learning outcomes. Looking at differences in these sheets from before and after implementation of strategies should provide a better and clearer way to evaluate if ones teaching has improved. Another, more qualitative, way to asses the improvement could also be to conduct interviews with students where their experiences would be in focus. Comparing attitudes and feelings of

students taking the course/lecture/lab before and after implementations of strategies could really give greater insight in how well the measures worked.

Process report

All the members of this project contributed equally in its development. We consulted the scientific literature along with documents available from universities in Europe, from Lund University and from the Swedish government. The literature was divided among the members and summarised; the summaries (and thus all source material) were then made available for everyone. Shahrzad Shaverdian focused on the section "Strategies employed by European Universities", Elin Dirlik focused on "Aims", part of the background, and "Method and evaluation" while Josiane da Silva Freitas made "Strategies employed by Sweden and Lund University". The final project had the text and citations reviewed and edited by the entire group.

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Sex and gender based discrimination affects learning outcomes in higher education

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Aims

- What effects discrimination based on sex and gender can have on student learning

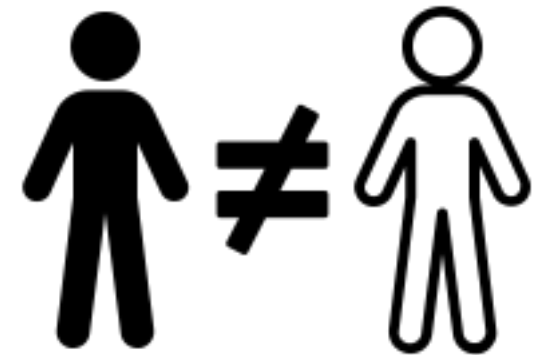- Study possible strategies designed to eliminate these issues

Particulary within an European and Swedish context

Background - Swedish Discrimination Act (2008:567)

- Direct discrimination

- Indirect discrimination

- Inadequate accessibility

- Harassment

- Sexual harassment

- Instructions to discriminate

- **Sex**

- **Transgender identity** or expression

- Ethnicity

- Disability

- Sexual orientation

- Age

Background - Effects

Have you experienced discrimination based on sex/gender?

96%
77%
23%
4%

yes

no

Axis Title

men women
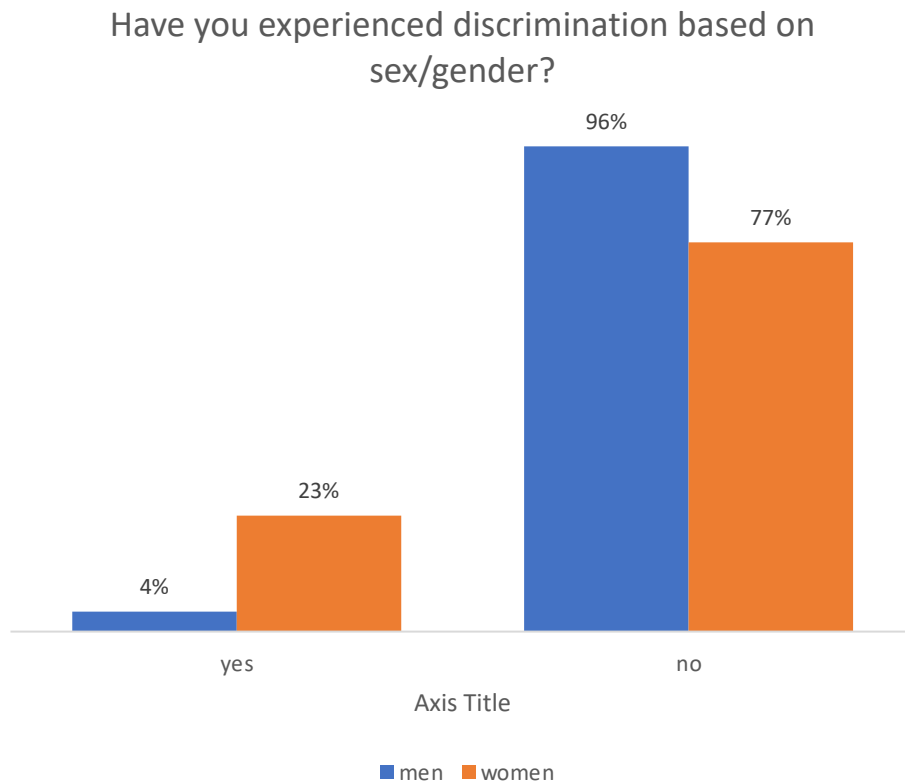
Doktorandspegeln 2016:18, UKÄ

- Unequal attention by teacher

- Feeling excluded or unwelcome

- Decreased motivation

- Perhaps why less women the higher in the hierarchy

Background - Strategies

In Europe

- Awareness:
  - workshops
  - courses and campaigns
  - annual events with university rector
- Equal recruitment
- "Gender Award": motivate students to research questions regarding gender issues

At Lund University

- Goals vs actions
- Awareness: workshop
- Equal recruitment
- Certify that individuals in leadership positions have the right skills to deal with discrimination
- Clarify procedures for reporting bullying and harassment
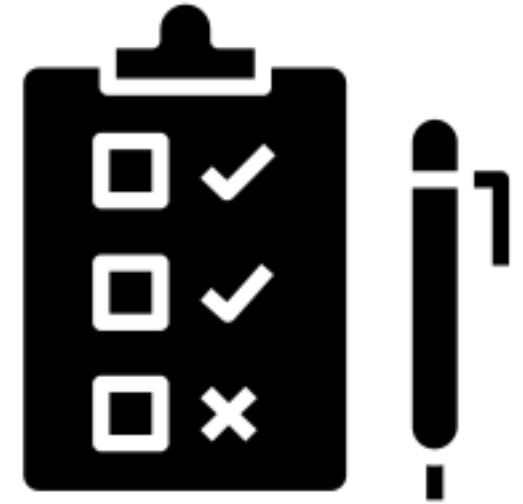
Our teaching

- Awareness:
  - discrimination/bias discussion among teachers before each course and evaluation after
  - annual workshops

- Observer

- Anonymity

- Representation
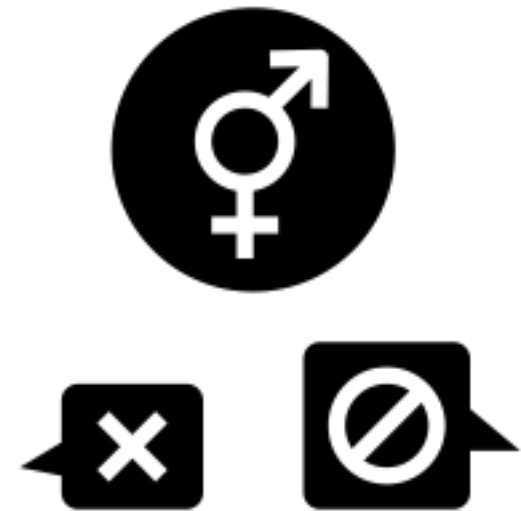
Evaluation

- Grades

- Score sheets with connections to ILO's

- Interviews

Compare result/responses before and after implementation