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Factors identifying commitment to gender equality in a School of Engineering

Camila Zapata

Master in Marketing and Market Research from the University of Barcelona, Spain. Industrial Civil Engineer from the Universidad del Bío-Bío. She has three diplomas in the areas of coaching, digital marketing and equality and empowerment of women. Her professional experience is linked to higher education as a project engineer and university management in the public and private area. Teacher at different universities in matters of entrepreneurship, business plans and marketing. She currently works as a teacher and academic secretary at the Faculty of Engineering of the Andrés Bello University. The areas of research interest are the impact, relationship and integration of the gender perspective within communications and marketing in the various areas of development, digital marketing and content marketing.

Maria Elena Truyol

María Elena Truyol, Ph.D., is full professor and researcher of the Universidad Andrés Bello (UNAB). She graduated as physics teacher (for middle and high school), physics (M.Sc.) and Ph.D. in Physics at Universidad Nacional de Córdoba, Argentina. In 2013 she obtained a three-year postdoctoral position at the Universidade de Sao Paulo, Brazil. Her focus is set on educational research, physics education, problem-solving, design of instructional material and teacher training. She teaches undergraduate courses related to environmental management, energy and fundamentals of industrial processes at the School of Engineering, UNAB. She currently is coordinating the Educational and Academic Innovation Unit at the School of Engineering (UNAB) that is engaged with the continuing teacher training in active learning methodologies at the three campuses of the School of Engineering (Santiago, Viña del Mar and Concepción, Chile). She authored several manuscripts in the science education area, joined several research projects, participated in international conferences with oral presentations and key note lectures and serves as referee for journals, funding institutions and associations.

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Abstract

Incorporating gender equality issues within higher education becomes increasingly relevant in the current context. Sustainable Development Goal (SDG) 5, dealing on gender equality, and SDG 4 dealing with quality education, reinforces the need to work on these issues. Engineering is a predominantly male centric area, as seen by the scarcity of women in the field. In Chile, only 18% of enrollments in engineering and construction degrees are women. It is well known that there are non-cognitive and affective factors that are relevant for student success and have a direct affect on degree choice and subsequent drop out rate. These factors bear relevance on curricular field, institutional sensitivity among others. For these reasons, it is necessary to rethink training institutions so they may become a welcoming, respectful space that favors full inclusion and development for women. The present work seeks to identify factors that enginering students themselves consider relevant and necessary to include in a School of Engineering, to allow promoting a safe and inclusive gender equal environment. Data was collected using a validated quantitative instrument, using the Sensitive Assessment for Gender Equality SAGE [1], training scale on students, regardless of their gender, in the School of Engineering of an important private entity in Chilean higher education, which has the highest enrollment nationwide. The study was complemented by conducting interviews with selected students. The results obtained go towards laying the foundations of what the engineering student community perceives as relevant regarding gender issues, during their training process. Additionally, the foregoing will allow in the near future to guide the School of Engineering in its proposals and in determining areas of opportunity and necessary actions to be made so as to be recognized as a leading institution among its peers in its commitment to gender equality.

Keywords: gender equality; women in engineering; higher education; gender perspective

Introduction

University studies associated with science, technology, engineering, and mathematics (collectively known as STEM), continue having a male gender bias in Chile. Female participation is only around 20% [2]. This low percentage is driven, among other reasons, by strong gender stereotypes regarding the study areas mentioned. The incorporation of women in STEM areas has been turned into a strategy by different institutions.

A specific strategy was developed in a School of Engineering from a private university in Chile, starting in 2021 where the formal creation of the Gender Equality Committee was achieved, whose mission became to promote "justice, equal opportunities and gender equality

within the School of Engineering and the wider university community, in a safe environment and with participative leadership" [3]. This committee recognizes the differences between the various areas of engineering and has prepared an action plan aiming to narrow the gender gap and incorporate more women into these careers.

The importance of this study lies in being able to identify exactly what characteristics or factors a School of Engineering must have to be perceived as a space capable of promoting gender equality. As it is currently dominated by the male gender, strategies are required to firstly create and then harbour a safe space for gender diversity. The former will be implemented through a quantitative and qualitative study of current Faculty of Engineering students, from three different cities in the country.

Study aims being to identify factors considered relevant by the student body and which would have to be included in a School of Engineering committed to gender equality. The former will enable, in the near future, to determine existing gaps between what students expect and what the School of Engineering currently offers. This will allow focusing strategies that work towards a reduction of said differences, harnessing the capacity of the school to promote gender equality. The study undertaken which used a mixed methodology, may constitute a framework for other institutions or Schools of Engineering seeking to address gender equality in the engineering area.

Bibliographic review

Gender would be the roles, behaviors, and attributes that a society, at any given time, considers appropriate for men and women, as per the definition ventured by UN Women. Thus, any generalizations made according to gender attributes are what is known as gender stereotypes. For example, *engineering is a career for men*, or *women are not good at maths*. This leads to discrimination and gender inequalities that bear a direct toll on society.

In recent years, gender equality has become increasingly important on the world agenda. The UN, within its 17 Sustainable Development Goals includes one which is exclusive dedicated to gender equality (Goal 5). In addition, each of its goals addresses gender perspective from different areas or disciplines, in a transversal manner. Gender equality, along with the empowerment of women, help drive economic growth and promote social development [4]. In relation to the above, one of the important indicators in this matter is the GII: gender inequality index. Chile has a GII of 0.288, which places the country in position 62 out of 162 countries, the highest in Latin America [5]. Although this can be seen as positive, the path towards gender equality has been arduous and progress has been jeopardised by the current health crisis. Today gender equity strategies are required, that is, actions and measures that help balance and compensate historical discrimination. These measures will have as their ultimate goal that of achieving gender equality.

Universities are a fundamental part in achieving these objectives. These institutions have been recognized for their power to influence societal models to follow on them being places

of higher learning [6]. Spain has a law known as Organic Law 3/2007, Igualdad Efectiva de Hombres y Mujeres (Effective Equality of Men and Women), which, as applied to the university sphere, refers to "the need to include gender perspectives both in teaching and in action lines pursued by faculties and departmental governing bodies, with gender equality plans being the instruments commonly used to further this" [1]. Most Spanish universities have an area dedicated to equality and a strategic plan seeking to achieve this [7].

As detailed in [7], UNESCO defines a gender perspective as a method or strategy that integrates concepts of gender, equality, and women's rights in all aspects of editorial coverage". In higher education, this allows for greater awareness at the institutional level, and therefore, to students and future professionals. It provides conceptual tools to improve their preparation and competencies [1]. The University of the Basque Country, in Spain, within its equality plans proposes incorporating a gender approach to all its university activities. Indicating that one of the most relevant and effective aspects is teaching [7].

Gender bias in education continues to be present, for example, there are highly segregated male and female areas, known as horizontal segregation, present both in the educational and labor spheres. A study carried out by M. Matarranz and E. Ramírez [8] mentions that an increase in women in university studies has not implied a greater presence in areas such as mathematics, science, and engineering, where there continues to be little female representation.

Given the multiple studies mentioned in [8], the interest shown by women in studying STEM areas remains low, so setting up policies capable of globally encompassing gender stereotypes has been proposed. Moving on from merely raising awareness to providing professional tools so as to place gender equality into practice [7]. The former considers that segregation begins at the previous level of education, meaning that in order to achieve gender equality at the workplace, concrete actions must be sought at the former stage, namely in higher education.

The European Commission has a gender equality strategy which, at the university sphere, is aimed at identifying gender bias, implementing strategies, and establishing and monitoring objectives through various indicators [6]. These actions must also imply a change in the organizational culture, not merely in normative aspects [6]. A gender perspective becomes fundamental in adopting policies in this area and in addressing inequalities [1].

In a study which sought to determine what factors influence women when choosing to study a AEC type career (Architecture, Engineering or Construction) [9], aspects such as personal interest, development opportunities and salary expectations were found to be the driving factors. In addition, findings indicate the need to increase the number of women as spokespersons in these areas.

In the report known as She Figures, from the European Union in 2019, mentioned in [6], some data of interest are provided as follows: 29% of professionals with a doctorate in

engineering are women, while in STEM, only 15% of women have a position deemed as being of a higher rank, while in higher education this is 22%. It also mentions that "The under representation of women in higher education has already been recognized as a global problem by international organizations such as UNESCO, the OECD and the European Union" [6].

The resistance to include gender perspective at an educational level may be due to practices rooted in highly male centric environments. At student or teacher level, this resistance may be due to them being unaware of or having no conscience of any gender inequalities [1]. Institutions need to work collaboratively with other organizations and civil society to make progress on equality [7]. Universities have the responsibility to review their training plans and motivate students to learn about gender issues [10].

There being no prior baseline as to just how much gender perspective teachers have had in their initial formation, research is undertaken [1] to determine an appropriate measurement instrument. Such measuring instrument has been applied in this present research, having first made the necessary adaptations for it to fit in with engineering training. Such adaptations are relevant since each area of study has its own realities regarding work on gender equality. It can be seen in [10] that gender perspectives in education need to be added in the communications area due to the sociocultural relevance of communications media. It is relevant in engineering since for years it has been predominantly male dominated area, and where it is necessary to promote the presence of women. In order to redress this imbalance, action plans are required from those entities offering these study plans.

Accreditation criteria for Chilean universities were updated in 2021, which included the following in dimension II: Strategic management and institutional resources, criterion 9: Managing a harmonious institutional life, gender equity, diversity, and inclusion, seeking to promote a comprehensive community development, meeting the challenges of gender equity and others [11]. With this, adding initiatives across the board on gender issues is no longer a suggestion which would be nice to have but rather an institutional duty, a must have.

The relevance of incorporating actions geared towards gender equality within engineering becomes increasingly clear. Various faculties at the national level have begun to apply various strategic plans, all related to this area. Given the case under scrutiny, the School of Engineering has a strategic plan furthered or hosted by the Gender Committee [3]. The study undertaken will allow both this and other faculties to measure and identify gaps in how they execute their gender equality action plans.

Methodology

The methodological tool used in this research is the Sensitive Assessment Scale for Training in Gender Equality [1]. Its designers proposed and validated said questionnaire aiming to measure the uptake of a gender approach in teacher training. The instrument used, with the adaptations relevant to the context of this research, is presented in the Appendix. It was then applied to undergraduate students from the School of Engineering. The questionnaire was

disseminated online where, given a universe of 8,656 students, 225 voluntary responses were received, of which 217 were validated for analysis. With a confidence level of 95%, the margin of error of the sample is 6.57%.

Complementary to the above, semi-structured and intentional interviews were carried out, enabling deeper insights of the answers given in the questionnaire. The participants first completed their willingness to participate and a consent form where their anonymity was assured. The description of the profile of those who participated as interviewees is shown in Table 1.

Table 1. Profile of interviewed students

ID	Gender	Age	Career studied	Study Modality	Campus
1	Male	23	Civil Engineering	Daytime	Santiago
2	Male	31	Industrial Engineering	Daytime	Conception
3	Female	22	Industrial Engineering	Daytime	Santiago
4	Female	25	Industrial Engineering	Daytime	Santiago
5	Female	46	Industrial Engineering	Evening	Viña del Mar

For purposes of analysis and results, the indicated IDs will be used to identify respondents. In addition, as the quantitative instrument used is divided into three dimensions: Gender in the curriculum, Institutional sensitivity and Awareness of gender inequalities, interview questions were also raised according to said structure. General questions were added to the questionnaire to complement information gathered.

Results were prepared using frequency analyzes through cross tables, using the SPSS statistical software.

Sample characterization

Given the survey population; 66% were male, 32% female, 1% non-binary and 1% prefer not to mention. 58% were day students while 42% were from evening programs. 62% are aged between 18 and 26 years old, while 38% are aged between 27 and 58 years old. Regarding venues and study programs, the sample is divided according to Table 2.

Data analysis and results

As mentioned above, the analysis is divided into the three dimensions addressed by the instrument used: Gender in the curriculum, institutional sensitivity and awareness of gender inequality. Given that 98% of respondents declared themselves male or female, part of the analysis of results is presented in this binary form to simplify result reading.

Introductory questions were added when presenting the various subject areas presented in the interviews. It is relevant to mention that when reaching questions such as “what does gender

equality mean to each respondents", there is a consensus in associating it with concepts such as: Equal opportunities among genders, non-discrimination between genders or equal rights and duties. ID4 indicates "Providing same conditions to different types of people". While ID1 indicates: "Everyone has the same opportunity and the same legal protections, regardless of whether they are men, women, or however they may define themselves."

Table 2. Headquarters and study programs of those surveyed

	Study programs	%
Concepción	Geology	0.5%
	Civil Engineering	0.5%
	Industrial Civil Engineering	9.2%
	Total	*10.1%*
Santiago	Civil Engineering	3.2%
	Civil Engineering in Mines	0.5%
	Industrial Civil Engineering	56.2%
	Engineering in Computers	0.9%
	Computers and IT Engineering	14.3%
	Construction Engineering	1.8%
	Industrial Engineering	4.1%
	Total	*81.1%*
Viña del Mar	Industrial Civil Engineering	8.8%
	Total	*8.8%*
	Grand Total	**100.00%**

Dimension 1: Gender on the curriculum

Given the total number of people surveyed, 62.67% (59% male; 70% female) agree or strongly agree that gender awareness training within engineering is a necessary condition to develop professionally in terms of equality. While 60% of females and 38.9% of male mention that they "Strongly agree" that including gender perspectives in engineering training is essential for dealing with sexist attitudes. In other words, the importance of gender training in engineering is recognized, with the female gender being mostly inclined to including it in their training plan, but not so the male gender.

Complementary findings were revealed when analysing the interviews, reflecting indecision whether to include it as an elective or a compulsory course. ID profiles 1, 2, 3 and 4 agree that it should be voluntary, while profile ID5 mentions the theme should be present across the board within the same subjects:

> *"Little things immersed within the classes themselves"* (ID5)

Complementing the above, when consulting on whether to include gender issues in class assignments as such, the survey findings come up with information summarized in Table 3.

Table 3. Dimension 1: Gender on the curriculum

	Strongly agree or agree with the statement			
	Female	Male	Non binary	Prefer not to say
Gender should be integrated into engineering training on a mandatory basis.	54.2%	35.5%	0.0%	100.0%
All subjects in the curriculum should be taught with a gender perspective	60.0%	33.4%	0.0%	100.0%
There should be at least one compulsory subject on gender equality in the curriculum.	52.9%	36.2%	0.0%	100.0%

One of the questions addressed in the interview is the perception as to whether an engineering professional should be trained in gender issues, or not. All interviewees agree that this indeed should be the case, given that it is an area where the male gender is overrepresented. The following comments are made: ID2 makes comments indicating that such training is important:

> *"Yes, because they are issues that are not dealt with in engineering. In engineering things are predominantly male centric"* (ID2)
> *"If there is an education in gender perspective, it will make people better able to work in mixed gender teams. They will be open to other visions that are needed today. A comprehensive, 360 vision is needed to address these complex challenges"* (ID3).

Another issue added to the research is regarding the use of inclusive language within the classroom by engineering teachers. The above was done without providing a definition of what could be understood as such, so as everyone may be on the same page. There is no single definition in this regard, although the use of a/o is mentioned in regards to assigning gender to everyday words, as the Spanish language does. They do not consider it mandatory, but they see it as positive if the teacher in charge where to indulge in this practice.

Dimension 2: Institutional sensitivity

Regarding perceptions held on the School of Engineering vis a vis gender issues, most students aired a neutral opinion. 39.6% of total respondents neither agree nor disagree with the statement "The School of Engineering has adopted a proactive approach towards gender equality" (while 18.9% strongly agree and 4.15% strongly disagree). Furthermore, 41.5% of students surveyed are not sure whether or not their study plan includes developing gender equality skills. In the interview, when asked about gender issue initiatives within the school, they were unable to distinguish any. That may go some way in explaining this neutrality.

Regarding subjects taught, 42.9% neither agree nor disagree that gender perspective receives sufficient attention when subjects are taught (38.6% female and 45.1% male). Faced with the

statement "The teaching staff is sufficiently aware to gender issues" the majority of the female gender agrees or strongly agrees, while the male gender has a mostly neutral opinion. The summary of the results can be seen in Table 4.

Table 4. Dimension 2: Institutional sensitivity

	Strongly disagree or disagree		Neither agree nor disagree		Strongly agree or agree	
	F	M	F	M	F	M
The School of Engineering has taken a proactive approach towards gender equality	20.0%	9.7%	34.3%	42.4%	45.7%	47.9%
The school applies current regulations regarding equality	10.0%	4.2%	35.7%	42.4%	54.3%	53.5%
My curriculum includes learning skills in dealing with gender equality	30.0%	30.6%	32.9%	45.8%	37.1%	23.6%
The gender perspective receives sufficient attention in subjects taught	25.7%	25.0%	38.6%	45.1%	35.7%	29.9%
Teachers are sufficiently sensitized to gender issues	31.4%	25.7%	24.3%	40.3%	44.3%	34.0%

The interviews gather opinions that agree with each other regarding training by teachers. Students indicate that it is essential that both teachers and directors have training in gender issues. Respondent ID1 mentions that a School of Engineering committed to gender equality encourages inclusion in class participation, indicating that this arises from the teaching style. Among the specific actions indicated is to ask for and respect the preferred pronouns students may wish for themselves and to have inspiring talks:

> *"Encourage participation and that every opinion is valid"* (ID1)
> *"Many of the talks that I have seen in my career are given by men"* (ID1)

Likewise, respondent ID5 adds that actions to be carried out by the faculty should be disseminated first by the academics themselves, indicating that women do not have equal participation in management positions within the industry and points out that:

> *"Teachers should promote and encourage (women) and highlight these inequalities"* (ID5)

Dimension 3: Gender inequality awareness

The survey includes four statements that make references to these dimensions; with results reflected in Table 5. It can be seen that most of the people that identify themselves within the masculine gender strongly disagree or disagree with receiving more attention from teachers

(59.8%) or that student achievements are frequently minimized (61.1%). The female gender rates approximately 20 percentage points less in both assessments.

Table 5. Dimension 3: Gender inequality awareness

	Strongly disagree or disagree		Neither agree nor disagree		Strongly agree or agree	
	F	M	F	M	F	M
Teachers tend to have higher and more demanding expectations from male students than from female students	32.9%	44.5%	30.0%	35.4%	37.2%	20.1%
Male students receive more attention from teachers than do female students	37.2%	59.8%	35.7%	27.1%	27.1%	13.2%
Student achievements are often minimized.	41.5%	61.1%	31.4%	25.0%	27.2%	13.8%
Student achievements are attributed more to their efforts than to their abilities	25.7%	37.5%	30.0%	35.4%	44.3%	27.1%

Information collated from interviews indicate having clearly disseminated processes given cases of gender discrimination, indicating the communication channels students may refer to under such cases. Interviewees agree that a greater female presence in the engineering area would be a good sign for gender equality, and that for this to happen it is necessary to encourage girls from early on to study STEM careers. Finally, they indicate that applying for a job is key moment, where practices that lead to biased results given skewed selection processes should be avoided. Regarding the latter, they state that:

> *"Refrain from stating gender in the curriculum vitae, and when interviewing, have the interviewer trained in equal opportunities, without preferences"* (ID4).
> *"To refrain from asking in the interview, as has happened to me, who would be left in charge of my children"* (ID5)

Supplementary questions

The level of importance assigned to gender equality training is queried, where both genders assign a high level of importance, 8 or higher on a scale of 1 to 10. Although there is significant difference among genders, the male gender indicates 50% in this index, the female gender represents 74.3% (See Table 6).

Regarding the interest in attending a course training or workshop on gender issues, 41.5% indicate that they are interested, while 81.11% of this percentage are students who assigned a high level of importance to gender equality training (ranking it between 8 and 10). 11% of

those surveyed indicate that they have already done some training on gender issues, whether offered by the University or an external entity.

Table 6. Level of importance assigned to gender equality training

	Female	Male
Between 1 and 5	5.8%	30.6%
Between 6 and 7	20.0%	19.5%
Between 8 and 10	74.3%	50.0%

Discussion of results

A limitation of the study is that surveys answered do not necessarily represent the same distribution of students within the School of Engineering, with respect to the city they study at, the program or career. It is suggested to additionally increase the number of interviewees in a similar study.

Regarding results obtained, given the interviews carried out, the concept of gender equality is understood by participants as equal opportunities without gender discrimination. This definition is in line with what is indicated in the bibliography, adding the notion that rights and responsibilities should not be submitted based on gender [6]. Generating actions that avoid vertical segregation within the School of Engineering is also recognized as relevant. Students also highlight the relevance of having gender parity both at teacher and at managerial levels.

Dimension 1: Gender in the curriculum

There is wide acceptance by the female gender of including gender issues as part of engineering training. However, most participants recognize the importance of being able to learn about gender issues, and recognize the relevance of gender issues as professionals in the engineering arena. This reflects an important first factor: Inclusion of gender issues in engineering training. It is recognized that a professional must be aware of these aspects, and although there is no full certainty as to how best to implement this, students recognize this as a positive step in attaining gender equality.

Dimension 2: Institutional awareness

The data from the survey applied shows a certain level of neutrality. In the study mentioned in [1], it can be seen that this was also a mostly neutral dimension. If an institution, in this

case the School of Engineering, wants to be recognized as an organization promoting gender equality, it must first generate actions reflecting institutional awareness regarding the issue.

Interview participants emphasize the need for teachers to be trained in gender issues, which would allow them to address situations within the classroom and so become authoritative in these issues. Another relevant factor gleamed from the study is the level of training in gender equality issues teachers within the School of Engineering may have.

Dimension 3: Awareness of gender inequality

Greater differences were seen in this dimension between the male and female gender, the latter perceiving the highest percentage of gender inequalities. This may be related to their own doubts on gender issue concepts or studies. Ignorance of certain issues may lead to neutral questionnaire responses. Therefore, a relevant factor for a School of Engineering to be associated with gender equality would be to have clear procedures to follow if the student body were to detect gender inequalities within the school. Such mitigation will serve to unify the language for students themselves regarding what situation could be construed as discriminatory in terms of gender.

Another relevant factor mentioned in the interviews, bear relation with job selection process that students go through after finishing their degrees. If students at present are unable to identify discriminatory or unequal situations in the classroom, they will hardly be able to distinguish this in a job selection process. Training and preparation for the world of work, using gender perspectives, becomes a key aspect to consider.

In summary, having analyzed results obtained, three salient factors are identified for a School of Engineering to take into consideration for it to be perceived as committed to gender equality by the student body., The first factor is the inclusion of gender issues in engineering training, which can be further broken down into two parts: The first part would be to include gender equality within the engineering training program, the second part of this first factor would be to include a preparation for entry into the world of work with a gender perspective, both parts aiming to lay the groundwork for gender equality in engineering.

The second factor is being able to regulate and measure training on gender equality issues within teachers from the School of Engineering. Teachers are considered as points of reference s and main actors in promoting an environment of gender equality in the classroom. The trainings must include gender equity in engineering and how to approach an inclusive language, capable of showing respect towards any gender.

The third factor would be to establish and communicate procedures and action protocols to banish gender discrimination within the school. Students need to be aware of what to do if they face discrimination. It is essential that the procedures are clear, that they promote a safe environment and that they are disseminated in a timely manner.

Conclusions and future directions

In the present work three factors are identified that the student body would associate with key actions that a School of Engineering truly committed to gender equality would undertake: Inclusion of gender issues in engineering training, level of training in gender equality issues in teachers within the school, and the existence ofclear action procedures to follow in case of perceived gender discrimination.

It is seen in general that the female gender gives greater importance to the inclusion of gender issues within engineering than does the male gender. It should be considered that engineering has historically been a highly male centric area, and that results reflect this.

The School of Engineering, in 2021, established the Gender Equality Committee. According to results obtained, one of the main challenges will be to make this committee more visible to the student body, which is not fully aware of its existence (it is not mentioned in interviews), nor of any of the actions it carries out (neutrality in terms of proactive approach to gender equality by the school).

Likewise, ignorance of gender issues theory is seen, reflected in mostly neutral options considering certain statements within the questionnaire, which the interviews revealed as doubts in relation to terminology such as: gender equality, gender equity, gender perspective, inclusive language, among others.

The study carried out in [1] reveals similar conclusions to the research carried out in the context of engineering training. Students perceive and recognize the importance of being trained with a focus on gender, but harbour mostly neutral perceptions regarding institutional sensitivity on the subject. There is also a difference in perceptions according to gender, where the female perceives inequalities to a greater extent. In general, Students seem unsure as to whether or not to include courses into their actual training plan. This may be due to subject resistance, and to a certain ignorance as to how gender perspective may be included in university education.

As mentioned in [6], Universities must provide comprehensive training, and become an example and social model, addressing the challenges of vertical and horizontal segregation still largely present in Engineering. “Inequalities and discrimination cannot be eradicated without education with a gender perspective” [6]. It is essential to be able to have teachers capable of including a gender perspective in their subjects. The Institution and the Faculty must provide the tools so that their directors and teachers are fully aware of the pending challenges for gender equality.

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Appendix

Appendix 1: Assessment Scale Sensitive to Training in Gender Equality

First part

Using a five-point scale, indicate the option that best represents your opinion regarding each of the statements contained in the questionnaire.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

1. The School of Engineering has taken a proactive approach towards gender equality.
2. The school applies current regulations on equality.
3. Training in gender issues within engineering is a necessary condition to develop professionally in equality
4. Including the gender perspective in engineering training is essential to dealing with sexism.
5. Gender issues are just as important for my training as those relating to other issues.
6. The diversity of sexual identities should receive more attention in the study curriculum.
7. My study curriculum includes the development of competencies in gender equality.
8. Gender perspective receives sufficient attention in the subjects studied.
9. Gender should be integrated into engineering training on a mandatory basis.
10. All subjects in the curriculum should be taught with a gender perspective.
11. There should be at least one compulsory subject on gender equality in the curriculum.
12. The teaching staff is sufficiently aware to gender issues.
13. Teachers tend to have higher and more demanding expectations from male students than to female students.
14. Male students receive more attention from faculty teachers than do female students.
15. Student achievements are often minimized.
16. Student achievements are attributed more to their efforts than to their ability.

Second part

- Does your study plan require compulsory studies of any subject related to gender studies?

Yes; No; I couldn't tell

- Is there an optional subject on gender/gender equality in your curriculum?

Yes; No; I couldn't tell

- Have you taken any subject or course on gender/gender equality during your university education?

Yes, it was offered by the School of Engineering; Yes, it was offered by the University; Yes, it was offered by an external entity; No

- Would you be interested in taking a course, training, or workshop on gender issues?

Yes; No; I couldn't tell

- Using a ten-point scale, being 1 (Minimum) and 10 (Maximum), indicate the importance you attach to training for gender equality:

Third part

- ➢ Career studied
- ➢ City study in (Viña del Mar, Santiago, Concepción)
- ➢ Study program modality (Daytime or Evening)
- ➢ Year of studies started
- ➢ Age
- ➢ Gender (Female; Male; Non-binary; Prefer not to say)

Appendix 2: Interview

- Issue 0: Introduction

We will start with general but relevant research questions,

1. What does gender equality mean for you?

2. If you have ever sought information on the issue: Where do you usually look for information?

- Issue 1: Gender in the curriculum

Regarding gender issues within you engineering training,

1. What opinion would you have if there were an elective subject on gender equality within the engineering degree program? Would you change your mind if it was mandatory?

2. What do you think would be the perception from the rest of your class regarding the above?

3. Is the use of inclusive language by your teacher in the classroom relevant or not? Why? (What would it mean for you to use an inclusive language?)

4. What importance do you assign to gender perspective within your training plan? Why?

5. In your opinion, should an engineering professional be trained in gender issues? Why?

- Issue 2: Institutional Awareness

Regarding issue awareness that the School of Engineering from the University may have,

1. What initiatives, regulations or others regarding gender equality are you personally aware of? How did you find out?

2. What kind of actions do you expect from the school to be associated with gender equality?

3. Do you expect any type of action from engineering teachers on the subject of gender equality? If so, which ones? If not, why?

4. Have you been part of any activity, within the school, where gender equality issues played an important role? Why did you participate or why have you not participated?

5. Would you say that the school has (or does not have) a commitment to gender equality? How is this reflected?

- Issue 3: Gender inequality awareness

The following questions refer to one's own awareness of gender inequalities,

1. In what way could it be perceived that gender equality is present within the area of engineering? (In what would it be reflected in?)

2. What comments or actions would you consider discriminatory in terms of gender in the classroom?

3. Hypothetical case: During a face-to-face class session, the teacher in charge makes one of these comments or actions. What would you do? How would you act or not?

- Issue 4: Final question

To finish off, the last question is,

1. What would be, in a few words, the final message or opinion that you would like to leave regarding the issues addressed in this Interview? (Perhaps something you couldn't mention and wanted to, something that seems relevant to you, etc.)