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Rethinking Social Action. Core Values in Practice

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Students' Perception Concerning Gender Equality as a Strong Responsible Research and Innovation Dimension

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Abstract

In education, the gender equality (which lets to ensure educational equality between boys and girls) have sparked great interest and provoked intensive discussions amongst various education stakeholders since ancient times. Thus, from the historical perspective, the traditional pedagogy - the magistro-centrist paradigm - was performed differently, in relation to gender dimension, taking also into account aspects related to differentiation of the education in report to social, political, economic and cultural context. Several aspects concerning the differentiation of the educational phenomenon - in relation to gender dimension - envisage: access of individuals to various forms of education, learning contents that include messages that leverages explicitly or implicitly gender characteristics, school performances in different subjects, forms of organization and duration of studies towards a particular career, valences of teachers who train girls or boys. In this respect, the paper aims to identify the students' perceptions about gender equality and its valuing in the own educational routes. More, the level of understanding of the gender dimension as part of the Responsible Research and Innovation (RRI) paradigm is explored. A questionnaire containing 4 items was designed and applied to students enrolled in different university professional paths, but who are also involved in the psycho-pedagogical study programme (level I). In addition, the students were introduced in the RRI processes, with the view to emphasize its importance for the needs and expectations of the actual society.

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Keywords: gender equality, gender dimension, Responsible Research and Innovation, IRRESISTIBLE Project, ENGAGE Project.

1. Introduction

Starting from the traditional school model, organized segregationally - in most cases - taking into account the gender equality criterion, and up to modern contemporary education, which promotes the model of equal opportunities and equity in the context of a school open to community, the gender dimension constituted a frequent subject for discussions, analyzes and controversies, approached especially in the process of identity construction of the students, in formal education.

In fact, ensuring gender equity and equal opportunities has become one of the major desires of the actual time, making the theme very relevant in the actual society, and being introduced as a new orientation in our social life. However, equality is neglected in several areas, even many institutions (as schools) or mass-media underline its social impact. In order to successfully achieve this desideratum in society, it is very important to promote its effective integration in the education process, thereby ensuring the implementation of gender educational policies

In recent years, a series of documents on gender issues adopted by the European bodies, viewed in a broader social or wider community context, demonstrate the increasing concern of policy makers and general public about the need to eliminate or reduce the rate of discriminatory practices. In this respect, the *EU Strategic Engagement for Gender Equality 2016-2019* stipulates the presence of five priority thematic areas: "increasing the participation of women in the labor market and equal economic independence for women and men; reducing the gender paying gap related to salaries, earnings and pensions, which lead to reducing the poverty among women; promoting gender equality in the decision-making process; fighting against gender-based violence and supporting and protecting victims; promoting gender equality and women's rights around the world." [1].

2. Problem Statement

When specifically addressing gender issues in education, research is often concerned with identifying the conditional factors that determine the difference between girls' school performance compared to boys' gender results (mentioned as *gender difference*). Thus, if initially speaking of real advantages that boys recorded in several disciplines such Mathematics or

Sciences (Physics, Chemistry, Biology), more recent research has shown that reality is not fully sustaining that idea [2, 3], considering there are no major differences between the cognitive capacities or the competences of the students of both genres, being based on social constructs, which involve a primary orientation, often determined by the family and community, towards certain school disciplines associated with the gender dimension.

In this respect, the research related to gender issues "needs to be treated with caution, despite the big potential to be applied in a wide range of areas, due to the fact that even the studies can introduce stereotypes or gender prejudices that target either on girls or boys, they may not test the most relevant skills and knowledge and/or may not provide predictability elements for future (mostly academic) performances" [4, p.25].

At the same time, as major themes of interest related to gender dimension in education, there are stated a series of issues that must be taken into account [4, p.28]: "the school curriculum (official and implicit), reading materials proposed by schools, choosing of subjects and preferences for certain subjects, students' motivational and psychological factors, school organization and management, teachers' attitudes, evaluation process, teaching profession, mixed education and the non-mixed structures, young boys problems etc.". In this context, there are also mentioned a number of discriminatory practices on the basis of gender, still identifiable in the European educational space, and not only in contradiction with the policies promoted by the competent bodies, including those ones recorded in the educational area.

From the legal point of view, three models of gender mainstreaming are identified in the European education systems [5, p.13]:

a. *the model of equal chances and equal treatment*, having a general nature, where gender equality in education is based on the general anti-discrimination provisions on equality between men and women, but the specific education laws do not explicitly mention gender equality as a educational desideratum;

b. *the model of equal treatment and chances in education*, where the particular legislation refers to equal opportunities and treatment, but does not contain specific provisions on the role of education on tackling gender inequalities and discrimination in the society. This model is also met in Romania.

c. *the model of gender-centered in education*, that clearly promotes gender equality, at the level of educational policies and practices, regarding the anti-discrimination as one of the main objectives of the educational system. However, the main objectives of education / educational systems related to gender education are [6, p.37]: "information, pragmatic-functional approach

concerning gender issues and growing of fair, responsible and active attitudes among students". More, "the teachers need to help students to understand how society can and should work, having gender equity as basis, in order to enable the citizen to work in their spirit to systematically improve the quality of their relationship, and to raise the interest, preoccupation and desire to add permanent positive facts to those relations".

Despite the multiple attempts to avoid gender discrimination in the actual education, gender inequalities are still existent in the society. Overcoming gender inequalities needs deep transformations in several social structures and the reconsideration of the relationships between men and women in many countries.

3. Aims of the Research

Two European FP7 projects in which Valahia University Targoviste was partner ("*IRRESISTIBLE - Including Responsible Research and Innovation in Cutting Edge Science and Inquiry-based Science Education to Improve Teacher's Ability of Bridging Learning Environments*" and "*ENGAGE - Equipping the Next Generation for Active Engagement in Science Project*") offered the necessary frame for considering gender equality in education. In fact, EU proposed a well-established framework on gender equality, considering also gender issues - in Horizon 2020 research programme -, as cross-cutting ones, being mainstreamed in different parts of the programme and trying to ensure a more integrated approach to research and innovation [7].

In the acceptance of the paradigm of *Responsible Research and Innovation* (*RRI*), gender equality has to be understood in the following lines [8]:

- Promoting gender balanced research teams;
- breaking down gender stereotypes;
- raising awareness towards for gender-sensitive investment and funding;
- ensuring gender-friendly workplace cultures;
- considering the gender dimension in research and innovation;
- gender balance in decision making.

In this respect, the students who participated in the abovementioned projects were introduced in the RRI processes, having as declared scope to raise their awareness concerning the importance of research and innovation for the needs and expectations of the actual society. So, one of the aims of the research was oriented to identify the students' perceptions about gender equality, to understand the gender dimension as part of RRI, and to assess its values in relation to their own educational routes.

4. Research Methods

For undertaking the research, a questionnaire containing 4 items was designed and applied to students enrolled in different professional paths, all of them being enrolled in the psycho-pedagogical study programme (level I) and selected randomly. The questionnaire was applied taking into account each student consent, ensuring the confidentiality of the data gathered from all of them and without violating the ethics principles of the research activity. Prior to applying the questionnaire to the subjects, all aspects related to the rights of participating / withdrawing from the research, but also the rights related to the confidentiality, data processing, and informed consent were presented.

The results were processed using statistical methods, being correlated with qualitative analyses, after debating with students the main findings.

5. Findings and Discussions

The first issue tried to explore the students' perception related to gender equality. Figure 1 illustrates their feed-back, almost half of them considering that gender discrimination does not exist. This is an encouraging result which leads to the idea that in EU countries, young generation is trained to understand and feel that the EU states have achieved gender equality. At the same time, it would have been interesting to notice if the students had perceived that men being superior to women (or vise-versa), concerning the way of solving various tasks. At this point, the result was difficult to be explained (figure 2), due to the fact that 56% of them felt that in many cases, one gender is superior over the other in a very great measure, when considering the way of solving various tasks. It seems that men are better than women in their perception, on different issues – they are stronger or they are more technical and solution oriented -, but also women are better than men in other directions - they are detail oriented or they are good communicators.

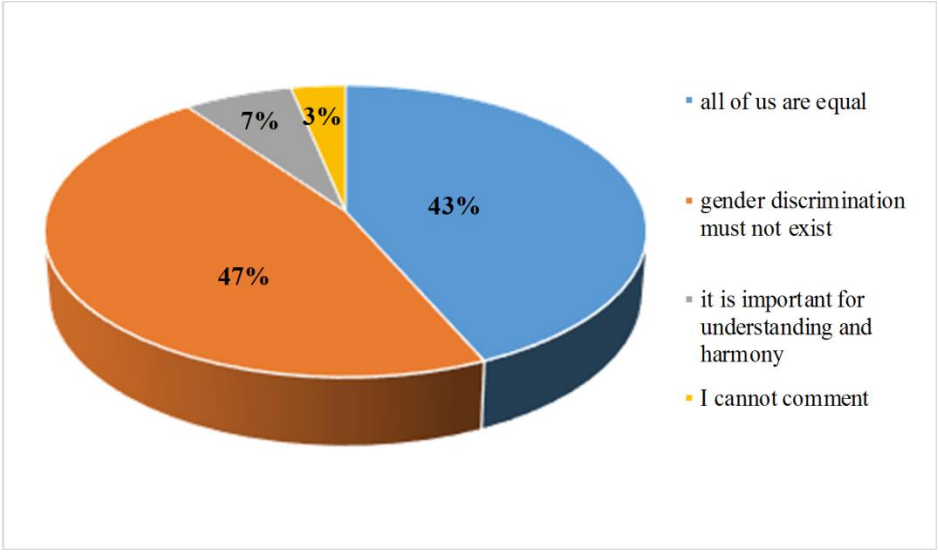

Fig. 1. Students' perception related to gender equality

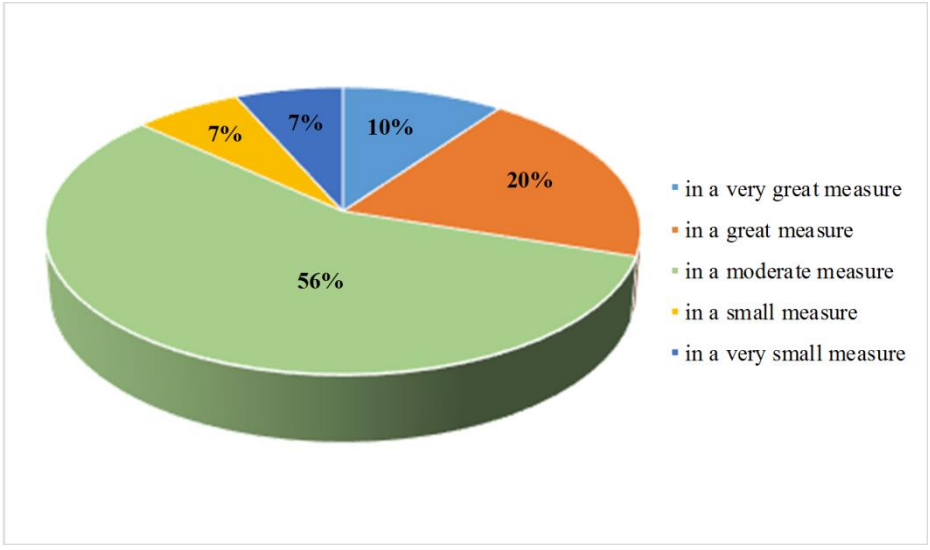

Fig. 2. Students' perception concerning the superiority of one gender over another related to the way of solving various tasks

Coming back to RRI issues, the students were called to express their opinions related to the importance of gender equality in the research and innovation area. Half of them said that is important in a very great measure and other 37% expressed that importance in a great measure (figure 3). In

this case, their previous preparation on RRI issues made them to understand the meaning of gender equality.

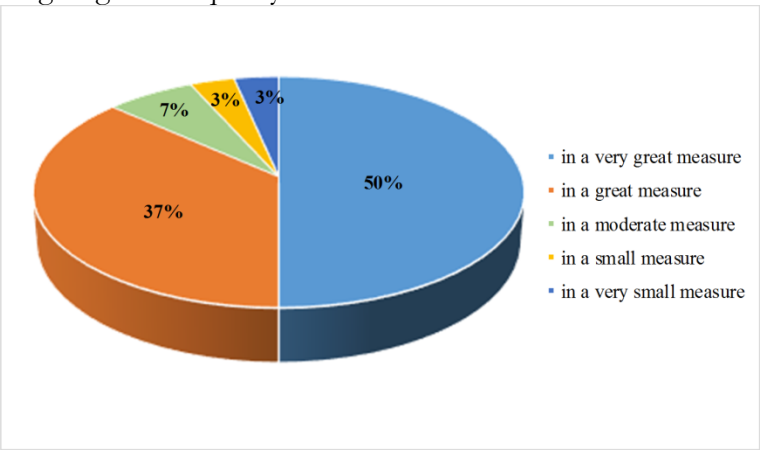

Fig. 3. Students' opinions related to the importance of gender equality in the research and innovation area

However, when taking about professions, 37% of students expressed that several professions are particularly suitable for one gender (figure 4). In this respect, they stipulated the jobs with great physical effort as fireman, electrician, builder policeman, army staff, engineer, mostly dedicated for men, and those with less physical effort as weaver or accountant for women. When taking about research, the students' opinions were divided, both men and women having enough capabilities or skills to be involved in the process of research and innovation. In this respect, gender equality is understood as a strong RRI dimension, able to offer equal opportunities or participation for men and women.

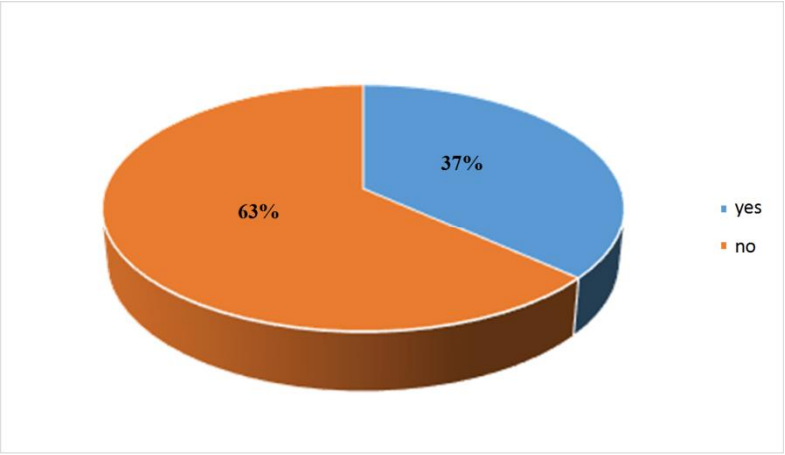

Fig. 4. Students' opinion concerning the professions suitable for one gender

The value of gender equality in relation to students' educational routes was generally appreciated. In fact, for the surveyed students, education was considered the best path to gender equality in the labor market. In this respect, a *qualitative education* (taking into consideration the gained competences, abilities and skills, near the cognitive accumulations) becomes a clear way on reducing gender inequality in the labor market.

7. Conclusions

Gender equality represents an important issue, well addressed by the EU in its policies, being considered as one of the most important values of the actual society. In fact, EU achievements in fostering equality between women and men have helped to change the lives of many European citizens for the better [9]. That is the reason for financing the projects that take into consideration the gender equality issues.

As a clear dimension of Responsible Research and Innovation, gender equality was presented to students, by our research team, in the frame of two FP7 projects. Starting from the fact that *Gender Education* is currently modestly presented in the Romanian school, its importance - and consequently, the *gender equality* in the actual society - represented an interesting point for the debates organized with the students. As novelty, their feed-back related to the understanding of gender dimension as part of the RRI paradigm, was strongly promoted and emphasized, and the conclusions were encouraging. All the participants agreed that the role of the teacher remains crucial, considering his/her involvement as a key-person who must stimulate gender dialogues in the lessons, with strong emphasis on promoting equity and gender equality, or using/indicating learning resources in order to encompass various perspectives when treating the gender issues: historic, ethnic, religious.

Acknowledgement

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- "*IRRESISTIBLE - Including Responsible Research and Innovation in Cutting Edge Science and Inquiry-based Science Education to Improve Teacher's Ability of Bridging Learning Environments*" - a coordination and support action under FP7-SCIENCE-IN-SOCIETY-2013-1, ACTIVITY 5.2.2 "Young people and science" - Topic SiS.2013.2.2.1-1: Raising youth awareness to

Responsible Research and Innovation through Inquiry Based Science Education.

The project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration, under grant agreement no 612367. The support offered by the European Commission, through the project mentioned above, is gratefully acknowledged

- "*ENGAGE - Equipping the Next Generation for Active Engagement in Science Project*" - a coordination and support action under FP7-SCIENCE-IN-SOCIETY-2013-1, ACTIVITY 5.2.2 "Young people and science" - Topic SiS.2013.2.2.1-1: Raising youth awareness to Responsible Research and Innovation through Inquiry Based Science Education.

The project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration, under grant agreement no 612269. The support offered by the European Commission, through the project mentioned above, is gratefully acknowledged.

The authors of this paper declare, on their own responsibility, that the subjects who participated in the research have been informed related to the voluntary nature of their participation, the understanding of the received information and the fact that the withdrawal from the research process can be done at any time without any negative consequences on participants. The whole research respected the actual ethical standards and the participants expressed their consent to participate in the undertaken research.

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