The on-line distance training of teachers on gender issues as a factor of blunting gender-defined attitudes and inequalities of the educational system.

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Abstract:

In the present study we made an effort for an overall composition of the data concerning the materialization and evaluation of an on-line environment of distance training of teachers on gender issues. It is surveyed whether an on-line environment on gender issues can contribute decisively on blunting gender inequalities generated through the educational system. We study and compare the attitudes and notions of one hundred and eighty three secondary school teachers who participated in the survey, in three different periods of time; before the training, during it and after the end of the process. From the data analysis we conclude that there are statistically important differences in the attitudes and notions of teachers before and after the training. So it becomes clear that teacher training on gender issues with the help of an on-line environment is capable of blunting the gender-defined attitudes and notions of teachers. The survey contributed to the broadening of the existent theory on the specific issue and at the same time it pointed out some other issues which should be examined in future surveys.

1. Introduction.

Prejudice and stereotypes associated with gender, but also asymmetrical gendered divisions and hierarchies, are reproduced and perpetuated in the field of education. This occurs at a multitude of different areas such as gender attitudes and expectations of teachers both men and women, the content and philosophy of the curriculum, the content and illustration of textbooks, the distribution of teachers by gender,the hierarchy of teaching industry,the positions of power, the centres of educational decision making. (Vervenioti, 1994. Eliou, 1993. Kladouchou, 2005. Maragoudaki, 1997. Maratou-Alipranti, Teperoglou, Ketsetsopoulou, 2001).

The educational system, by its nature, is best suited for an enterprise of degradation of the sexist attitudes and behaviours. Prerequisite to combat all forms of exclusion and discrimination in education is to change attitudes and perceptions (Gouvias 2008). Moving towards this direction, a continuous and systematic distance training of teachers on gender and equality issues can play a very important role but also highlight the educational dimension of distance education in a qualitative educational context.

2. **Beliefs, attitudes, expectations and practices of teachers.**

The structure and organization of the educational system and the uneven distribution of jobs and power contributes to the reproduction of gender inequality (Vervenioti, 1994. Eliou, 1993. Maragoudaki, 1997. Maratou-Alipranti, Teperoglou, Ketsetsopoulou, 2001). Teachers, in a racially socialized educational system, as prior students, reproduce the unequal distribution of work and power with their attitudes and perceptions (Freiderikou, Folerou, 1991).

Attitudes and perceptions shape the ideology and practices of teachers in a complicated interaction which contributes to gender inequality in education. The function of teachers at class level is detected by the study of their personal beliefs in relation to the gender of students, with the specific practices they choose, with the expectations of their students' performance which is clearly defined by gender (Kladouchou, 2005).

he effect of a teacher's gender and the teaching methodology he/she follows in the performance of students and their self-esteem in relation to specific subjects is guaranted in literature. (Vitsilaki-Soroniati et al, 2001. Maragoudaki, 2003. Sidiropoulou Demas, 1997. Frosi, 2000). Therefore, the function of teachers in the classroom and their attitude towards gender is very important .. Under even the daily teaching function teachers give students traditional characteristics of personality. Girls are often characterized as mature, studious, obedient, diligent and quiet, and boys as emotionally immature, but more intelligent and aggressive (Kantartzi, 1991. Natsiopoulou & Giannoula, 1996). According to a survey of Hionidou-Moskofoglou (1996) teachers have different expectations from boys and girls, although they are not aware of these differing expectations.

In the survey of Stavridou, Solomonidou, & Sachinidou, (1999), male and female teachers even believe that in studying Science boys and girls do not differ, however, they believe that boys outperform girls on this subject. Kouimtzi Deligianni, at al. (2000) consider that the negative self-image that girls often internalize, regarding science and technology, is due to the perceptions of teachers, the way of teaching methods teachers use to teach different subjects and the content of textbooks in general.

It is true that the role of teachers is becoming influential in the exacerbation or alleviation of stereotypes and the development of critical thinking of students regarding gender (Kladouchou, 2005). Teachers' attitudes, indeed, are those which form, to a large extent, the so-called "hidden curriculum" which refers primarily to the non-conscious dimensions of learning, such as the organization and operation of the school rules, whatever is happening and there is something more than the strict part of teaching. This is a very important process which greatly affects the student's image of internalising himself/herself or his/her expectations of their professional ambitions. (Gouvias 2008). Textbooks are likewise a key

area of detection gender inequality while together with the curriculum they serve as carriers of the messages of the dominant ideology (Weiner, 1997).

Although in the occupation of teachers, female teachers outnumber their male colleagues, the paradox is that fewer women are in managerial positions and, in general, the higher hierarchical positions of education. Maragoudaki (1997) emphasizes that the "exclusion" of women from positions of responsibility has major implications for students who do not usually accept women in positions of power. At the same time girl students are not taught to seek and claim management positions. This leads to the phenomenon of maintenance and reproduction of conservative power relations between the two genders.

3. **The Research: general description.**

The quantitative research methodology described the methods of collection and analysis of research data. The research was conducted during the period November 15, 2008 - January 31, 2008, in six (6) periods, involving 183 teachers of secondary schools [81 men (44%) and 102 women (56%)], selected using the theoretical sampling technique.

The sample taking method was based on two (2) criteria: Teachers selected, taught in secondary schools and were familiar with online learning environments as they were active members of the environmental distance training for teachers (e_εξ@ε), which operated (2005 to 2008) for research reasons on the asynchronous learning platform e-class (course code: TELEGU178) of GUnet. academic network The learning process was underway with the cooperation of the Democritus University of Thrace (Department of Electrical and Computer Engineering) and the Regional Advisor for Adult Education of Eastern Macedonia and Thrace, designed to train teachers of secondary education in the subject field of adult education and lifelong learning (Kioulanis, 2008. Kioulanis, Panagiotidou, Moysiadis, 2008).

The collection of statistics was based on the completion of two (2) printed and three (3) Electronic measurement tools (questionnaires) that were given to participants in the research. (At the beginning, during and at the end of the process).

The questionnaires were developed partially according to the type of questions of Likert scale (Strongly Disagree, disagree, no opinion, agree, strongly agree) (Cohen & Manion, 1977) and were based on previous researches investigating the gender identified attitudes of teachers (Kantartzi, 1996. Natsiopoulou & Giannoula, 1996. Savvidou, 1996. Sidiropoulou-Demas, 1990. Frosi, 2000).

The analysis of this research was done for the printed questionnaires with the statistical package SPSS 15.00 for Windows,but for the electronic questionnaires automatically via the asynchronous learning platform e-class.

4. **The learning process.**

The teachers who took part in the research joined a new online environment created for the purpose of the research in the asynchronous learning platform e-class of the academic network of GUnet module code (TELEGU232).

teachers were studying the printed educational material recovered partially from the platform (the area of "documents") based on a specific timetable for the study. The training was held in six (6) periods and each period of the research corresponded to a period of about ten (10) days determined by a specific thematic framework that was integrated in the overall outline of the research..

Each unit consisted of selected texts main and parallel,. The teachers participated in debates - activities, answered self-assessment exercises checking, in this way, the knowledge acquired during their study and were able to navigate through the platform on relevant to gender and equality websites to see relevant videos and share files. Throughout the training process they had been actively involved in solving activities and problems and they exchanged experiences and ideas. The process encouraged reflection, developing new attitudes, new skills or new ways of thinking (Lewis, Williams, 1994).

The area which mostly received attention was the training to serve the purposes and characteristics of distance education and adult education (Rogers, 2002. Grain, 2005). Particular emphasis was given on:

- The correlation between the material and the needs of learners so as the experiences of the learners to be taken into account..
- In the process of motivating the participants and their interaction with the environment in both a cognitive and emotional level.
- Strengthening and encouraging the participants participating in the educational research.
- The dynamic involvement of participants in the process.
- The direct interaction between participants / teachers.
- The development of critical thinking.

An online environment of distance education, offers to participants the possibility to work together and support each other as they use a variety of tools and information in search of learning objectives and activities. In this way it can promote the principles of interaction, cooperation, support active learning and learning by solving real problems.

5. **The method of learning through problem solving (Problem - Based Learning), in the distance training of teachers.**

The process of training was based largely on learning by solving problems [Problem - Based Learning (PBL)]. This is a method of introducing a different dimension to the learning process. The PBL is a student centred approach that places the trainee in the centre of the

learning process. In this context, the trainee is actively involved in the acquisition of knowledge through an environment where he/she does not remain merely an observer, but participates actively in the educational process (Trop, Sage, 1998). This is a method that attracts attention and encourages trainees to take initiatives and solve problems. It contributes to the application of the theoretical knowledge acquired, and excites the participants (Banta, Black, 2000. Suebnukarn, Haddawy, 2004).

A typical course, organized according to the process of PBL, begins by presenting a complicated and preferably practical problem which the participants can not solve using their knowledge. Then the focus is on the participants to recognize by themselves what knowledge they need to learn and how to acquire it. In other words, the problem is the one which guides learning (Nioras, 2005).

The main features of the method is that students participate actively in the learning process, they learn to solve problems and make effective use of sources, while the traditional roles of teachers and students differ significantly. (Nioras, 2005).

The effective application of this method seems to be accompanied by a change in attitudes of both learners and teachers, which is particularly important in terms of negotiating gender and equality in teacher training.

6. **Conclusions.**

The first research question was whether teachers have different expectations of male and female students, regarding their performance in theoretical and scientific subjects and hence the profession they will follow.

We investigated the above questions based on three independent variables (gender, age, and the variable before and after the training) and a dependent variable (the attitudes of teachers as to the view that they have different expectations of male and female students , regarding their performance in theoretical and scientific subjects and hence the profession they will follow). We used the statistical analysis of variance test of bi-directional (two-way ANOVA).

The analysis results in statistically significant differences between men and women teachers. It is observed that male teachers have different expectations of male and female students, regarding their performance in theoretical and scientific subjects and hence the profession to follow than women teachers (F_1, 308 = 90.969, $p < 0.01$). We also observe statistically significant differences between different age groups,(in general older teachers have more conservative views than younger ones In younger, in fact, gender identified perceptions and attitudes are reduced. (F_3, 308 = 3.113, $p < 0.05$).

We even found out statistically significant differences in attitudes before and after the training. After the training it is noted that gender identified perceptions and attitudes of teachers are reduced.(F1, 308 = 16.263, p <0.01).

The second research question was whether the teachers believe in the distinct roles in a family. There are statistically significant differences between men and women teachers as it seems that male teachers agreed more than women in distinct roles in a family (F1, 308 = 96.184, p <0.01). There is also statistically significant differences between different age groups, as the older teachers have more conservative views than the younger ones and at the younger teachers gender identified characteristics are reduced. (F3, 308 = 4.187, p <0.05). In general, there are statistically significant differences in attitudes before and after training, as after training it seems to ease the perception of a distinct role in the family (F1, 308 = 12.621, p <0.01).

In the third research question the participants were asked to identify some features as more masculine or feminine. In this case we investigate whether gender, age and education of teachers is independent from the identification of some features as more male or female. In order to study this case we used statistical criterion X^2. We notice that gender and age are related to the identification of some features as more masculine rather than feminine.

The fourth research question explored whether according to the social reality, that teachers construct, men and women are two completely separate groups in different spheres of influence, different characteristics, different levels of power and different roles and responsibilities. Generally we see here, statistically significant differences between men and women teachers. We notice that male teachers agree more than women, that men and women are two completely separate groups in different spheres of influence, different characteristics, different levels of power and different roles and obligations (F1, 308 = 89.218, p <0.01). Also significant differences were noticed among different age groups (F3, 308 = 4.282, p <0.05). We also observe statistically significant differences between the attitudes before and after training (F1, 308 = 15.676, p <0.01).

The fifth research question investigates whether the practices adopted by teachers towards boys and girls, but also in terms of organizing the class, there are gendered identified discriminations. We observe statistically significant differences between men and women teachers. Male teachers agree more than women, on the view that practices adopted by teachers towards boys and girls, but also in the way of organizing the class, gendered discriminations are identified. (F1, 308 = 4.770, p <0.05).

Significant differences are noticed among different age groups. It becomes evident that the younger age varies more than the older in terms of gender discrimination concerning class organization. (F3, 308 = 3.143, p <0.05).

Also, we observe statistically significant interactions between gender and age (F2, 308 = 10.854, p <0.01.), which shows that the differences between men and women are more profound in the category of 46-55 years old.

In the prospective evaluation of the importance of characteristics associated with the PBL method in teacher training, we tested whether gender affects the evaluation of the importance of characteristics associated with the application of PBL method .

Since in this research each individual participated in only one group, the plan which was used, was that of independent samples and t test was   also used , because this one is suitable for independent samples.

It was found that there are not statistically significant differences between men and women, as   both men and women support the hypothesis that participation in the learning process sustains critical thinking and promotes an exploratory rather than passive learning. Instead, we see that men think more than women that it is through distance education that efficient use of time   is achieved.[t (156.52) = -3.12, p = 0.03 <0.05)].

7. **Findings - Recommendations.**

The investigation confirmed that male teachers have different expectations of   male and female students, regarding their performance in theoretical and science subjects and hence the profession they will follow from those of female ones. The investigation confirmed that in the context of everyday teaching act male teachers agree more than women in distinct roles in the family, with the woman, first of all, wife, mother and housewife.It is also confirmed that male teachers give students traditional elements of personality, such as tenderness and sensitivity to girls, and courage and determination to boys. Men teachers agree more than women, that men and women are two completely separate groups, with different spheres of influence, different characteristics, different levels of power and different roles and obligations. It is, finally, confirmed that male teachers agree more than female with the idea that regarding teaching practices engaged by teachers towards boys and girls, but also in terms of organization of the class, there is gender discrimination.

Teachers participating in the research   believe that participation in a programme of distance training via Internet provides equal access to education and training opportunities to more teachers, while in the process of distance learning participants reach a high level of communication and teamwork . Finally, distance training through an online environment, contributes to developing and sustaining relationships among the participating teachers.

In this context and with regard to the established forms of teacher training (introductory and periodic) it is necessary to introduce new thematic courses to sensitize teachers to gender issues and equality. Simultaneously, it is necessary to systematically assess the attitudes and behaviour of teachers in relation to gender in the educational process itself and primarily through observation to record the impact of these attitudes   on students and, on the basis of these results, to design appropriate training programmes.

Having as a target the adaption of a training programme to many different needs of trainees, we must take into account a range of basic level models of learning and adult education principles. Everything should also be related to the perceptual predispositions of the participants in training, in how they utilize the experiential learning as well as their learning patterns..

The method of learning through problem solving (Problem - Based Learning), in distance teacher training, opens new roads releasing the field of research and seeking the quest for knowledge, which is no longer limited to topics. It also facilitates and up to a point, poses the interconnection of the learning process to reality and what is used in practice. This is the biggest advantage of this method as it is not a monotonous and without any real impact, memorization process of knowledge and ideas. Moreover, the solutions and opinions which can be emerged from such studies may be innovative and workable proposals directly to real problems.

From the survey conducted among teachers who participated in the process of training arises the need of creation and application of a continuous and systematic model of distance training of teachers on gender issues and the belief that it can effectively and decisively contribute to the process of training. With the implementation of flexible formats of training which will last over time and will address the individual needs of teachers we can effectively complement existing structures and meet the demands of the modern era.

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