RE-MENT - REVERSE MENTORING AS A WAY TO DECONSTRUCT GENDER RELATED STEREOTYPES IN ICT

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ABSTRACT

In applying a reverse mentoring approach, the project *re-ment* aims at raising the interest of female students for Information and Communication Technology (ICT) professions and at contributing to the deconstruction of gender stereotypes in this field. This approach offers a completely new and innovative perspective in the field of gender equality and advancement of girls in technology. This innovative mobile learning approach is applied in *re-ment* as the mentors and the mentees communicate via a social network. The project implements reverse-mentoring programs in four partner schools in Austria, the main result being a comprehensive course for teacher education.

KEYWORDS

Innovative mobile learning approaches, e-mentoring.

1. INTRODUCTION

Re-ment is a research project that develops and implements a reverse-mentoring approach in four upper secondary schools in Austria. The aim of this project is to raise girls' interest in ICT (Information Communication Technologies) and sciences professions and to demonstrate gender specific segregation as well as to deconstruct gender related stereotypes. One major element of *re-ment* is the e-mentoring approach as the mentoring process itself will be online via a social network. Combining reverse mentoring and e-mentoring is identified as an innovative mobile learning approach.

2. REVERSE MENOTRING IN ICT

Reverse-mentoring opens new perspectives and equal opportunities for girls in the ICT branch. *Re-ment* focuses on the girls' competences and not their deficits. Especially regarding ICT competences, young people have higher competences than older people as published by the PIAAC (Program for the International Assessment of Adult Competences) study in 2013. According to Bozeman and Feeney, mentoring takes place between a mentor, who is "a person who is perceived to have greater relevant knowledge, wisdom or experience" and a mentee, "a person who is perceived to have less" (Bozeman and Feeney, 2007, p. 731). In *re-ment*, female students, aged between 16 and 17, who have higher competences in ICT will be mentors and teachers or parents will be mentees. Consequently, girls' ICT competences will be raised on an individual level as well as gender related stereotypes will be deconstructed. It is well known that reverse mentoring mainly implements ICT questions or issues as the younger people are the digital natives and support older people with latest developments in ICT and, therefore, both – mentors and mentees – will benefit and it is an innovative way to encourage learning (Prensky, 2001).

Reverse-mentoring turns the traditional mentoring concept upside down. It is an internationally well developed and often used method. According to Hsueh-Hua-Chuang and Ann Thomson there are two well spread projects in the USA that make use of the reverse-mentoring concept and focus on ICT competences of pupils and students (Hsueh-Hua Chuang and Ann Thompson, 2005, cited by Peterson, 2012). In these two projects, pupils and students act as a kind of help desk regarding ICT questions to support school management staff or teachers. These two projects are called Mouse (Making Opportunities for upgrading Schools and Education) and GenYES. Mouse's mission is "to empower students to create with technology to solve real problems and make meaningful change in our world." One central focus of Mouse is on "creating more diversity in STEM (Science, Technology, Engineering and Mathematics) […]" (https://mouse.org/). GenYes aims at "closing the digital divide and empowers students to become leaders in their schools by using technology to solve crucial problems in education, while also becoming interested in STEM careers" (http://genyes.org). The benefit that is outlined by Peterson is that teachers and management staff profit from the ICT support and pupils and students profit from the preceding trainings that they received by professional mentors (Peterson, 2012). Consequently, reverse mentoring implements a high potential for innovative improvements in educational settings, especially in ICT. For the purposes of the research project *re-ment*, reverse-mentoring is defined as

> *"Reverse-mentoring is a specific form of mentoring and refers to a reciprocal and timely stable developmental partnership between one or more less experienced mentor/s providing specific expertise and one or more experienced mentee/s who want/s to gain this knowledge. The partnership is characterized by reciprocity and mutual respect and it aims at both, the development of the mentors and the mentees. In applying a networked perspective, it may take advantage of digital technology."*

One key element of this innovative mobile learning approach in *re-ment* is the online mentoring process that is often referred to as e-mentoring. A definition of e-mentoring that is offered by Stöger states that e-mentoring is "a special form of mentoring where communication takes place online, at least partly" (Stöger, 2009, p. 229). This online mentoring process faces new challenges and opportunities for mentees and mentors regarding their ICT competences as outlined by Williams, Sunderman and Kim (2012) and consequently trainings have to be offered in the course of this project. For the purposes of the research project *re-ment*, a social network is used to facilitate communication between mentors and mentees. The social network that is used is called *yammer* which is primarily used by enterprises to connect employees across the company. *Re-ment* makes use of *yammer* that mentors and mentees are able to connect and collaborate online as well as to provide a secure online platform (www.yammer.com).

Using the social platform *yammer* for the online mentoring process is beneficial for mentors and mentees. Giddens and Phillips outline the positive experiences using the Web 2.0 for their reverse-mentoring concept in a company that can be identified in an educational environment as well:

> *"Reverse mentoring is an innovative way to encourage learning and facilitate cross-generational relationships."*

> *„The most positive outcome for us was, that web 2.0 was a catalyst for the strengthening of our professional relationship, underpinned by deeper levels of honesty, trust and respect for each other."* (Giddens and Phillips, 2009, p. 9)

Therefore, using *yammer* as the online platform in *re-ment* will help mentors and mentees in the mentoring process as the relation between the girls and teachers or parents will be supported and intensified. According to Bargh & McKenna online relationships conducted through e-mentoring programs can be similar to those developed in person in terms of their breadth, depth and quality (Bargh and McKenna, 2004, cited by Shpigelman, 2014). Shpigelman concludes that there is a considerable potential of e-mentoring for personal growth and empowerment of children as well as adolescents (Shpigelman, 2014). Consequently, mentors and mentees in *re-ment* will experience the online reverse mentoring process positively.

3. CONCLUSION

In conclusion it can be stated that this innovative mobile learning approach that combines a reverse mentoring concept and an online social platform to facilitate the mentoring process will be an innovative setting for both, mentors and mentees. In *re-ment* girls who are the mentors support their parents or teachers who are their mentees regarding ICT questions or issues and, therefore, both will benefit as it is an innovative way to encourage learning. Finally, the project itself and the results will be published and the findings of the accompanying quantitative and qualitative evaluation will be the basis for the development of teacher trainings and teaching material. The course will consist of a face-to face seminar that will also be offered online, and a module for the new upper secondary school in Austria will be designed.

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