Blended Learning Approaches to Enhance Gender Mainstreaming

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Abstract

At the German labour market gender inequalities exist with respect to occupation. In order to counteract these inequalities, it is important to establish a policy of gender mainstreaming also in the area of education and to orient training measures in a gender-sensitive way. But how? The authors introduce the blended learning concept of the further education measure "E-Office Management"and show that the consideration of female learning characteristics is possible when developing training measures. The evaluation of E-Office Management illustrates that a gender-sensitive further education measure can contribute to the enhancement of gender mainstreaming. On the basis of the described aspects of blended learning scenarios as well as due to the evaluation results, a set of standard rules for gender-sensitive, computer-assisted learning concepts has been formulated.

Key words

gender mainstreaming, gender inequalities, e-Learning, blended learning, gender-sensitive further education

The Relevance of Gender Mainstreaming in Germany

In the legal sense, women and men are treated equally in Germany.[1]

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[1] In the Basic Law of the Federal Republic of Germany article 3, paragraph 2 (2008, p.9) it is said:
"Men and women shall have equal rights. The state shall promote the actual implementation of equal rights for women and men and take steps to eliminate disadvantages that now

But from a social point of view it cannot be spoken of gender equality. This is also mirrored by the German labour market. In spite of increasing labour force participation rates of women, gender-specific occupational patterns and labour market conditions are prevalent (Wiepcke, 2006, p.16). In Germany, women's employment is characterised by qualification disadvantages. Compared to men, they are affected by job losses and downgrading processes more often. They are employed less often, work part-time more frequently and are affected by unemployment above average (Engelbrech, 2002).

Labour markets of Western industrial societies are still defined and hierarchically structured in a gender-specific way. The separation of male occupations and female occupations, the so-called gender-specific segregation, is among the most enduring socio-structural characteristics of a gender-specific labour market (Heinz *et al.*, 1997, p.135). In Germany, gender-specific labour market segregation is characterised thereby that

- women concentrate on considerably fewer occupations than men do, these are less respected and less paid than those, in which mainly men are employed (KOM, 2007, p.3)[2]
- women are under-represented in executive positions (Huschke, 2002, p.31)[3]
- in the same occupations women earn less than men (KOM, 2007).[4]

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exist."

[2] Of about 400 different occupations in Germany women only concentrate in 10 (Bundesregierung, 2002, p.7). Almost 40% of the women work in the health care system, in the educational sector or in public administration (KOM, 2007, p.3). Saleswoman, hairdresser, bank clerk, office clerk, trained retail saleswoman, industrial clerk, doctor's assistant/receptionist, nurse, clerical assistant and adminstrative assistent are considered as characteristic female professions. All of these jobs can be attributed to the service sector (Huschke, 2002, p. 31). Furthermore, women predominantly work as unskilled or only underqualified employees (KOM, 2007, p.4).

[3] Only 3-5 % of the executive positions at universities, in politics and the economy are occupied by women (Huschke, 2002, p.32).

[4] For the year 2005 the Commission of European Community reports that—on average—women in the European Union earn 15%, in Germany even 22% less than men (KOM, 2007, p.3ff.).

In order to achieve equality between men and women in the labour market, the Federal Government of Germany implemented the gender mainstreaming principle in its government program in the year 1999. It is the aim of gender mainstreaming to make the "discriminatory" social structures a topic of discussion and to change them. In this context, gender equality as well as the promotion of a complete integration of women and men into society are primary objectives (Europarat, 1998, p.5).

From its approach, gender mainstreaming is in accordance with the idea of cross-sectional politics, that is the establishment of equal opportunities for women and men is only possible, if this goal is aimed at in all areas of politics (Stiegler, 2000, p.7). According to the council of Europe (Europarat) gender mainstreaming is defined as follows:

> Gender Mainstreaming is the (re)organisation, improvement, development and evaluation of policy processes, so that a gender equality perspective is incorporated in all policies at all levels and at all stages, by the actors normally involved in policy-making (Council of Europe, 2004).

Thus, gender mainstreaming aims at the incorporation of the perspective of gender relations in all decision-making processes and to utilise all decision-making process for gender equality.

Necessity of Gender-Sensitive Learning Concepts

Current Requirements on Qualifications

With the increasing spread of Information and Communication Technologies (ICT) the importance of different qualification structures of women and men increases. Due to the technological change, an increasing modernisation of workplaces can be recognized. By now, every simple clerical occupation is connected with the use of a computer. This fact makes clear that also underqualified occupations (in which mainly

women work) are affected by the implementation of new ICT and thus require an appropriate qualification.[5] This change increases the requirements on employees and accounts for continuous qualification (resp. lifelong learning) (Wiepcke, 2006, p.31).

These remarks show that on the German labour market the proficient use of ICT is regarded as key qualification. But women in particular have less knowledge in the field of ICT. Two reasons can be given for this:

a)

Whereas the male occupational biography—in the majority of cases—is characterised by a continuous development without breaks, the female occupational biography is often characterised by a (longer) break in employment due to child care. By reason of the break in employment, women suffer from qualification disadvantages, as they did not participate in professional and technological innovations. The (long lasting) distance to occupational experience processes implies that to some extent their occupational qualification is obsolete and that they have little experience when exposed to the use of ICT (Wiepcke, 2008, p.2). In addition, there is the fact of learning withdrawal. Studies on further education measures for the reintegration into work show (Wiepcke, 2006, p.101) that with growing distance to employment (but also to the initial vocational training) a reduction of motivation for further education, the undervaluation of one's own learning ability as well as the distance to the use of ICT increase.

b)

Löw (2003, p.73) points out that women and men are characterised

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[5] Qualification is aimed at the fulfilment of given purposes (externally organised), it is restricted to the fulfilment of a concrete demand, to directly job-related knowledge, abilites and skills and can be legally certified as skill/ability (Heyse & Erpenbeck, 2004, p. XVI). If, for example, students obtain their diploma as graduation certificate of their education at university, it is the certificate of their qualification.

by different learning characteristics. Women prefer subjects which are concerned with communicative and interactive processes as well as with problems that are related to vivid phenomena and ethical judgements. Women are said to be gifted in learning languages, to like reading, to be creative, empathetic, talented in communication and to be team players. On the other hand, men are considered to be subject-oriented and technology conscious, they prefer analytical methods and achievement-oriented strategies. These learning characteristics can be transferred on computer application. In this connection, Kalmbach (1990) makes clear that men and women approach computers differently, which is mirrored in the fact that women are more distanced from computers. Technology in general, ICT in particular are considered to be unfeminin, men, on the other hand are thought to be the more talented gender with regard to computers. If one transfers the female learning characteristics on ICT, it means that women mainly consider the usefulness and the result as very important when using a computer. They rather think in holistic systems and communication circles, their attitude towards computers is more sceptical, more critical and more pragmatic (Wiepcke, 2007, p.3).

The fact that women have less knowledge and skills with regard to ICT puts them at disadvantage notably. As it was pointed out, women only concentration few occupations, which mainly belong to the service sector. In particular those occupations, which belong to the service sector are impacted on by ICT to an extremely high degree. For this reason, especially women are in need for qualification in the field of computer application.

Need for Gender-Sensitive Learning Concepts

In order to give consideration to the permanent need for qualification, new methods for knowledge acquisition are needed, which cover all areas of the different phases of life of men and women. Normally, the following belong to these phases of life (cf. Wiepcke, 2006, p.33):

- initial vocational training,
- internal and external further education during employment as well as
- qualification for returning to employment after breaks in employment.

The last point makes clear that at the end of parental leave a further education program is necessary and that further education concepts have to be developed which reconcile family and occupation and reduce the qualification deficits with respect to ICT.[6]

In order to furthermore reduce the existing distance of women with regard to ICT, a "de-technization" should be facilitated and the usefulness should be highlighted by application orientation of technology usage. Accordingly, the conveyance of ICT-qualifications should be connected with the working out of subject-specific questions (Scharfenroth, 1998, p.28). Apart from that, competencies are to be enhanced, which are used at work, but which cannot be replaced by the computer, as, for example, creativity, initiative, and intuition.[7] In gender-sensitive learning concepts, subject matters should be integrated into a context. The description of female aptitudes shows that women are more successful in learning if they can work in groups. Thus, gender-sensitive learning concepts should enable exchange of experiences and the formation of information networks (Wiepcke, 2007, p.4).

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[6] In Germany, parental leave is the unpaid release of employees (mothers or fathers) for the purpose of care and education of newborns in the first phase of life. It is connected with a child-raising allowance, which is granted by the state. Parents have a legal claim to this release. Concerning parental leave, a new law was enacted in Germany on 2nd January 2001, according to which the employer is obligated to allow parents after the birth of a child to work part-time. Parental leave can be taken by both the mother and the father until three years after the birth of their child. (May, 2006, p.177, p.187).

[7] Whereas qualifications are externally organised and can be attested with the help of certificates (cf. footnote 5), competencies are self-organised. Erpenbeck & von Rosenstiel (2003, p.IX-XII) define competencies as the characterisation of abilities of persons to orient oneself in a self-organised way in open, unclear, complex and dynamic situations. In contrast to qualifications, competencies are not testable directly, but they are only deducible and assessable from the realisation of abilities and accomplishment of actions.

Gender-Sensitive Further Education by Blended Learning

Advantages and Disadvantages of e-Learning

To an increasing degree, computer-assisted learning environments are used in occupational further education. Here, learning processes are supported with the help of the computer (also known as e-Learning). Computer-assisted learning is understood as interactive learning by means of the computer. The computer is used as a medium in order to enhance and support learning (Wiepcke, 2006, p.40).

The current social change brings forward computer-assisted further education concepts to an increasing degree. They are to be distinguished from other learning media as, for example, traditional education in class or attendance learning and, in particular, they enhance the desired ICT-competencies.

Advantages

Kaltenbaek (2003) and Köllinger (2001) enumerate the following advantages:

- **Independence of time and place**: It is possible to learn whenever and wherever one wants. Learners have the possibility to organise their learning times flexibly and do not have to stick to fixed dates for attending classes. They can learn, when they need the subject matter (*learning on demand*).
- **Interactivity**: In contrast to conventional forms of teaching, computer-assisted learning concepts provide the opportunity for interaction. This enhances active behaviour of learners as they learn independently.
- **Diversity**: Computer-assisted learning concepts allow for a multitude of forms of representation (text presentation, Power Point presentations, video films, etc.), possibilities of navigation, help systems, teaching methods and fields of application.

- **Adaptivity**: In the first instance, computer-assisted learning facilitates individualised learning. Individuality consists in the adaptation of the scope and depth of the subject matter to previous knowledge, learning type, experience and motives, one's own interests, speed of learning, length of the learning period as well as to the level of difficulty.
- **Globality and efficiency**: The globality is characterised by the provision of appropriate information at the appropriate point in time in every place. Above all, the factors topicality, quality and availability of topics are characteristic of this global provision. The criteria for the provision of information are achieved by easy updatability and availability.

Disadvantages

In spite of numerous advantages, computer-assisted learning concepts also bring about restrictions. Independent and interactive learning requires a high degree of self-motivation as well as technological knowledge. If learners do not possess it, they are helplessly "at the mercy" of the learning program. An elaborate arrangement of the topics can appear to be confusing and rather inhibit the learners instead of motivating them (helplessness). In comparison to the social communication of traditional in-class instruction, e-Learning features a reduced communication context. Doubts, contradictions, and also advanced questions remain unanswered. Moreover, learners have no possibility to express their feelings. There is no possibility of formal or informal exchange of experience (social isolation). The lack of technological previous knowledge as well as learners' helplessness result in a lack of acceptance of this teaching method (Köllinger, 2001, p.25).

If one, at first, contrasts the advantages of computer-assisted learning with the requirements on gender-sensitive learning concepts, this teaching method allows for a consideration of the different life situations of men and women. The independence of time and place makes it possible to

learn at home. A further education and thus a qualification for the professional life is possible in addition to desired care for the family. But comparing the claim for "de-technization", the reduction of barriers with regard to ICT as well as the consideration of female competencies, it can be found out on the basis of the disadvantages that especially women are affected by them and that they do not meet the requirements on gender-sensitive learning concepts.

In the following section it will be shown, which possibilities exist to meet the requirements with the help of further education measures, how the disadvantages of e-Learning can be minimised and how, at the same time, gender-sensitive learning habits can be taken into account.

The Diversity of Blended Learning

The discrepancies between the reconciliation of flexibility (independence of time and place) and the claim for the formation of social relationships require the realization of different learning scenarios as well as different teaching methods. Thus, it is called for a mixed learning – a mix of in-class instruction and distance learning as well as of traditional and computer-assisted learning. That concept which combines these criteria is referred to as *blended learning*.

Blended learning can also mean "mixed learning". This type of learning brings together and combines different methods and (see Figure 1).
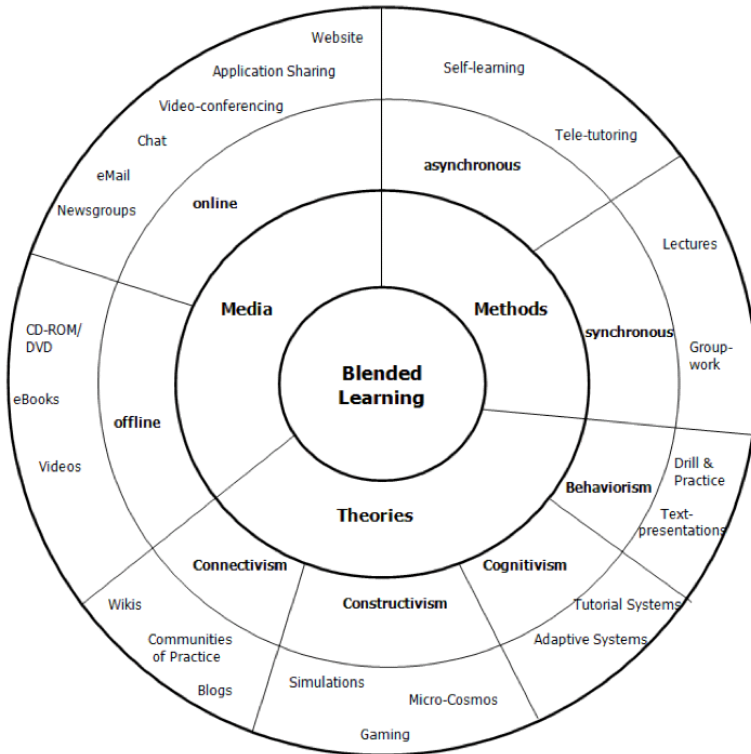
Figure 1. Blended Learning: Media, Methods and Theories (cf. Wiepcke, 2006, p.69).

Erpenbeck and Sauter (2007) define the teaching method of blended learning as follows:

> Blended Learning (Blender = machine to mixing redients) is an internet-/ intranet-based learning system which—according to the needs—combines problem-oriented workshops with phases (most of the time lasting several weeks) of self-directed learning on the basis of web based trainings and communication via a learning platform (Learning Management System, LMS) in connection with transfer tasks and real decision situations in practical exercises or projects (cf. Erpenbeck & Sauter, 2007, p.150).

Advantages of Blended Learning for Women

The integration of in-class phases facilitates an introduction and an overview of the topic, they motivate to learn, provide the opportunity to get to know each other as well as to form a group. Thus, the feeling of social isolation can be minimised. The advantages of in-class phases can be enriched with the help of blogs, discussion forums and wikis. The community of learners develops into a community of practice, so that the desired communication and informal exchange are encouraged. The use of computer-assisted modules results in the obtaining of key qualifications and allows for a flexible and individual learning. An implemented teletutoring (hotline) facilitates information as well as communication. During the isolated learning process the de-personalised computer-assisted learning unit is compensated for in personal feedback by means of opportunities for communication and cooperation. As a combination of different media and methods is realised, blended learning is no longer characterised by mere technology. The integration of group work and in-class phases as well as teletutoring facilitates the "de-technization"of computer application. The identification of female abilities (creativity, ability to communicate, and teamwork) is enhanced by the combination of the learning scenarios, fears of contact are reduced by group dynamics and teletutoring. Thus, the acceptance of this teaching method increases women's difficulties with regard to technology can be better coped with, which results in an increase of motivation (Liening *et al.*, 2007, p.5).

Best Practice: E-Office Management

Taking the target group and the general framework into consideration, the Institut für wirtschafts-und sozialwissenschaftliche Bildung e.V. Münster/ Germany (IWSB) developed a further education program which is practically relevant and flexible with regard to time and place, the "E-Office Management".

Structure and Topics of E-Office Management

E-Office Management is a part-time further education with an extent of 20 hours per week. The further education measure is based on the concept of blended learning. Of the 20 hours per week, four are covered by in-class phase and 16 by computer-assisted independent learning at home. In addition, the approximately 20 participants per course are provided with extensive teletutoring. The teletutoring consists of two persons and is available from 9:00 am. until 9:00 pm. every day. The duration of E-Office Management is variable. Depending on the regional promotion it has a duration of 6-12 months. The financing of the further education measure is provided by the respective local employment office.[8] The execution is realised in cooperation with a regional educational institution.

The first of two main emphases of E-Office Management is on the enhancement of ICT-competency. The participants learn and deepen the proficient use of the internet, of the operating system, of word processing, spreadsheet analysis, presentation software, data base program as well as of a graphics program. With the help of these computer applications the participants work on the second thematic focus, the subject-specific themes of the topic "office practice". Here, topics like management of a secretariat (mail handling, making a 'correct' telephone call, time scheduling and monitoring, self-management, method of working, etc.), preparation of conferences, commercial calculation, e-commerce, wage and salary administration, methods of negotiation etc. are in the centre of attention. It has to be pointed out that the topics concerning computer application are directly put into the actual work

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[8] The employment office (Agentur für Arbeit) is the lowest adminstrative level of the federal employment office (Bundesagentur für Arbeit). The federal employment office is a German administrative body which is responsible for placement service and promotion of employment as well as for the granting of benefits. Placement service, labour market consultation service, occupational counselling, labour market monitoring and labour market – and occupational research are among its functions (cf. Bundeszentrale für politische Bildung, 2004, p.469).

context of the subject-specific, economic topics. For instance, knowledge and skills in the field of the spreadsheet program are not dealt with in isolated, but integrated into the real economic topics, for example, cost accounting. Thus, computer application is put into a direct work context.

For the last six weeks of the measure it is provided for a practical training in a business of the region. On the one hand it is supposed to facilitate the participants' return into work, on the other hand it is supposed to give potential employers the understanding that independent and self-motivated learning and working is possible.

Evaluation of E-Office Management

In the years 2003 and 2004 three courses were analysed with respect to their quality. The evaluation of E-Office Management comprised surveys among the participants (ex ante and ex post), a review of assessment including reintegration into the labour market as well as a self-evaluation of learning contents and software. In the following section, selected results are presented (in detail on the evaluation of E-Office Management see Wiepcke, 2006): The results provide information on the achievement of objectives of selected criteria. The evaluation was expressed with the help of a satisfaction level. It shows, with which success the objectives of the measure were achieved. It is a heuristic in the field of quality management to accept a satisfaction level of at least 80% (so called pareto principle).

The quality of learning contents and software is of particular importance. The participants' evaluation of the user-friendliness of the learning modules (87.5%), comprehensibility of the sample solution (82%) and comprehensibility of the e-books and scripts (85.6%) showed that they are accepted. Solely the comprehensibility of the learning modules has a satisfaction level of 77.9%. In order to optimise the learning materials, a revision of the learning modules with regard to structuring and clearness of the subject matters was carried out in 2007. On the whole, the learning software was considered as user friendly and

thus satisfies a gender-sensitive service ability.

Earlier it was stressed that it is of particular importance for the gender-sensibility of a computer-assisted further education measure that the topics are practically relevant, that the learners consider them to be useful and that they are in accordance with their interests. Here, as well, the evaluation showed that the satisfaction level of the following assessment criteria was achieved with more than 80%; adequate level of difficulty = 83.3%; usefulness of the further education measure = 85.6%; closeness to interests 86%; transfer 81.7% and practical relevance 79.3%.

An important aspect for evaluation was the strengthening of attributes which affect the development of personality. In this context, the effect of computer usage on women's personality and structures of identity was analysed. Where as the strengthening of self-confidence, self-learning ability and the reduction of fears of contact with respect to the computer reached a satisfaction level of more than 80%, the assessment of creativity (77.2%) and self-realization (73%) are only marginally below. The satisfaction with the increase of self-confidence shows that through the acquisition of topics and the positive experiences with the computer during the measure, self-confidence was not only strengthened with regard to ICT, but also with regard to other problems of everyday life. The participants have not only overcome their fear of contact with regard to the computer, but also feel strengthened in conflict situations and feel confident to act more independently.

After the execution of the measure, the central question is, if the participants succeed in returning to working life. For this reason, a half year after the end of the measure, information about the learners' whereabouts was gathered. For individual courses the rate of reintegration into the labour market was between 65% and 83%. In the relevant district of the Federal Employment Office the average rate of reintegration in the field of occupational further education 2003 was about 35% and about 43% in 2004 (Bundesagentur für Arbeit, 2004, p.13, 2005, p.13).

As a whole, E-Office Management was rated 'good' to 'excellent' by the participants. Whereas the overall acceptance was at a value of 83.1 %, 100% of all participants would recommend the further education measure to others.

Set of Standard Rules for the Recommendation of Gender-Sensitive, Computer-Assisted Learning Concepts

On the basis of the described aspects of blended learning scenarios as well as due to the evaluation results, a set of standard rules for gender-sensitive, computer-assisted learning concepts will be formulated below. The set of standard rules shall be understood as recommendation and makes no claim to be complete.
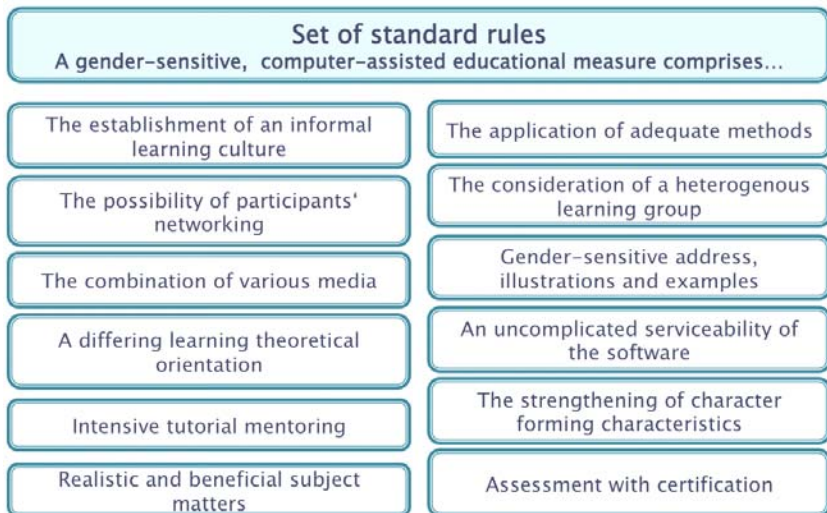

Figure 2. Set of Standard Rules for the Concept Development of Gender-Sensitive, Computer-Assisted Educational Measure (Wiepcke, 2006, p.286 ff.)

Conclusion: Blended Learning Enhances Gender Mainstreaming

In the first section, it was pointed out that in the German labour market gender inequalities exist with respect to occupation. In Germany, women's employment is characterised by qualification disadvantages: Women only concentrate in few occupations, they are affected by unemployment and dequalification processes to a higher degree, they are employed less frequently in comparison to men and predominantly work as unskilled and underqualified employees. In order to counteract these disadvantages, it is important to establish a policy of gender mainstreaming also in the area of education and to orient training measures in a gender-sensitive way. The blended learning concept of the further education measure E-Office Management shows that the consideration of female learning characteristics is possible when developing training measures. Furthermore, the evaluation of E-Office Management illustrates that a gender-sensitive further education measure can contribute to the enhancement of gender mainstreaming. E-Office Management qualifies women for the occupation and stands out due to a high rate of reintegration. Thus, the disadvantages of dequalification and increased unemployment are counteracted.

However, it should be critically noted that E-Office Management does not make a contribution to reduce the gender-specific segregation of the labour market in Germany. In order to decrease unemployment of persons after the parental leave, it was essential to develop a further education measure which offers parents a subsequent qualification for occupation. In particular, a subsequent qualification was necessary in the commercial service sector, as persons were not able to participate in ICT-innovations during parental leave. The participants of E-Office Management were exclusively female. On the one hand, women mainly work in the service sector, on the other hand, parental leave—in Germany—is mainly taken by women (cf. Wiepcke, 2006, p.28).[9] In order to counteract the gender-specific segregation of the labour market,

it is necessary to organise learning concepts in a gender-sensitive way already at school and university, so that men and women are sensitised to a gender-independent occupational choice at an early stage.

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9 In the last decades, men's appreciation of employment has decreased in favour of the family. But in spite of the increased appreciation of the family phase, men's inhibition threshold to take parental leave is still very high. For them, a break in employment still implies a career slump. This is also mirrored by the participants of E-Office Management, who, so far, have only been female.

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