GENDER & ICTS

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INHALTSVERZEICHNIS

1. CHiME & GENDER

Gender issues cut across all of CHiME's objectives, thematic areas and aims. In fact, CHiME is well aware that while the gender gap with respect to users of the Internet seems to be narrowing rapidly (see: the UN's Human Development Report 2001), there is still a big, and sometimes even growing, divide between the genders in the areas of ICT-related research, education, training and SME's. In fact, in most European countries, women are vastly under-represented in scientific and technological research, are very reluctant to take university degrees in scientific and technological disciplines, or to train for jobs in the ICT domains. Furthermore, considerably less women start or lead SME's devoted to IST applications and services.

CHiME is, further, aware that notwithstanding the many measures taken to bring about gender equality, in most European countries gender equality has not been attained, traditional patterns of behaviour and attitudes are still valid and stereotypical views and judgments of women's and men's capabilities persist among both sexes.

When studying the gender divide and the attitudes which lead to it, most attention has been devoted to the scientific, technological and technical domains. The Humanities, where women are traditionally in the majority, on the contrary, have been hardly ever the centre of interest, although in many European countries precisely in this domain the "shrinkage" in the percentage of women from one qualification or career level to another is particularly strong, leadership positions are mostly occupied by men, and diffidence towards ICTs is very common.

Another domain which has not been given much consideration, although the percentage of women there is particularly high, is the teaching and learning of languages not only in universities but even more so in schools and professional training. Like in the Humanities in general, in this domain also stereotypical attitudes with respect to the capabilities and roles of women are widespread with both sexes, women are found to lack confidence with respect to the use of

ICTs, and tend to leave everything to do with technology to their male colleagues or male students.

As the situation encountered in the Humanities and in language teaching might provide a better basis for research into the question why progress with respect to gender equality is so slow and which measures have to be taken in order to bring about change in the cultural attitudes, CHiME consciously focuses on these fields.

Gender issues are relevant also with respect to e-content matters in general and the digitalisation of cultural heritage in particular. In fact, it makes no sense to talk about excellence if women do not visibly experience the consequences of the research effort, the opportunities offered by ICTs and the potentials for their own identity which lie in the digitalisation of the cultural heritage and in multilingual access to it on the net. It is crucial, in this respect, to overcome the marginalisation of women caused by the traditional gender disparities in the canon and to promote the inclusion of women's cultural, social and scientific history and their contribution to technological and economic developments, to science, culture, literature, art etc. in the digitalisation effort being put in place in many European countries. Furthermore, women's needs and expectations with respect to ITCs, their design and implementation have to be taken into account.

CHiME is confident that because of its approach, the network will be able to contribute a different perspective on the gender divide and make proposals for alternative models for ICT diffusion, for the design of ICTs and the setting up of ambient intelligence in such a way that they will not simply reinforce women's marginalisation, as well as for the integration of cultural heritage with women-centred contents and for better use of women's lively interest in the Humanities and in foreign language learning for the building of the Knowledge Society.

CHiME's objective is, in fact, not only to further the development and the adoption of IST applications and services, or to make European cultural heritage accessible in the languages of Europe, or to encourage e-learning of languages, or to encourage women to take up science and technology. Instead,

CHiME's aim is the integration of all these individual objectives into a holistic approach which will be more suited to the complexity of the task FP6 sets itself and the transversal nature of issues like gender.

The strategy adopted by CHiME consists in a bottom-up approach to the issues most relevant to its objectives, thematic areas and aims. As gender issues play a big role in the formation of expectations, ideas about possibilities, the takeup of technology, starting of SMEs etc., CHiME will try to understand which attitudes are at stake, take actions to transfer knowledge, provide possibilities for practical experience, evaluate critically the results and take measures which allow for lasting effects.

As the encouragement of women's participation in scientific and technological research, or of taking professional specialisations in the field of ICT has to start long before women reach a university degree, CHiME's analysis and activities will not be limited to the level of scientific research or university education. Instead, schools will also be taken into consideration. Consideration will be given also to the training and retraining of women in ICT skills, as one of CHiME's aims is to further the transfer of knowledge and technology between RTD and SMEs and to contribute to the determination of professional profiles adapted to the new requirements of the market.

CHiME will set up a multi-institutional research infrastructure project to support further research into the gender issues related to its aims by modelling an adequate multilingual portal which will make the results of CHiME's activities, the resources and information gathered, and the tools widely available.

CHiME will also link with networks of women and virtual Women's universities devoted to science and technology and raise awareness that gender is an issue not only in domains where women are traditionally in the minority, and that the dramatic gender disparities encountered in so-called female domains in many European countries can only be overcome by interdisciplinary and ICT-integrating approaches such as being adopted by CHiME.

2.   THE GENDER GAP

If the strategy adopted in Lisbon 2000 for an accelerated transition to a competitive and dynamic knowledge economy capable of sustainable growth, with more and better jobs and greater social cohesion and the non-exclusive integration of European citizens into the Knowledge Society pursued by the FP6 is to be realised, the existing gender disparities with respect to the adoption, implementation and use of ICTs has to be tackled.

While the gender gap with respect to users of the Internet seems to be narrowing rapidly (see: the UN's Human Development Report 2001), there is still a big and sometimes even growing divide between the genders in the areas of ICT related research, education, training and SME's. In fact, in most European countries women are vastly underrepresented in scientific and technological research, are very reluctant to take university degrees in scientific and technological disciplines or to train for jobs in the ICT domains.[1] Furthermore, considerably less women start or lead SME's devoted to IST applications and services. In many respects women can be said to still belong to the developing edges of ICT diffusion.

CHiME is well aware of this divide and its first objective is to understand better the reasons behind it. CHiME is confident, that because of its approach, the network will be able to contribute a different perspective on this divide and make proposals for

- alternative models for ICT diffusion,
- the integration of cultural heritage with women centred contents,
- designing ICTs and setting up ambient intelligence in such a way that they will not simply reinforce women's marginalisation,
- better use of women's interest in the Humanities and in foreign language learning,

which would promote gender equality in a more incisive way than the ones taken to the present.

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[1]   In fact, as IDC says "the participation of women in the skilled networking space is relatively low." (see Bulletin "Networking Skills Shortages in EMEA" *Analyst: Andrew Milroy,* May 2001 http://www.idc.com).

The strategy of CHiME consists in a bottom-up approach to the issues most relevant to its objectives, thematic areas and aims. As gender issues play a big role in the formation of expectations, ideas about possibilities, the take up of technology, starting of SMEs etc. CHiME will try to understand which attitudes are at stake, take actions to transfer knowledge, provide possibilities for practical experience, evaluate critically the results and take measures which allow for lasting effects.

As the encouragement of women's participation in scientific and technological research or of taking professional specialisations in the field of ICT has to start long before women reach a university degree, CHiME's analysis and activities will not be limited to the level of scientific research and university education. Instead, schools will also be taken into consideration. Consideration will be given also to the training and retraining of women in ICT skills as one of CHiME's aims is to further the transfer of knowledge and technology between RTD and SMEs and to contribute to the determination of professional profiles adapted to the new requirements of the market.

CHiME's bottom-up approach will consist in:

- using the data already available, extract the relevant information and analyse comparatively the situation in the different European countries,
- collecting more data from its own perspective with the help of questionnaires, pilot surveys etc.,
- developing research questions and proposing criteria for larger scale surveys,
- taking affirmative actions with respect to knowledge transfer to and inclusion of women into the Knowledge Society
- evaluating the results
- providing for follow ups and lasting effects

CHiME will set up a multi-institutional research infrastructure project to support further research into the gender issues related to its aims by modelling of an adequate multilingual portal which will make the results of CHiME's activities, the resources and information gathered and the tools available widely.

3.   THE ISSUES MOST RELEVANT TO CHiME - A SKELETON

3.1   The Humanities

As can be seen by the distribution of the genders across academic subjects in many European countries women are very interested in the Humanities, languages, cultures and society issues. In many European countries even the vast majority of students in the Humanities is female.

3.1.1   Leadership positions in the Humanities

Despite this, in a lot of European countries (Germany for example), the higher the level of qualification or career in the Humanities, the fewer women are found and up to 90% of leadership positions in the Humanities are occupied by men, i.e. young female students are most of the times provided with male role models.

In some European countries, on the other hand, the percentage of women holding leadership positions in the Humanities is much higher (Italy for example) and thus young female students are provided much more with non traditional female role models.

In order to understand the issue of leadership and role models better, CHiME will first of all exploit the data which have been already collected (see for example the Helsinky Group's Report) extracting above all those data which concern the Humanities and comparing the situation in the various European countries.

CHiME has already encouraged a considerable number of high level, female researchers to take part in the network. As a consequence, among the registered PhD students, which will take part in the network, the number of women is also high. CHiME has, furthermore, encouraged women to take up coordinating responsibilities inside the network. In the future CHiME will try and reach not only equity in numbers between the two genders when it comes to network composition but will also strive to employ above all female researchers and students for the work to be done by the network attracting thus more women towards research in ICT-related fields and IST applications.

Furthermore, CHiME's speciality is not only to overcome linguistic and cultural obstacles by the promotion of multilingualism but also to overcome the gulf between male (hard) Science and Technology domains and female (soft) Humanities domains via its multidisciplinary composition. CHiME thus creates an innovative space with excellent potentials for interdisciplinary and integrative research and for a new type of collaboration and exchange between the genders. CHiME will try and disseminate this new role model in all possible ways.

3.1.2   Female Humanities students and ICTs

Most female students in the Humanities are still very reluctant to take to ICTs and IST applications even on the very basic level. They leave the handling of computers to their fathers, brothers or male partners. When young female researchers in the Humanities are asked to set up a web page for their male professors (who rarely have IT skills), they ask their partners or brothers to create the page, to set it up and introduce it to the professor.

Against this background the integration of the Humanities and ICTs is not only to be seen as a way to meet the high demand for professionals trained in the confluence between the humanities disciplines and the ICT, foreseen in a vast sector of the so-called knowledge economy, but it would seem to be also the means to overcome the division between the so called soft (female) - and hard (male) disciplines. Humanities computing would, in fact link the female students' interest in languages, literature and cultures with applied computing, giving women the chance

- to become confident with ICT in a "soft" setting,
- to overcome their diffidence towards ICTs,
- to discover their interest for Science and Technology

Thus, the development of ICT oriented university degrees, postgraduate courses and doctorats in the Humanities, of study groups and workshops will be one of the best ways to encourage and promote women's participation in research. Furthermore, Humanities computing and digital humanities are already leading to new research questions and methodologies which have the

potentiality of addressing women's needs and interests better than the traditional gulf between the Humanities and Science and Technology.[2]

CHiME will do research on this question by first of all

- collecting whatever data are available on the use of ICTs on the various levels of Humanities education and above all in Language, Literature and Cultural Studies as well as on the gender distribution with respect to the teachers who use ICTs in their courses and the students who take such courses,

- conducting a pilot study on the attitudes to the adoption of ICTs in a small number of departments

- developing a questionnaire for teachers and students together with specialists on the basis of the results of the pilot study

- conducting (or commissioning) a large scale survey via the distribution of this questionnaires to departments and students.

On the basis of the findings CHiME will formulate further research questions and undertake itself the following affirmative actions with the aim of transferring knowledge about IST applications to humanities teachers and students

- organise humanities computing workshops at a local / regional and / or national level favouring above all the participation of women

- initiate multilingual e-humanities projects in some departments and monitor their progress

- organise a women's day with integrated knowledge fair which takes place locally and virtually at the same time and where among others the results of the projects will be presented to a European community in a multilingual way

- institutionalise a European e-humanities summer school for university teachers, young researchers and graduate students,

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2 Karin Haenelt (2002): „A Future with Language Technology", in: Computerlinguistik. Was geht, was kommt? 95-99. Online questioning showed that „All participants agreed that interdisciplinary work will become more and more important in the future, and that more training in cross-methodological thinking will be required in education. [Absatz] Computational linguistics and language technology already comprise approaches from linguistics, from mathematics, from engeneering and other disciplines. Based on this interdisciplinary experience this science and technology can offer support to forward interdisciplinary thinking in school education. They can contribute educational topics and methods which provide an excellent opportunity to overcome a split of pupils into those which are ‚linguistically gifted' and those which are ‚mathematically gifted' in favour of pupils which are well-educated." (97).

- evaluate the activities and try to answer the question whether attitudes have changed,

- link with the decision taking bodies in the different European countries in order to raise awareness about the necessity to integrate Humanities and ICTs and the importance of such an integration for the inclusion of women into the Knowledge Society, its importance for the economy and the job market,

- disseminate the results of the surveys, the evaluation of the activities and the resources collected on CHiME's multilingual portal.

- provide for a follow up and for the lasting effect by creating European degrees on all levels of education (BA, MA and Doctorates) in e-humanities and a consortium of European Universities to teach these courses and to undertake research in humanities computing and e-humanities

3.2   Schools

The present situation with respect to gender distribution in the Humanities and the attitudes to the adoption of ICTs has obviously consequences for schools in general and language learning in particular.

3.2.1   *Humanities vs. Science subjects*

In most European countries the number of young people choosing to study science subjects in general has shrunk steadily in recent years, according to a Eurobarometer survey in 2002. The reasons are very often bad experiences with mathematics, physics etc. in school. This does not alter the fact that considerably more young women than young man take up university degrees in the Humanities. This means there must be more reasons for girls than for boys not to study science subjects.

To gain a more precise picture of the situation in individual countries statistics of girls and boys taking up scientific / technological specialisations in secondary schools will be collected.

As the reasons for girls not to study science subjects might not be found in the overt conditioning of girls via stereotypes like "women are not fit for science and engineering, they are hard subjects, women are better off with 'soft' disciplines like the Humanities" alone but in much more subtle ways of directing girls away from science and technology CHiME will carry out a small

scale pilot survey in primary and secondary schools in different European countries, taking into account Humanities as well as Science subjects.

This pilot survey will be carried out by members of CHiME themselves because CHiME brings together a wide multidisciplinary mass of European scientists and other experts and thus is better qualified to take a holistic approach to the question than specialist in one or the other domain or more specialised groups or networks.

On the basis of the results of this survey the criteria for a larger survey to be carried out by specialists will be elaborated.

It is expected that this pilot survey will add more gender sensitive indicators to the core set already developed by Eurogramme.

3.2.2   *Teaching and Learning of languages*

Girls are generally found to have more interest in the learning of foreign languages than boys. Due to the gender disparity in the Humanities in general and foreign language departments in particular, the majority of teachers of foreign languages are female.

In most European countries the learning of foreign languages starts at primary school level. Whereas most parents out of pragmatic reasons agree that English should be taught in schools, there is resistance to the learning of other languages. As parents and the surroundings exert great influence on the attitudes of children the same resistance can be found with pupils. To win this resistance physical exchange between schools and pupils would need to take place, but problems of finance get into the way.

ICTs could help to overcome these problems as they permit the realisation of a manifold virtual exchange (chat rooms, web pages, discussion list etc.). Most schools, however, do not undertake such activities. The problem is not only that many schools, above all outside the big centres, are not yet connected to the net, but that they do not have the personnel who feels competent to exploit the possibilities offered by ICTs. Female teachers in schools leave the whole domain of ICT to their male colleagues or male students.

CHiME will first of all create a repository of information on

- the take up of foreign languages by the two genders in the various types of schools in the European countries and on the gender distribution with respect to language teachers
- the usage of ICTs in the teaching of languages in the various types of schools in the European countries and on the gender distribution with respect to the teachers who use them and the pupils who profit from them.

On the basis of the findings CHiME will formulate further research questions and proposals for affirmative actions.

CHiME will furthermore itself undertake some affirmative actions like for example

- linking with schools in general and female language teachers in particular,
- organising workshops for female language teachers / female language students on the possibilities offered by ICTs, the basic knowledge needed to exploit them, hands on experience and indications where further information can be found,
- initiating multilingual projects in these schools and monitoring their progress,
- organising a girl's day with integrated knowledge fair which takes place locally and virtually at the same time so that the schools / groups which took part in the workshops in the various countries can be linked and their projects made known to a European community in a multilingual way,
- prepare a multilingual presentation for this day
- linking with government bodies which are responsible for education locally / regionally / nationally in order to raise awareness about the more subtle reasons for gender disparity and the need to think of new ways in order to increase gender equality,
- provision of facilities for a follow up (comments, discussions, proposals etc.)
- initiating spin-offs by techno-humanists (consultants, educators, specialist in the transfer of HLT etc.) and prepare the ground for their recognition by the relevant bodies and schools

3.3   Professional training and retraining of women

For what concerns professional training and retraining of women, two aspects are particularly relevant to CHiME: the need for multilingual speakers by the

digital market and the need for skilled networking professionals in the European Union and in the SME community.

In fact, the Internet opens up international marketing to another dimension. It is already understood that online marketing needs to take place in the language of the target country, as any form of marketing does. The global market thus creates the necessity for multilingual speakers and languages acquire economic value.

Furthermore, as IDC research reveals, in most European countries there are Networking Skills Shortages: "despite the threat of an economic downturn, the shortage of skilled networking professionals in Western Europe is set to grow from approximately 200,000 skilled networking professionals in 2000 to approximately 550,000 professionals by the end of 2004". IDC also expects significant networking skills shortages to become apparent in most emerging markets in Eastern Europe and the adoption of networking technology and demand for associated networking skills to increase in the SME community. (see Bulletin "Networking Skills Shortages in EMEA" *Analyst: Andrew Milroy,* May 2001 http://www.idc.com*)*.

Winning women to be professionally trained in this domain is seen to be one of the solutions to overcome the Networking Skills Shortages. In fact, as IDC says "the participation of women in the skilled networking space is relatively low. Encouraging women to develop skills in this area could also relieve supply side constraints." (see Bulletin "Networking Skills Shortages in EMEA" *Analyst: Andrew Milroy,* May 2001 http://www.idc.com).

3.3.1 *Learning of languages*

Also with respect to language learning in professional training ICTs could help to overcome the problems arising from the lack of physical contact with mother tongue speakers of the languages to be learnt. Furthermore, ICTs could allow for language learning in virtual environments which will become more and more widespread in the individual professions and in the market related domains. The adoption of ICTs in language teaching and learning would, furthermore, help to combat the diffidence towards ICTs which is found to be

particularly common with women and to interest women for ICT oriented professional domains.

CHiME's approach to the gender issues with respect to language learning in professional training will be similar to the one outlined above with respect to schools.

CHiME will first of all create a repository of information

- on the learning of foreign languages by the two genders in professional training countries and on the gender distribution with respect to language teachers,
- on the usage of ICTs in the teaching of languages in professional training in the European countries and on the gender distribution with respect to the teachers who use them and the trainees who profit from them.

On the basis of the findings CHiME will formulate further research questions and make proposals for affirmative actions.

CHiME will furthermore itself undertake some affirmative actions like for example

- linking with schools of professional training in general and female language teachers in particular,
- organising workshops for female language teachers / female language students on the possibilities offered by ICTs, the basic knowledge needed to exploit them, hands on experience and indications where further information can be found,
- initiating multilingual projects in these schools and monitoring their progress,
- organising a girl's day with integrated knowledge fair which takes place locally and virtually at the same time so that the schools / groups which took part in the workshops in the various countries can be linked and their projects made known to a European community in a multilingual way,
- prepare a multilingual presentation for this day
- linking with decision taking bodies in order to raise awareness about the need to integrate ICTs and language teaching and the importance of such an integration for the inclusion of women into the Knowledge Society, its importance for the economy and the job market,
- providing facilities for a follow up (comments, discussions, proposals etc.)

- initiating spin-offs by techno-humanists (consultants, educators, specialist in the transfer of HLT etc.) and prepare the ground for their recognition by the relevant bodies and schools

3.3.2   Retraining of unemployed women

Mainstream retraining courses in ICT skills and applications for unemployed people have been developed first of all for men and thus do not necessarily take women's needs and women empowering contents and environments into account. There are, however, a few examples of innovative ways of retraining unemployed women like the one taken by BreZel, the *Bremen Centre for Literature Documentation* (see http://www.brezel.uni-bremen.de/) where a database on female authors from 1945 onwards is being built in collaboration with the Bremen job centre. Unemployed women are, in fact, trained at the university centre in ICT applications in general and are given the skills in particular which are needed in order to be able to work on the project. Apart from the research oriented environment in which this takes place, and the working experiences gained, women are, thus, also given the possibility to gain insight into the histories and lives of women and their contribution to German culture.

As the question whether such ways of retraining unemployed women in IST applications and services contributes more to the promotion of gender equality and to the empowerment of women than traditional retraining schemes is relevant to CHiME's objectives, CHiME will first of all link with job centres and collect information about ICT-retaining schemes in general and courses which taken women's needs and women centred contents into account.

On the basis of the results, CHiME envisages to

- link with some traditional and innovative retraining courses in IST applications and services,
- monitor both types of courses and evaluate them comparatively,
- organise a forum where women on such training courses can exchange experiences and where innovative projects can link,
- linking with job centres in order to raise awareness about more innovative ways of retraining women in ICTs,

- disseminate the results of the comparative study and the information collected on CHiME's multilingual portal.

3.4 Cultural heritage and Women – the level of contents

In many European countries the cultural and economic value of the digitisation of the cultural heritage is being recognised and growing effort is undertaken to make cultural heritage available via the web. There his, however, great danger, that women and their cultural, social and scientific history as well as their contribution to technological and economic developments and to science, culture, literature, art etc. will be marginalised because of the traditional gender disparities in the canon. As it makes no sense to talk about excellence if women do not visibly experience the consequences of the research effort, the opportunities offered by ICTs and the potentialities for their own identity which lay in the digitalisation of the cultural heritage and making it available to everybody on the net,

- CHiME will collect information on projects devoted to the collection of data on the history of women and the digitalisation of artefacts, literature, scientific works etc. created by women (see for example databases of women's writing) and provide multilingual access to these projects' web pages,
- CHiME will initiate projects devoted above all to the contribution women made to the technological and economic developments, science, culture etc. of the individual European countries.

3.5 Women's Needs

In order to take women's needs into account, women's expressions of their needs and their attitudes to ICTs have to be known. Women all over the world have expressed their needs and expectations with respect to ICTs in a wealth of declarations (see for example Beijing 1995, Toronto 1995, Bamako 2002, preparation for Geneva 2003 etc.). Women are discussing these needs on discussion lists like *Gender & ICT*, *mujeresred-informatica* etc. or in portals like *Mujeres en Red*, *Server Donne*, *Penelopes*, *Womenspace*. Women write also Manuals for other women about how to use computers, create WWW-pages etc. and why it is important for women to adopt ICTs (see for example *El viaje de las internautas. Una mirada de género a las nuevas tecnologías*).

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Profiles of female users of the net have been compiled (see for example Info@Perla 1997).

CHiME will first of all collect such declarations, create a repository where to archive such information and make it accessible to every body. It will, furthermore, extract from the various types of publications the needs and expectations which are most relevant to CHiME and publish the findings in a special section of its portal.

3.6 Raising awareness of other networks

CHiME will link with networks of women scientists in the Humanities, in Science and in Technology. CHiME will also link with Women's universities like the virtual IFU (http://vifu.de). As most networks and virtual universities are devoted to Science and Technology, one aim of CHiME will be to raise awareness about the gender issues in the traditional Humanities and the importance of CHiME's interdisciplinary and ICT oriented endeavour for increasing gender equality.

4. VERSION PUBLISHED IN THE PROPOSAL

4.1 Gender Action plan

CHiME will try to reach not only equity in numbers between the two genders when it comes to network composition but the network will also employ preferably female researchers and students for the work to be carried out by the network, thus attracting more women towards research in ICT-related fields and IST applications.

In order to understand the gender issues in the domains most relevant for the network's objectives, CHiME will use the first 18 months to

- exploit the data already existing on gender disparity (Report of Helsinki Group "Women and Science" etc.) by extracting above all the data concerning the Humanities and language learning and comparing the situation in the various European countries,
- collect more data from its own perspective with the help of pilot surveys,

- compile and evaluate women's declarations (Beijin 1995, Geneva 2003 etc.), discussion lists (Gender & ICT etc.), portals (for example Mujeres en Red, Server Donne, Womenspace) on needs and expectations with respect to ICTs,

- collect information about innovative ways (collaboration between universities and job centres, women centred contents) of training and retraining women in ICTs,

- collect links to projects devoted to women's history and their contribution to cultural heritage.

On the basis of the findings, research questions, criteria and proposals for larger scale surveys and an action plan for the next 3.5 years will be elaborated.

The actions envisaged are:

- organisation of knowledge transfer workshops at local, regional or national level for female Humanities students, language teachers and pupils,

- initiation of multilingual e-humanities / e-language learning projects in schools, Humanities departments, institutions of professional training, and the monitoring of their progress,

- organisation of a women's / girls' day with integrated knowledge fair to take place locally and virtually at the same time and where the results of the projects will be presented to a European community in a multilingual way,

- evaluation of the activities and their effectiveness with respect to change in attitudes,

- initiation of spin-offs by techno-humanists (consultants, educators, specialists in the transfer of HLT etc.) and prepare the ground for their recognition by the relevant bodies,

- linking with networks of women scientists and Women's universities like the virtual IFU (http://vifu.de) not least in order to raise awareness about the gender issues in the traditional Humanities and the importance of CHiME's interdisciplinary and ICT oriented endeavour for increasing gender equality.

- linking with the decision-taking bodies in order to raise awareness about the necessity to integrate Humanities / learning of languages and ICTs, and the importance of such an integration for the inclusion of women into the Knowledge Society,

- institutionalisation of an European e-humanities summer school for university teachers, young researchers and graduate students,

- initiation of cultural heritage projects devoted to women's contribution to technological and economic developments, science, culture etc. of the individual European countries,

- initiation of projects for the retraining of unemployed women through collaboration between women centred cultural heritage projects and job centres,

- dissemination of the results, of evaluations and resources in a special section of CHiME's multilingual portal.

4.2 Gender issues

Gender issues cut across all of CHiME's objectives, thematic areas and aims. The following issues are, however, particularly relevant to the network:

- the presence of women in the network, their participation in research and the change of working culture

- the strong interest of women in the Humanities and in the teaching and learning of languages

- the widespread diffidence among women towards ICTs, science and technology

- women-centred contents, women's needs and expectations with respect to ITCs

CHiME has already encouraged a considerable number of high-level female researchers to take part in the network. Also among the participating PhD students the number of women is high. CHiME has, furthermore, encouraged women to take up coordinating responsibilities inside the network. Furthermore, via its multidisciplinary composition CHiME creates an innovative space with excellent potentials for interdisciplinary and integrative research and for a new type of collaboration and exchange between the genders.

In a context in which young women more than young men appear to be interested in the Humanities (languages, cultures, society issues) and given widespread diffidence of humanities students towards ICTs, science and technology, the development of Humanities computing / e-humanities university degrees, postgraduate courses and doctorats, of study groups and workshops, which link the students' interest in languages, literature and cultures etc. with computational methods and advanced computing skills as well as with the theoretical questions arising from the application of ICTs to humanities contents seems to be <u>the</u> means to overcome the gulf between the so called soft (female) - and hard (male) disciplines.

As humanities graduates very often become language teachers, ICT-oriented degrees will also change the situation in schools and professional training, where the same diffidence to and defensive rejection of ICTs can be found particularly with female language teachers. Contributing to the integration of ICTs in the teaching of languages and thus also to the promotion of e-learning, is in itself one of the best ways of making women confident in the use and application of ICTs.

As projects devoted to the collection of data on the history of women and their contribution to the cultural heritage show, Humanities computing / digital humanities and the new research questions it raises also have the potential to combat the traditional marginalisation of women caused by the traditional gender disparities in the contents canon. Such projects open up, furthermore, new perspectives for the training of women in IST applications and services and allow women to visibly experience the consequences of the research effort and the opportunities offered by ICTs for their own identity.

While realising its aims in all the three thematic areas which CHiME considers strategic for the internationalisation of communication the network will take into account the needs and expectations of women with respect to ICTs expressed in relevant online publications. Furthermore, the network will link with networks of women and Women's universities devoted to Science and Technology, in order to raise awareness about the gender issues in the traditional Humanities and the importance of CHiME's interdisciplinary and ICT oriented endeavour for increasing gender equality.