UNIVERSITY OF EASTERN FINLAND

Benefits of Lifelong Learning

BeLL Survey Results

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Additional deliverable for Work packages:
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BeLL BENEFITS OF LIFELONG LEARNING

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Executive summary

This Work Package report describes the analysis and results of the survey data collected for research project "Benefits of Lifelong Learning"(BeLL). The aim of the project was to analyze the wider benefits of liberal (non-formal non-vocational) adult learning in 10 European countries. The task for Work Packages 2 and 3 was to develop and organize a large scale survey and to analyze the survey data (n = 8.646, structured questions on a Likert scale and qualitative analysis of open questions). This report describes (1) the theoretical perspective of the research and the construction of the questionnaire, (2) data collection and analysis, and (3) research results based on the survey data.

The results indicate that participation in liberal adult education generates multiple benefits for individuals and society.70 - 87 % of respondents experienced positive changes in learning motivation, social interaction, general wellbeing and life satisfaction. Less frequently experienced changes related to work and career and on active citizenship, but even here 31 - 42 % has experienced some positive changes. Qualitative analysis of open questions shows that people are able to recognize, name and describe these benefits.

Statistical analyzes of survey data (n= 8646) found 10 benefit factors. These benefits can be summarized in three latent factors: changes in CONTROL OF OWN LIFE, ATTITUDES & SOCIAL CAPITAL and HEALTH, FAMILY & WORK. Structural equation model show that participation in liberal adult education generates social capital and learning motivation, which in turn generate health, work and family related benefits. Increased sense of being able to control owns life mediates the development of benefits as well. Especially social interaction and new networks seem to play an important role in the development of benefits.

There are some small but statistically significant differences by gender, types of courses and countries. There are also significant differences in relation to educational level: the lower the educational level is, the more changes participation in liberal adult education generates in learning motivation, well-being and in other benefits. Liberal adult education can therefore narrow the gaps between different social groups. It is likely to increase the probability of future participation, particularly for those who have had poor previous educational experiences. Therefore it is a good low threshold learning service motivating especially lower educated to study further.

There were also some age related differences: for younger participants liberal adult education serves as a "stepping stone" into society, improving sense of control of their own life. For older participants it is a "cushion" softening age related changes like retirement, loss of friends and family members, and skills decline.

Key words: wider benefits of learning, liberal adult education, wellbeing, lifelong learning, social capital, individual capital, mixed methods, structural equation models

List of contents:

List of Figures:

List of Tables:

1 Introduction

1.1 Purpose of this report

This report is an additional deliverable for the BeLL project, summarising the work and analysis done on the quantitative part of the BeLL study. This report covers work packages 2 (Development Research Framework: Quantitative Part) and 3 (Development Research Practice Part: Quantitative Part).

This report summarizes first the project aims in general and defines liberal adult education, to describe the context where the survey belongs in the BeLL study. More detailed description is available on theoretical framework and some earlier research, which serve as background for questionnaire development. Sampling procedure and data collection in ten participating countries is described.

Since the BeLL survey included both structured Likert scale questions and open questions, the statistical analysis and qualitative analysis are reported in separate chapters. Statistical results include in addition to respondent and course type profiles the basic frequencies of benefit statements, and a deeper confirmatory factor analysis. Group comparisons are made using T-test, ANOVA and ANCOVA. Finally structural equation model describing the development of benefits is presented.

Qualitative analysis of two open benefit questions is based on qualitative content analysis of 4443 respondents' answers. These results give an additional perspective on the wider benefits.

1.2 Background and aims of BeLL project

Aim of the BeLL project is to analyze how non-vocational non-formal adult learning – the "second type of learning" in the EU policy – benefits the individuals and society. This kind of adult education is sometimes labelled as "popular" especially in Swedish context (cf. Rubenson 2006, p. 337) but because this term has a different political connotation especially in Latin America, a more suitable and common label is "liberal" adult education, and this term is therefore used in the BeLL project. Common to these liberal adult education activities is that adults participate voluntarily, on their own spare time, and based on their own personal interests. The courses are usually non-credited and they are not (at least directly) aiming at development of labour market related skills and employability. In earlier studies this kind of adult learning is defined as "learning activities taken for personal interest-related reasons" (Desjardins, 2003, p. 11) or "general curricula" (Feinstein & Budge, 2007, p. 20).

The Benefits of Lifelong Learning -project (BeLL), is a trans-European research project analysing wider benefits of liberal adult education in peoples' life's in 10 European countries[1]. It is the first study on benefits of liberal adult education in Europe following the "Wider-Benefits-of-Learning" Approach. It focuses primarily on social and individual benefits of learning such as well-being, rather than on economic or vocational benefits. In other words it is looking for private, external, public and non-monetary benefits of education and learning (compare OECD, 2007a; Desjardins, 2008b). In the BeLL study benefits of lifelong learning were defined, refined, and explored in ten European countries and the knowledge base on liberal adult education in general and the respective liberal adult education landscapes in the ten participating European countries was expanded. The findings on the perceived benefits of learning were to be interpreted against this background.

[1] Spain, England, Germany, Switzerland, Italy, Finland, Czech Republic, Slovenia, Romania, and Serbia.

The following research objectives were partly predefined at the beginning of the project and partly developed in the course of the research process. The BeLL study aims

- to understand, refine, and develop the definitions of 'benefits' and their categorization in adult education research;
- to document and interpret the benefits learners perceive from participation in liberal adult education in ten European countries;
- to compare these findings for different groups of participants with respect to gender, age, employment status, course type, and course subject;
- to describe the relationships between the reported benefits of liberal adult education and course characteristics, such as topic, teaching methods, learner groups, teaching styles, learning cultures, and teacher personalities, and to develop from this hypotheses on the institutional conditions associated with individual and societal benefits;
- to expand the knowledge base on liberal adult education in general and on the respective liberal adult education landscapes in the ten participating European countries, and to interpret findings on the perceived benefits of learning against this background.

1.3 Definition of liberal adult education in BeLL study

The target group for BeLL study are the adults who have participated liberal adult education courses during the past 12 months. Liberal adult education is that part of the non-formal adult education system that is non-vocational and based on topics and courses that are not work or career oriented.

The **Eurostat manual** *Classification of Learning Activities* (CLA) defines **formal education** as education provided in the system of schools, colleges, universities and other formal educational institutions that normally constitutes a continuous 'ladder' of full-time education for children and young people, generally beginning at the age of five to seven and continuing up to 20 or 25 years old (Eurostat 2006, p. 13).

Non-formal education is defined as any organised and sustained educational activities that do not correspond exactly to the above definition of formal education. Non-formal education may therefore take place both within and outside educational institutions, and cater to persons of all ages. Depending on country contexts, it may cover educational programmes to impart adult literacy, basic education for out of school children, life-skills, work-skills, and general culture. Non-formal education programmes do not necessarily follow the 'ladder' system, and may have a differing duration (ibid. p. 13).

The challenge for BeLL study and also for European lifelong learning policies is that non-formal non-vocational adult education is often not recognized as an important and special activity within the field of non-formal adult education, which is mostly work related and organized or paid by employers. The Adult Education Survey in 2007 revealed that over 80 % of non-formal adult education is work related, and over half of the courses are organized (and sponsored) by employers or non-formal training organizations (Boateng, 2009). This can be seen in participation statistics, legislation and in organizational structures, which in many countries cover non-vocational non-formal adult education less effectively. The following table describe how liberal adult education is related to other types of adult education.

Table 1 Types of adult education

	Vocational education	**Non-vocational education**

Formal education	Vocational basic, secondary and tertiary education, providing formal degrees	General basic and secondary education, providing formal degrees
Non-formal education	Work-related courses organized by employers or training organizations, no formal degrees provided but certification usual	**Liberal adult education: courses based on own learning interest, voluntary participation, no formal degrees nor certificates; organized by associations, adult training organizations or third sector organizations**

The types of adult education programs defined by Rogers (1996, p. 21) fit in the same typology: vocational types are programs leading to a degree (offered by formal education system) and vocational training programs that do not lead to typical degrees (targeted at unemployed people or employees). Non-vocational programs are programs leading to acquisition of basic skills (targeted at culturally disadvantaged social groups), programs aimed at personal growth (covering a wide range of subjects, such as handicraft, arts, sports), and programs aimed at social growth (targeted at specific population groups with the aim of enhancing their social role, for instance, parental counselling, women counselling, counselling of union trades members etc.). The last two types of programs are usually considered as liberal adult education.

The difference between types of provision is sometimes fuzzy, and there is also a difference if liberal adult education is defined from the organizational point of view (which course provider organizes the learning activities) or from the personal point of view (what are the learning and participation motives, recreational or vocational). The same pottery course in an adult learning centre can be a hobby course for another, and vocational for someone whose aim is to became a pottery teacher.

1.4 Liberal adult education in BeLL countries

The challenge for BeLL study is that liberal adult education is organized differently in the European countries. For example Finland has a clear organizational structure and state funding system, but some other countries have less structured and centralized system. These national differences are related to another problem, which is related to participation statistics. For Finland rather good statistics are available. In Finland more than 1.7 million adults (out of 5.2 million inhabitants) participate in adult education each year, which covers half of the working age population (18 to 64 olds). Majority of adult studies is work related. It is estimated that out of these 1.7 million people almost 520.000 adults participate in voluntary hobby related and non-vocational courses (liberal adult education courses) (www.stat.fi). In 2005 the actual registered number of course participants in liberal adult education organizations was 1.022.851 (Kumpulainen, 2007), which indicate that some adults often participate more than one course. Participation rates in liberal adult education have stayed unchanged from 1990, with female participation rate of 26 % and male 11 % (www.stat.fi).

These high participation rates are common to all Nordic countries, and reflect the characteristic of Nordic education system and welfare state, as well as the historical importance of liberal adult education for the development of national state in Finland and Sweden especially (see Antikainen 2006; Rubenson 2013). High participation rates in liberal adult education are also related to good organiza-

tional infrastructure and state supported system for liberal adult education organisations (adult education centres, folk high schools, summer universities, study centres and physical education centres).

Table 2 Finnish liberal adult education organizations in 2007 (Kumpulainen, 2009)

Type of organization	Number of organizations	Percent of all participants (n = 1 022 851)
Adult education Centres	223	58 %
Folk High Schools	83	11 %
Summer Universities	20	4 %
Study Centres	11	18 %
Physical Education Centres	14	9 %

In other BeLL countries the liberal adult education sector is less structured, and it is financed and organized differently. For example England has a long history of liberal adult education (including worker's educational movement, Open University etc.) but a rather decentralized education system.
The adult education sector of the United Kingdom is characterised through different policy developments in the four belonging nations of England, Wales, Scotland and Northern Ireland. The central Governments of these four states hold the responsibility for the educational systems but in most cases the provision of the education is decentralised to local authorities, voluntary providers, governing bodies of educational institutions etc. Major feature of adult education in the UK is a strong public funded non-vocational adult education service. In the meantime, there is no distinct adult education sector in the UK. Adult education takes place in sectors like higher education, school, work based learning programmes or local authority adult education services. Only the last one is exclusively for adults. It is the one being less public funded and at the same time counts most participants.

There are no robust surveys in England of the type of liberal adult learning, with all relevant data collection aggregating all types of adult learning, vocational and non-vocational. NIACE's annual Adult Participation in Learning Survey does not ask participants where their learning took place, focusing instead on participation and planned, or expected participation in the future. However, analysis of the Skills Funding Agency Individualised Learner Record (ILR) shows that the majority of the type of liberal adult education that is the focus of the BeLL study is delivered in Further Education Colleges and through Local Authorities (often via independent Adult and Community Learning providers). Higher Education Institutions and Private training providers also play an important role. Accordingly, the following provider types seem to organize liberal adult education courses in England.

- Further education colleges
- Adult and community learning providers
- Local authorities
- Higher education institutions
- Community groups

In Czech Republic adult education policy tries to support social cohesion, active citizenship as well as employability. It is provided in the areas 'General Education' (basic education, e.g. for early school

leavers), 'Further Vocational Education' and 'Civic or Special Interest Education' (concerns political, historical and cultural interest). Key providers are primary schools, secondary and professional schools, language schools, universities, companies and organisations as well as non-profit organisations. NGOs are advocating the development and coordination of adult education in the Czech Republic. The umbrella organisation in this field is 'The Association of Adult Education Institutions of the Czech Republic'. Very active are 'The Association of Universities of the Third Age', 'The National Centre of Distance Education' and 'The National Training Fund' (Country Report on Adult Education in the Czech Republic, 2011, p. 3-6). There is a crucial difference in the financing of education activities. The formal sphere of education covers the whole initial education and is prevailingly financed by the state budget although there are some private providers here, too. Their number is, however, minimal. Liberal adult education in Czech Republic is understood as any training and education activity which people attend from their own interest. The liberal adult education belongs to the sphere of non-formal education and is directed neither centrally nor regionally. Plenty of bigger or smaller adult education providers offer manifold liberal adult education courses, including many schools and universities from the formal sphere of education.

Italy represents another end of continuum, where the role of state is minimal and liberal adult education provision is mainly based on activity of non-profit associations. Main public institutions promoting adult learning opportunities are the Permanent Territorial Centres (CPT) and the evening schools. Additional private organizations as well as NGOs can be found. The CPTs operate in the field of formal and non-formal education. Its main purpose is to promote basic literacy skills, develop basic skills and specific knowledge, teach foreign languages, and offer Italian courses to foreigners and courses for high education diplomas. They also promote cultural as well as professional development of adults. NGOs like the 'Italian Association for the Education of Adults', the 'Folk High Schools' or the 'Universities of Third Age' underlie different rules (depending of the region they belong to). Though in order to operate, all of them have to be recognized as an association. They must provide at least six different courses, two thirds of the teachers have to have a university degree and they should be economically autonomous. Further, they have to be a member of the national or the international association of Università per la Terza Età.

A recent law reform established CPA (Centers for adult education) which has to provide courses for people who don’t have fulfilled their scholastic obligation and also liberal non-vocational education, but the reform is only on the paper for now. At the moment only existing state organizations are CTP’s in every province focusing only on formal adult education and on Italian courses for migrant people in order to obtain a long term permission to stay (immigrant visa). For financial reasons there is no adult liberal education in these centers. It’s a matter of fact that adult liberal education in Italy is run only by non-profit organizations, especially cultural associations. There are a very large number of them, offering a very high quality courses and activities and having an important and rich tradition at the local level, but few have a national structure widespread across the whole country. If they do, strong differences exist between north and south Italy and among regions. Non-profit organizations that run activities for liberal adult education at national level in Italy are:

- ENDAS – National democratic organization for social activity (Founded in 1948; independent body not tied to the political parties or catholic church)

- ARCI – National association of social development, founded at the end of the fifties and directly tied to left parties.
- UISP – Italian Union for sport for everybody (Unione Italiana Sport Per tutti)
- "Third Age" Universities - Cultural associations and non-profit organizations at the local level. They usually run every kind of courses and organize conferences and tours in museums, exhibitions and monuments.
- DLF- National Association for After-work activities for Railway Workers. The ancient Italian institution for worker's free time and leisure, established in 1925. Members of the Association are railways workers both employed and retired; DLF hold sport facilities, hotels, green areas, clubs and haunts and usually run a lot of courses and leisure activities.

2 BeLL survey

2.1 Theoretical perspective and earlier studies

Wider benefits studies represent different genres. One basic difference is whether the focus is in the analysis of economic, social or individual benefits. Another difference is whether the focus is on the societal (benefits for society) or at individual level (benefits for individuals). Studies looking for societal economic or social benefits are usually based on large register data and on statistical analysis of correlations between aggregate variables like regional or national educational level and income, employment rate, costs of health and social care etc. Individual benefits are usually researched using a more qualitatively oriented analysis of individual experiences. Kil et al. (2012) point out that despite the various theoretical and methodological approaches, research work in this field intersects at two points: firstly, they share the same central question and secondly, they believe that the analysis of the wider benefits of learning is only possible via a multi-dimensional research approach.

BeLL is looking for individual benefits (which of course may have consequences at societal level as well) and data collection is based on experiences of liberal adult education course participants. The following example from BeLL semi-structured interviews (see work package 5 report) describes what kind of wider benefits one respondent (a 70 year old woman from England) have experienced after having participated several liberal adult education courses:

> Question: *And the courses you were doing, in terms of thinking about the outcomes - what have you noticed?*
> Answer: *In technical terms if you like, all the courses I have taken, which are liberal arts, cultural sorts of things, they have all honed by writing skills, including the Open University course and the Spanish because you still have to write essays and things, so they have definitely honed my skills and in personal terms they have given me much more self-confidence. [..] And they have also given me new social outlets; I have made really good friends - really good friends, lasting friendships. And other things have come out of them [...]*

This small piece of data illustrates several wider benefits. In addition to improved **writing skills**, the courses have boosted her **self-confidence** and widened her **social networks**. In the BeLL survey this same question was asked from 8.646 survey respondents (as open questions and as change statements on a Likert scale). The aim was to analyze, what kind of benefits people experience when they participate adult learning courses which are voluntary and non-vocational by nature.

Kil, Motschilnig & Thöne-Geyer (2012) point out that the term 'wider benefits of learning' is not based on any standard theories or research approaches. The research field is characterised by various theoretical strands and a range of methodological approaches (Schuller, Bynner, Green, Blackwell, Hammond, Preston & Gough, 2001, 1). Because wider benefits research has been "multidimensional" and lacking common theoretical framework, the empirical evidence so far is fragmented.

The benefits mentioned in the interview example above correlate very well with benefits found in the earlier studies (eg. Feinstein & Budge, 2007; Feinstein et al., 2008; Manninen 2010; Feinstein & Hammond, 2004; Schuller et al., 2002; Hammond, 2002; Dench & Regan, 2000). There is empirical evidence that there is a connection between education and several benefits, such as physical and mental well-being, civic and social engagement, networks, self-confidence, learning skills and learning motivation. Participation in adult education also appears to play an important role in promoting health, parental abilities and civic competencies, as well as certain psycho-social qualities, such as self-esteem, self-efficacy, sense of identity and purpose, and the ability to cope effectively with change. Education may also have a positive influence on social cohesion and on active citizenship as it appears to promote trust, tolerance, civic co-operation and likelihood of voting.

Adult education impacts on changes in behaviour and attitudes, and on several health-related issues such as health behaviour (smoking, alcohol use). Adult learning also helps adults to develop communication and social skills, general skills, attitudes related to citizenship, creates a sense of group membership, and improves learning skills and learner self-image. For good summaries of wider benefits found in the previous studies see Desjardins & Schuller (2007), Field (2009), Motschilnig (2012) or Feinstein et al. (2008).

While there are well-founded studies of the benefits of formal education (schooling, further and higher education), relatively little attention has been paid to the benefits of learning within non-vocational education in adult life. Accordingly, empirical evidence on the potential of liberal adult education to create personal, economic and social value is scarce (Motschilnig, 2012). Furthermore, the research conducted so far has focused mainly on the economic returns of education, but the social and personal returns of learning have been relatively under-researched (and therefore also neglected in policy; Field, 2009, p. 5). Some exceptions are OECD projects on wider benefits (OECD 2007a; 2010), research conducted at University of London Centre for Wider Benefits of learning (eg. Feinstein et al., 2008), and the work conducted by NIACE[2] (Schuller & Watson, 2009).

The empirical findings have been usually interpreted using socio-psychological, medical or sociological concepts and theories. Examples of socio-psychological explanations and findings are Schuller (2002) and Feinstein & Hammond (2004; also Manninen & Luukannel, 2008) who show that self-efficacy and self-confidence can develop positively, become clearer and grow through the process of learning itself. Dench & Regan (2000) show that adults between the age of 50 and 71 perceived that they had a higher level of self-confidence following participation. There is also evidence that participants in continuing education are less at risk of adopting extremist attitudes and develop a more tolerant behaviour (Preston & Feinstein, 2004). Older people improve their learning experiences by adopting fewer age stereotypes and by being able to participate in decision-making processes and incorporate their ideas (Simone & Scuilli, 2006).

Sociological perspective includes studies like Preston (2004), which show that people involved in adult education activities become politically active, vote and are on the whole politically motivated.

[2] Inquiry into the Future for Lifelong Learning (IFLL), see http://www.niace.org.uk/lifelonglearninginquiry/default.htm

Social networks create trust in others and in decision makers. Field (2005) shows that participation in adult education is closely linked to further involvement in social and community activities. Adult learning also generates community well-being (Merriam & Kee, 2014). In a qualitative study, Brasset-Grundy (2004) shows that parents not only pay more attention to how their own children are raised but that they can also provide more support and communication when interacting with their children.

Studies made from the perspective of health sciences prove that improvements can be seen in the areas of physical health, health behaviour, and wellbeing. There is concrete proof of lower consumption of cigarettes and alcohol (Feinstein & Hammond, 2004). Participation in adult education can also lead to a generally positive attitude to life (Tuijnman, 1990). The term "well-being" (both mental and general) is widely used and deals with a psychosocial quality that comprises an individual's own optimistic attitude and opportunities to influence one's own life (Field, 2009, 9), or well-being in general (Desjardins, 2008b).

2.2 Research questions

The specific research questions for the BeLL survey were:

1. In what kind of liberal adult learning activities adults participate in different countries?
2. What are the benefits of participation in liberal adult education?
3. Are there any differences in the experienced benefits
    a. between different groups of participants?
    b. between the types of study topics in different kinds of courses?
    c. between the countries involved in the study?
4. What are the course-related aspects in the learning process that support the development of benefits?

In addition to defining benefits at the individual level, the data is used to analyze if there are indicators of wider benefits for the family and local community (compare Merriam & Kee, 2014), for the wider social networks and communities, and for the society in general.

The survey will provide empirical evidence about what kind of wider benefits adult learning in liberal adult education courses have in participants' lives and in society in general, and how these benefits are generated during the learning process.

2.3 Methodological approach

The BeLL study is based on a mixed methods (or multi-method) research design (Hammond, 2005; Mason, 2006; see Desjardins, 2008b for a description of its advantages in benefits research). Survey data (n = 8.646) is combined with semi-structured interviews (n = 82, see separate WP-report). The survey data is predominantly numerical but the survey questionnaire also included open questions (two about outcomes and benefits and one about the learning situations) which are analyzed using qualitative content analysis.

The earlier Finnish study (Manninen & Luukannel 2008; Manninen 2010) showed that the benefits found in the interviews, in the open questions and in the survey statements were almost identical,

providing an element of triangulation. Influenced by Mason's typography of six strategies of mixed methods research (Mason, 2006), this project aims to use a mixed methods approach in two ways. It aims to use qualitative data to provide a 'close-up illustration' (and explanation) of the 'bigger picture' provided by the quantitative analysis. It also aims to use another of Mason's six strategies of mixed methods research: 'to ask distinctive but intersecting questions', that is, to use the quantitative and qualitative data to address slightly different aspects of our research questions; that is to understand benefits and their development in different ways.

In this way, a mixed method approach enables a deeper analysis or understanding of the wider benefits of adult learning, qualitative data giving a "natural voice" to the results. Combined use of statistical and qualitative analysis provides an opportunity to explore from different perspectives how benefits develop within the courses and in what kind of circumstances. It provides the opportunity for an analysis of possible connections between the benefits, for finding observable external criteria of the benefits and for a deeper exploration of the development of the benefits depending on course related aspects like the teacher, the group, the teaching methods, etc.

Use of qualitative and quantitative data and analysis in the BeLL study serves also two purposes suggested by Hammond (2005, pp 247-250), complementarity and triangulation. Triangulation can be used to test the validity of data collection, results and interpretations. Complementarity means that different types of data provide possibilities for elaboration, enhancement, illustration and clarification of the results.

2.4 Questionnaire construction

The theoretical basis of BeLL study builds on previous studies (eg. Feinstein et al., 2008; Manninen, 2010) and literature (Desjardins, 2008; OECD, 2007a; Feinstein, Budge, Vorhaus, & Duckworth, 2008; Motschilnig, 2012). One of the aims is to get a comprehensive picture about all potential benefits of adult learning in liberal adult education in 10 European countries. Therefore the survey questions were defined using the list of all potential benefits (except lower crime level) found in the previous studies, and by defining these as theoretical concepts. These were operationalized into respective statements. In addition to theory driven analysis of survey data also qualitative data is collected in the survey questionnaire and analyzed using qualitative content analysis.

The BeLL Survey questionnaire development process included the following stages:

1. Construction of the piloting version of the questionnaire (Spring 2012)
2. Translation of the piloting version of the questionnaire into national languages
3. Piloting of the questionnaire (May 2012)
4. Project meeting on piloting results (June 2012)
5. Modifications in the questionnaire (July – September 2012)
6. Production of final questionnaire BeLL^{Q} (paper and web versions in national languages)
7. Data collection (from September 2012 onwards)

The construction of a questionnaire in itself is a demanding task, and in a trans-European study like BeLL extra caution had to be used when different language versions were developed. Cultural differ-

ences were taken into account, as well as different meanings of the terms and words in different languages.

The piloting version was tested in three different ways:

1. Each partner asked 3-4 experts to review and comment the questionnaire. The experts were university professors and researchers, administrators and practitioners.
2. Each partner collected piloting data from 6-7 adult learners who met the target group criteria. Web versions for piloting questionnaire was created in English and in Finnish, other countries used paper versions. Piloting data was analysed and results used to modify the questionnaire.
3. In addition all partners organized individual or group interviews for 3-4 respondents, who had tested the questionnaire, to collect qualitative feedback about questions and questionnaire.

All feedback and piloting results were taken into account and discussed in project meeting in Ostrava in June 2012. As a result, some changes were made in the questionnaire, especially the number of statements was reduced, and some overlapping or unnecessary questions were removed.

The final BeLL-questionnaire contains 35 benefit statements, each of them representing one of the following 14 concepts:

- Psychological benefits based on concepts *Locus of Control* (Rotter, 1966) *and Self-efficacy* (Schwartzer & Jerusalem, 1995)
- Benefit-concepts *Tolerance, Trust, Social Networks, Sense of Purpose in Life, Civic and Social Engagement, Civic Competence, Mental Well-being, Work-related Benefits, Physical Health, Health Behaviour, Family,* and *Changes in Educational Experience.*

In addition, *Skills and competencies* is used as one benefit concept in the qualitative analysis of open questions, but it is not included in the structured survey questions for practical reasons. It would have been impossible to list all potential skills in the questionnaire.

Benefit studies often face dangers related to selection bias, based on the fact that more active adult learners are usually healthier, socially active etc. than no-participants. It is also difficult to create research settings with longitudinal follow-up data collection, and especially control groups as in natural sciences, and therefore it is also quite difficult to verify any causality in benefit studies (Desjardins, 2008b). In BeLL study this problem is tried to minimize by asking the respondents to report in the questionnaire the *changes* caused by the participation in liberal adult education courses. Even though this measurement is based on subjective experience, it is based on the perceived changes that may or may not have taken place during or after the participation. As described earlier (Chapter 2.1) these changes are based on personal experiences and perceptions, and therefore can and also should be measured using self-reports. The wording in the questionnaire was formulated in the following way:

2.3.1 *Now, please assess whether these liberal adult education courses have caused the following changes in your life. Use the following scale*:

Much less (- - -) Less (- -) Slightly less (-) No change (0) Slightly more (+) More (+ +) Much more (+ + +)

It should be noted that the wording of the question and the scale takes into account also the possibility that the changes might be negative as well. This approach is seldom used in the benefit studies and brings therefore an additional perspective in this field of research.

In practice wider benefits are defined in BeLL study as "positive changes" in respondents' lives. Note that in some questions "less than before" can be a positive change (like in smoking and alcohol use) or that "positive change" depends on the perspective and context: for example less trust in decision makers may be a sign of democratic awakening of active citizens in a non-democratic society, but at the same time a negative change from the perspective of the decision makers of that country.

The theoretical definitions of the concepts and related statements in BeLL survey questionnaire are described below. The English version of the questionnaire is available in Appendix 10.

Locus of Control

Locus of control refers to the extent to which individuals believe that they can control events that affect them. Individuals with a high *internal locus of control* believe that events result primarily from their own behaviour and actions. Those with a high *external locus of control* believe that powerful others, fate, or chance primarily determine events (Rotter, 1966; Zimbardo, 1985, p. 275). It is a psychological state of mind that changes in different life situations, for example in unemployment situations (Manninen, 2002) or other stress-related life events (Frost & Clayson, 1991). Those with a high *internal locus of control* have a better sense of control of their lives and behaviour, and tend to be more active in society as well (exhibit more interest in politics, more likely to attempt to influence other people and to assume that their efforts will be successful). They are more active in seeking information and knowledge concerning their situation than do *externals.*

The following statements were selected from Internal-external locus-of-control scale (Rotter 1966) into questionnaire:

31. I feel that I have influence over the things that happen to me
28. When I make plans, I am certain that I can make them work
30. I am convinced that what happens to me is my own doing

Self-efficacy

Bandura's (1994) concept of Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. It represents the extent to which we believe that we are the authors of

what we do and can have an impact on what happens to us (Cervone, Artisitco & Berry, 2006; Schwarzer, 1992; Schwarzer & Jerusalem, 1995; Scholz, Gutierrez Dona, Sud, & Schwarzer, 2002).

The following statements for the questionnaire were selected from the GSE-Scale (Schwarzer & Jerusalem, 1995; see http://userpage.fu-berlin.de/health/engscal.htm):

34. If someone opposes me, I am able to find the means and ways to get what I want
32. It is easy for me to stick to my aims and accomplish my goals
33. I am confident that I could deal efficiently with unexpected events

Tolerance

Changes in attitudes and understanding of cultural differences have been were found in the previous studies (Field, 2009) and also in the Finnish study (Manninen, 2010) as benefits. In BeLL study the concept of tolerance[3] is used to cover the changes in the permissive attitude toward or even in acceptance of behaviour, opinions, practices and beliefs which are different from one's own. Tolerance was measured using the following statements:

9. I have respect for other people's points of view
11. I have respect for other people's cultures

Trust

So called generalized trust is an attitude or a mindset that unknown people can be trusted in general. Educational level correlate with trust (Newton, 1999) and there are quite big differences between countries (Kouvo, 2011). Trust is a common sociological concept linked to social capital and social cohesion. Social capital is based (according to Putnam, 1995) on social networks, trust, norms and cooperation, and generally used in benefit studies as one indicator of the benefits of learning (OECD, 2007a, p. 80; Manninen, 2010; Merriam & Kee, 2014). Earlier studies show that changes in trust are linked to creation and development of social networks (Schuller & al., 2002).

There is a difference between interpersonal trust and institutional (political) trust (Newton & Zmerli 2011). The latter is related to active citizenship through voting behaviour. Institutional trust also correlate with participation in voluntary organizations.

The following statements were added in the questionnaire to measure generalized and political trust:

20. I have trust in other people generally
14. I have trust in decision makers

[3] For definitions see http://dictionary.cambridge.org/dictionary/british/tolerance_1

Social network

Social network is a social structure based on individuals or groups. It is a network of friends, colleagues, and other personal contacts, including social interactions in learning situation with other people. Social interaction with other learners, getting new friends and creating new networks are among the core benefits found in the earlier studies (Field, 2009; Manninen, 2010). These benefits were measured using the following statements:

22. I meet other people
3. I am involved in social networks (friends, colleagues etc.)

Sense of Purpose in Life

This concept is defined by Ryff (1989) as "*having goals in life and a sense of directedness, a feeling that there is meaning to present and past life, harbouring a belief that gives purpose, and having aims and objectives for living*". Central to the sense of purpose in life is a feeling that life has a meaning. Research results show that sense of purpose in life predict psychological and physical well-being (Reker, Peacock, & Wong, 1987). The concept has its roots in Positive Psychology (Seligman, 2002) and in Antonovsky' research (Sense of Coherence Scale, Antonovsky, 1979). Comprehensive review of literature on meaning and purpose in Life is available in Makola & van den Berg (2008), see also Steger & al. (2006) for the Meaning in Life Questionnaire.

The following two statements were used in BeLL questionnaire:

29. I know what I want from my life
35. I am positive about life

Civic and social engagement

Civic and social engagement is often connected with educational level and defined therefore as wider benefit in earlier studies (for example Dench & Regan, 2000; Merriam & Kee, 2014). It can include activities like joining associations, volunteering, or taking otherwise more active role in community (OECD, 2007a). It is also part of Active Citizenship, which can be defined as "*Political participation and participation in associational life characterized by tolerance and non-violence and the acknowledgement of rule of law and human rights*" (Weerd, Gemmeke, Rigter, & Rij, 2005). In EU policy the indicators of Active Citizenship are usually voluntary work in organizations and networks, organizing activities for the community, voting in elections, and participation in political parties, interest groups, forms of peaceful protest, and public debates.

The following two statements were used to measure civic and social engagement:

4. I am engaged in my local community
21. I am likely to take part in voluntary activity

Civic competence

Civic competence is closely linked to Civic and social engagement, because it includes the skills and competencies that equips individuals to fully participate in civic life, including knowledge of social and political concepts and structures and a commitment to active and democratic participation (EU, 2006a). Hoskins & Crick (2010, p. 8) define Civic competence as a complex mix of knowledge, skills, understanding, values and attitudes and dispositions: "*Skills for civic competence relate to the ability to engage effectively with others in the public domain, and to display solidarity and interest in solving problems affecting the local and wider community. This involves critical and creative reflection and constructive participation in community or neighbourhood activities as well as decision-making at all levels*". Dench & Regan (2000, p. 1) reported as a benefit of learning the increased "ability to stand up and be heard" in group situations.

In EU this concept has a central role in active citizenship and in the strengthening of political system. The ability and willingness to engage in active participation is based on generalized trust (in other people) and in institutional trust (on institutions).

After the piloting of survey questionnaire the number of statements measuring this benefit was reduced into two, the other measuring group discussion skills and the other one interest in politics:

18. I know how to make myself heard in a group
16. I am interested in politics

Mental well-being

Mental well-being denotes a combined state including factors like mental health, happiness, life satisfaction and quality of life. Although mental health (as a medical concept) is a crucial component of mental well-being, mental well-being is even more based on the factors listed above that are not related to mental health. Foresight Mental Capital and Wellbeing Project (2008, p. 45) define mental well-being as a dynamic state in which the individuals are able to develop their potential, work productively and creatively, build strong relationships with others, and contribute to their community. It is enhanced when an individual is able to fulfil their personal and social goals and achieve a sense of purpose in society. In a similar way WHO[4] defines it as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.

[4] http://www.who.int/features/factfiles/mental_health/en/index.html

In previous benefit studies well-being is linked to other benefits like health, social participation and civic engagement (Field, 2009). This benefit was also one of the top outcomes in the Finnish study (Manninen, 2010). In BeLL survey it is measured using the two statements measuring general happiness and life satisfaction:

6. Taking all things together, I am happy
15. I am satisfied with my life

Work-related benefits

Benefits and outcomes which help the individual to get, keep or advance in his/her job, get better income or any other benefits which are related to employment. These benefits are not usually associated with liberal adult education which is by definition non-vocational, but work-related benefits came clearly out in the previous Finnish study (Manninen, 2010) and therefore statements 1, 10 and 13 were added to BeLL survey. Statement 7 was added to measure potential increased mobility, which is in EU-policy considered as one element of employability and flexibility of the workforce (EU, 2010).

10. I have opportunities to increase my income
13. I have alternative job or career opportunities
7. I am willing to move in order to get a new job
1. I feel good at work nowadays

Physical health

A self-reported experience of a relative state in which one is able to function well physically, mentally, socially, and spiritually in order to express the full range of one's unique potentialities within the environment in which one is living.

17. I am satisfied with my physical health

Self-rated health is a commonly used and valid indicator of physical and also mental health in research. It is found to have good correlation with mortality and other more objective indicators of health (Chen & Yang, 2013, p. 65; Nummela, Sulander, Rahkonen & Uutela, 2008; Nummela, Sulander, Karisto & Uutela 2009). The same applies to Health behavior.

Health behaviour

Feinstein and Hammond (2004) found that learning has positive effects on a wide range of health behaviours, such as giving up smoking, increasing exercise, positive changes in behaviour and attitudes, and more healthy living. The following statements were added in the questionnaire:

23. I pay attention to my health
5. I try to lead a healthy lifestyle

26. I smoke…
27. I drink alcohol…

Family

According to earlier studies educational attainment of parents has positive effects in family life and kids. Adult learners become better parents, are more patient, understanding and better supporting their children (Wolfe & Haveman, 2002; The Centre for Literacy, 2010). The concept is here limited to parent – child relationships.

24. I have confidence in my ability as a parent
25. I am supportive of my children's learning

Changes in the educational experiences

According to all participation studies (for example Rubenson, 1979; Rubenson, 2001; Manninen, 2003 and 2006; Rubenson & Desjardins, 2009; Hippel & Tippelt, 2010) previous learning experiences direct future participation. In this study three key concepts have been selected to measure potential changes in educational experiences: learning motivation, learner self confidence and value of learning.

These concepts interact closely in real life situations. For example Pintrich's motivational expectancy model (Pintrich, 1988; Pintrich & Ruohotie, 2000) include several components of motivation, such as learner efficacy control and outcome beliefs, task value, and expectancy for success. Learner self-confidence is a broad, multidimensional construct involving assumptions about oneself (self-estimation) and about the value of one's abilities, actions and results. Its sub-constructs are self-confidence, self-worth and self-efficacy (Ruohotie, 2000, 8). These are also related to expectancy-valence –analysis made by the individual in participation situations (Rubenson, 1979).

Value of training is the rather permanent meaning something has for an individual. Values are very highly prized, and as a result become an 'ideal' which affects the individual's choices and actions (Ruohotie, 2000, 8). Whether adult learning is perceived as a value and an opportunity is also based on the images the person has about adult education and about its usefulness in general. Especially less experienced adult learners depend more on prior schooling experiences and related images, which therefore play a central role in their motivation and participation (Manninen, 2003). In a similar way Rubenson & Desjardins (2009, 197; also Hippel & Tippelt, 2010) suggest that the constraining and enabling features of social and material conditions should be taken more into account, as well as "habitus" or "social milieus" which dictate whether learning experiences are socially shared.

These elements of learning experiences were measured using the following statements:

2. I am motivated to learn
12. I feel confident as a learner

8. I see adult learning as an important opportunity
19. I am encouraging others to learn too

Social Desirability

Because the BeLL data collection is based on self-reported changes asked retrospectively, there is the danger of subjective "bias". Benefits are judged from the perspective of current and former participants in liberal adult education courses, and they are asked whether they recognize any changes caused by the participation. Such answers can become subject to the effects of general positive image of adult education, and an individual might answer the questions in this normatively highly charged field of lifelong learning in a "socially desired" manner (see Paulhus, 1991; 1998). The Social desirability is defined as a “tendency to give socially desirable responses in self-description” (Edwards 1957, 35; Paulhus 1991). This danger in asking about subjectively experienced benefits was taken into consideration by adding the following four control statements measuring Social Desirability into the questionnaire. Statements were selected from Paulhus Social Desirability Scale (Balanced Inventory of Desirable Responding BIDR):

36. It would be hard for me to break any of my bad habits
37. I never regret my decisions
38. I am very confident of my judgments
39. Once I have made up my mind, other people can seldom change my opinion

Background questions and open questions

In addition to the benefit questions defined above the questionnaire included the following questions about the learning history during the past 12 months period:

- Number of liberal adult education courses attended (1.1)
- Name, topic and length of these courses (1.2)
- Course provider (1.3)

After that there were two open questions about outcomes and changes. The aim was to get an unprovoked answer about potential benefits before the respondent was introduced the list of potential benefits. Similar method and questions were used in the previous Finnish study as well (Manninen & Luukannel, 2008; Manninen, 2010). The two open questions were:

2.1 What immediate outcomes, if any, have you noticed from your participation in learning?

2.2 What other outcomes, long term effects or changes have you noticed?

After the benefit statements and statements measuring Social desirability the respondents were introduced a list of potential element of learning situation that might have been important for the development of benefits (question 2.4). The elements were selected with the help of results of previous studies and adult education literature. For example the importance of group is described well in adult education handbooks (Knowles, 1985) and in various theories of learning, like in communica-

tive learning (Mezirow, 2009) and social constructivism (Bonk & Cunningham, 1998). It is also found in previous studies (Manninen, 2010). In addition, the role of these elements in the development of benefits was asked using an open question:

> *2.5 If Possible, please give one or two examples which illustrate, why and how these elements were important for the outcomes you listed above.*

The last page included some background questions about respondents

- gender
- age
- educational level
- employment status
- profession
- citizenship
- mother tongue (whether it is same as in the questionnaire).

2.5 Benefits as forms of capital

At a more theoretical level benefits are often categorized using different forms of "capital" (for definitions of different capitals see Bourdieu, 1986 and Putnam, 1995). This kind of benefit studies (eg. Côté, 2005; Schuller, 2007; Manninen, 2010) assume that through participation in learning people acquire different types of capital from which both the individual and the society as a whole can profit. Schuller et al. (2004, 20) summarize these capitals in the following way:

- 'Human capital' is based on know-how and qualifications that enable an individual to participate in the economy and in society.
- 'Social capital' results from networks in which people actively participate, so that when they face a challenge they can fall back upon their social relations.
- 'Identity capital' comprises individual features such as self-confidence and internal control to support personal development

Especially social capital has been quite widely used in literature when outcomes and wider benefits of learning are discussed. For example Schuller et al. (2002) analyse their results using the concepts of social and human capital and social cohesion. Education cultivates social capital and social cohesion since participation leads to developing certain meta-competencies, such as becoming aware of the importance of active citizenship and gaining the actual skills needed in it (Schuller et al., 2002). Participation in education also helps to generate and maintain trust and social networks, which are (according to Putnam, 1995) the building blocks of social capital.

Figure 1 describes how the theoretical concepts used in BeLL study relate to three forms of capital. As the figure show, benefits selected to be measured in BeLL study focus more on less researched identity capital and social capital.

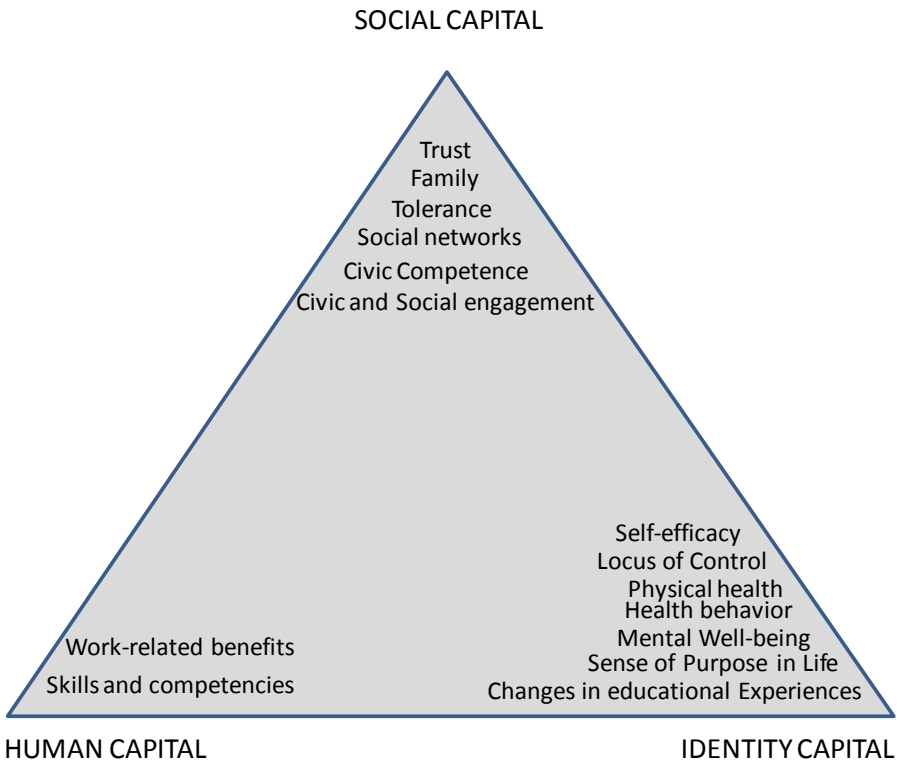


Figure 1 BeLL benefit concepts grouped as forms of "capital" (based on Schuller et al., 2004)

3 Data collection

3.1 Target group

The BeLL study is based on the experiences of adult learners who have participated at least one liberal adult education course during the past 12 months period. Liberal adult education was defined earlier in this report in Chapter 1.3.

The challenge for BeLL project data collection was that liberal adult education provision is organized differently in European countries, as described earlier. In addition the BeLL survey had two related research tasks: (1) to analyze the benefits of learning (which require a sample of active adult learners from liberal adult education courses), and also (2) to map the liberal adult education provision in BeLL countries (which require to select the sample from organizations that reflect the national liberal adult education course providers as precisely as possible).

As described earlier in Chapter 1.4, there are big differences on how liberal adult education is organized in BeLL countries. In some countries the provision is well monitored including statistics and legislation, but in some countries it is difficult to get information about all existing provision and course providers.

In order to map the liberal adult education provision available in different member states the partners made a sample plan, reflecting the national situation of the liberal adult education in his/her country. Basis for sample plans were available sources (statistics, descriptions of national adult education systems etc.) which were used to locate and describe the liberal AE course providers and situ-

ation in his or her country. The national AE situation was described in the sample plan, and based on that every partner represented and explained the sample decisions. Taking into account that the situation and structure of liberal adult education varies in all partner countries it was acceptable that the sample plans were somehow different for every partner country.

In order to cover the wide range of potential liberal adult education course topics a list of these was created and used as a guideline when targeting the respondents. Every partner had to make sure that their BeLL sample contains the following course topics:

- Languages / humanities;
- ICT;
- Creative arts;
- Social skills, active citizenship;
- Health and sports,
- Basic skills and competences.

These topics should be represented in the BeLL study by approximately 10% each. It was also agreed that the respondent profiles should be diverse according to gender, age, level of education, and employment status.

3.2 Sampling method

The data collection was conducted using both paper and online questionnaires. Paper versions in all 10 languages (+ Italian version for Swiss Italian speaking part of the country) were edited by DIE to follow the same BeLL layout. Identical web questionnaires for all languages were created by UEF, using the "e-lomake" -programme.

Both Paper and web questionnaires were used for various reasons. These both versions have advantages and disadvantages, and the idea was to provide an alternative for training organizations and respondents to choose from. Web version was the main data collection method (objective to collect 70-80% of the responses), and paper questionnaire was the additional method (objective 20 – 30% of the responses).

BeLL study is explorative, aiming to analyse what kind of benefits participation in liberal adult education generates. Therefore data collection had to be targeted on those individuals who have recent experience about that kind of adult learning activities (compare Dolan & Fujiwara, 2012). Therefore the sampling method (how the respondents were selected) in BeLL survey was convenience sampling (Hedt & Pagano, 2010) targeting active adult learners in liberal adult education organizations.

Similar challenge face for example medical studies where the target group are individuals taking part in a special treatment, or are rare, elusive or otherwise hard to reach populations (Sudman, Sirken & Cowan, 1988; Hedt & Pagano, 2010; Brick, 2011). It was not possible to use random sampling of all adults (because majority of them have no experience of liberal adult education courses). It was also impossible to target the survey on a random sample of registered course participants, because there are no registers or easily accessible administrative records (Brick, 2011, p. 878) available on liberal adult education participants in 10 European countries. Due to these preconditions it was not possible

to have random sample of “active adult learners”. Reaching for example every 10th adult learner at random would have required up-to-date statistics and registers of participants, and especially extra work from training providers.

For the same reason it is impossible to estimate the return rate or representativeness of the sample, because the number of adult learners in all countries is not known. In Finland alone the estimated number of liberal adult education participants is 520.000, which make it difficult to get a “representative sample” of these adults. In addition, because of the explorative nature of BeLL study and the convenience sampling method the results cannot be generalized to wider adult population in general, only on adults participating in liberal adult education courses. This is self-evident, but has to be kept in mind when using the results in policy discussions.

3.3 Survey data collection in practice

It was evident that the only way to collect BeLL data was to contact (1) liberal adult education providers and ask them to deliver questionnaires to their students or (2) to contact adult learners themselves directly. In practice BeLL survey data consist of adult learners, who (1) have participated at least one liberal adult education course during the past 12 months, and (2) have received the paper questionnaire or link to web questionnaire somehow, and (3) have been willing to fill in the questionnaire.

The target was to collect 1000 questionnaires per country, a total of 10.000 respondents.

Distribution of paper questionnaires was based on the following methods:

- Taking questionnaires into a learning group, introducing the study and questionnaire face-to-face and collecting back questionnaires
- Asking trainers or administrative staff to do the same
- Asking organizations to distribute questionnaires to individual adults and to organize collection of questionnaires
- Using research assistants (students) to contact individual adult learners

Distribution of web questionnaire links was conducted in the following ways:

- Motivational letter with web link (traditional paper letter or email) was sent directly to learners using organizations’ email lists
- ”Poster” advertising BeLL survey (paper version on notice boards, web versions on organizations’ web sites with link to survey or on front page of a web journal targeted to liberal adult education providers and learners)
- Asking national liberal adult education umbrella organizations and training organizations for help with distribution of information

Because liberal adult education is organized differently in each country, some national modifications on sampling methods had to be developed.

In **Finland** the data collection for BeLL survey followed the same procedure as in the original Finnish study (Manninen & Luukannel 2008; Manninen 2010). Finnish liberal adult education system is much institutionalized, and because the organizations receive also state funding, there is good statistics available. This enabled a sampling procedure which proved successful in the earlier study, providing representative sample for each type of organization. Sampling plan was done so that representative sample was possible according to share of students in each type of organization.

Information about the survey (information letter for organizations and for adult learners) and the link to web questionnaire was sent by email to all organizations using existing distribution lists. Main delivery channel was the Finnish Adult Education Association (http://www.vsy.fi/en.php), which is the umbrella organization for all sub-organizations representing individual types of organizations (for example Finnish Association of Adult Education Centres KOL, www.ktol.fi). Each sub-organization forwarded the information to their member organizations and centres. In addition the survey was advertised in national web journal for liberal adult education (www.sivistys.net).

The objective was to gather 80 % of questionnaires using the online survey. In addition, questionnaires in paper format were delivered and collected in cooperation with:

- Two adult education centres (Joensuu region and Pieksämäki city)
- One Summer University (Snellman Summer University in Kuopio)
- One folk high school (Kitee evangelical folk high school)

As a result the respondent profile in Finland matched the participation statistics very well. Majority (69,9 %) of the Finnish respondents had participated in courses offered by adult education centres. The second largest group (22,2 %) studied at study centres and 8,9 % at Folk High Schools. At Summer university studied 3,5 %. Higher respondent rates for Adult education centres can be explained at least by two factors: there is a bigger number of organizations and participants in this category, and they also have a clear organizational structure, which makes the data collection easier.

These response rates are almost identical with the previous Finnish study (Manninen & Luukannel, 2008) and reflect also the actual participation statistics in each provider category (Kumpulainen, 2009), except for Study centres. However, the higher response rate for Study centres is based only on the coding system. In this category were coded also the third sector associations and organizations (sports clubs, dance groups, choirs, voluntary associations) which are not part of the official Study centre system, but in practice organize similar type of courses following the same principles. The actual response rate for official Study centre participants is close to the actual participation rate (18%).

In **England** data collection was done by University of London Institute of Education in cooperation with NIACE. Both organisations have extensive experience of similar data collection exercises with adult learners in England, for example NIACE's annual Adult Participation in Learning Survey.

There are no robust surveys in England of the type of learning with which the BeLL survey is concerned, with all relevant data collection aggregating all types of adult learning, vocational and non-vocational. NIACE's annual Adult Participation in Learning Survey does not ask participants where

their learning took place, focusing instead on participation and planned, or expected participation in the future. However, analysis of the Skills Funding Agency Individualised Learner Record (ILR) shows that the majority of the type of liberal adult education that is the focus of the BeLL study is delivered in Further Education Colleges and through Local Authorities (often via independent Adult and Community Learning providers). Higher Education Institutions and Private training providers also play an important role. Accordingly, the aim was to include learners predominantly from the following provider types targeting specific examples of each to ensure that the sample was representative.

- Further education colleges
- Adult and community learning providers
- Local authorities
- Higher education institutions
- Community groups

We first invitation to participate the survey went directly to adult learners through a database held by NIACE of learners who have indicated in previous research that they were happy to be contacted for other research purposes. Individual, personalized emails were sent to each of these individuals asking them to complete the survey and a reminder was sent after three weeks. At the same time NIACE asked a series of large national and regional organizations involved in adult learning to publicise the survey through their newsletters and social media. Alongside this there was a process of gaining agreement from a group of large providers, representative of the provider types described above and which offered a broad enough range of courses to include all of the target topics, to take an agreed number of hard copies of the questionnaire and to administer these to their learners.

As a result, most of the English sample was drawn from learners on courses run either by Community Colleges (32%) or Local Authorities (28%), with other community organisations (17%) and FE Colleges (17%) also featuring high.

A bit different sampling process was necessary for example in **Czech Republic**, where the variety of adult education providers of liberal education courses required a very specific approach. Because there is no regular network of folk high schools or any functional umbrella organization of adult education providers in Czech Republic, it was decided to distribute the information about the project BeLL and its questionnaire in other ways and distribution channels than traditional ones.

Members of the Regional network of adult education providers in the region Moravia – Silesia were informed by e-mails about the project BeLL and the survey. They were subsequently contacted personally and asked for their help. Other umbrella organisations were contacted (Asociace podnikatelek a manažerek / Association of women – managers and women–in-business, its independent branch in Moravia, Regional Chamber of Industry and Commerce, Association for Development of the region Moravia – Silesia and other organisations). Some adult education providers in other regions of Czech Republic were contacted by e-mails, some companies which provide liberal education, institutions that directly collaborate with the Czech BeLL partner (Employment Offices in several towns in the region Moravia – Silesia) and some carefully selected schools including universities. The questionnaire was presented to participants with the recommendation to market the survey towards further people, their friends, colleagues or relatives. Members of the Regional network of adult edu-

cation providers did the same. Participants filled out questionnaires and contacted further their relatives and friends. The Czech BeLL partner ATHENA offered the link to the questionnaire at its website.

To sum it up, the first part of the quantitative analysis of the survey reached its goal by the complex of above-mentioned activities and by contacting wide range and spectrum of people of various age, gender, various levels of education and other characters. Personal contacts were more emphasized because people are generally oversaturated by many surveys without knowing their purpose and especially results. This leads to a high level of unwillingness to participate in any survey. Step by step a network of "BeLL-Ambassadors" was built in Czech Republic and people completed either online questionnaires or sent completed paper versions.

There were quite big differences on how fast and easy the data collection process was in different countries. Data collection process was rather easy and fast especially in Finland and also in Czech Republic, Serbia and Slovenia, but more difficult and took longer time in Italy, Germany, Switzerland, Spain and also in Romania, until the data collection strategy was changes there.

These differences seem to be based on various reasons. The differences on how liberal adult education is organized make data collection easier of more difficult: for example in Finland the organizational structure is clear, whereas in Italy it is more difficult to contact diverse actors and associations.

There also seems to be some cultural differences on how online surveys are working as data collection means. In Finland the data collection took only 2 months, and majority of respondents used web questionnaire, whereas for example in Italy data collection took a year and 70% of data was collected using paper questionnaires. In all countries (except in Finland) contacts by email (online approach) were less effective. People don't feel invited and don't fill out the online version, for various reasons, but a second contact (second email round/reminder) seemed to raise the interest. In these countries a direct intervention (field visits, face-to-face contact) seems to be the most effective way to collect questionnaires. In almost all countries a personal contact (face-to-face, phone, personal email) helped immensely to increase the interest and thereby the collection of questionnaires. In this way also professionals at adult schools and organizations were more willing to support also by personally distributing the questionnaires.

In some cases it was better to work closely with trainers and administrators than directly with the learners, but this was implemented and accepted differently in each country.

The problems encountered with the course providers were very similar in many countries:

- questionnaire was seen as an extra administrative burden
- fear of disturbing the learners in organizations where they were seen as customers,
- scepticism towards some questions and the length of the questionnaire,
- time problems caused by high efforts.

In some countries the purpose of the survey was not recognized or not valued for some reasons. Perhaps one of the main reasons why data collection was easier in Finland was the fact that the earlier Finnish benefit study (Manninen & Luukannel, 2008; Manninen, 2010) was done in cooperation with the liberal adult education organizations, and the results were well known and valued in the field. BeLL study was also well marketed in national media as a continuation for the Finnish earlier survey, and therefore training organizations were well aware of the nature and purposes of the BeLL survey, and more willing to promote it for learners.

There were some country specific challenges in data collection. A summary of problems encountered in partner countries show that in Germany the learners for not willing to answer in web questionnaire, and in England the training organizations were reluctant to do "extra work" and also there were several ongoing surveys, especially national "quality" survey at the same time. In Serbia private training providers were reluctant to "disturb" their participants, and there was some difficulty to get back paper questionnaires, learners were not willing to fill in web version in some cases there was a small numbers of participants in the courses. In Italy the independent, suspicious associations were difficult to motivate to take part in the survey. In Spain the timing was bad and web questionnaire was not attractive. In Switzerland there was reluctance to participate and support the survey at national and organizational level.

Most of the data collection problems seem to relate in phenomena called "gatekeeping"[5] (Kawulich, 2010) which have been known in research for ages, and it has emerged lately more often in educational research as well. It is related on the increased number of research in the field and understandable if there are several surveys going on simultaneously or one after another.

4 Results of statistical analysis of survey data

This Chapter describes first the respondents' profiles and the basic frequencies of benefits. Later more detailed results of factor analysis and group comparisons will be presented. The statistical analyses were done with SPSS-19.0 and MPlus 6.0 statistical software (Muthén & Muthén, 2010) in four phases:

- **first phase**: The structure of the first and second order latent factors of benefits was tested with the help of confirmatory factor analysis (CFA). The confirmatory factor analysis was done step by step for each theoretical dimension.
- **second phase**: the sum scores measuring the benefits were calculated for each respondent, based on the factors found in the confirmatory factor analysis
- **third phase**: the benefits were compared between different subgroups with the help of t-test and one-way variance analysis (ANOVA)
- **fourth phase**: the interaction between background variables in relation to benefits was analyzed with the help of covariance analysis (ANCOVA)
- **fifth phase**: The overall structure and relations between benefit factors were examined using structural equation modeling (SEM).

Note that SEM-analysis was used for two purposes: as a starting point for analysis to define the benefit factors (phase 1), and to analyze the factor structure and development of benefits (phase 5).

4.1 Respondents

The target for data collection was 1000 respondents per country. After the data collection had ended the non valid cases were removed from the data (cases that had not participated liberal adult education courses, were duplicates, had too much missing data etc.). There were only a few such cases per country. The remaining number of valid respondents was 8.646. Table 3 show that the target of 1000

[5] The gatekeeper decides which information will go forward, and which will not. A gatekeeper in a social system decides which of a certain commodity – materials, goods, and information – may enter the system (http://www.utwente.nl/cw/theorieenoverzicht/Theory%20clusters/Media,%20Culture%20and%20Society/gatekeeping/)

respondents was reached in 3 countries and was rather close in 4 countries. Only Switzerland remained far from the target, because of problems in data collection described earlier.

Table 3 Respondents by country

Country	n	%
England	709	8.2
Finland	1252	14.5
Germany	902	10.4
Italy	543	6.3
Romania	1043	12.1
Switzerland	274	3.2
Serbia	981	11.3
Spain	898	10.4
Czech republic	989	11.4
Slovenia	1055	12.2
Total	8646	100.0

Out of the 8.646 respondents 62 % had participated only one liberal adult education course during the past 12 month period, and rest of them two or more courses.

The profile of respondents[6] follows the general profile of active adult learners familiar from liberal adult education participation statistics: 71 % are female, majority have a rather high educational level, and are active in working life or retired. Age range varies from 15 to 92. (See Appendix 1 and tables below). All respondent profiles by country are available in Appendix 1. There are some differences between the 10 countries on respondent profiles. In Finland and Slovenia the respondents are relatively older than in other countries, and Romania has more male and young respondents. These differences need to be taken into account in the comparative analysis.

Table 4 Educational level of the respondents

	n	%	Valid %
Primary education, or first stage of basic education, or less (ISCED 1 or less)	324	3,7	3,8
Lower secondary education, or second stage of basic education (ISCED 2)	825	9,5	9,7
Upper secondary education (ISCED 3)	2724	31,5	32,2
Post secondary education (ISCED 4)	1383	16,0	16,3
First or second stage of tertiary education (ISCED 5 and 6)	3180	36,8	37,6
Other	29	,3	,3
Total	8465	97,9	100,0
Missing	181	2,1	
Total	8646	100,0	

[6] The uneven number of male and female respondents reflects well the actual gendered liberal adult education participation rates and profiles. For example in Finland 70 % of liberal adult education participants are female (Kumpulainen 2008, p. 94).

The respondents (as adult education participants in general) have a rather high educational level. 37 % of respondents have higher education degree, and the second biggest group are those with upper secondary education. As tables in Appendix 1 show, there are quite big differences between countries: Italy and Spain have very few respondents with tertiary education, whereas for Germany and Romania over 50 % of respondents have a university level education. These national differences in respondent profiles reflect partly some differences in sampling procedure, but are also related to differences in national educational structures, as well as to differences in liberal adult education course provision.

The respondents were grouped in five age groups according to age (Table 5, for country comparison see Appendix 1,Table 61). Countries differ in age profiles: Finnish, English, Slovenian and especially Italian respondents belong more often in the oldest age groups, and the youngest respondents can be found in Romania, Spain and Serbia.

Table 5 Age groups

		n	%	Valid %
Age groups	15-24	1065	12.3	12.9
	25-36	1938	22.4	23.6
	37-49	1727	20.0	21.0
	50-64	2160	25.0	26.3
	65-92	1338	15.5	16.3
	Total	8228	95.2	100.0
Missing		418	4.8	
Total		8646	100.0	

Table 6 show the main categories of employment status. The more detailed categories and employment status by country is available in Appendix 1, Table 59). In September 2013 the average unemployment rate for EU28 was 11 % (Eurostat 2013), which is almost identical with the share of unemployed respondents in the BeLL data (11.7 %). The highest percentage of unemployed respondents can be found in Spain (25.9 %), Slovenia (19.8 %) Serbia (19.6 %) and Czech Republic (14.6 %). Only for Spain and Serbia these numbers correlate with actual unemployment rate (26.6 % in Spain, 20.0 % in Serbia in September 2013), for other two the actual unemployment rates are much lower, for Slovenia 10.2 % and Czech Republic 7.0 %.

Table 6 Employment status of the respondents

	n	%	valid %
In working life	4124	47.7	49.0
Student	838	9.7	10.0
Outside labourmarket	2443	28.3	29.0
Unemployed	1009	11.7	12.0
Total	8414	97.3	100.0
missing	232	2.7	
	8646	100.0	

In order to estimate the validity of responses the questionnaire included also two questions about nationality and mother tongue. Table 62 in Appendix 1 show that majority of the respondents were citizens of the country they lived in, only Spain, Switzerland and England had a bit more immigrant respondents. In Switzerland and England the immigrants were mainly citizens of another European country, and only in Spain relatively more immigrants were outside of Europe (8.7 % of respondents). Biggest share of respondents with other mother tongue than the one used in the questionnaire (Table 63) was in England (21.1 %) and in Spain (26.2 %). However, a more detailed analysis of these two questions show that many immigrants actually had the same mother tongue in both countries (have moved from English or Spanish speaking countries), and that many respondents with different mother tongue were actually citizens of their home country (had lived there for a longer period, and/or home language was different from the one used in the questionnaire). Only 2.6 % of all respondents had immigrant status and other mother tongue than the language used in questionnaire. Therefore it can be assumed that the validity of the data in that sense is good.

Out of the total of 8,646 respondents the number of respondents used in the deeper statistical analysis was 8,417 for confirmatory factor analysis, and for ANOVA and ANCOVA analysis 8,228. These were the respondents who had replied in change statements well enough, so that it was possible to make sum scores for the respondent. In other words, those respondents who were dropped from the deeper statistical analysis had too many missing answers in change statements or in background questions. The number of cases in different analysis and in different sum scores varies according to type of analysis and number of people who have provided valid answers in different statements.

4.2 Course types

The following table describes the detailed list of course types found in the analysis, in order of frequency. Table 8 describes a shorter list of the main categories of types of courses. A more detailed content analysis of course types by country is available in Appendix 3. The categorization of course types was done using the name and topic of the course(s) the respondent had attended (maximum 3 courses; question 1.2).

Because the respondents were asked to list a maximum of three courses they had participated, the number of courses to analyse was higher than number of respondents. 38 % of respondents listed more than one course, and the total number of courses to analyse was 13.338. In most cases the course type was easy to define by the name of the course (for example “ICT for beginners”), in some cases also the course topic description was needed for analysis (for example a course named “A monstrous regiment” can be defined as history course with the help of “Tudors” as course topic description).

Appendix 2 show the course topic definitions, which were used to do the content analysis of course types.

Table 7 Course types in order of frequency

Course type	Frequency	Percent	Valid Percent
Several course types attended *	2099	24,3	24,6
Languages	1290	14,9	15,1
Work related and vocational topics	958	11,1	11,2
Sports	735	8,5	8,6
Basic ICT skills	544	6,3	6,4
Social education	465	5,4	5,4

Handicrafts	341	3,9	4,0
ICT	316	3,7	3,7
Arts	258	3,0	3,0
Singing	238	2,8	2,8
Culture	217	2,5	2,5
Health related courses	206	2,4	2,4
Basic competencies	155	1,8	1,8
Political education	147	1,7	1,7
Music	76	,9	,9
Basic literacy skills	69	,8	,8
Baking and food	64	,7	,7
History	61	,7	,7
Special skills	61	,7	,7
Basic language skills	57	,7	,7
Creative writing	55	,6	,6
Nature	55	,6	,6
Animals	48	,6	,6
Science courses	24	,3	,3
Basic numeracy skills	8	,1	,1
Total	8547	98,9	100,0
Missing	99	1,1	
Total	8646	100,0	

* This category includes participants, who have participated more than only one type of courses

For the purposes of analysis the course types were also classified into main categories, to narrow down the number of types and to combine similar types of courses into same main category. Appendix 2 describe how the main categories were created and which course types belong to each category.

Table 8 Main categories of course types

Main category of course type	**Frequency**	**Percent**	**Valid Percent**
Health & sports	941	10,9	11,0
ICT & skills	1210	14,0	14,2
Languages	1290	14,9	15,1
Creative activities	1135	13,1	13,3
Society & culture	914	10,6	10,7
Work related and vocational topics	958	11,1	11,2
Several courses attended	2099	24,3	24,6
Total	8547	98,9	100,0
Missing	99	1,1	
Total	8646	100,0	

* This category includes participants, who have participated more than only one type of courses

Note that the numbers in Table 8 indicates the numbers of course topics (not the number of courses) the respondents have mentioned. For example the number 941 indicates, that so many respondents have participated *one or more* courses, which have all been Health & sports related.

Work related and vocational course topics exist in the data for various reasons, even though by definition liberal adult education is non-vocational. Some training providers organize both liberal and work related courses, and more importantly some adults study these work related topics on volun-

tary basis, without having specific goal oriented vocational reasons for participation, but instead study as activity or learning oriented participants (Houle, 1961). In Finland this kind of courses are Open University studies, which are organized by liberal adult education organizations in cooperation with universities, and are academic university studies.

There are many work related course participants especially in Spain, where 40,6 % of respondents studied work related & vocational topics. In fact, 37,2 % of all vocational course participants came from Spain, which have to be taken into account in country comparisons (see Chapter 4.8). Second biggest shares of work related course participants were from Romania and Czech Republic (19,3 % and 10 % of learners studying this course topic). Smallest shares were in Finland (2,5 %) and in Switzerland (3.3 %).

When the Spanish course topics were analyzed in more detail, it was found that majority of work related course participants were studying "University access exam for people over 25 years old". However, many people doing this kind of training are not trying to increase their opportunities in terms of accessing the labour market, but because of personal reasons (testing own learning skills, going back to study at adult age at any level of education, or even to study for pleasure or interest, etc.). These kinds of courses are also the few examples of state provision for adults in Spain. Also, because of the economic, financial and social crisis, adults in Spain have looked education as a way to simply make use of the extra time because of unemployment. Many people see unemployment as an opportunity to devote time to learning activities. In interviews the participants declared that they were trying to improve their CVs by taking additional courses, although these do not provide any kind of accreditation.

The cumulative category "Several courses attended" includes the respondents, who had participated two or more courses that belong to different course categories, for example one language course and one Health & sports related course. Even though the category differs from others in terms of definition and frequency, it is the only solution for analysis. The category do not show which courses the respondent have participated, but it can be used in the analysis as a "mixed courses" category.

Deeper analysis of adults who have participated "several course topics" show that course type combinations are very individual, and it is difficult to point out a "typical" set of combinations. The analysis showed in Figure 2 give some information about the potential combinations. The bars show the second and third course categories for those respondents, who had mentioned a language course as the first course (n = 366). It seems that the most popular other course types have been sports, ICT, arts, culture and handicrafts. It can be assumed that group "several courses attended" have a well balanced course combination, with different types of courses ranging from intellectual activities to cultural and physical topics.

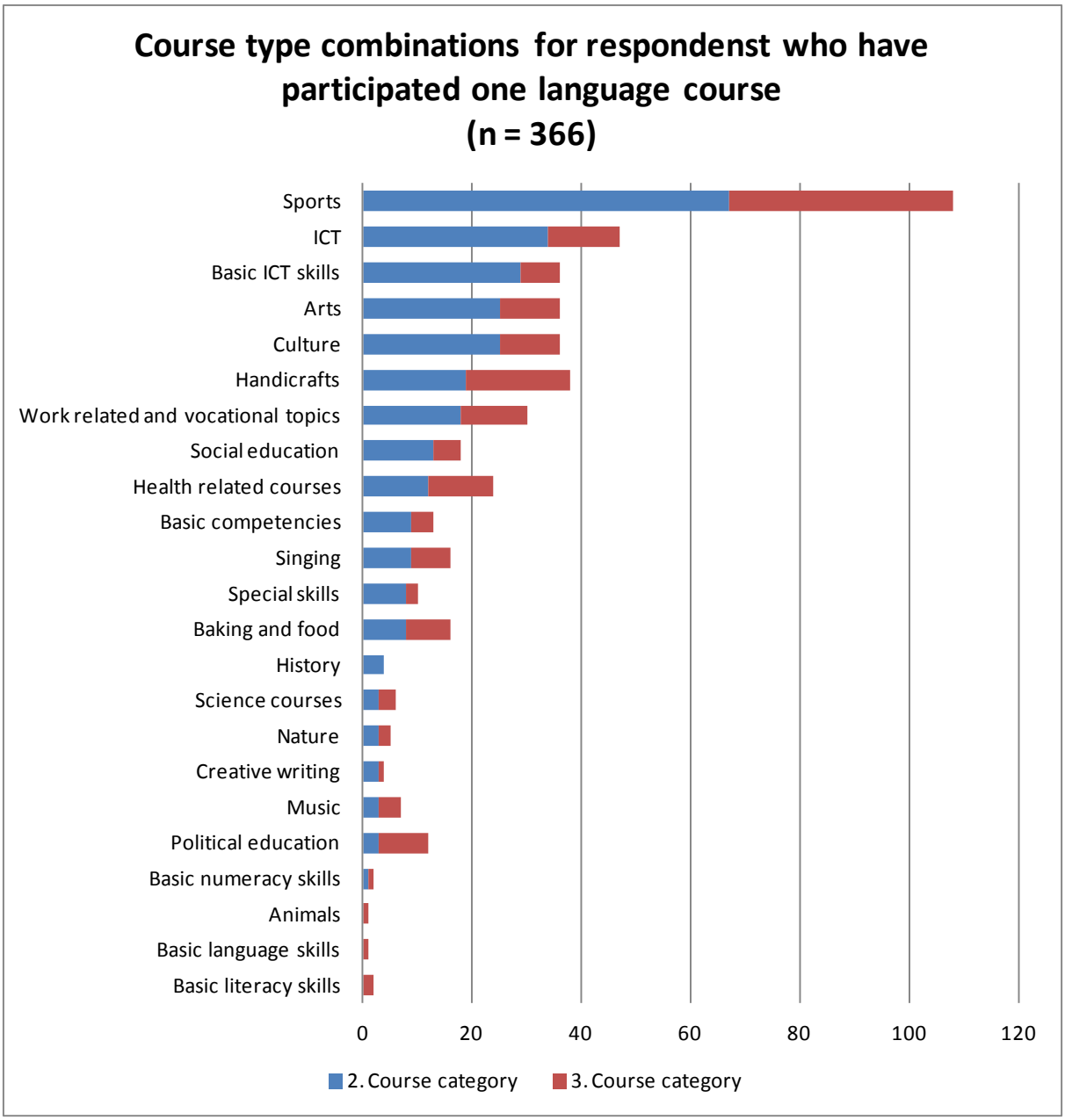


Figure 2 Second and third course types for respondents, whose first course type is languages

Course type information is important for the analysis of benefits, because different types of courses generate different types of benefits. Tentative analysis indicates that for example health & sports related courses generate – obviously – more health related benefits. Learning motivation increases more in ICT & skills courses, in courses with work related and vocational topics, and also for those who have attended several types of courses. That group of participants are the "heavy users" of adult education, and they also seem to report more benefits than other participants. Interestingly, language courses seem to generate statistically ($p = .000$) relatively less benefits than other types of courses. Language learners report smaller positive changes especially in social networks (mean 4,94 versus 5,51 for participants who have attended several types of courses) and in engagement in local community (4,09 versus 4,72).[7]

[7] Scale: Much less (1) Less (2) Slightly less (3) No change (4) Slightly more (5) More (6) Much more (7)

For example Hammond (2005, p. 250) write that different types of education have different effects for learners with different backgrounds, and Desjardins (2003, p. 27) report findings that job-related learning have positive effect on economic outcomes, but personal interest related learning have an negative effect on economic outcomes (participation in courses for personal interest has negative correlation with income level). In terms of social outcomes the effects are reversed.

4.3 Basic frequencies

4.3.1 Changes experienced by the respondents

The statistical analysis of BeLL data will be based on the experienced changes measured with 27 benefit statements (measuring the 12 benefit concepts) and in 8 psychological statements (measuring the two psychological concepts), as described earlier in Chapter 2.4. The respondents were introduced a list of potential benefits and asked to estimate, whether there have been changes in these caused by the participation in liberal adult education courses during the past 12 months period. The following instruction and scale was used in the questionnaire:

> 2.3.1 Now, please assess whether these liberal adult education courses have caused the following changes in your life. Use the following scale:
> Much less (- - -) Less (- -) Slightly less (-) No change (0) Slightly more (+) More (+ +) Much more (+ + +)[8]

The following Figure show the general results in order of biggest positive changes. For presentation purposes the response alternatives much less, less and slightly less have been combined into one alternative “Less than before”, and respectively alternatives measuring changes into other direction into one alternative “More than before”. No change –category is the same.

[8] Scale numbering for statistical analysis: Much less (1) Less (2) Slightly less (3) No change (4) Slightly more (5) More (6) Much more (7)

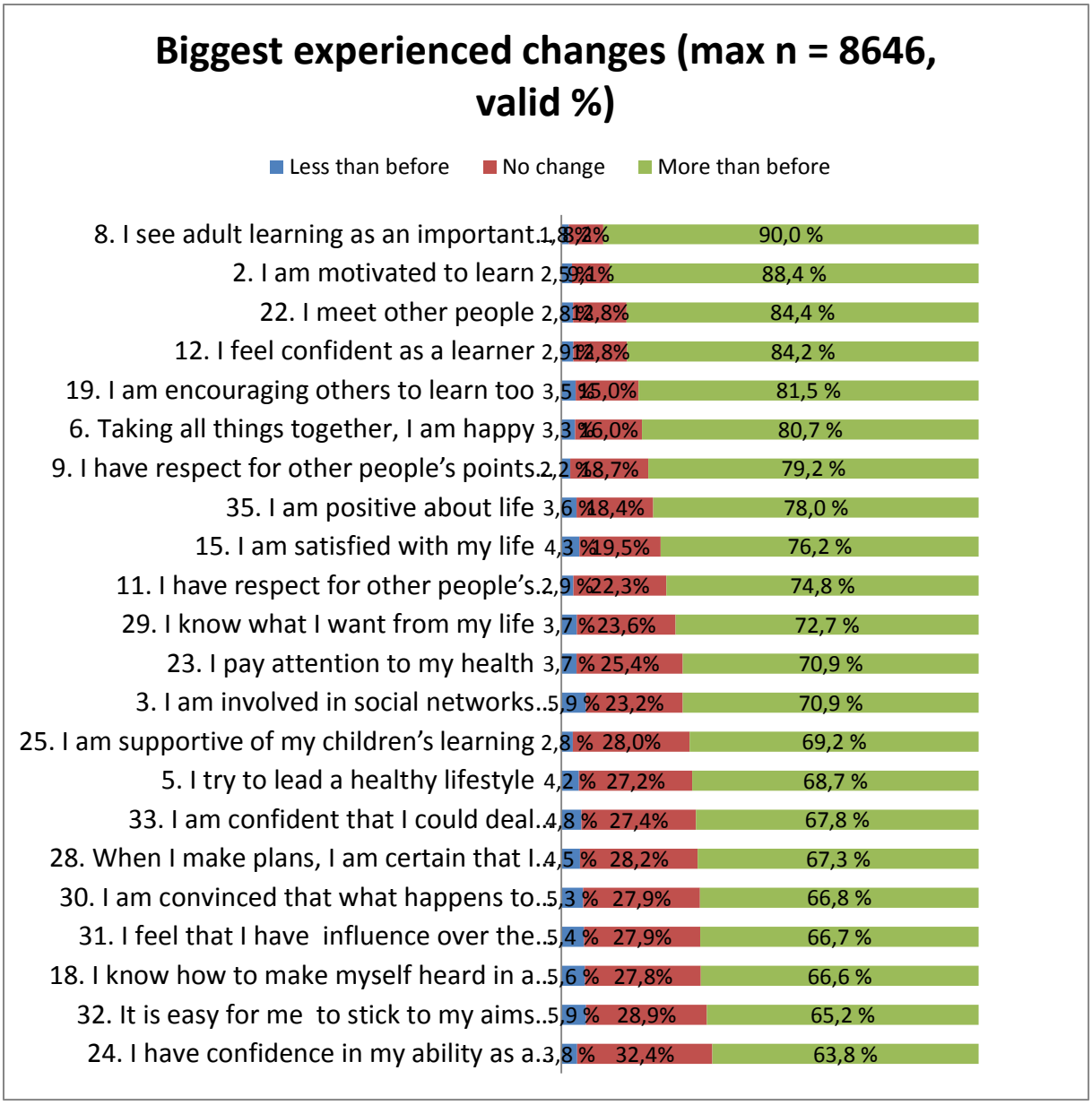


Figure 3 Biggest experienced changes at statement level (valid %)

The results show that 90 % of those respondents who have replied that question see adult learning as a more important opportunity than before the course participation. Respectively 88,4 % feel that they have now better learning motivation, and 84,4 % meet more other people than before.

The following Figure shows the second half of the list, "smaller changes".

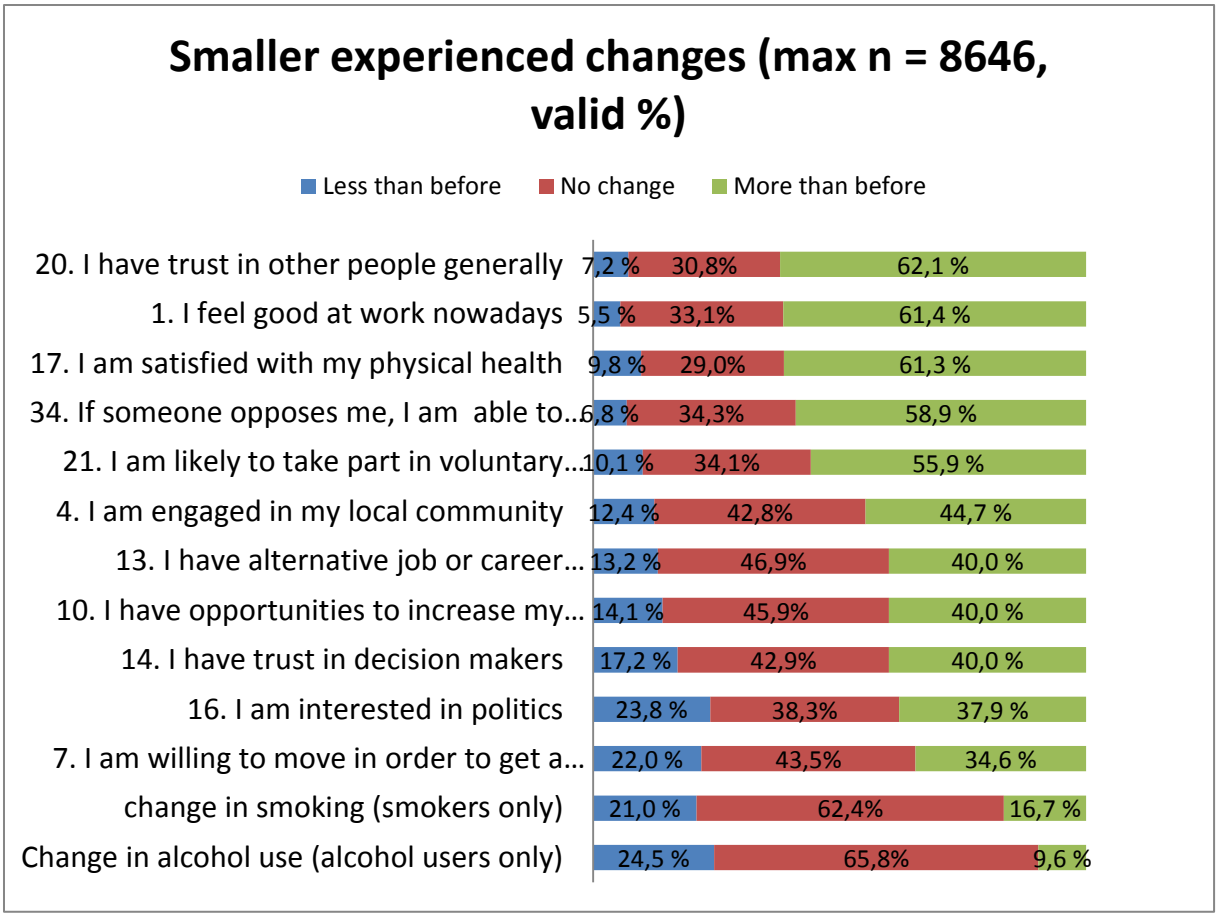


Figure 4 Smaller experienced changes at statement level (valid %)

In Figure 4 the changes for smoking and alcohol use are based only on the responses of those adults, who smoke or use alcohol. Those who replied that they don't use alcohol or smoke at all have been removed from the analysis. There were 2551 smokers and 4507 alcohol users in the data. Note that "Less than before" is here a positive outcome (at least from the point of view of national health). The results show that 21 % of smokers smoke now less than before the course participation, and 24,5 % of those who use alcohol have reduced that habit. However, there are also respondents who smoke or use more alcohol than before. It seems that the relationship between "bad habits" and participation in adult education is a complex one, and there are some differences between countries and also between course types. Deeper analysis is presented later in Chapter 4.9.

4.3.2 "Negative" outcomes

BeLL survey results indicate also negative changes albeit in a much lower percentage than there are positive perceived benefits. Negative outcomes of learning are an interesting theme that is even less researched than wider benefits, and BeLL is the first study analysing also potential negative changes.

We have to keep in mind that these negative changes can be

1. indicators of real negative outcomes and changes in participants' life
2. based partly on misunderstanding of the question or change scale, or on technical mistakes in answering or in the manual input of paper questionnaire data.

As the BeLL results seem to indicate, learning can also cause negative changes in adult's life. It is fair to assume that learning can also be a negative experience (bad teacher or group experience, poor

learning results) and related potential negative outcomes can be based on unrealistic or unmet expectances. It can therefore be assumed that negative experienced changes in BeLL data are mainly real, not errors. In the previous Finnish study (Manninen & Luukannel, 2008; Manninen, 2010) the respondents reported a few negative outcomes, such as being busy with courses and having reduced opportunities to spend time with the family. In BeLL interviews one respondent talked about the stress of completing course work and meeting deadlines but went on to say that this stress was 'small' compared to a) the larger life stresses that course participation was alleviating and b) the sense of personal satisfaction at meeting a deadline and achieving in a piece of course work. Also some previous studies (OECD 2007a, 31) mention as negative potential outcome the increased stress level. Another respondent in BeLL interviews mentioned divorce when she was asked about negative outcomes of learning, but she felt this was actually a positive outcome since it enabled her to better fulfil her potential instead of being in a depressing relationship.

OECD (2007a, 31; see also Feinstein et al., 2008, 20) mention as negative potential outcome at society level the increased inequalities for example in income and employment opportunities, and at individual level increased cynicism regarding political system and politicians, if courses raise critical questions about functioning of the society. BeLL results show that 17,2 % of respondents have less trust in decision makers and even more have less interest in politics. There are big differences between countries in these changes, but they need to be analyzed later using deeper socio-economic data for interpretations as well.

It should be noted that in addition to changes in smoking and alcohol use the "Less than before" changes are not always negative outcomes. For example the above mentioned lower trust in decision makers can be a positive change, if it happens in a corrupted or undemocratic society because adult education have raised critical awareness about functions of state and administration.

Existence of potential validity problems based on interpretation or technical errors was analyzed. Crosstabs analyses of "Less than before" answers using Chi-square and adjusted residuals (Reynolds, 1977) show that some of the answers indicating negative changes might be respondent mistakes, based on misinterpretation or misunderstanding of the scale or be simply technical mistakes in answering or in coding. Misinterpretation hypothesis is supported by the observation that in some statements negative changes are reported more by respondents, whose mother tongue is different than the one used in the questionnaire. On the other hand, in some other questions the same respondents give "rational" results, for example they experience more positive changes in willingness to move and feel that they have more opportunities to increase their income.

If misinterpretations explain some negative change answers, these errors are not systematic: crosstabs analysis show that in majority of the statements there are no statistically significant differences by nationality, mother tongue, age, gender, employment status, type of course, or educational level. Comparison of qualitative answers in open benefit questions (2.1 and 2.2, see Chapter 5) show that those who have selected "Less than before" in some benefit questions have often either empty or rather short "laconic" answers in open questions, including answers like "*None*" or they mention only one or two benefits ("*Greater knowledge of the subjects*"; "*Improved painting techniques*" or "*Not to be afraid of modern technology*"). This supports the interpretation that answers in the statements are often valid and not interpretation errors.

There are some small but statistically significant differences between countries. However, we have to keep in mind that the actual number of respondents in "Less than before" categories is relatively small. Chi-square analysis using adjusted residuals (Reynolds, 1977) show, for example, that compared to other countries there is less community engagement in Germany (130 persons in "Less than before" category, Switzerland (49) and Spain (143). Could it be that for some reason people in these countries spend less time in community activities because of learning activities? In England (37) and

Germany (41) there is a bit more people who are less happy than before, for some reason. Especially Finns but also Germans and Slovenians are relatively less willing to move in order to get a job. Most of these differences can be explained by different respondent profiles (see Chapter 4.5).

Some differences can be found between course types, for example in language and vocational courses there are slightly more negative changes in terms of seeing adult education an important opportunity, perhaps based on dissatisfaction with learning experience?

There are a few gender differences. Male respondents have more "less than before" answers in statement "3. I am involved in social networks (friends, colleagues, etc.)" (Adjusted residual +1.9) and also in "22. I meet other people" (+3.4). It might be that spending time in learning activities reduce time spent with friends more for men than for women. Interestingly, there are more male respondents who see adult learning less important opportunity (+2.3) and are less encouraging others to learn (+3.4), but there are no differences on changes in learning motivation or in learner self-confidence by gender.

4.4 Factor structure

4.4.1 Confirmatory factor analysis

In the **first phase** of deeper statistical analysis the overall factor structure was explored with the help of Structural Equation Models (SEM, for an example see Figure 35 later in this report). Confirmatory factor analysis (CFA; Brown, 2006) was done step by step for each theoretical dimension to define the factors measuring benefits of lifelong learning in this study (compare Chen & Yang 2013). In addition to normal first order factors (10) three second order factors were created. These factors are described in Table 9. A more detailed table with statements loading in factors is available in Appendix 4.

Table 9 Benefit factors

Benefit Factors (sum scores)	Cr.α (n)	Second order factors:
Locus of Control (3 items)	.85 (8066)	
Self-Efficacy (3)	.85 (8044)	CONTROL OF OWN LIFE (8 items) .93 (7853)
Sense of Purpose in Life (2)	.78 (8170)	
Tolerance (2)	.80 (8147)	
Social Engagement (5)	.78 (7717)	ATTITUDES & SOCIAL CAPITAL (11) .89 (7444)
Changes in educational Experiences (4)	.80 (7975)	
Health (3)	.84 (8056)	
Mental Well-being (2)	.82 (8134)	HEALTH, FAMILY & WORK (9) .83 (2468)
Work (2)	.77 (7475)	
Family (2)	.89 (2735)	

In the **second phase** of analysis, sum scores measuring changes in benefit factors for each respondent were calculated based on the items loaded on each factor. The variation of the sum scores was not normally distributed (Kolmogorov-Smirnov). However, the descriptive statistics of Skewness (g_1) as well as Kurtosis (g_2) were < ± 1. Also visual examination showed that the variation in responses enabled further analysis (see Appendix 4). The internal consistency of the sum variables was satisfactory, Cronbach's α varied between 0.77–0.93 (see Table 9). The means and variances of sum variables are presented in Appendix 4.

The benefit factors will be used later in the SEM-analysis (see Chapter 4.10).

4.4.2 Description of benefit factors

Each factor is described below in details, including the definitions, statements and frequencies of the answers in statements. The factor structure follow quite closely the original theoretical concepts described earlier in Chapter 2.4, but not in every detail. Some statements were moved to another factor (concept) and some were dropped from the factor structure because they did not fit into it (see Appendix 4 for details).

The following three factors were defined and used to create a second order factor **CONTROL OF OWN LIFE.**

Table 10 Locus of Control (Factor 1)

Locus of Control (Cr.α = .85, n= 8066)							
Individuals with a high *internal locus of control* believe that events result primarily from their own behaviour and actions. Those with a high *external locus of control* believe that powerful others, fate, or chance primarily determine events. (Rotter 1966; Zimbardo 1985, 275).							
2.3.1 Now, please assess whether these liberal adult education courses have caused the following changes in your life. Use the following scale: Much less (- - -) Less (- -) Slightly less (-) No change (0) Slightly more (+) More (+ +) Much more (+ + +)							
	- - -	- -	-	No change	+	++	+++
28. When I make plans, I am certain that I can make them work	64 ,8%	88 1,1%	218 2,7%	2319 28,2%	2547 31,0%	2066 25,1%	922 11,2%
30. I am convinced that what happens to me is my own doing	80 1,0%	88 1,1%	264 3,2%	2295 27,9%	2098 25,5%	2178 26,5%	1212 14,8%
31. I feel that I have influence over the things that happen to me	70 ,9%	87 1,1%	285 3,5%	2281 27,9%	2266 27,7%	2199 26,9%	990 12,1%

* numbers and percentages show valid row n and %

This factor is based on the original well-tested Locus of Control Scale (Rotter 1966), and the reliability of the factor is good (Cr.α = .85).

Table 11 Self-efficacy (Factor 2)

Self-efficacy (Cr.α = .85, n= 8044)							
People's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives (Schwarzer & Jerusalem 1995; Bandura 1994; Scholz, Gutierrez, Sud & Schwarzer, 2002).							
	- - -	- -	-	No change	+	++	+++
32. It is easy for me to stick to my aims and accomplish my goals	59 ,7%	106 1,3%	320 3,9%	2368 28,9%	2338 28,6%	2010 24,6%	986 12,0%
33. I am confident that I could deal efficiently with unexpected events	63 ,8%	70 ,9%	261 3,2%	2249 27,4%	2254 27,5%	2132 26,0%	1171 14,3%
34. If someone opposes me, I am able to find the means and ways to get what I want	73 ,9%	130 1,6%	355 4,3%	2800 34,3%	2160 26,5%	1790 21,9%	857 10,5%

Also this factor is based on well-tested original instrument, and produces a reliable factor.

In the factor analysis the following factor seemed to load into the same second order latent factor with Locus of Control and Self-efficacy. This combination of factors gives a meaning for this second order factor: sense of control and purpose of own life, combined with self-efficacy beliefs.

Table 12 Sense of purpose in life (Factor 3)

Sense of Purpose in Life (Cr.α = .78, n= 8170)							
A feeling that there is meaning to present and past life, having aims and objectives for living (Ryff, 1989).							
	- - -	- -	-	No change	+	++	+++
29. I know what I want from my life	54	69	184	1949	2236	2245	1513
	,7%	,8%	2,2%	23,6%	27,1%	27,2%	18,3%
35. I am positive about life	71	63	166	1525	2106	2263	2099
	,9%	,8%	2,0%	18,4%	25,4%	27,3%	25,3%

Second order latent factor **ATTITUDES & SOCIAL CAPITAL** is based on the following three factors:

Table 13 Tolerance (Factor 4)

Tolerance (Cr.α = .80, n= 8147)							
A fair, objective, and permissive attitude toward opinions and practices that differ from one's own.							
	- - -	- -	-	No change	+	++	+++
9. I have respect for other people's points of view	43	36	100	1541	1555	2632	2354
	,5%	,4%	1,2%	18,7%	18,8%	31,9%	28,5%
11. I have respect for other people's cultures.	51	38	148	1842	1429	2281	2475
	,6%	,5%	1,8%	22,3%	17,3%	27,6%	29,9%

The following factor is a combination of three original theoretical concepts: Trust, Social network and Civic and Social Engagement. In the factor analysis the statements measuring these concepts loaded into same factor, and formed a common factor which was defined as Social Engagement.

Table 14 Social Engagement (Factor 5)

Social Engagement (Cr.α = .78, n= 7717)
Trust: An attitude or a mindset related to trustworthiness of other people, politicians, institutions etc. (OECD, 2007b, 80; Newton & Zmerli, 2011).

Social Network: A network of friends, colleagues, and other personal contacts. ***Civic and Social Engagement:*** Joining associations, volunteering, more active role in community (OECD, 2007a, 67). Also Active Citizenship, which is defined as "Political participation and participation in associations" (Weerd, Gemmeke, Rigter & Rij, 2005).							
	- - -	- -	-	No change	+	++	+++
20. I have trust in other people generally.	132 1,6%	144 1,7%	316 3,8%	2537 30,8%	2141 26,0%	2142 26,0%	835 10,1%
22. I meet other people.	57 ,7%	61 ,7%	115 1,4%	1068 12,8%	2164 25,9%	2634 31,6%	2244 26,9%
3. I am involved in social networks (friends, colleagues etc.).	159 1,9%	113 1,4%	210 2,6%	1891 23,2%	1986 24,4%	2210 27,1%	1586 19,4%
4. I am engaged in my local community.	394 4,9%	224 2,8%	383 4,8%	3447 42,8%	1626 20,2%	1166 14,5%	808 10,0%
21. I am likely to take part in voluntary activity.	302 3,7%	191 2,3%	329 4,0%	2777 34,1%	1725 21,2%	1514 18,6%	1314 16,1%

The following four statements measure the concept Changes in Educational Experiences:

Table 15 Changes in Educational Experiences (Factor 6)

Changes in educational Experiences (Cr.α = .80, n= 7975)							
Learning motivation, learner self confidence, learner efficacy control and outcome beliefs, task value, and expectancy for success (Pintrich, 1988; Ruohotie, 2000, 8; also expectancy-valence –model of participation, Rubenson, 1979).							
	- - -	- -	-	No change	+	++	+++
2. I am motivated to learn	60 ,7%	55 ,7%	97 1,2%	760 9,1%	1841 21,9%	2935 35,0%	2644 31,5%
8. I see adult learning as an important opportunity	52 ,6%	32 ,4%	66 ,8%	687 8,2%	1476 17,7%	2468 29,5%	3572 42,8%
12. I feel confident as a learner	52	44	145	1061	2202	2708	2051

	,6%	,5%	1,8%	12,8%	26,6%	32,8%	24,8%
19. I am encouraging others to learn too	86	72	129	1249	2149	2528	2101
	1,0%	,9%	1,6%	15,0%	25,8%	30,4%	25,3%

As the frequencies in table shows, changes in educational experiences are the top changes experienced by adult learners participating liberal adult education courses. Over 80% or respondents recognize a positive change of some degree in these statements.

The third second order latent factor was named as HEALTH, FAMILY & WORK. It combines wider benefits of learning which have also more societal relevance, by extending the benefits of learning into the social context (benefits for family members and in the work contexts) and also to wider society via better well-being and health benefits.

Table 16 Health (Factor 7)

Health (Cr.α = .84, n= 8056)							
Health Behaviour: Healthy habits, such as giving up smoking, increasing exercise, positive changes in behaviour and attitudes, and more healthy living (Feinstein & Hammond, 2004) **Health:** A subjective perception of the relative state in which one is able to function well physically.							
	- - -	- -	-	No change	+	++	+++
5. I try to lead a healthy lifestyle	81	66	200	2247	1760	2136	1785
	1,0%	,8%	2,4%	27,2%	21,3%	25,8%	21,6%
23. I pay attention to my health	73	63	169	2115	1666	2259	1974
	,9%	,8%	2,0%	25,4%	20,0%	27,2%	23,7%
17. I am satisfied with my physical health	145	179	480	2387	1846	2037	1166
	1,8%	2,2%	5,8%	29,0%	22,4%	24,7%	14,2%

Table 17 Mental Well-being (Factor 8)

Mental Well-being (Cr.α = .82, n= 8134)							
A state of wellbeing in which individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (WHO).							
	- - -	- -	-	No change	+	++	+++
6. Taking all things together, I am happy	64	55	153	1326	2051	2695	1930

	,8%	,7%	1,8%	16,0%	24,8%	32,6%	23,3%
15. I am satisfied with my life	72	89	199	1611	2182	2487	1637
	,9%	1,1%	2,4%	19,5%	26,4%	30,0%	19,8%

Table 18 Work (Factor 9)

Work (Cr.α = .77, n= 7475)							
Benefits and outcomes which help the individual to get, keep or advance in his/her job, get better income or any other benefits which are related to employment.							
	- - -	- -	-	No change	+	++	+++
10. I have opportunities to increase my income	521	185	384	3539	1277	972	832
	6,8%	2,4%	5,0%	45,9%	16,6%	12,6%	10,8%
13. I have alternative job or career opportunities	517	154	328	3557	1336	975	725
	6,8%	2,0%	4,3%	46,9%	17,6%	12,8%	9,5%

Table 19 Family (Factor 10)

Family (Cr.α = .89, n= 2735)							
Becoming a better parent, more patient, understanding and better supporting their children (Wolfe & Haveman, 2002).							
	- - -	- -	-	No change	+	++	+++
24. I have confidence in my ability as a parent	36	17	53	910	404	721	669
	1,3%	,6%	1,9%	32,4%	14,4%	25,7%	23,8%
25. I am supportive of my children's learning	43	6	28	780	336	566	1027
	1,5%	,2%	1,0%	28,0%	12,1%	20,3%	36,9%

For family benefit questions 24 & 25 only those who have children under 18 were asked to reply (n = 2810), which makes the frequencies smaller.

These ten factors and three second order factors were used to calculate sum scores for each respondent, see Appendix 4 for details. These sum scores are used in the following Chapters to make group comparisons for experienced benefits.

4.5 Group comparisons of benefits

This chapter describes the basic differences between different respondent groups in relation to experienced changes and benefits. This is the **third phase** of analysis, where the benefits of lifelong learning were compared between different subgroups. The statistical differences were examined with the help of t-test and one-way ANOVA. T-test was used in analyzing the means of two groups and ANOVA when there were three or more subgroups to compare. The comparisons are made mainly by T-test or ANOVA, later with more detailed Covariance analysis (ANCOVA). More complex statistical tables are available in Appendix 5.

Interpretation of the statistical differences has to be made keeping in mind the fact that differences between different groups are small, even if the differences reach the level of statistical significance. Statistical significance indicate only that the observed – even a small – difference between group mean values is "real" and that the mean values and variances are different enough to make the interpretation that the groups in question have some real differences. Due to large number of respondents even small differences in BeLL data are statistically significant, even though in "real life" situation these differences are less radical. An example is given in the following figure, which show how the statistically significant difference between male and female respondents in "Family" sum score (5.30 vs. 5.48, $p < .01$; see next chapter) is reflected in actual response frequencies[9].

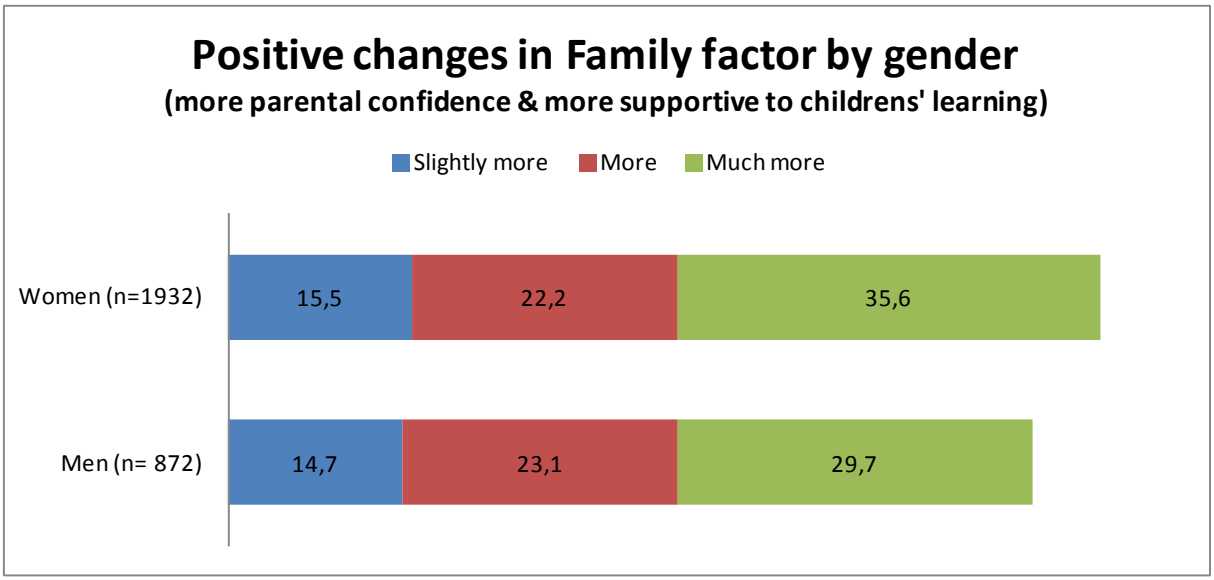


Figure 5 Example of group differences

[9] The scaling of sum scores (Factors and second order Factors) into original response scale of 1 to 7 was made by recoding the sum scores in the following way: 1 = 1 (much less), 1.1 to 2 = 2 (less), 2.1 to 3 = 3 (slightly less), 3.1 to 4 = 4 (no change), 4.1 to 5 = 5 (slightly more), 5.1 to 6 = 6 (more) and 6.1 to 7 = 7 (much more). Note that these recoded sum variables are more abstract than the original statements on the response scale 1 to 7, and are used only for visual demonstration of differences in sum scores, not in statistical analysis.

As the Figure 5 show, 67.5 % of male respondents for these questions have experienced some positive change, and respectively 73.3 % of female respondents have done the same. The major difference seem to be that women have selected “much more” alternative more often than men.

4.5.1 Benefits of lifelong learning in relation to respondents’ gender

Earlier research indicates that there are differences between the men and women on how they experience the benefits (Nummela, Sulander, Rahkonen & Uutela, 2008). Comparison of BeLL data revealed that development of “Locus of Control” or “Sense of Purpose in life” did not differ between male and female respondents, but male respondents reported more changes in ”Self-efficacy”. The difference was statistically significant also in the sum variable of CONTROL OF OWN LIFE which describes the sum score of these three sub dimensions.

Female respondents had experienced more changes in the area of ATTITUDES & SOCIAL CAPITAL. The difference was statistically significant in all three sub dimensions: “Tolerance”, “Social Engagement” and “Changes in educational Experiences”. Also in the HEALTH, FAMILY & WORK female respondents had got more benefits compared to male, except in benefits related to “Work”.

Table 20 Benefits of lifelong learning in relation to respondents’ gender

Dimensions of benefits	M (SD.)		Group comparison
	Male (n=2371)	Female (n=5823)	
Locus of Control (3 items. Cr. α= .85)	5.14 (1.04)	5.09 (1.05)	$t_{8192} = 1.868$, ns.
Self-Efficacy (3. Cr. α= .85)	5.13 (1.06)	5.01 (1.04)	$t_{8167} = 4.624$, p < .000
Sense of Purpose in life (2. Cr. α= .78)	5.42 (1.10)	5.39 (1.10)	$t_{8243} = 1.199$, ns.
CONTROL OF OWN LIFE (8. Cr. α= .93)	5.21 (.99)	5.14 (.98)	$t_{8279} = 2.808$, p < .01
Tolerance (2. Cr. α= .80)	5.56 (1.08)	5.63 (1.13)	$t_{4613,569} = -2.592$. p < .05[a]
Social Engagement (5. Cr. α= .78)	4.97 (.98)	5.11 (.98)	$t_{8336} = -6.218$. p < .000
Changes in educational Experiences (4. Cr. α= .80)	5.66 (.91)	5.79 (.92)	$t_{8402} = -6.245$. p < .000
ATTITUDES & SOCIAL CAPITAL (11. Cr. α= .89)	5.33 (.86)	5.46 (.88)	$t_{8417} = -6.199$. p < .000
Health (3. Cr. α= .84)	5.25 (1.18)	5.39 (1.18)	$t_{8268} = -4.657$. p < .000
Mental well-being (2. Cr. α= .82)	5.40 (1.12)	5.49 (1.10)	$t_{8265} = -3.376$. p < .01
Work (2. Cr. α= .77)	4.49 (1.34)	4.42 (1.33)	$t_{7697} = 2.112$. p < .05
Family (2. Cr. α= .89) (Male = 872; Female = 1932)	5.30 (1.32)	5.48 (1.29)	$t_{2802} = -3.465$. p < .01
HEALTH, FAMILY & WORK (9)	5.09 (.92)	5.17 (.93)	$t_{8349} = -3.406$. p < .01
[a]Levene test of Homogeneity of Variances < .05			

4.5.2 Benefits of lifelong learning in relation to respondents’ age

Comparison of respondents’ age group in relation to benefits (see Appendix 5, Table 66) revealed that the youngest participants had benefitted most in CONTROL OF OWN LIFE. This difference was evident in all sub dimensions except in ”Sense of purpose in life”. It seems that education had improved the ”Sense of purpose in life” in youngest but also in the oldest age group. The interpretation

could be that for younger participants liberal adult education serves as a “stepping stone” to society and own life, and for older participants as a “cushion” softening the age related changes like retirement and loss of family members.

The age group of 65-92 had benefitted most in the area of ATTITUDES & SOCIAL CAPITAL. The difference was obvious in all sub dimensions and also statistically significant in the ”Social engagement” to all other age groups. The difference was similar also in the ”Health” and in the ”Mental well-being”, oldest participants had benefitted most in these areas. It seems that especially for older adults social interaction and engagement are important sources of wellbeing.

In the benefits concerning ”Work” the three youngest age groups of 15-24, 25-36 and 37-49 years differed from the age groups of 50-64 and 65-92 years. This difference is natural because of retirement of older respondents. On the other hand it seems that age group of 50-64 years had not got work-related benefits even though they are not yet in the formal retirement age. There are at least two interpretations on this: older adults don’t participate courses with vocational and work related topics, or are not looking for work related benefits, because they already have a good income level and no need to look for alternative job or career opportunities.

In the area of ”Family” benefits there was statistically significant difference between 15-24 and 37-49 years old. Also this result is understandable. The 165 respondents in the youngest group are less likely to have school aged children yet, while the 1086 respondents in the group of 37-49 years old are more potential parents of school aged children. Interesting point is that the mean of the oldest age group was same as the mean for group of 37-49 years old. Maybe the benefits of these 204 respondents in the group of 65-92 years old were related to their adult children and grandchildren. In the interview data there were some examples on how participation of older adults had encouraged their adult age children to learn as well. As a total the youngest and the oldest had benefitted most in the area of HEALTH, FAMILY & WORK but the differences were small.

4.5.3 Benefits of lifelong learning in relation to participants’ educational Level

Comparison of respondents’ educational level in relation to benefits revealed that the respondents with educational background on ISCED levels 1-3 had benefitted more in CONTROL OF OWN LIFE compared to respondents with ISCED 4 and ISCED 5 or 6 levels (Appendix 5, Table 67). The difference was statistically significant in ”Self-efficacy” and ”Sense of purpose in life”. The difference between educational levels was linear: the lower the educational level the higher seems to be the benefit of participation in liberal adult education courses. The differences between educational levels were similar also in the benefits concerning ATTITUDES & SOCIAL CAPITAL. This observation is obviously based on the fact that participants with lower educational background are likely to experience more changes than those with longer learning history, because these higher educated persons have “already benefitted” from education during their educational career. In plain language they already have for example good sense of self-efficacy, and additional participation in learning do not produce so big changes as the lower educated seem to experience. Similar observations have been made by Chandola & al. (2011) who reported that lower educated adults get more health benefits from adult education. Also Field (2009, 36) point out that more vulnerable groups are likely to benefit more from adult learning.

Also in the ”Health” and ”Family” as well as in the benefits concerning ”Work” the respondents with lowest educational level had benefitted most, but there was not statistically significant difference between educational levels in the Work-related benefits. The difference between educational levels was linear also in the area of ”Mental well-being”, except the ISCED 2 –level which had benefitted most.

As a total, the difference between perceived benefits between different educational levels concerning CONTROL OF OWN LIFE, ATTITUDES & SOCIAL CAPITAL and HEALTH, FAMILY & WORK is obvious. The difference is linear and statistically significant. The respondents with lower educational level benefit from liberal adult education more than those with higher educational level. To be more precise (see Figure 6), all respondents with different educational background experience changes, but especially the respondents in the lowest ISCED level report bigger changes than others. They have selected "much more" alternative almost three times more often than the respondents in the highest ISCED level (32,7 % versus 12,8 %).

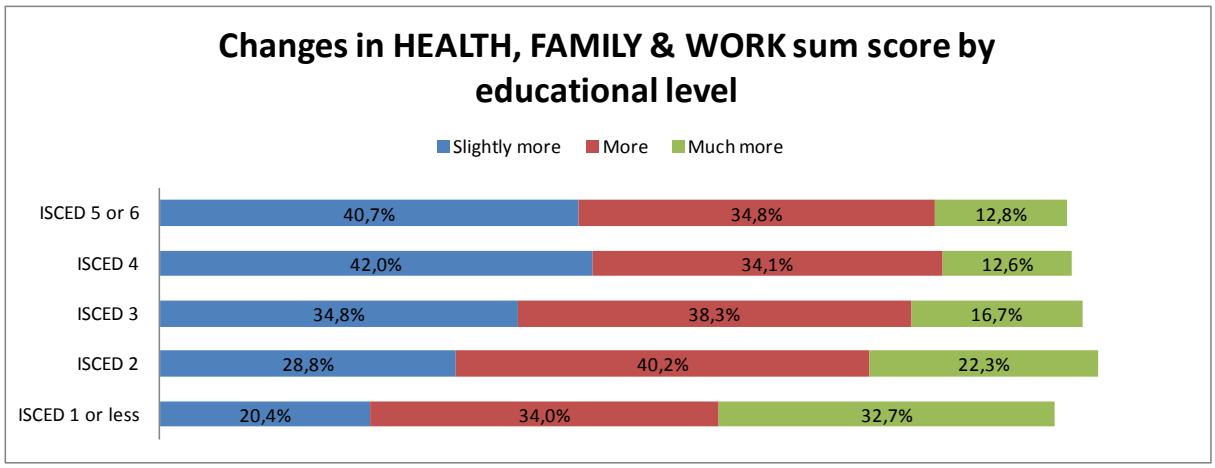


Figure 6 Changes in HEALTH, FAMILY & WORK sum score by educational level

4.5.4 Benefits of lifelong learning in relation to participants' employment status

Analyzing benefits of lifelong learning in relation to Participants' Employment Status revealed that Self-Employed/freelancers, House workers and Full-time students had experienced a bit more changes in the CONTROL OF OWN LIFE, but the differences were not statistically significant. Also in the ATTITUDES & SOCIAL CAPITAL House workers differed from other groups. Besides them it seems that also especially retired had got benefits in the ATTITUDES & SOCIAL CAPITAL along with the sub dimensions of "Tolerance", "Social engagement" and "Changes in educational experiences". This same difference was found in the age comparison, which is obvious because retired people are often older as well.

These two groups of House workers and Retired had got benefits in "Health" and "Mental well-being" more than participants of liberal adult education in general, but the differences were not statistically significant. House workers (who are more likely to have children to take care of) differed also in the "Family"-related benefits from other groups, significantly from part-time workers.

In the benefits related to "Work" there were interesting differences. Self-Employed/ freelancers and Part-time students had experienced work-related benefits more than others, which can be explained by the more "unsecure and searching" labour market status of these groups (learning generates new career options and job opportunities to increase income). Interestingly unemployed respondents had got least work-related benefits (M= 4.51, except retired respondents who had the lowest mean, 3.79). Difference was statistically significant to Self-Employed/ freelancers. Unemployed participants had participated more often on courses dealing with ICT, Skills and Competencies and Work related topics, but it seems that they experience less work related changes. This may be related to fact that

their life situation is more seriously based on the challenge of finding new job opportunities, and they have already went through that thinking process before entering the courses. However, out of unemployed respondents 45.7 % reported that they have better opportunities to increase their income and 42.5 % had better career or job opportunities, therefore it is obvious that learning benefits unemployed participants as well, but the changes are a bit smaller than in some other groups. The respective percentages for Self-employed and Freelancers were 54,4 % and 56,2 %. Interpretation of the statistically significant differences has to be made keeping in mind the fact that actual differences between groups are small.

4.6 Development of benefits and different course topics

The question of which courses generate what benefits is quite central in BeLL study. This Chapter focus in this question.

The analysis of open benefit questions (see Chapter 5 later in this report, also for the difference between open questions and structured questions) revealed that the respondents named spontaneously an average of 1,89 (in Italy) to 2,93 (in Finland) benefits per person. The number of benefits mentioned by single respondents varied between 0 to 12, most common number of benefits mentioned being 2. These numbers are related to (a) on the actual number of benefits the respondents recognize spontaneously and (b) are willing to report, but also on (c) how much the respondent is willing to write text in the open space provided. These numbers also give some insight on how benefits are experienced at individual level: spontaneously individuals report 0 to 12 benefits, most commonly 2 benefits.

Similar examples can be picked up from survey results as well. The following table shows examples of what kind of changes 5 language course participants have experienced. These are random examples from Romania and England.

Table 21 Example of changes in five individual cases

Case	Locus of control	Self-efficacy	Sense of purpose in life	Tolerance	Social engagegagement	Changes in educational experiences	Health	Mental well-being	Work	Family
ROM; young female	++	+++	++	++	+	+++	0	0	+++	+
ENG; middle aged female	0	0	0	0	0	+	0	0	0	0
ENG; young male	+	0	+++	++	+	+++	+	+++	++	0
ENG; older female	+	+	+	++	+	++	0	0	0	0
ROM; older female	0	+	0	+	+++	+	++	+	++	0

- - - ”Much less”, - - ”Less” , - Slightly less”, 0 ”No change”, + ”Slightly more” , ++ ”More”, +++ ”Much more”

For example the respondent on row 2 have experienced only one benefit: this female higher educated participant on “Spanish improvers” course has experienced only one change, having now “slightly more” positive educational experiences. Another example from row 1 is a younger female with upper

secondary level education, who have participated “Curs Franceza”, and experienced no changes in health or in mental well-being, but slight changes in Family and social engagement, have more sense of internal Locus of control, Sense of purpose in life, Tolerance, and much more Self-efficacy, Work related benefits and benefits related to Educational experiences.

It is obvious that at individual level the adults experience benefits very individually. Similar courses (here language courses) may generate for someone benefits that others don’t recognize. When all language course participants (n = 1290) are analyzed statistically, we see that all benefit factors exist, but there are some differences on which benefits are experienced more or less. As Figure 7 show, Changes in educational experiences are the “top benefit” from language courses (and in fact, from all types of courses).

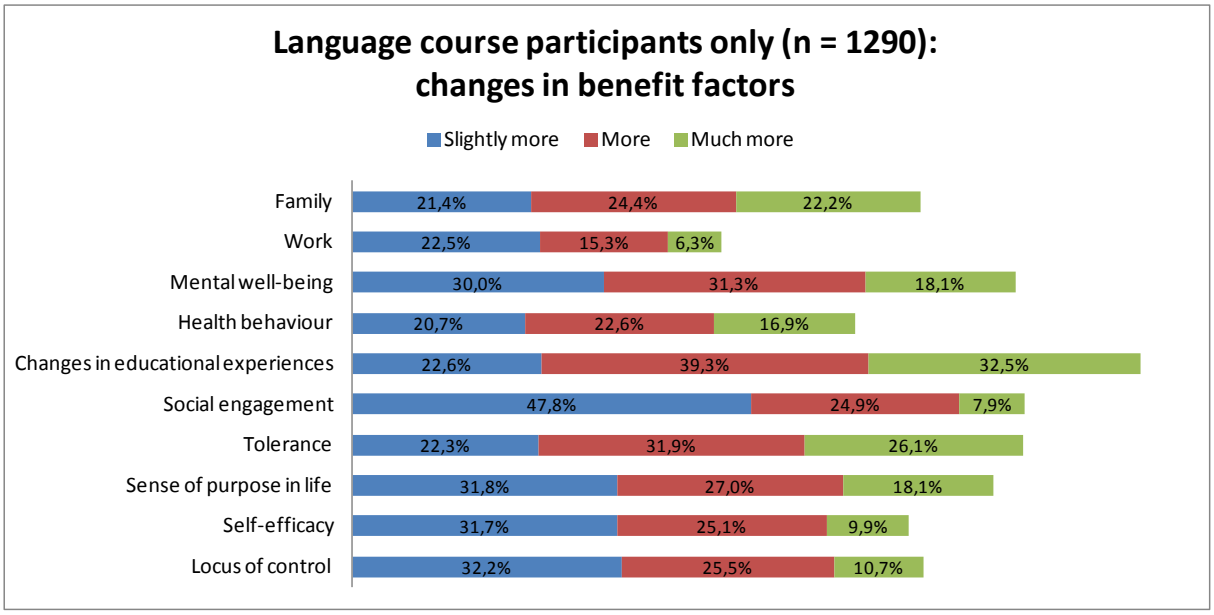


Figure 7 Changes in benefit factors experienced by language course participants

The differences between types of courses in terms of generated benefits are actually very small in practice, even though there are some statistically significant differences, as described later in this Chapter. The following Figure shows that the benefit factor profiles for creative course participants are visually almost identical with language course participants, and there are only some differences in percentages.

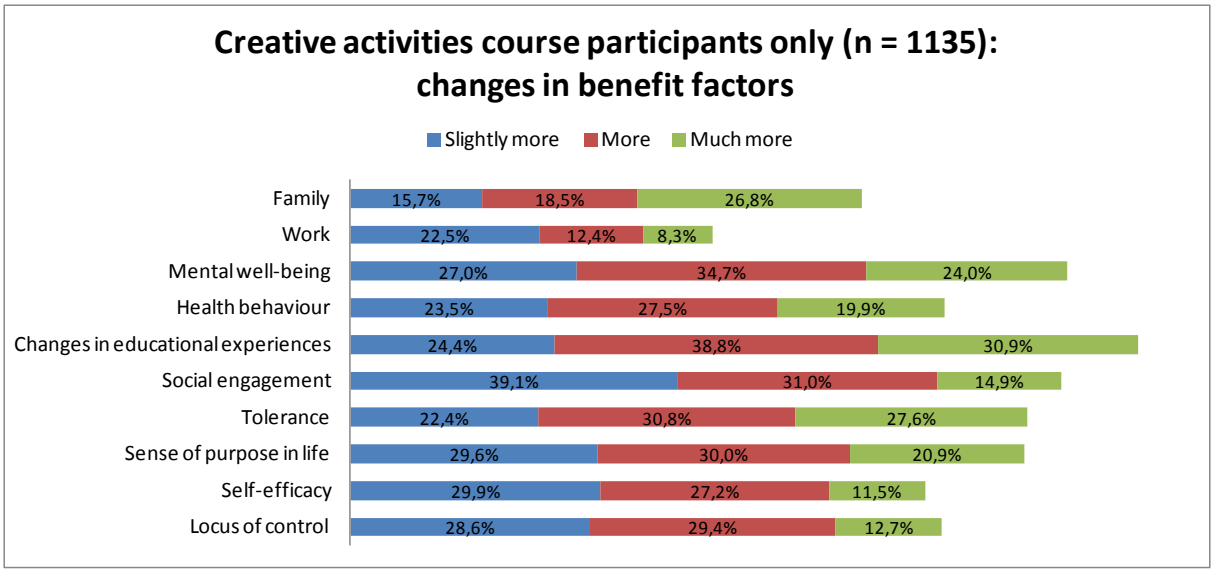


Figure 8 Changes in benefit factors experienced by creative activities course participants

For work related courses the benefit profile is a bit different (Figure 9). It seems that these courses develop a bit more self-efficacy and internal locus of control, as well as sense of purpose in life, than the other two course types.

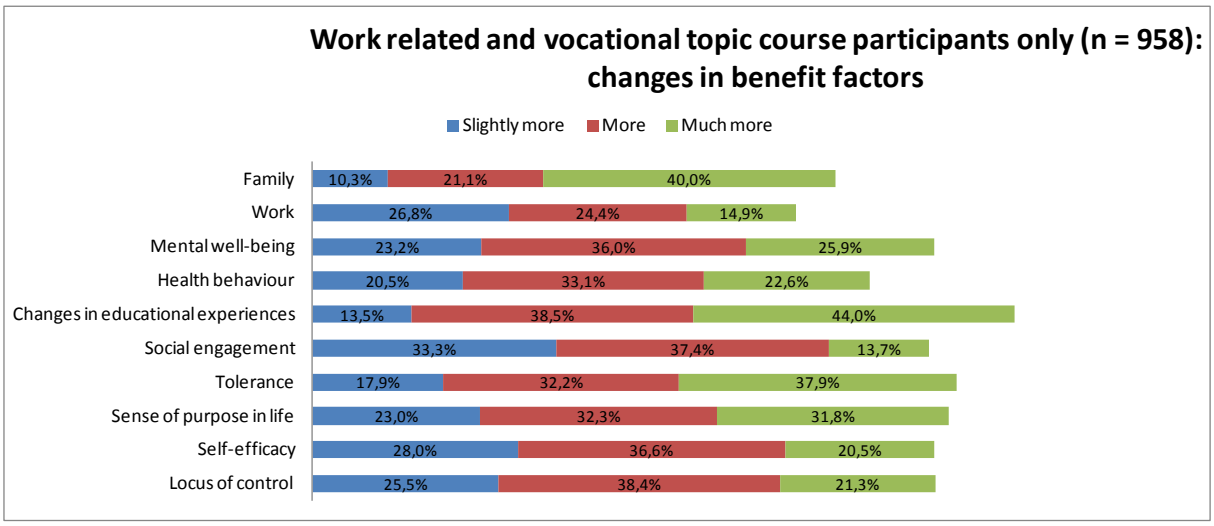


Figure 9 Changes in benefit factors experienced by work related course participants

Deeper statistical comparison of types of courses revealed that Work and vocation related courses supported best the development of the CONTROL OF OWN LIFE. The difference was statistically significant in all sub dimensions: in development of ”Locus of control”, ”Self-efficacy” and “Sense of Purpose in life” compared to all other course types; except in development of ”Sense of purpose in life” compared to those who had participated several courses. Opposite to this it was revealed that courses dealing with Languages and Creative activities supported the development of CONTROL OF OWN LIFE less than other course types. However, this does not mean that language courses or courses dealing with Creative activities are not effective in producing wider benefits. On the contrary, 80.9 % of language course participants had experienced some positive changes in CONTROL OF OWN LIFE, but for Work related and vocational topic course participants the percentage was even higher, 90.3 %. The following figure shows the differences at response frequency level.

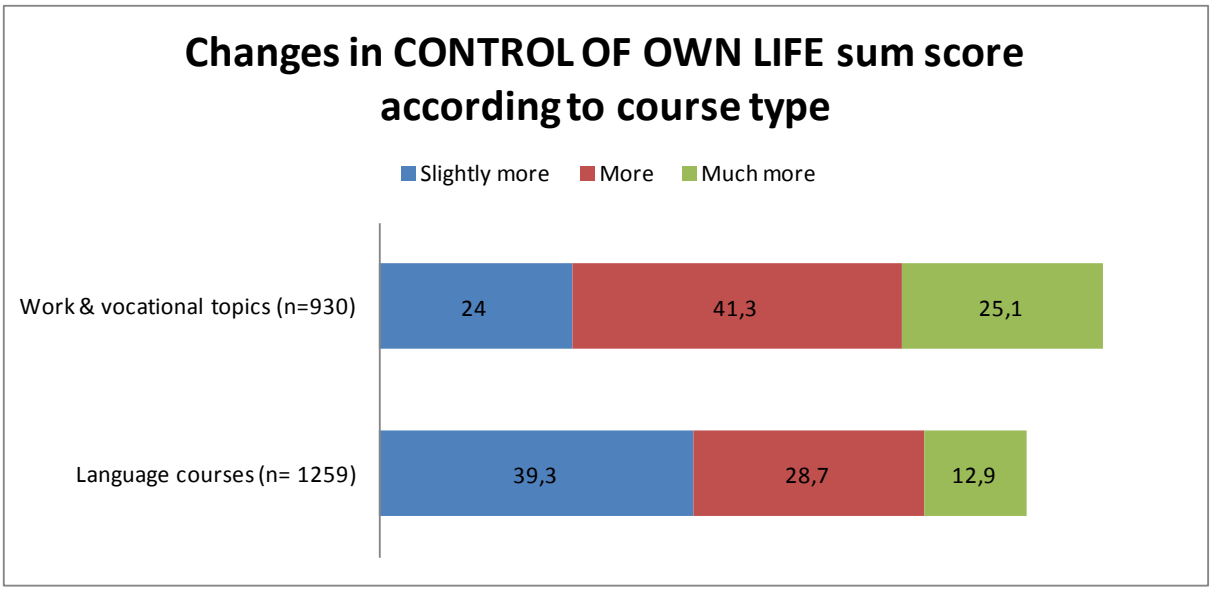


Figure 10 Differences of two course types

The results show that adults participating certain types of courses seem to experience a bit more changes than participants in some other courses, but none of the course types is “ineffective” in terms of development of benefits. The differences between course types are small, and at least to some degree can be explained by different types of participants as well.

Those who had participated several courses perceived most changes in the development in ATTITUDES & SOCIAL CAPITAL. The difference was evident to all other course types except to work-related courses which seem to support not only the CONTROL OF OWN LIFE but almost as well the development of ATTITUDES & SOCIAL CAPITAL. Also ICT-related courses seem to support ”Tolerance”, ”Social engagement” and ”Changes in educational experiences”. The courses dealing with Languages supported the development of ATTITUDES & SOCIAL CAPITAL least.

It is not a surprise that Health & Sports courses supported most the development of ”Health”. In interviews this comes out clearly:

> *“Ah yes, the bodywork. Yes, the bodywork has made me much more aware of my body and has allowed me to develop a better relationship with my body. And it’s as a result of this I think that I have begun to think a lot about how at the end of the day, we are only alive as a result of our bodies. All of this has led me to become a lot more self-aware. Perhaps it’s also a matter of becoming older and thinking more about things. I’m not sure but what I do think is that all of these external stimuli have set me thinking on my own.[...] In any case, I think that the breathing exercises are relaxing and that they and the walking provide me with a bit of endurance training. All in all, I’ve become a little more composed.” (GER_A)*

Participation to several courses seems to support ”Mental well-being” even better. It is obvious that “doing anything” that keeps one active is beneficial for wellbeing, as the following example from interviews indicate:

> *“I feel great, I feel a complete sense of well-being. I’m not sure if it’s because of that or other things. But I don’t want to rule it out. Because I’ve now got a reason to go somewhere. You make a commitment to go somewhere and do something different, to be active. And it’s for this very reason that it enriches your life.” (GER_C)*

The participation to several courses supported best also the development of ”Family”-related benefits. Perhaps a bit surprisingly ICT-courses supported ”Family” benefits almost as much. The explanation is that positive learning experiences in ICT courses helps parents to understand their own learning processes, and therefore also support the learning of their kids.

Again, we have to keep in mind that the actual differences are small, even though they are statistically significant (see Figure 11).

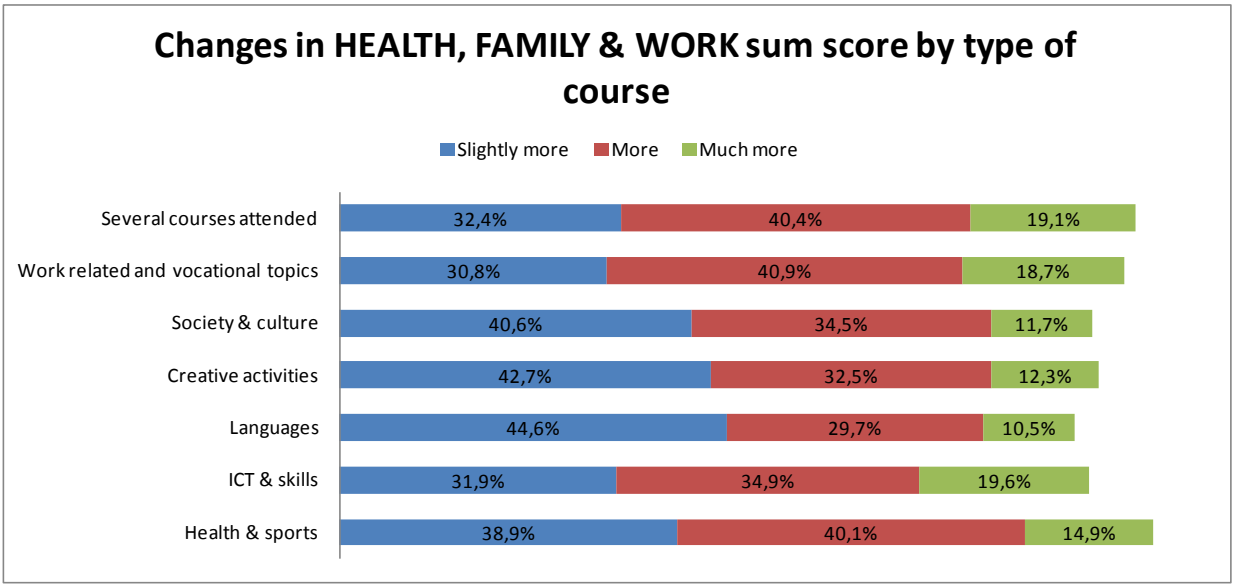


Figure 11 Changes in HEALTH, FAMILY & WORK sum score by type of course

Analyzing benefits in relation to the number of participated courses revealed that participating three courses brings the biggest changes in CONTROL OF OWN LIFE, ATTITUDES & SOCIAL CAPITAL as well as in the HEALTH, FAMILY & WORK in general. Comparison between subgroups based on number of participated courses showed that those who had participated three courses or more courses differed from those who had participated one or two courses (Appendix 5, Table 69).

In general the difference between sub groups was linear: the more courses the respondents had participated the more changes they had experienced. The only exception was in work-related benefits: the groups did not differ statistically, and noteworthy is that participating already one course brings favourable work-related benefits. One explanation might be that those single courses had been more often work or skills related courses than other course topics.

4.7 Interaction between background variables and benefits

In the **fourth phase** of analysis the more complex and detailed interaction between background variables in relation to benefits was analyzed with the help of covariance analysis (ANCOVA). The idea was to control the potential influence that intervening variables may have on development of benefits, for example to find out what course types generate different kinds of benefits in relation to gender and age when the respondents’ educational background is controlled (see Appendix 5).

The perceived benefits in relation to participants’ educational level were analysed earlier with the help of ANOVA (see Appendix 5, Table 67). This group comparison revealed the linear relation between respondents’ educational background and perceived benefits. That’ s why it was reasonable to set education as a covariate whereas the main effects of respondents’ gender, age and type of

course as well as interaction between these variables were analyzed in relation to perceived benefits. Besides a linear relation between the covariate and the dependent variables the analysis of covariance prerequisites that covariates are not correlative.

Also the benefits of lifelong learning in relation to country and course type were analyzed with the help of ANCOVA. The idea was to find out what course types generate different kinds of benefits in relation to respondents Country when their educational background, age and gender were controlled (see Appendix 5).

4.7.1 The interaction between background variables and CONTROL OF OWN LIFE

The results of ANCOVA dealing with development of CONTROL OF OWN LIFE are presented in Appendix 5, Table 71.

The differences between course types are small in practice (see Figure 12). It seems that higher means for several courses attended, work related and ICT courses are based on slightly bigger percentage of respondents who have selected "much more" alternatives. There are also differences between work related and language course participants on how big changes they experience: biggest category in language courses is "slightly more" (39,3 %) but in work related courses "more" (41,3 %).

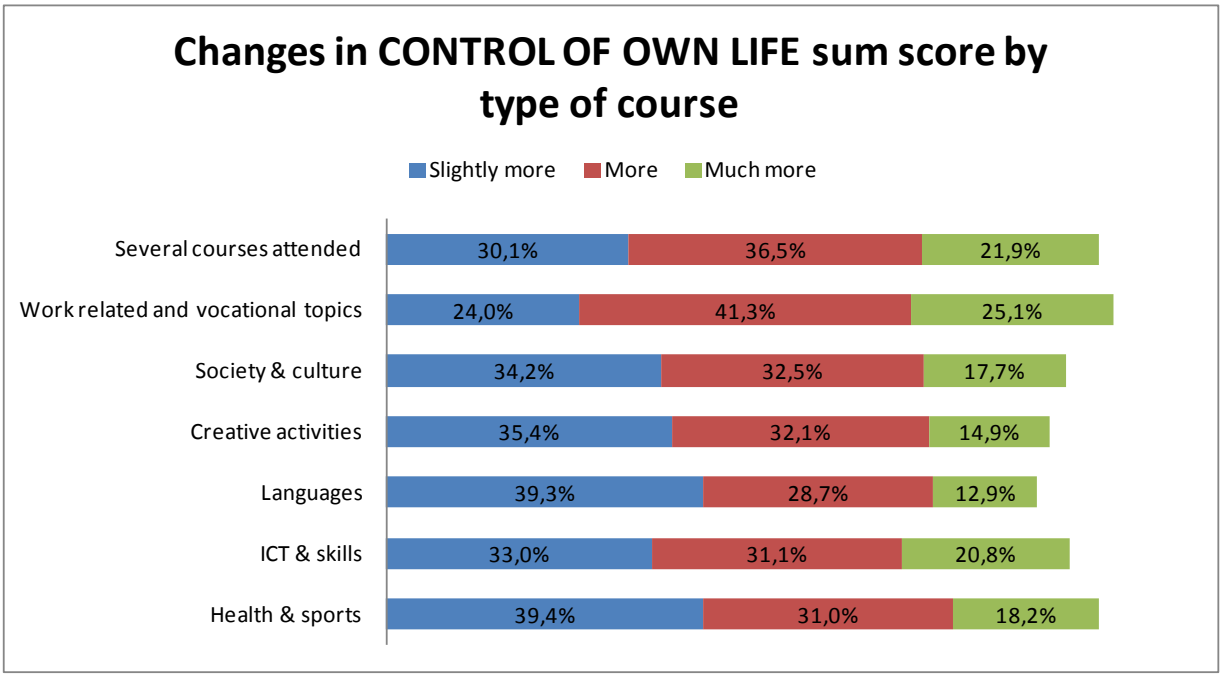


Figure 12 Changes in CONTROL OF OWN LIFE sum score by type of course

"Locus of Control"

When respondents educational background was controlled for in the analysis, it was revealed that the relation between participants educational background and the development of "Locus of control" was statistically significant but amount of variance explained quite small ($F_{1,7664}$ = 15,664, p <.001, η^2_p = 0.002). The η^2 (Partial eta^2) value in tables (Appendix 5, Table 71) indicates the amount of variance that can be explained by the variable (how much the variable explains the differences in the sum variable). For example in previous table the value .004 indicates that a mere 0.04% of the vari-

ance in CONTROL OF OWN LIFE is accounted for educational background, but Course type explains 82 % of it. In plain language this means that changes in CONTROL OF OWN LIFE are based mainly on different course types, not on participants' educational background. Or, in other words, participants experience different courses in rather similar ways, no matter what their educational background is.

Tests of Between-Subjects Effects showed statistically significant relation between the course type and the development of "Locus of control" ($F_{6;\ 5,282} = 9,931$, $p < .05$, $\eta_p^2 = 0.919$).

The pairwise comparisons showed that the most important courses for the development of "Locus of control" were Work related (M=5.33), Several courses attended (M=5.23) and courses dealing with Society & culture (M=5.13). These course types differed significantly from Language courses (M=4.94) ($p < .01$). The difference was statistically significant also between those who had attended several courses and courses dealing with Creative activities (M=5.01).

Also the univariate test (ANOVA) showed the significance of the main effect of the course type for the development of "Locus of control" but the effect was quite low ($F_{6,7664} = 8,788$, $p < .001$, $\eta_p^2 = 0.007$).

"Self-Efficacy"

Also the relation between participants educational background and the development of "Self-efficacy" was statistically significant but amount of variance explained quite small ($F_{1,7642} = 22,970$, $p < .001$, $\eta^2_p = 0.003$). The relation between the course type and the development of "Self-efficacy" was statistically significant ($F_{6;\ 11,285} = 6,087$, $p < .01$, $\eta^2_p = 0.764$). Also the relation between the development of "Self-efficacy" and respondents' Gender ($F_{1;\ 16,228} = 14,872$, $p < .01$, $\eta^2_p = 0.478$) and Age group ($F_{4;\ 32,142} = 2,702$, $p < .05$, $\eta_p^2 = 0.252$) were statistically significant. Besides the interaction of Age group * Course type was statistically significant ($F_{24;\ 24,053} = 2,075$, $p < .05$, $\eta^2_p = 0.674$) (see Figure 13).

The pairwise comparisons showed that male respondents "Self-efficacy" (M=5.13) had developed more than females (M=5.00), but the univariate test showed that this difference was small ($F_{1,7642} = 11,957$, $p < .01$, $\eta^2_p = .002$). The difference in the development of "Self-efficacy" was evident between the Age groups of 15-24 (M=5.19) and 50-64 (M=4.99) but the amount of variance explained was small ($F_{4,7642} = 4,275$, $p < .01$, $\eta^2_p = .002$).

The univariate test showed that the main effect of Type of course was statistically significant but amount of variance explained quite small ($F_{6,7642} = 8,586$, $p < .001$, $\eta_p^2 = .007$). The pairwise comparisons showed that the most important courses for the development of "Self-efficacy" were Several courses attended (M=5.18) that differed from Health & sports courses (M=4.98), Languages (M=4.89) and Creative activities (M=4.99). The difference was statistically significant ($p < .01$) also between Work related courses (M=5.32) and Languages. The interaction of Age groups and different course types in relation to development of "Self-efficacy" is presented in Table 22.

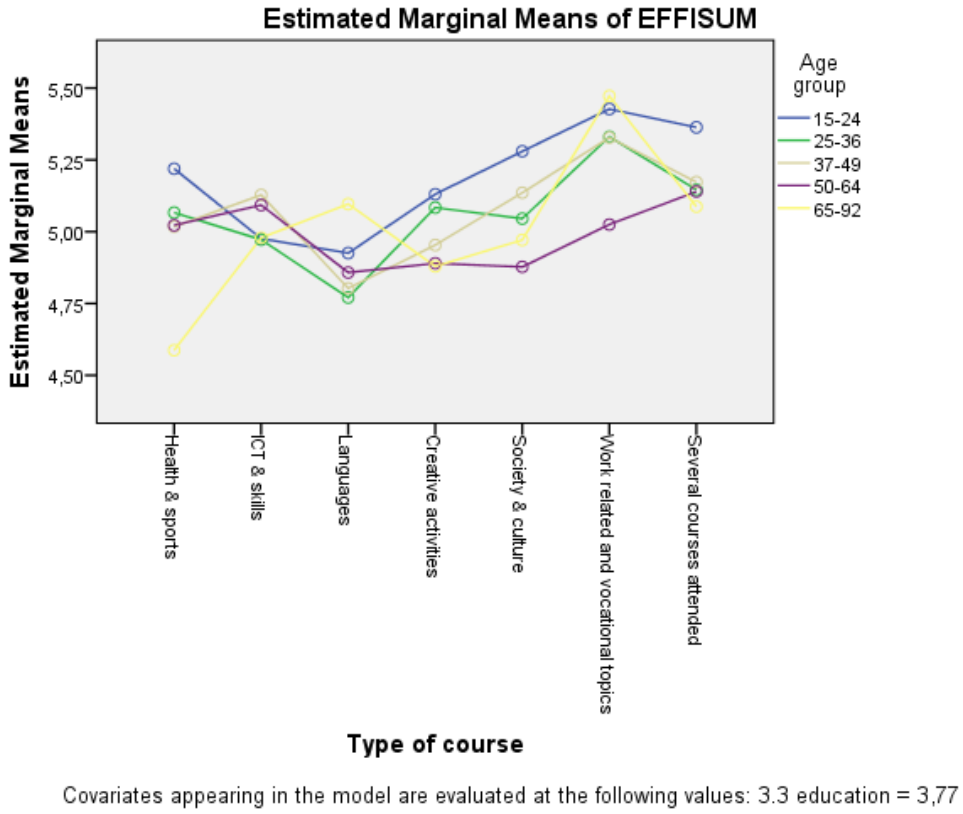


Figure 13 Interaction of age and course types with development of "Self-Efficacy"

Table 22 Development of "Self-efficacy" in different Age groups in different Course types

Age group	"Less effective" and "more effective" Course types		Sig.
15-24	Languages (M=4.95)	Work related courses (M=5.47)	p < .01
25-36	Languages (M=4.76)	Work related courses (M=5.31)	p < .001
	ICT & skills (M=4.95)	Work related courses (M=5.31)	p < .01
	Languages (M=4.76)	Several courses attended (M=5.13)	p < .01
37-49	Languages (M=4.79)	Work related courses (M=5.32)	p < .001
	Languages (M=4.79)	Several courses attended (M=5.18)	p < .01
50-64			ns.
65-92			ns.
The mean difference is significant at the .01 level (Bonferroni multiple comparisons). Levene's Test of Equality of Error Variances > .05			

"Sense of Purpose in life"

The relation between participants educational background and the development of "Sense of purpose in life" was statistically significant but amount of variance explained quite small ($F_{1,7703} = 42{,}001$, $p < .001$, $\eta^2_p = 0.005$). Also the relation between the course type and the development of "Sense of purpose in life" was statistically significant ($F_{6;\ 11{,}873} = 5{,}089$, $p < .05$, $\eta^2_p = 0.72$). The pairwise comparisons of different course types in relation to the development of the "Sense of Purpose in life" are presented in the Table 23. The univariate test showed that the main effect of different course types

for the development of "Sense of Purpose in life" was statistically significant but low ($F_{6, 7703}$ = 10,164, p <.001, η^2_p = .008).

Table 23 Development of *"Sense of Purpose in Life"* between different course types

"Less effective" and "more effective" course types		Sig.
ICT & skills (M=5.34)	Work related and vocational topics (M=5.72)	p < .01
Languages (M=5.20)	Work related and vocational topics (M=5.72)	p < .001
Creative activities (M=5.34)	Work related and vocational topics (M=5.72)	p < .01
ICT & skills (M=5.34)	Several courses attended (M=5.54)	p < .01
Languages (M=5.20)	Several courses attended (M=5.54)	p < .001
Creative activities (M=5.34)	Several courses attended (M=5.54)	p < .01

The Interaction of Age groups and course types in relation to development of "Sense of Purpose in life" was statistically significant ($F_{24;\ 24{,}052}$= 2,230, p <.05, η^2_p = 0.69) (see Figure 14). The interaction of age groups and different course types in relation to development of "Sense of purpose in life" is presented in Table 23.

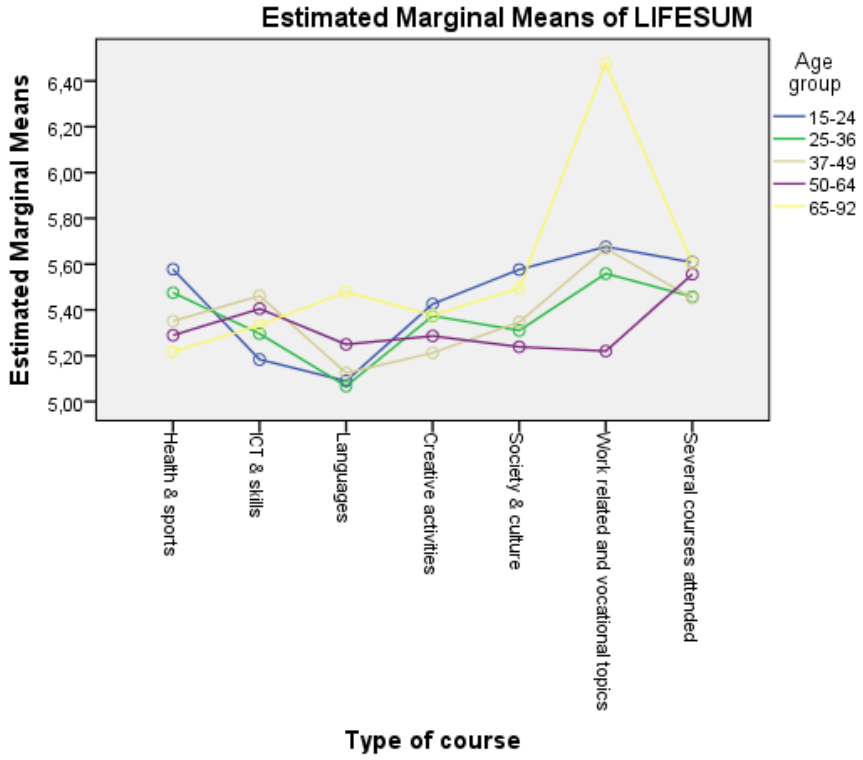


Figure 14 Interaction of age and course types with development of *"Sense of purpose in life"*

Note that the high peak of Age group 65-92 on Work related and vocational courses is based on only 9 respondents, who belong to this age group and have participated this kind of courses.

Table 24 Development of *"Sense of purpose in life"* by age and course types

Age group	"Less effective" and "more effective" course types	Sig.

15-24	Languages (M=5.12)	Work related courses (M=5.73)	p < .001
25-36	Languages (M=5.04)	Work related courses (M=5.53)	p < .001
	Languages (M=5.04)	Health & sports (M=5.45)	p < .001
	Languages (M=5.04)	Several courses attended (M=5.43)	p < .01
37-49	Languages (M=5.11)	Work related courses (M=5.66)	p < .001
	Creative activities (M=5.20)	Work related courses (M=5.66)	p < .01
50-64			ns.
65-92			ns.
The mean difference is significant at the .01 level (Bonferroni multiple comparisons). Levene's Test of Equality of Error Variances > .05			

CONTROL OF OWN LIFE

When respondents educational background was controlled, the relation between participants educational background and the development of "Control of own Life" was statistically significant but amount of variance explained quite small ($F_{1,7736}$ = 30,544, p <.001, η_p^2 = 0.004). CONTROL OF OWN LIFE is a second order factor and sum variable of previous three sum variables (”Locus of control”, ”Self-efficacy” and ”Sense of purpose in life”).

Tests of Between-Subjects Effects showed statistically significant relation between the development of CONTROL OF OWN LIFE and respondents' Gender ($F_{1;\ 16,941}$= 6,335, p <.05, η^2_p = 0.272). The pairwise comparisons showed that Male respondents "Control of own Life" (M=5.21) had developed more than Females (M=5.14). The univariate test showed that the main effect of gender was statistically significant but had low explanation power ($F_{1,7736}$ = 4,965, p <.05, η^2_p = 0.001).

The relation was statistically significant also between the development of CONTROL OF OWN LIFE and the course type ($F_{6;\ 10,314}$ = 7,728, p <.05, η_p^2 = 0.818). The pairwise comparisons between different course types are presented in Table 25. The univariate test showed that also this main effect was weak ($F_{6,7736}$ = 10,526, p <.001, η^2_p = .008).

Table 25 Differences of development of *"Control of own Life"* between different course types

”Less effective” and “more effective” course types		Sig.
Languages (M=4.99)	Society & culture (M=5.18)	p < .01
Languages (M=4.99)	Work related and vocational topics (M=5.42)	p < .001
Languages (M=4.99)	Several courses attended (M=5.29)	p < .001
Creative activities (M=5.08)	Work related and vocational topics (M=5.42)	p < .01
Creative activities (M=5.08)	Several courses attended (M=5.29)	p < .001

Conclusions

The ANCOVA revealed the importance of the course type for the development of dimensions of CONTROL OF OWN LIFE when the participants' educational background was controlled. The effect (η_p^2) varied between .72–.92 (p < .05).

Also the main effect of gender and age were important for the development of ”Self-efficacy” as well as gender was for the development of CONTROL OF OWN LIFE. The Interaction of age group and course type was related to the development of ”Self-efficacy” and ”Sense of purpose in life”. Especially the importance of Work related courses was evident for the development of "Self-Efficacy" and

"Sense of Purpose in life". This effect was remarkable in the age groups of 15-24, 25-36 and 37-49. The difference between Work related and Language courses was statistically significant.

When the main and interaction effects were analyzed closer the effects showed to be quite low. This is a sign of importance of participants' educational background in relation to participants' perceived benefits. As showed in the group comparison, those with the lowest educational level had benefitted from the training most (see Appendix 5, Table 67).

4.7.2 The interaction of background variables and ATTITUDES & SOCIAL CAPITAL

The results of ANCOVA dealing with development of ATTITUDES & SOCIAL CAPITAL are presented in Appendix 5, Table 72.

"Tolerance"

When respondents educational background was controlled, it was revealed that the relation between participants educational background and the development of "Tolerance" was statistically significant but amount of variance explained quite small ($F_{1,7681}$ = 48,844, p <.001, η^2_p = 0.006). Tests of Between-Subjects Effects showed statistically significant relation between the course type and the development of "Tolerance" ($F_{6;\ 6,857}$= 8,201, p <.01, η_p^2 = 0.878). The pairwise comparisons between different course types are presented in Table 26. Also the univariate test (ANOVA) showed the significance of the main effect of the course type for the development of "Tolerance" but the effect was quite low ($F_{6,7681}$= 10,762, p <.001, η_p^2 = 0.008).

Table 26 Development of *"Tolerance"* in different course types

"Less effective" and "more effective" course types		Sig.
Health & sports (M=5.42)	Society & culture (M=5.67)	p < .01
Languages(M=5.43)	Society & culture (M=5.67)	p < .01
Health & sports(M=5.42)	Work related and vocational topics (M=5.80)	p < .01
Languages(M=5.43)	Work related and vocational topics (M=5.80)	p < .01
Health & sports(M=5.42)	Several courses attended (M=5.75)	p < .001
Languages(M=5.43)	Several courses attended (M=5.75)	p < .001
Creative activities(M=5.52)	Several courses attended (M=5.75)	p < .001

The differences are again small in practice. Those who have attended more than one course have obviously had also more opportunities to benefit from learning. A bit higher mean for work related topics might be explained by increased skills and competences. The general mechanism on how "Tolerance" may develop during the courses was found in the interviews and in open questions, where mixed groups and interaction with people with different cultural and ethnic background increased understanding of different attitudes and habits.

"Social Engagement"

Also the relation between participants educational background and the development of "Social engagement" was statistically significant but amount of variance explained quite small ($F_{1,7781}$ = 15,466, p <.001, η^2_p = 0.002). The relation between the course type and the development of "Social engagement" was statistically significant and the course type also explained 79,6 % of differences in "Social engagement" ($F_{6;\ 11,929}$ = 7,738, p <.01, η^2_p = .796). The frequencies of response categories (Figure 15)

show that the differences between course types and changes in “Social engagement” are visible quite well. It seems that some courses are perhaps based on more individualistic learning practices, like languages and health & sports, and therefore don’t generate so big changes in social networks or in social engagement. It is also likely that participants on these courses are more individually oriented, focusing on their own learning interests (learning French, Yoga lessons, painting).

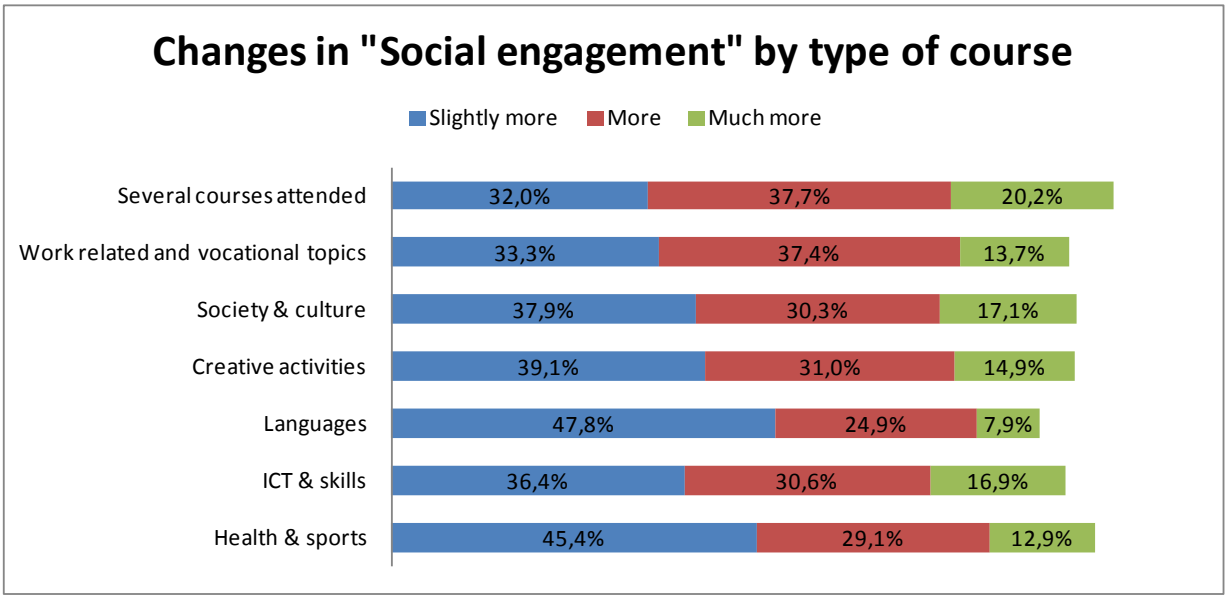


Figure 15 Changes in "Social engagement" by type of course

Also the relation between the development of ”Social engagement” and respondents’ Gender ($F_{1;\ 10,868}$= 8,745, p <.05, η^2_p = 0.446) and Age group ($F_{4;\ 30,053}$= 3,594, p <.05, η_p^2 = 0.324) were statistically significant. In addition the interaction of Age group * course type was statistically significant ($F_{24;\ 24,045}$= 2,246, p <.05, η^2_p = 0.691) (see Figure 16).

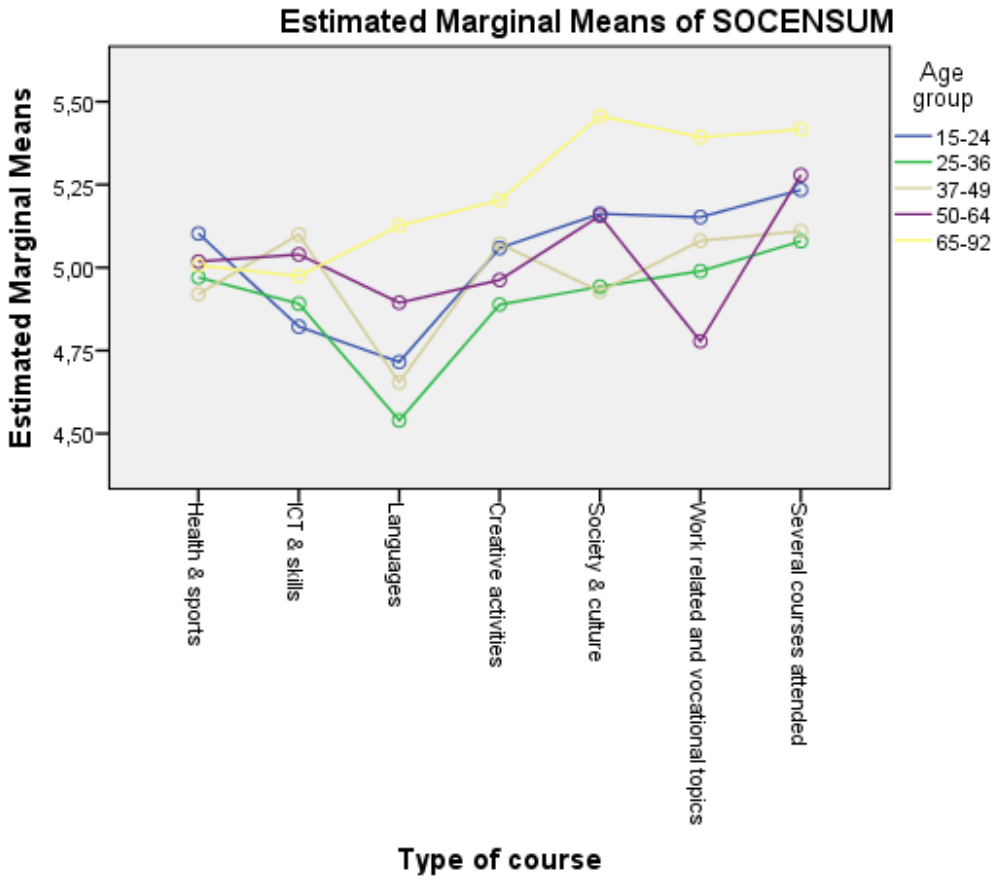


Figure 16 The Interaction of Age groups, course types and *"Social Engagement"*

The pairwise comparisons showed that female respondents "Social engagement" (M=5.09) had developed more than males (M=4.98), but the univariate test showed that this difference was small ($F_{1,7781}$ = 10,824, p <.01, η^2_p = .001). The Age group of 65-92 (M= 5.23) differed in development of "Social engagement" from Age group of 25-36 (M= 4.9), Age group of 37-49 (M=4.98) and Age group of 50-64 (M=5.02) but the effect was low ($F_{4,7781}$ = 7,389, p <.001, η^2_p = .004). It seems that training has developed and supported especially older peoples' "Social engagement". These respondents had more actively participated on ICT & skills related courses and on Several courses. One interpretation is that older adults use liberal adult education courses more for social purposes, to be socially active and to meet other people (compare Figure 16).

The univariate test (ANOVA) showed that the main effect of Type of course was statistically significant but amount of variance explained quite small ($F_{6,7781}$ = 18,181, p <.001, η_p^2= .014). The pairwise comparisons showed that the most important course type for the development of "Social engagement" was "Several courses attended" (M=5.22). This makes sense because participating more than one course type expands the possibilities for social interaction. It differed from single course categories of Health & sports (M=5.00), ICT & skills (M= 4.97), Languages (M=4.79) and Creative activities (M=5.04). The difference was statistically significant (p < .01) also between "Languages" (M=4.79) and Health & sports (M=5.00), "ICT & skills" (M= 4.97), Creative activities (M=5.04) and Society & culture (M=5.13). The interaction of Age groups and different course types in relation to development of "Social engagement" is presented in Table 27.

Table 27 Development of "Social engagement" by age in different course types

Age group	”Less effective” and “more effective” course types		Sig.
15-24[A]	Languages (M=4.72)	Work related courses (M=5.2)	p < .01
		Several courses attended (M=5.28)	p < .01
25-36[A]	Languages (M=4.53)	Health & sports (M=4.96)	p < .001
		ICT & skills(M=4.87)	p < .01
		Creative activities(M=4.88)	p < .01
		Society & culture(M=4.94)	p < .001
		Work related and vocational topics(M=4.96)	p < .001
		Several courses attended(M=5.06)	p < .001
37-49[A]	Languages (M=4.65)	ICT & skills (M=5.1)	p < .001
		Creative activities (M=5.1)	p < .01
		Work related and vocational topics (M=5.08)	p < .001
		Several courses attended (M=5.11)	p < .001
50-64	Work related and vocational topics (M=4.78)	Several courses attended (M= 5.28)	p < .01
	Languages (M=4.90)		p < .001
	Creative activities (M=4.97)		p < .01
65-92	ICT & skills (M=5.00)	Society & culture (M=5.46)	p < .01
		Several courses attended (M=5.42)	p < .001
The mean difference is significant at the .01 level (Bonferroni multiple comparisons). [A]Levene's Test of Equality of Error Variances < .05			

“Changes in educational Experiences”

Also the relation between participants educational background and the development of “Changes in Educational Experiences” was statistically significant but amount of variance explained quite small ($F_{1,7836}$ = 10,513, p <.01, η^2_p = 0.001). The relation between the course type and the development of “Changes in educational Experiences” was statistically significant and the course type explained 96,6 % of variance in that factor ($F_{6;\ 3,668}$= 17,590, p <.05, η^2_p = .966). Also the relation between the development of “Changes in educational Experiences” and respondents’ Gender ($F_{1;\ 11,907}$= 10,199, p <.01, η^2_p = 0.461) and Age group ($F_{4;\ 34,497}$= 5,752, p <.01, η_p^2 = 0.400) were statistically significant. As Figure 17 show, female respondents have experienced more changes in all course types, except in courses dealing with Society and culture.

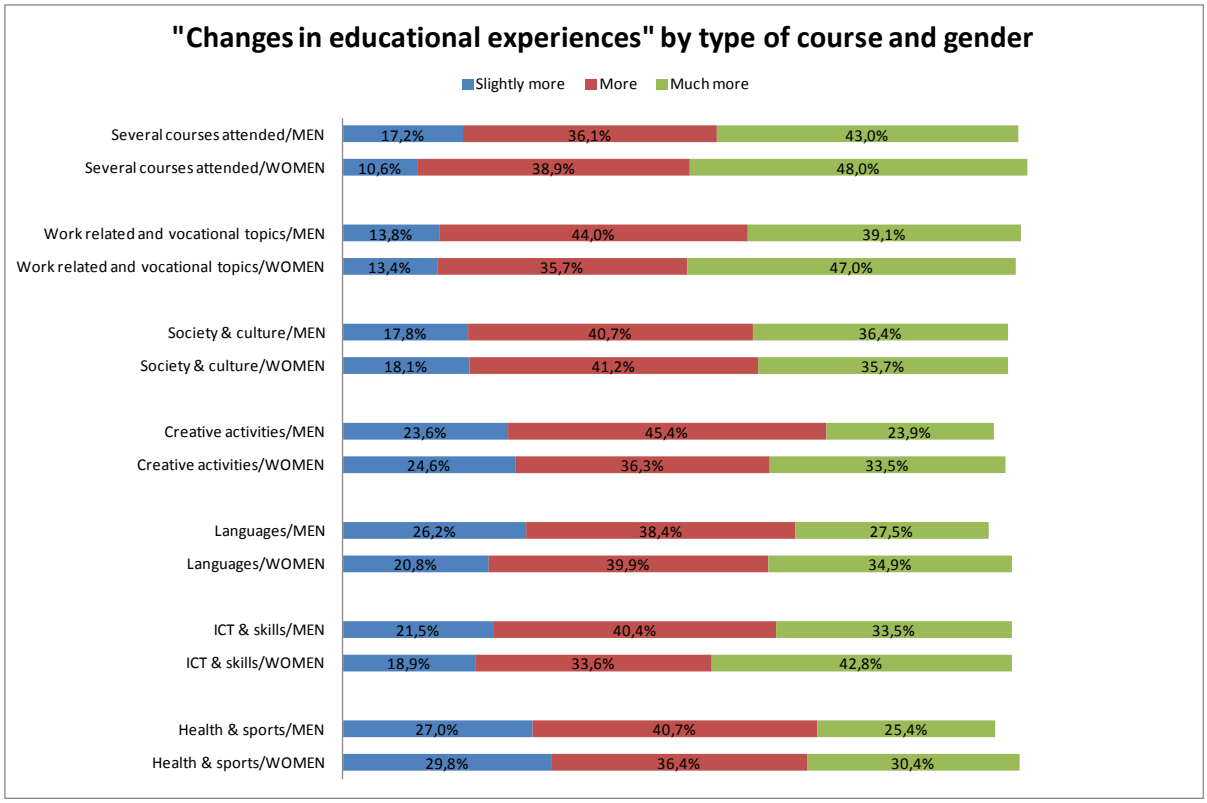


Figure 17 "Changes in educational experiences" by type of course and gender

The Age group of 37-49 (M=5.76) differed ($p < .01$) in development of "Changes in educational Experiences" from Age group of 15-24 (M=5.6) and Age group of 25-36 (M=5.62) but the effect was low ($F_{4,7836} = 7{,}680$, $p < .001$, $\eta^2_p = .004$).

The univariate test (ANOVA) showed that the main effect of Type of course was statistically significant but amount of variance explained quite small ($F_{6,7836} = 19{,}159$, $p < .001$, $\eta_p^2 = .014$). The pairwise comparisons between different course types are presented in Table 28 (see also Figure 18)

Table 28 Development of "Changes in educational Experiences" in different course types

"Less effective" and "more effective" course types		Sig.
Creative activities (M=5.56)	Society & culture (M=5.73)	p < .01
Health & sports (M= 5.56)	Work related and vocational topics (M=5.9)	p < .01
Languages (M=5.58)		p < .01
Creative activities (M=5.56)		p < .01
Health & sports (M= 5.56)	Several courses attended (M=5.91)	p < .001
ICT & skills (M=5.71)		p < .001
Languages (M=5.58)		p < .001
Creative activities (M=5.56)		p < .001
Society & culture (M=5.73)		p < .01

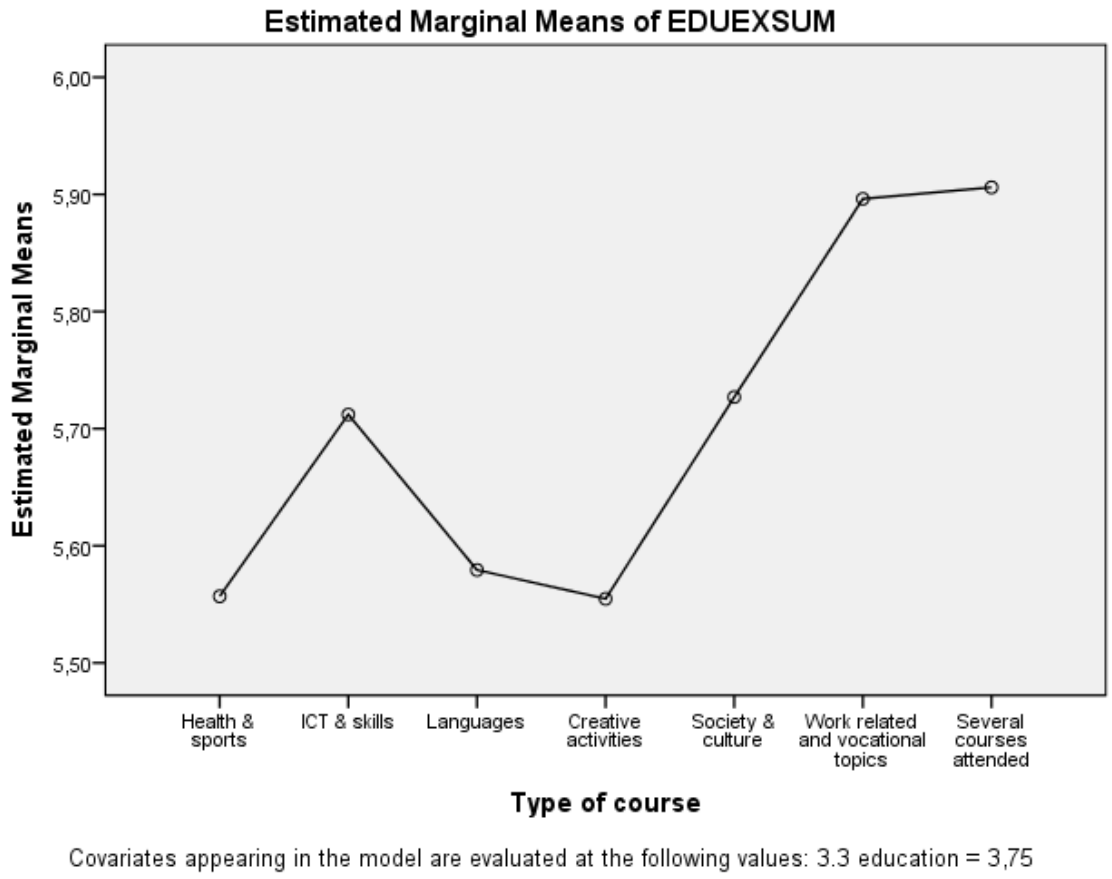


Figure 18 "Changes in educational Experiences" in different course types

"Visually big" and statistically significant but in practice small differences between course types on how they generate "Changes in educational experiences" may be related on two aspects. The first is the assumption that those adults who participate on language courses and on creative activities already have a rather high learning motivation, feel confident as learners and also see adult education as an important opportunity, and don't therefore experience so much change on these variables. Health and sports related courses – as well as creative activities – are also more hobbies than "serious" learning situations in the same way as ICT or work related courses. These courses are also more likely to generate more concrete benefits like Skills and competencies, which in turn may be related on the increased learning motivation and valuing more adult education.

ATTITUDES & SOCIAL CAPITAL

Also the relation between participants educational background and the development of ATTITUDES & SOCIAL CAPITAL was statistically significant but amount of variance explained quite small ($F_{1,7850}$ = 25,057, p <.001, η^2_p = 0.003). ATTITUDES & SOCIAL CAPITAL is a second order factor and sum variable of "Tolerance", "Social engagement" and "Changes in educational experiences". The relation between the course type and the development of ATTITUDES & SOCIAL CAPITAL was statistically significant and it explained 86,4 % of differences ($F_{6;\ 10,155}$ = 10,719, p <.01, η^2_p = .864). Also the relation between the development of ATTITUDES & SOCIAL CAPITAL and respondents' Gender ($F_{1;\ 12,228}$= 8,214, p <.05, η^2_p = 0.402) and Age group ($F_{4;\ 31,793}$= 3,892, p <.05, η_p^2 = 0.329) were statistically significant.

The pairwise comparisons showed that female respondents ATTITUDES & SOCIAL CAPITAL (M=5.42) had developed more than males (M=5.33), but the univariate test showed that the difference was

small ($F_{1,7850}$ = 8,772, p <.01, η^2_p = .001). The Age group of 25-36 (M=5.27) differed in development of ATTITUDES & SOCIAL CAPITAL from Age group of 37-49 (M=5.38), Age group of 50-64 (M=5.38) and Age group of 65-92 (M=5.53) but the effect was low ($F_{4,7850}$ = 6,586, p <.001, η^2_p = .003).

The univariate test (ANOVA) showed that the main effect of Type of course was statistically significant but amount of variance explained quite small ($F_{6,7850}$ = 19,077, p <.001, η_p^2 = .014). The pairwise comparisons between different course types are presented in Table 29. (see also Figure 19)

Table 29 Development of *ATTITUDES & SOCIAL CAPITAL* in different course types

"Less effective" and "more effective" course types		Sig.
Languages (M=5.2)	Society & culture (M=5.44)	p < .001
	Work related and vocational topics (M=5.51)	p < .01
	Several courses attended (M=5.57)	p < .001
Health & sports (M=5.28)	Several courses attended (M=5.57)	p < .001
ICT & skills (M=5.35)	Several courses attended (M=5.57)	p < .001
Creative activities (M=5.31)	Several courses attended (M=5.57)	p < .001

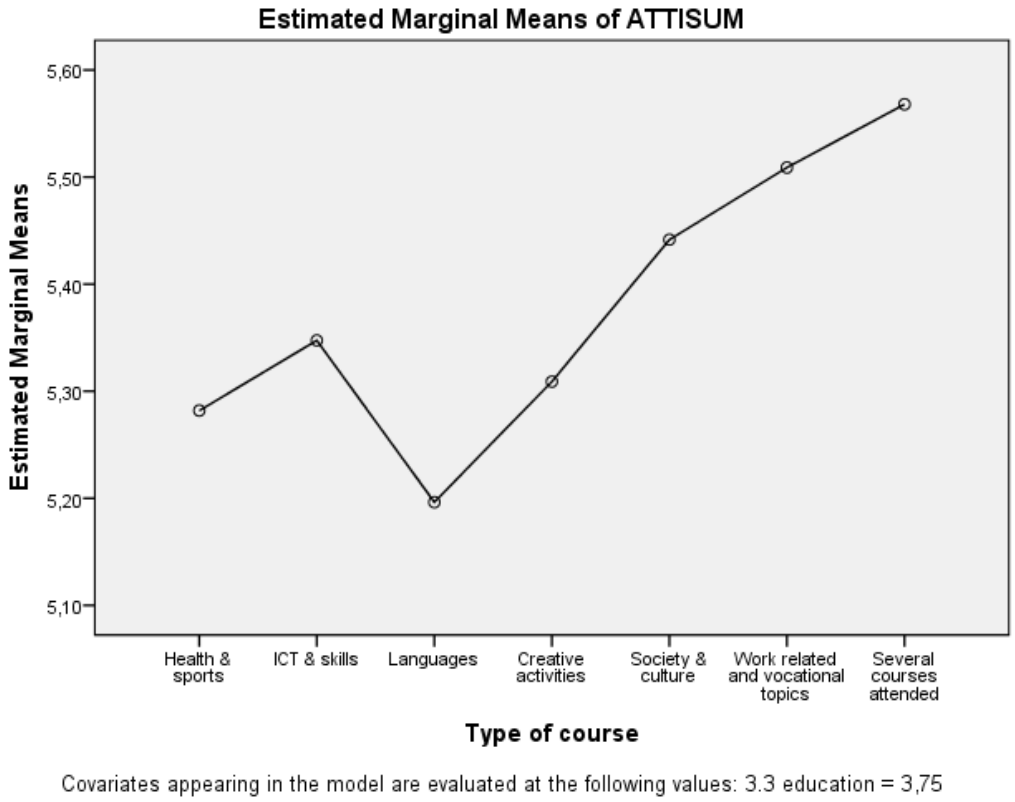


Figure 19 Development of *ATTITUDES & SOCIAL CAPITAL* in different course types

Conclusions

The ANCOVA revealed the importance of the course type also for the development of dimensions of ATTITUDES & SOCIAL CAPITAL when the participants' educational background was controlled. The effect (η_p^2) varied between .80–.97 (p < .05).

Also the main effect of gender and age were important for the development of ”Social engagement” and ”Changes in educational experiences” as well as for the development of the sum variable of ATTITUDES & SOCIAL CAPITAL (”Tolerance”, ”Social engagement”, ”Changes in educational experiences”). The interaction of gender, age group and course type was not statistically significant for the development of participants’ ATTITUDES & SOCIAL CAPITAL neither for the development of subdimensions, except the interaction of age and course type which explained the development of participants’ ”Social engagement” ($p < .05$). This relationship was found already earlier in this report (see Figure 13): older adults seem to use courses for social interaction and engagement more than some other age groups.

Especially the Work related courses, Several courses attended and courses dealing with Society & culture seemed to develop participants’ ”Tolerance”. Work related courses and participation to several courses was related also to the development of ”Social engagement”, except in the age groups 50-64 and 65-92 years old. Besides several courses attended and work-related courses also participating courses dealing with Society & culture seemed to be remarkable for the development of “Changes in educational Experiences”. The meaning of these three course types was evident also for the development of sum variable of ATTITUDES & SOCIAL CAPITAL.

4.7.3 The interaction between background variables and HEALTH, FAMILY & WORK

The results of ANCOVA dealing with development of second order factor HEALTH, FAMILY & WORK and it’s subfactors are presented in Appendix 5, Table 73.

“Health”

The relation between participants educational background and the development of ”Health” was statistically significant but amount of variance explained quite small ($F_{1,7721} = 137{,}707$, $p < .001$, $\eta^2_p = 0.018$). The relation between the course type and the development of ”Health” was statistically significant ($F_{6;\ 15{,}553} = 6{,}297$, $p < .01$, $\eta^2_p = .708$) as well as the interaction of course type and Age group ($F_{24;\ 24{,}047} = 3{,}695$, $p < .01$, $\eta_p^2 = .787$) (see Figure 20). The relationship is similar as in “Mental well-being” (see next chapter).

The pairwise comparisons showed that the age group of 65-92 (M= 5.67) differed in development of ”Health” from all other age groups, age group 15-24 (M= 5.15), age group 25-36 (M= 5.14), age group of 37-49 (M=5.24) and age group of 50-64 (M=5.34). Also age group of 50-64 differed significantly from two youngest age groups (15-24 and 25-36). The main effect of age group was low ($F_{4,7721} = 14{,}528$, $p < .001$, $\eta^2_p = .007$). It seems that training has developed and supported especially older peoples’ health. This is a bit surprising because the oldest group have not been particularly active on participating especially Health & Sports related courses. It seems that older adults get health benefits from “regular” courses as well (compare Table 74).

The univariate test (ANOVA) showed that the main effect of Type of course was statistically significant ($F_{6,7721} = 28{,}123$, $p < .001$, $\eta_p^2 = .021$). The pairwise comparisons between different course types are presented in Table 30. The interaction of Age groups and different course types in relation to development of ”Health” is presented in Appendix 5, Table 74.

Table 30 Differences of development of ”Health” between different course types

”Less effective” and “more effective” course types		Sig.
ICT & skills (M=5.17)	Health & sports (M=5.68)	p < .001

Languages (M=4.99)		p < .001
Creative activities (M=5.22)		p < .001
Society & culture (M=5.15)		p < .001
Several courses attended (M=5.46)		p < .01
ICT & skills (M=5.17)	Several courses attended (M=5.46)	p < .001
Languages (M=4.99)		p < .001
Creative activities (M=5.22)		p < .001
Society & culture (M=5.15)		p < .001
Languages (M=4.99)	Work related (M=5.47)	p < .001
Languages (M=4.99)	Creative activities (M=5.22)	p < .01

An interesting detail is that changes in sum score "Health" are not related to health & sports courses only. Even creative activities and work related courses seem to generate health benefits.

In younger age groups Health & Sports courses differed from others in relation to development of "Health", but in age group of 65-92 there were no statistically significant differences between course types, which all had high mean values. This confirms the interpretation that for oldest age group the participation in liberal adult education courses in general generates benefits related to "Health".

"Mental well-being"

The relation between participants educational background and the development of *"Mental well-being"* was statistically significant but amount of variance explained quite small ($F_{1,7718}$ = 24,062, p <.001, η^2_p = 0.003). The relation between the course type and the development of *"Mental well-being"* was statistically significant ($F_{6;\ 13,743}$= 3,868, p <.05, η^2_p = .628) as well as the interaction of course type and Age group ($F_{24;\ 24,048}$= 2,638, p <.05, η_p^2 = .725). This means that the changes in "Mental well-being" are based on the type of course, and that the older participants benefit more in all course types.

The univariate test (ANOVA) showed that the main effect of Type of course was statistically significant ($F_{6,7718}$ = 9,560, p <.001, η_p^2= .007). The pairwise comparisons between different course types are presented in Table 31. The interaction of Age groups and different course types in relation to development of *"Mental well-being"* is presented in Table 32.

Table 31 Development of *"Mental well-being"* in different course types

"Less effective" and "more effective" course types		Sig.
Languages (M=5,23)	Health & sports (M=5,51)	p < .001
	Creative activities (M=5,50)	p < .001
ICT & skills (M=5,35)	Several courses attended (M=5,55)	p < .01
Languages (M=5,23)		p < .001
Society & culture (M=5,33)		p < .01

Table 32 Development of "Mental well-being" by age in different course types

Age group	"Less effective" and "more effective" course types		Sig.
15-24[A]	Languages (M=4,95)	Health & sports (M=5,65)	p < .001
		Creative activities (M=5,61)	p < .01
		Work related and vocational topics (M=5,71)	p < .001
		Several courses attended (M=5,51)	p < .01

25-36[A]	Languages (M=5,05)	Health & sports (M=5,56)	p < .001
		Creative activities (M=5,47)	p < .001
		Several courses attended (M=5,4)	p < .01
37-49 [A]	Languages (M=5,16)	Work related and vocational topics (M=5,58)	p < .01
50-64	Work related and vocational topics (M=5,1)	Several courses attended (M=5,62)	p < .01
65-92			ns.
The mean difference is significant at the .01 level (Bonferroni multiple comparisons). [A]Levene's Test of Equality of Error Variances < .05			

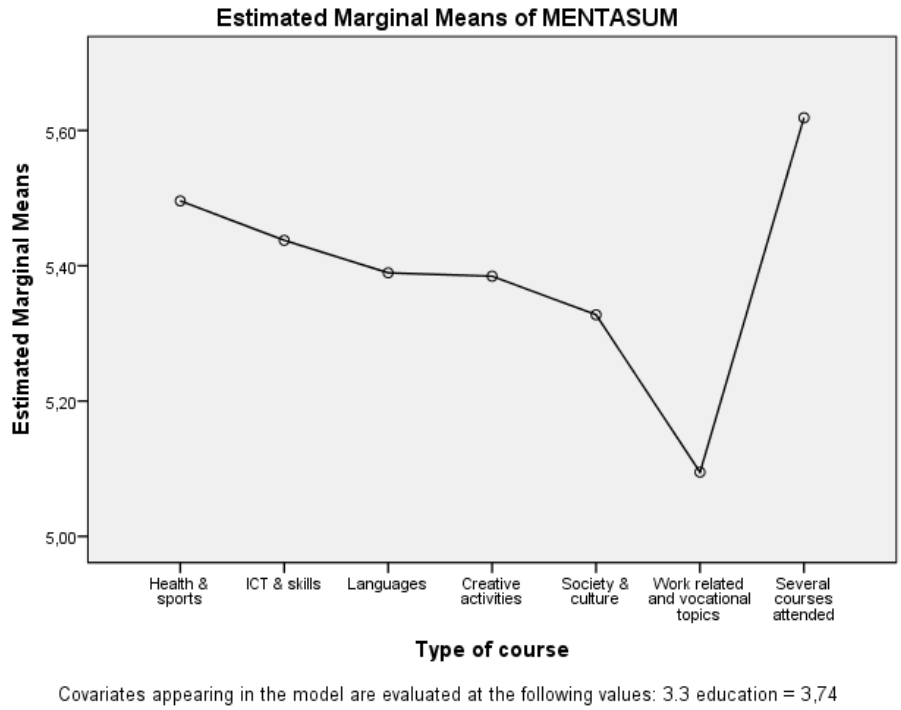


Figure 20 Development of "Mental well-being" in different course types in age group of 50-64

"Work"

Sum variable of "Work" included two items: "I have opportunities to increase my income" and "I have alternative job or career opportunities". There was no relation between Educational background and work-related benefits, neither between educational background and participated course types. Instead participants age group ($F_{4;26,866}$= 18,259, p <.001, η^2_p = .731) and interaction of age group and course type ($F_{24;\ 24,033}$= 3,236, p <.01, η^2_p = .764) seemed to explain work-related benefits. It seems that participation generates different amount of work related benefits for different age groups.

The pairwise comparisons showed that age groups 15-24 (M=4.76), 25-36 (M=4.75) and 37-49 (M=4.72) experienced more work-related benefits of training. These three groups differed statistically significantly (p<.001) from the groups of 50-64 (M=4.13) and 65-92 (M=3.92). The univariate test showed that the difference between groups was statistically significant ($F4_{,7211}$ = 61,549, p <.001, η^2_p = .033). The interaction of Age groups and different course types in relation to Work-related benefits is presented in Table 33. It should be noted that liberal adult education courses are not usually aiming

at work related benefits, and these are often “by-products” of participation. For example participation in creative activities may bring in mind new ideas about making a hobby (for example pottery, handicrafts) into a career opportunity. Qualitative interviews and open questions had some examples on that. As the table show, the youngest age groups had experienced more changes if they had participated several courses, even more than those who had participated only one work related course. This may indicate that learning different topics in liberal adult education system may open up new career and income opportunities, especially for young adults.

Table 33 “Work-related benefits” in different Age groups in different course types

Age group	”Less effective” and “more effective” course types		Sig.
15-24[A]	Work related and vocational topics (M=4.46)	Several courses attended (M=5.09)	p < .001
25-36[A]	Health & sports (M=4.48)	Several courses attended (M=5.08)	p < .001
	Creative activities (M=4.5)		p < .001
	Health & sports (M=4.48)	Work related and vocational topics (M=4.95)	p < .01
	Creative activities (M=4.5)		p < .01
37-49 [A]	Health & sports (M=4,51)	Work related and vocational topics (M=5.23)	p < .001
	Languages (M=4,55)		p < .001
	Creative activities (M=4,54)		p < .001
	Society & culture (M=4,58)		p < .001
	Several courses attended (M=4.71)		p < .001
50-64 [A]	Languages (M=3.86)	Work related and vocational topics (M=4.58)	p < .001
		Several courses attended (M=4.22)	p < .01
65-92			ns.
The mean difference is significant at the .01 level (Bonferroni multiple comparisons). [A]Levene's Test of Equality of Error Variances < .05			

“Family”

Sum variable of ”Family” included two items: “I have confidence in my ability as a parent” and “I am supportive of my children’s learning”. The relation between participants educational background and the ”Family” related benefits was statistically significant but amount of variance explained quite small ($F_{1,2565}$ = 22,576, p <.001, η^2_p = .009). Unlike in other analysis there was no relation between course type and ”Family” related benefits. This indicates that adult learning in general generates changes measured here as ”Family” related benefits. The relation between the age group and the ”Family” related benefits was statistically significant ($F_{4;\ 28,565}$= 3,844, p <.05, η^2_p = .350) (see Figure 21). The pairwise comparisons showed that age group 37-49 (M=5.47) had got most ”Family” related benefits of training whereas 15-24 (M=4.94) has got least (p<.01), which is rather obvious because the parenthood responsibilities related to school aged kids focus more on age group of 37-49 olds.

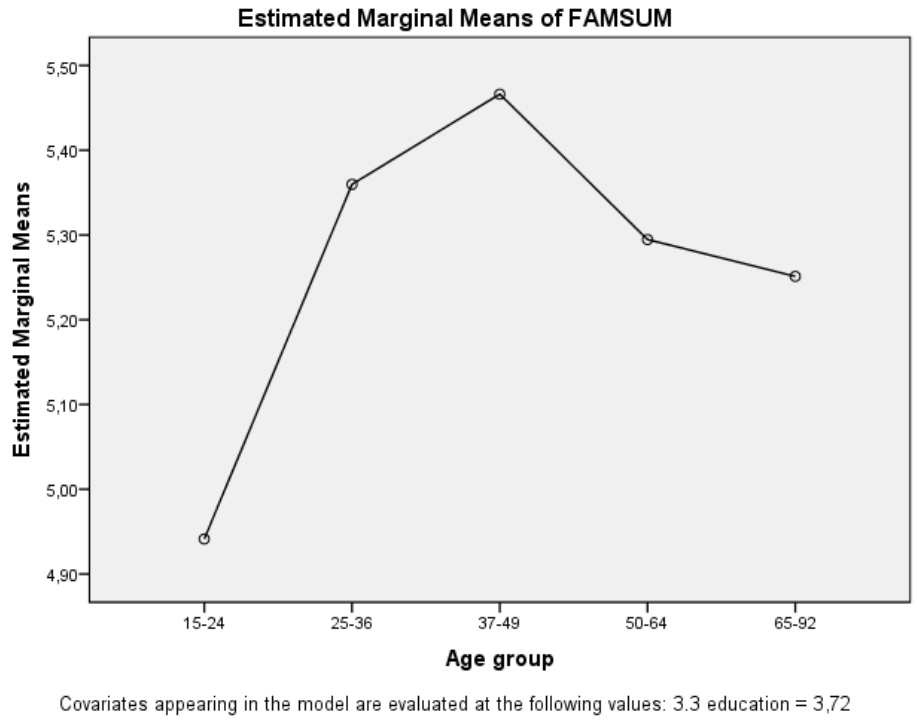


Figure 21 Differences of family-related benefits between different age groups

HEALTH, FAMILY & WORK

When the second order factor and sum variable HEALTH, FAMILY & WORK (combining ”Health”, ”Mental well-being”, ”Work” and ”Family”) was analyzed as one variable it was revealed that the relation between participants' educational background and the HEALTH, FAMILY & WORK was statistically significant ($F_{1,7788}$ = 91,721, p <.001, η^2_p = 0.012). Also age group ($F_{4;\ 31,569}$= 3,109, p <.05, η^2_p = .283) and course type ($F_{6;\ 8,531}$= 3,692, p <.05, η_p^2 = . 722) were related to the HEALTH, FAMILY & WORK as well as interaction of course type and Age group ($F_{6;\ 40,495}$= 3,052, p <.05, η^2_p = .311). It seems that best predictor of this benefit group is the course type, but different age groups have some differences.

The pairwise comparisons showed that age groups 37-49 (M=5.17) and 65-92 (M=5.24) had experienced more changes in this benefit type. These groups differed statistically significantly (p<.01) from the age group of 50-64 (M=5.02). The univariate test (ANOVA) showed that the main effect of Age group was statistically significant but quite low ($F_{4,7788}$ = 5,310, p <.001, η_p^2= .003). Also the univariate test of course type was statistically significant ($F_{6,7788}$ = 13,726, p <.001, η_p^2= .01). The pairwise comparisons of course type is presented in Table 34 and the interaction of course type and Age group in Table 35.

Table 34 *HEALTH, FAMILY & WORK* and different course types

”Less effective” and “more effective” course types		Sig.
Languages (M=4,93)	Health & sports (M=5,18)	p < .001
	Work related and vocational topics (M=5,30)	p < .001
ICT & skills (M=5,08)	Several courses attended (M=5,26)	p < .001
Languages (M=4,93)		p < .001
Creative activities (M=5,06)		p < .001

Society & culture (M=5,05)		p < .001

Table 35 HEALTH, FAMILY & WORK in different Age groups in different course types

Age group	”Less effective” and “more effective” course types		Sig.
15-24	Languages (M=4.83)	Health & sports (M=5.3)	p < .001
		Several courses attended (M=5.28)	p < .001
		Work related and vocational topics (M=5.24)	p < .001
25-36[A]	Languages (M=4.8)	Health & sports (M=5.2)	p < .001
		Several courses attended (M=5.26)	p < .001
		Work related and vocational topics (M=5.21)	p < .001
37-49 [A]	Languages (M=4.89)	Health & sports (M=5.22)	p < .01
		ICT & skills (M=5.25)	p < .01
		Work related and vocational topics (M=4.8)	p < .001
		Several courses attended (M=5.24)	p < .01
	Creative activities (M=5.05)	Work related and vocational topics (M=5.39)	p < .01
	Society & culture (M=5.05)		p < .01
50-64 [A]	Languages (M=4.9)	Several courses attended (M=5.22)	p < .001
	Creative activities (M=4.9)		p < .001
65-92			ns.
The mean difference is significant at the .01 level (Bonferroni multiple comparisons). [A]Levene's Test of Equality of Error Variances < .05			

Conclusions

As shown in the Appendix 5, Table 73, educational background (ISCED level) did not explain participants’ work-related benefits. This was the only benefit area which did not have a linear correlation with participants’ educational level. Analysis of the main effects showed that nor did gender explain benefits related to HEALTH, FAMILY & WORK. Instead age explained benefits related to its sub factors ”Health”, ”Work” and ”Family”. The course type explained the changes in ”Health” and in ”Mental well-being” but not the changes related to ”Work” or ”Family”. The interpretation of this result is that work and family related benefits are a kind of “side effect” or added value of all kind of courses.

The interaction of age group and course type was statistically significant for the development of participants’ ”Health” and ”Mental well-being” and also for work-related benefits. Not a surprise as such, Health & sports courses were important for the ”Health” in all age groups. They were important also for the ”Mental well-being” in addition with Creative activities and work-related courses. But it seems that also the other course types support ”Health” and “Mental well-being” especially in the older age groups.

Work-related courses support changes in ”Mental well-being” more in the age groups of 15-24 and 37-49 but little less in the age group 50-64. In this age group participating several courses supported ”Mental well-being” best whereas Work-related courses supported it least (see Figure 20).

When the main and interaction effects were analyzed closer the effects showed to be quite low. This is a sign of importance of participants' educational background in relation to participants' perceived benefits. Even though the statistical differences were not revealed in the group comparison, those with the lowest educational level had benefitted for the training most also in the dimensions of HEALTH, FAMILY & WORK, except in the dimension of "Mental well-being" (see Appendix 5, Table 67).

4.8 Benefits of lifelong learning in relation to country and course type

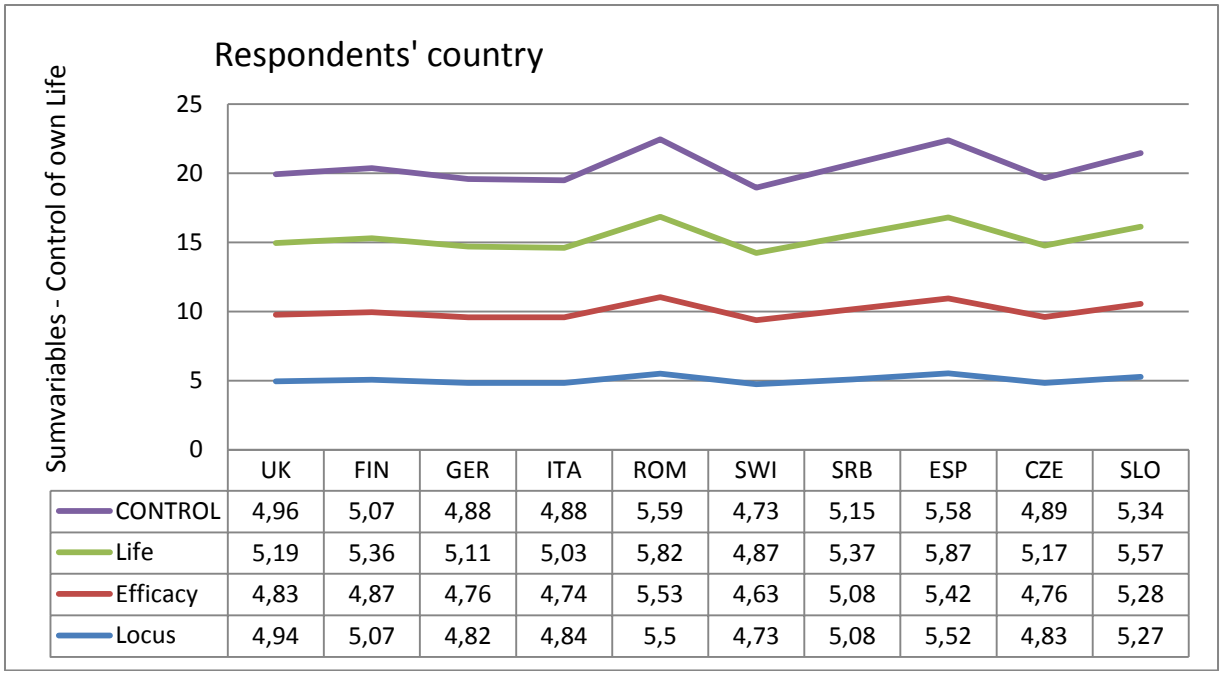
In country comparisons the different respondent profiles (Chapter 4.1) and course types (Chapter 4.2) have to be kept in mind. Even though the statistical analysis is made using covariance analysis (ANCOVA) which makes it possible to control and analyse the influence of intervening variables, the interpretation of some country differences requires also consideration of some national differences. For example in Spain there were more non-Spanish speaking immigrant respondents and more work related course participants than in other countries, which is likely to explain many country differences involving Spain.

4.8.1 Interaction of country and course type with CONTROL OF OWN LIFE

The benefits of lifelong learning in relation to country and course type were analyzed with the help of ANCOVA. Analysis revealed that covariates, such as respondents' gender, age group or educational background did not explain development of variables concerning the CONTROL OF OWN LIFE. The explanation rate of these variables was not statistically significant or the explanation rate was low (η_p^2 = .001–.004) (see Appendix 5, Table 75). This means that the potential differences in benefits between countries are real and cannot be explained by different respondent profiles.

When gender, age and educational background were controlled, the main effects of country and course type were statistically significant. Also interaction of these variables was statistically significant but the explanation rates were rather low (η_p^2 ~ .02). Main effects showed that country explains development of benefits more than course type. That's why benefits were analyzed next related to respondents' country with the help of ANOVA (see Appendix 5, Table 76 and Table 36).

Table 36 Changes in CONTROL OF OWN LIFE in Relation to respondents' Country



	UK	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO
CONTROL	4,96	5,07	4,88	4,88	5,59	4,73	5,15	5,58	4,89	5,34
Life	5,19	5,36	5,11	5,03	5,82	4,87	5,37	5,87	5,17	5,57
Efficacy	4,83	4,87	4,76	4,74	5,53	4,63	5,08	5,42	4,76	5,28
Locus	4,94	5,07	4,82	4,84	5,5	4,73	5,08	5,52	4,83	5,27

The different frequencies in second order sum score of CONTROL OF OWN LIFE by country are described in Figure 22. It seems that higher mean values for Slovenia, Romania and Spain are based on the fact that respondents in these countries have selected more often alternatives “more” and “much more” in the eight statements measuring changes in these psychological dimensions of Locus of control (feelings that can have influence in one’s own life), Self-efficacy (confidence on own ability to meet the aims) and Sense of purpose in life. Keeping in mind the principle that statements measure changes after course participation, it seems that in the above mentioned countries the respondents experience a bit bigger changes in their lives when they participate liberal adult education courses. Respondents in Switzerland, on the contrary, seem to select mostly “slightly more” alternatives and only few of them experience bigger changes. This may be explained by more stable and economically secure society, and perhaps Swiss learners already feel that they have a good control of their own life before entering the courses, and therefore the learning activities do not lead in so big changes than in some other countries. This interpretation is supported by rather similar profiles in Germany, Finland and in the UK, but not supported by Italian profile which indicates relatively small changes as well. However, in Italy more respondents are outside labour market, which may explain some of these differences.

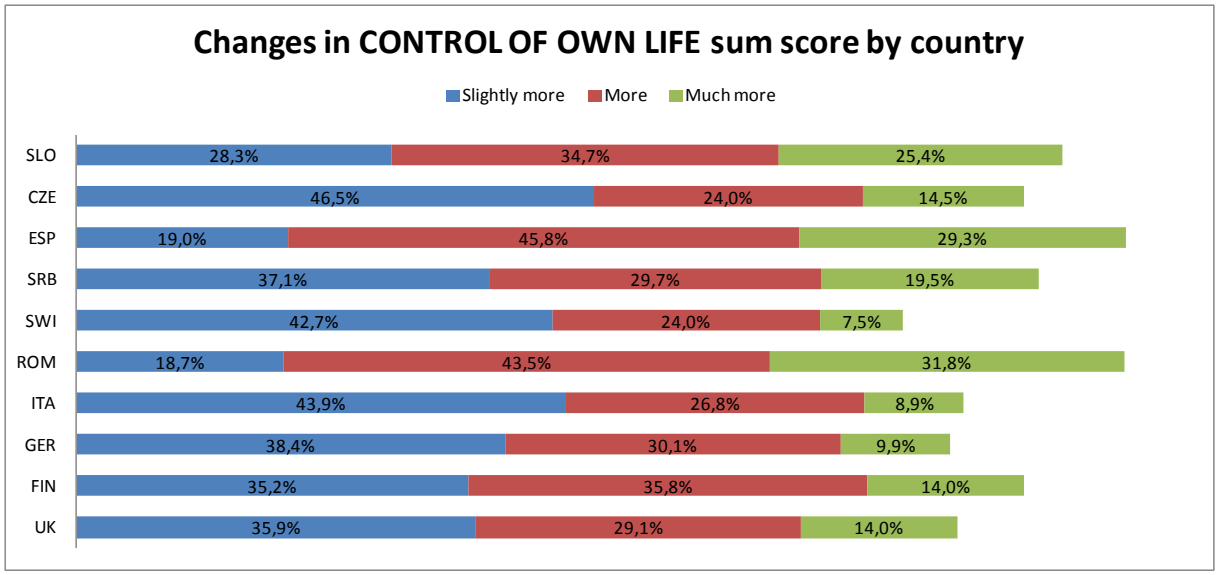


Figure 22 Changes in CONTROL OF OWN LIFE sum score by country

The same phenomena can be seen at statements level, when Romanian respondents are compared to all respondents (see Figure 23). There is clear difference on how many percent of respondents in Romania have selected the alternative “Much more” when asked about changes related to “Locus of control” factor.

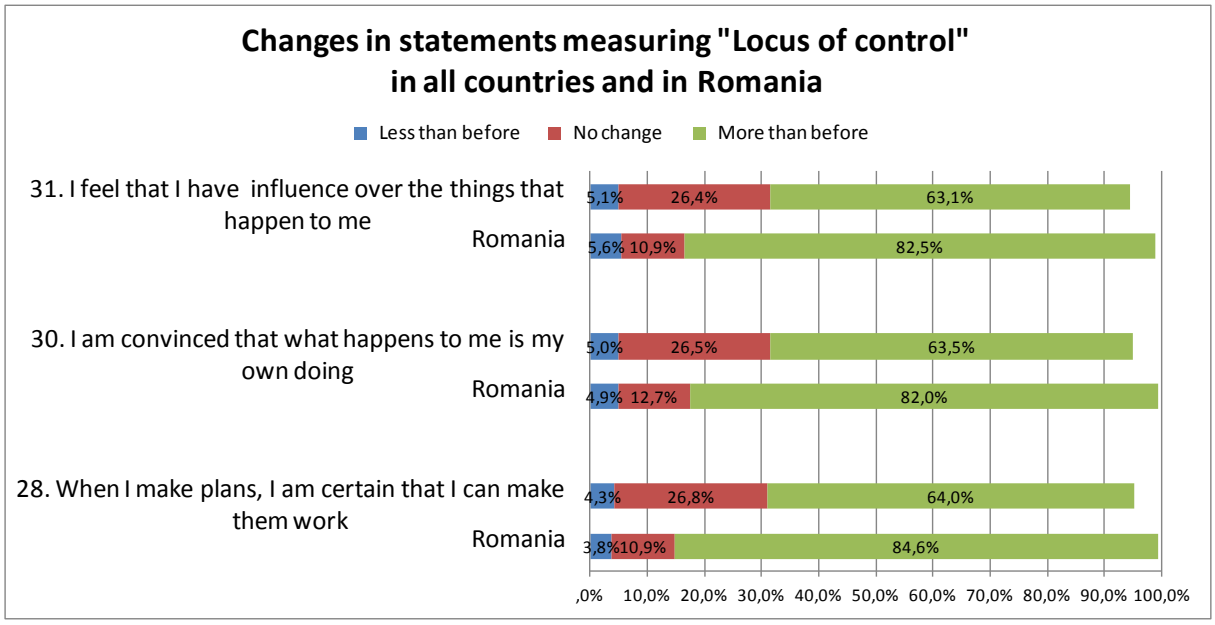


Figure 23 Changes in statements measuring „Locus of control“ in all countries and in Romania

Similar difference was found in the qualitative analysis of open questions (and also in interviews). In Romania education seems to generate a bit more awareness of available opportunities and also feelings that it might be possible to have more influence on own success and future.

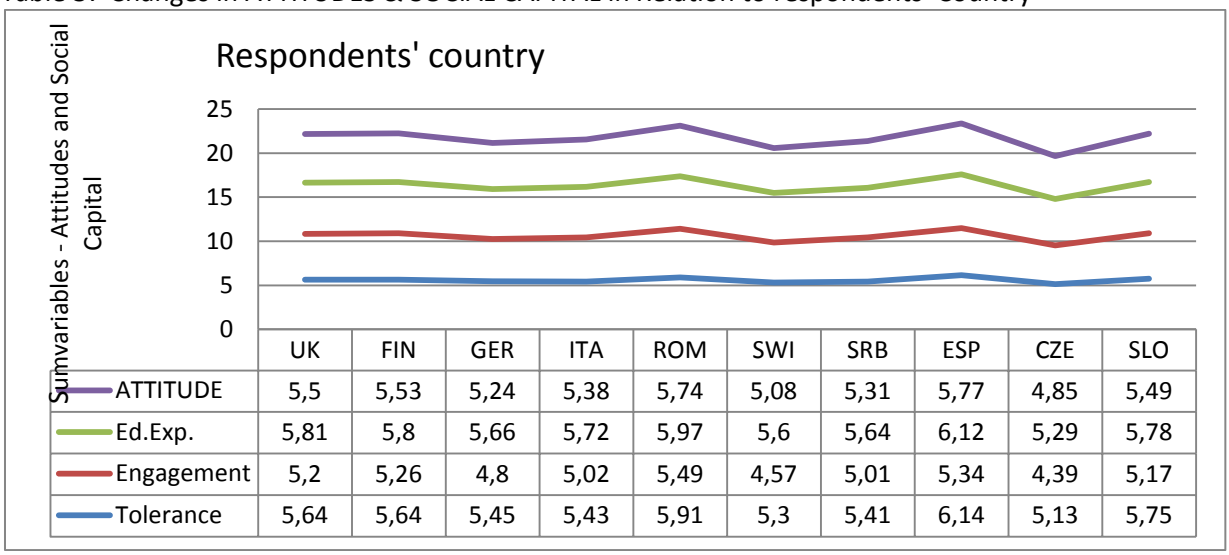
4.8.2 Interaction of Country and course type with ATTITUDES & SOCIAL CAPITAL

ANCOVA revealed, that respondents' gender, age group or educational background did not explain in a great extend the changes in ATTITUDES & SOCIAL CAPITAL, when course type and country were

controlled. Even though the explanation rates of these variables were mainly statistically significant the explanation rates were low (η_p^2 = .001–.008) (see Appendix 5, Table 77).

When gender, age and educational background were controlled, the main effects of country and course type were statistically significant. Also interaction of these variables was statistically significant but the explanation rates were rather low (η_p^2 ~ .02). Main effects showed that country explains differences in benefits more than course type. That's why benefits were analyzed next related to respondents' country with the help of ANOVA (see Appendix 5, Table 78 and Table 37).

Table 37 Changes in ATTITUDES & SOCIAL CAPITAL in Relation to respondents' Country



	UK	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO
ATTITUDE	5,5	5,53	5,24	5,38	5,74	5,08	5,31	5,77	4,85	5,49
Ed.Exp.	5,81	5,8	5,66	5,72	5,97	5,6	5,64	6,12	5,29	5,78
Engagement	5,2	5,26	4,8	5,02	5,49	4,57	5,01	5,34	4,39	5,17
Tolerance	5,64	5,64	5,45	5,43	5,91	5,3	5,41	6,14	5,13	5,75

As Figure 24 show, the response frequencies for ATTITUDES & SOCIAL CAPITAL are rather similar as in the previous sum score (Figure 22), but the differences between countries are smaller Note that the big difference in Czech profile is based on the fact that almost all Czech respondents had participated only one course. Interestingly that difference did not have the same impact on previous sum score (CONTROL OF OWN LIFE, Figure 22), where Czech respondents had rather similar profile as the respondents from other countries.

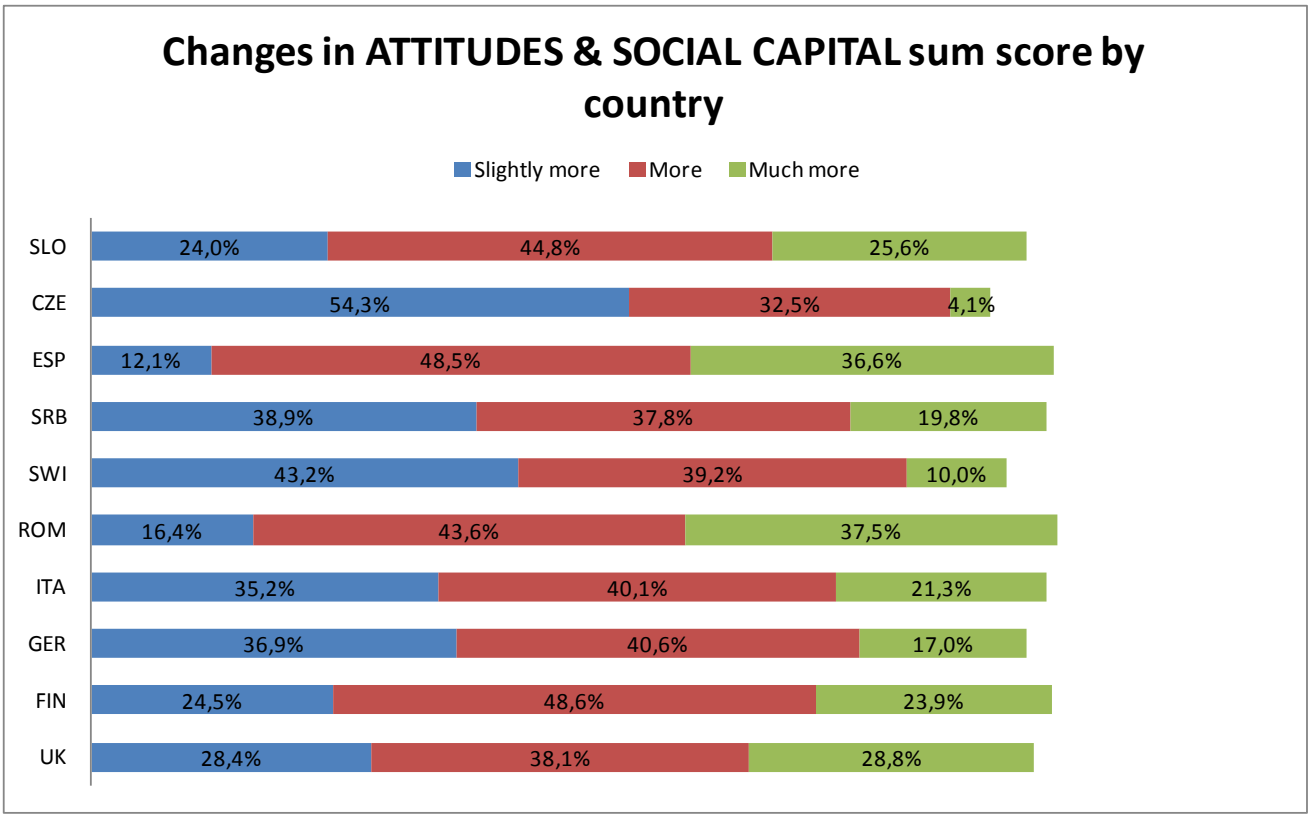


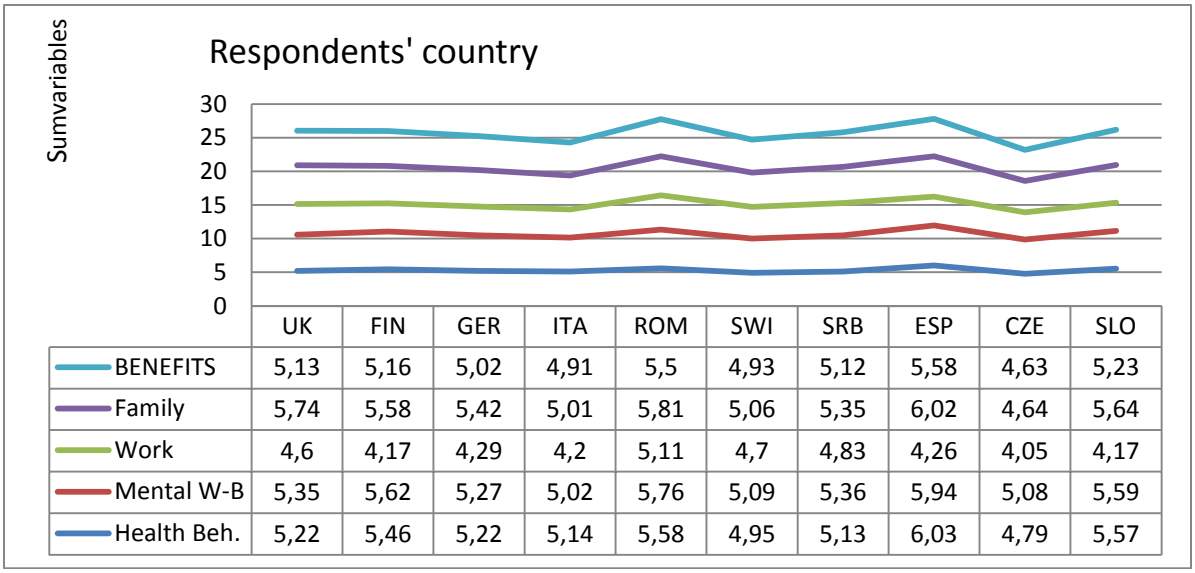
Figure 24 Changes in ATTITUDES & SOCIAL CAPITAL sum score by country

4.8.3 Interaction of Country and course type with HEALTH, FAMILY & WORK

ANCOVA revealed, that respondents' gender, age group and educational background explained significantly the development of participants' "Health" and "Mental well-being". The explanation rates (η_p^2) of these variables varied between .001–.02. (see Appendix 5, Table 79). Age explained work-related benefits and gender family-related benefits.

When gender, age and educational background were controlled, the main effects of country were statistically significant. Also the main effect of course type was statistically significant in "Health" and "Work". The interaction of these variables was statistically significant and the explanation rates were higher (η_p^2 ~ .025-.040) than in benefits related to CONTROL OF OWN LIFE and ATTITUDES & SOCIAL CAPITAL. Also in this dimension main effects showed that country explains benefits more than course type. That's why benefits were analysed next related to respondents' country with the help of ANOVA (see Appendix 5, Table 80 and Table 38).

Table 38 Changes in HEALTH, FAMILY & WORK by Country



	UK	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO
BENEFITS	5,13	5,16	5,02	4,91	5,5	4,93	5,12	5,58	4,63	5,23
Family	5,74	5,58	5,42	5,01	5,81	5,06	5,35	6,02	4,64	5,64
Work	4,6	4,17	4,29	4,2	5,11	4,7	4,83	4,26	4,05	4,17
Mental W-B	5,35	5,62	5,27	5,02	5,76	5,09	5,36	5,94	5,08	5,59
Health Beh.	5,22	5,46	5,22	5,14	5,58	4,95	5,13	6,03	4,79	5,57

The following figure shows the differences between countries at frequency level. The higher means for Romania, Spain and Slovenia seem to be based on relatively bigger frequencies in “more” and “much more” alternatives. The differences between countries are similar as in the two other sum scores (Figure 22 and Figure 24). Respondents in these countries seem to experience more changes in HEALTH, FAMILY & WORK in their lives than the respondents in some other countries. Other countries seem to have less visible differences, except Italy and Czech Republic seem to have more respondents in “slightly more” alternative. Note again that lower means in Czech profile are based on Czech respondents’ participation only on one course. Interestingly this did not have the same impact on the country profile in CONTROL OF OWN LIFE (Figure 22), as it had in the other two sum scores (Figure 24 and Figure 25). This will be explained later in the analysis (see Chapter 4.10), when SEM-model show that the benefits related to HEALTH, FAMILY & WORK are generated through a path where participation leads into changes in ATTITUDES & SOCIAL CAPITAL, while sense of CONTROL OF OWN LIFE has a less central role in that process. In plain language this means that because Czech respondents had participated less courses, they did not experience so big changes as the more active participants in other countries.

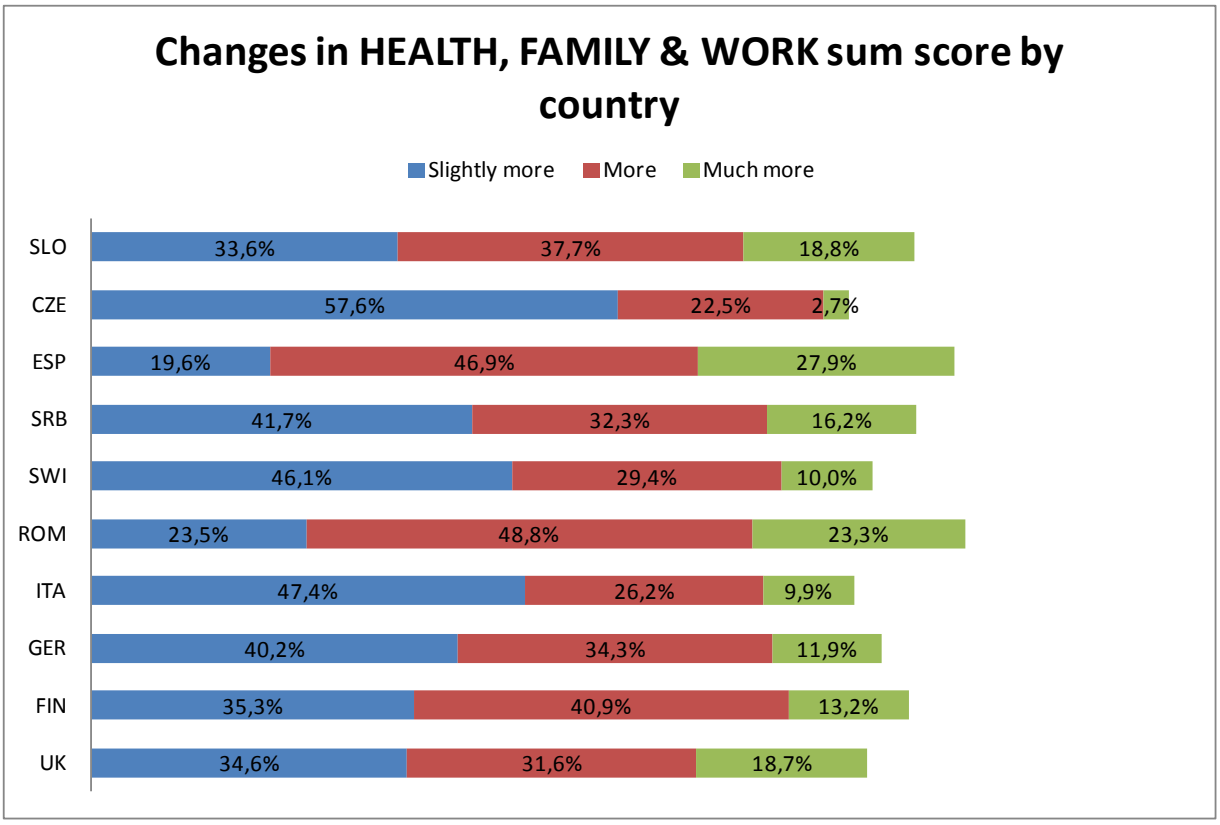


Figure 25 Changes in HEALTH, FAMILY & WORK sum score by country

Interpretation of these country differences is not easy. Some explanations can be based on different labour market situation and respondent profiles in relation to employment status. As Table 59 in Appendix 1 show, there are some differences by countries in the respondents' employment status. There are relatively more unemployed respondents in Spain, Serbia, Slovenia and Czech Republic. Highest numbers of employed respondents can be found in Switzerland, Czech Republic, Romania, and Germany. In Italy, UK and Finland there are more respondents who are outside labour market (retired or working at home). The Romanians (N = 1017, age M = 32.41, SD = 12.32) were younger than average compared to other respondents ($p < .000$). The Romanians were more frequently (63.5 %) in the working life. In relative terms, the biggest group in working life were the Swiss (84.1 %). This explained the fact that the Swiss had experienced more work related benefits, but otherwise their means were lower than average.

However, different employment status does not explain all country differences in the development of benefits. There are countries like Serbia, Czech Republic and Spain with more unemployed respondents, but response profiles for these countries are different. Romania and Switzerland have highest number of respondents in working life, but very different profiles in benefits. It seems that explanations should be sought from differences in educational system, national economic situation and perhaps even from history and culture. Switzerland and Romania are very different nations in many aspects, and these differences may influence the learning experiences as well.

4.9 Changes in some single statements

Seven statements were not included in the sum scores. Two of them were questions measuring changes in smoking and alcohol use. Even though these are clearly part of the health behaviour, pre-

vious studies have suggested that the relationship between education and smoking and drinking is a complex one, and therefore need to be analyzed separately.

The following five statements were dropped from factor analysis because of low communalities:

1. I feel good at work nowadays
7. I am willing to move in order to get a new job
14. I have trust in decision makers
16. I am interested in politics
18. I know how to make myself heard in a group

Statement 1 measuring well-being at work did not load in the Health or Mental well-being factors, because there were quite many respondents outside labour market. Statement 18 seemed not to measure development of civic competencies well enough.

Statements 7, 14 and 16 are analyzed below separately, because the changes in these are interesting from the EU perspective.

4.9.1 Changes of trust in decision makers and interest in politics

There is a lot empirical evidence that educational level correlates with active citizenship, including interest in politics, trust on policy makers and state institutions, and especially with likelihood of voting.

The BeLL results show that in general participation in liberal adult education have developed participants' trust in decision makers almost in all countries (Mean= 4.37). This is evident especially in Romania and Spain. On the other hand it seems that trust has actually decreased in Germany and in the Czech Republic during participation. There are quite big, statistically significant differences between countries.

Table 39 Changes in trust in decision makers by country

	Mean	Std. Deviation
a) ENG (n=640)	4.43 ^{b,c,e,f,h,i}	1.33
b) FIN (n=1176)	4.13 ^{a,c,e,g,h,j}	1.18
c) GER (n=796)	3.72 ^{a,b,d,e,f,g,h,i,j}	1.18
d) ITA (n=391)	4.22 ^{c,e,h,i}	1.07
e) ROM (n=1034)	5.02 $^{a,b,c,\ d,f,g,i,j}$	1.37
f) SWI (n= 261)	4.07 ^{a,c,e,g,h,j}	1.01
g) SRB (n= 962)	4.39 ^{b,c,e,f,h,i}	1.22
h) ESP (n=808)	4.99 ^{a,b,c,d,f,g,i,j}	1.67
i) CZE (n=979)	3.97 ^{a,c,d,e,g,h,j}	1.05
j) SLO (n=931)	4.47 ^{b,c,e,f,h,i}	1.54
Total (n=7978)	4.37	1.36
1=”Much less”, 2=”Less” , 3=Slightly less”, 4= ”No change”, 5=”Slightly more” , 6=”More”, 7=”Much more”		
$F_{9,7968} = 88.568$, $p < .001$ Levene test of Homogeneity of Variances < .05 (Dunnett T3), The mean difference is significant at the 0.01 level.		

These national differences are clearly visible in the next figure, which show how the frequency bars are different. Especially Spain and Romania have bigger share of “More than before” answers.

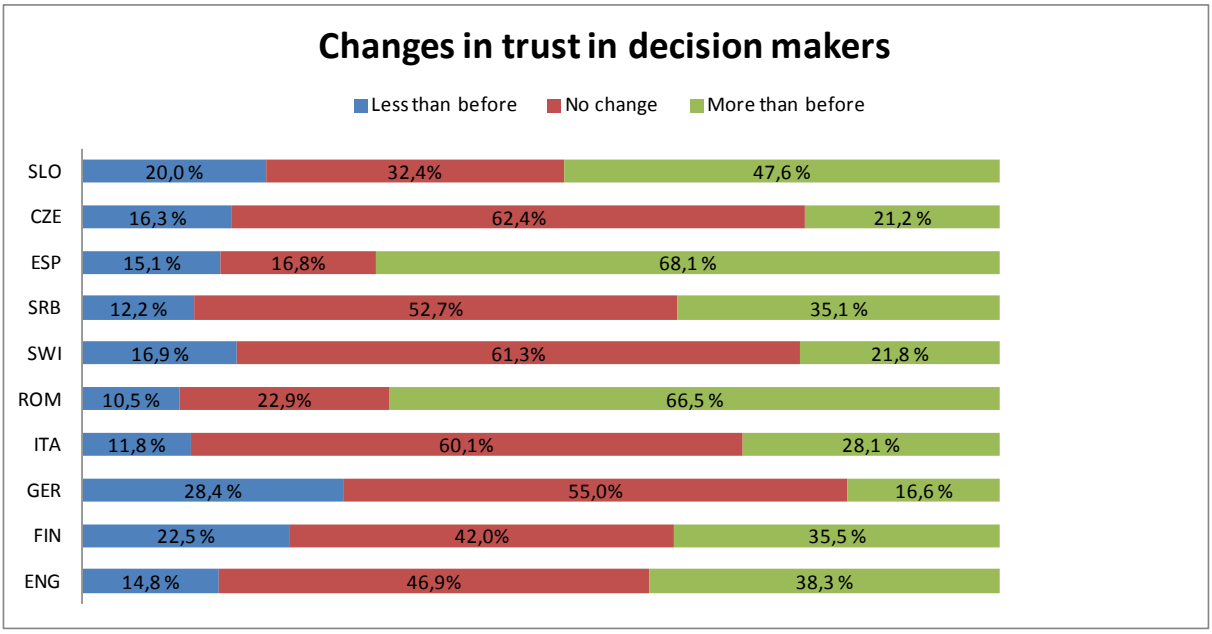
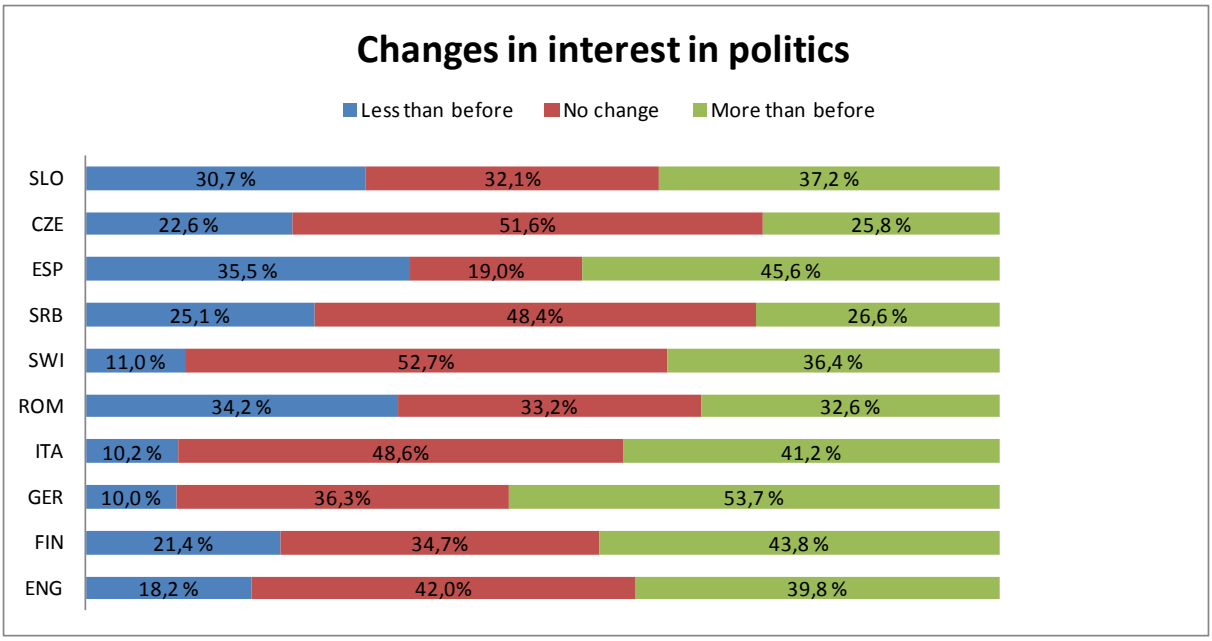


Figure 26 Changes in trust in decision makers by country

In general also the interest in politics had developed slightly (Mean = 4.15). As the following table show, interest has increased especially in Germany and Italy, whereas it has decreased a little in Romania, Serbia, Spain and in the Czech Republic.

Table 40 Changes in interest in politics by country

	Mean	Std. Deviation
a) UK (n=653)	4.39 ^{c,e,g,h,i,j}	1.51
b) FIN (n=1195)	4.30 ^{c,e,g,h,i,j}	1.46
c) GER (n=842)	4.78 ^{a,b,e,f,g,h,i,j}	1.37
d) ITA (n=430)	4.49 ^{e,g,h,i,j}	1.31
e) ROM (n=1033)	3.82 ^{a,b,c,d,f}	1.86
f) SWI (n= 264)	4.38 ^{c,e,g,h,i,j}	1.20
g) SRB (n= 970)	3.97 ^{a,b,c,d,f}	1.53
h) ESP (n=823)	3.91 ^{a,b,c,d,f}	2.01
i) CZE (n=973)	3.97 ^{a,b,c,d,f}	1.31
j) SLO (n=963)	3.94 ^{a,b,c,d,f}	1.77
Total (n=8146)	4.15	1.62
1=”Much less”, 2=”Less” , 3=Slightly less”, 4= ”No change”, 5=”Slightly more” , 6=”More”, 7=”Much more”		
$F_{9,8136} = 31,737$, $p < .001$ Levene test of Homogeneity of Variances < .05 (Dunnett T3), The mean difference is significant at the 0.01 level.		



Changes in trust in decision makers and interest in politics was also analyzed in relation to course types. The results show that all course types have increased participants' trust in decision makers, especially courses related to ICT and work.

Table 41 Changes in trust in decision makers by type of course

Type of course (n)	trust in decision makers		
	M	*SD*	*p*
a) Health & Sports (905)	4.35	1.19	.01 [b,f]
b) ICT & skills (1037)	4.60	1.46	.01 [a,c,d,e,g]
c) Languages (1192)	4.20	1.23	.00 [b,f]
d) Creative activities (1085)	4.21	1.33	.00 [b,f]
e) Society & culture (853)	4.25	1.30	.00 [b,f]
f) Work & vocation (921)	4.71	1.46	.00 [a,c,d,e,g]
g) Several courses(1909)	4.33	1.41	.00 [b,f]
Total (n=7902)	4.37	1.36	
1="Much less", 2="Less" , 3=Slightly less", 4= "No change", 5="Slightly more" , 6="More", 7="Much more"			
[A]Levene test of Homogeneity of Variances < .05 (Dunnett T3). $F_{6,7895} = 21,647$, $p < .001$			

The same result can be seen from frequencies:

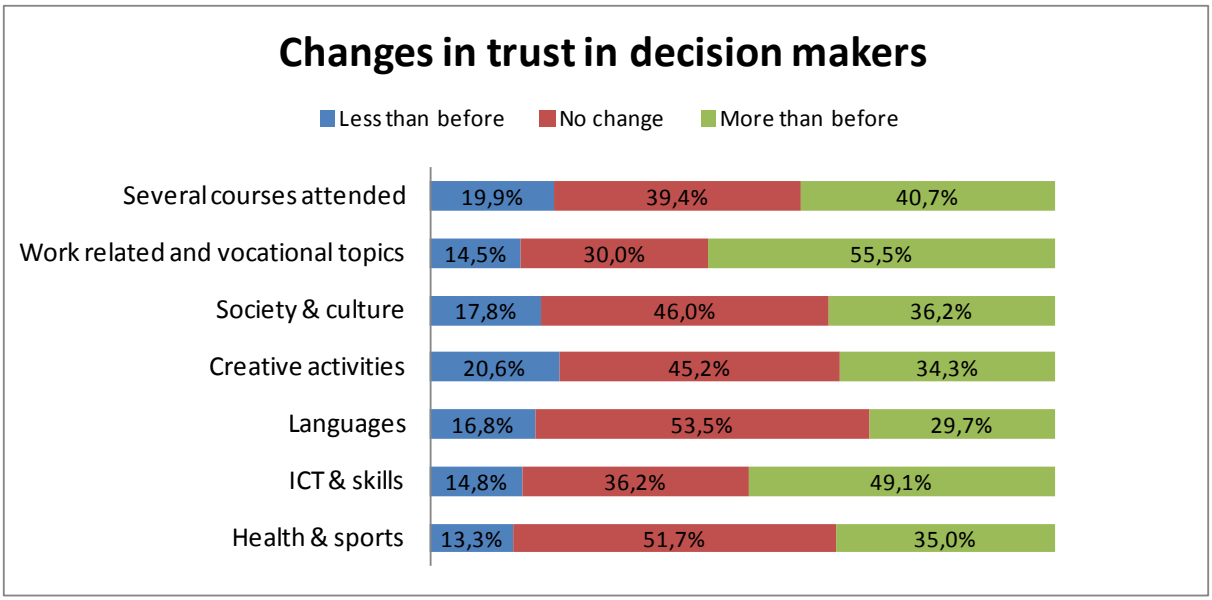


Figure 27 Changes in trust in decision makers by type of course

All course types (except work-related) seem to increase participants' interest in politics. It seems that interest in politics have developed especially in the group who have participated several course types.

Table 42 Changes in interest in politics by type of course

Type of course (n)	interest in politics		
	M	*SD*	*p*
a) Health & Sports (910)	4.08	1.47	.00[g]
b) ICT & skills (1073)	4.12	1.73	.00[g]
c) Languages (1210)	4.16	1.45	ns.
d) Creative activities (1097)	4.00	1.55	.01[e,g]
e) Society & culture (872)	4.25	1.60	.01[d,f]
f) Work & vocation(929)	3.91	1.80	.01[e,g]
g) Several courses(1974)	4.35	1.64	.01[a,b,d,f]
Total (n=8065)	4.15	1.61	
1="Much less", 2="Less" , 3=Slightly less", 4= "No change", 5="Slightly more" , 6="More", 7="Much more"			
[A]Levene test of Homogeneity of Variances < .05 (Dunnett T3). $F_{6,8058} = 10{,}807$, $p < .001$			

The following frequencies show that the differences are small, even though they are statistically significant.

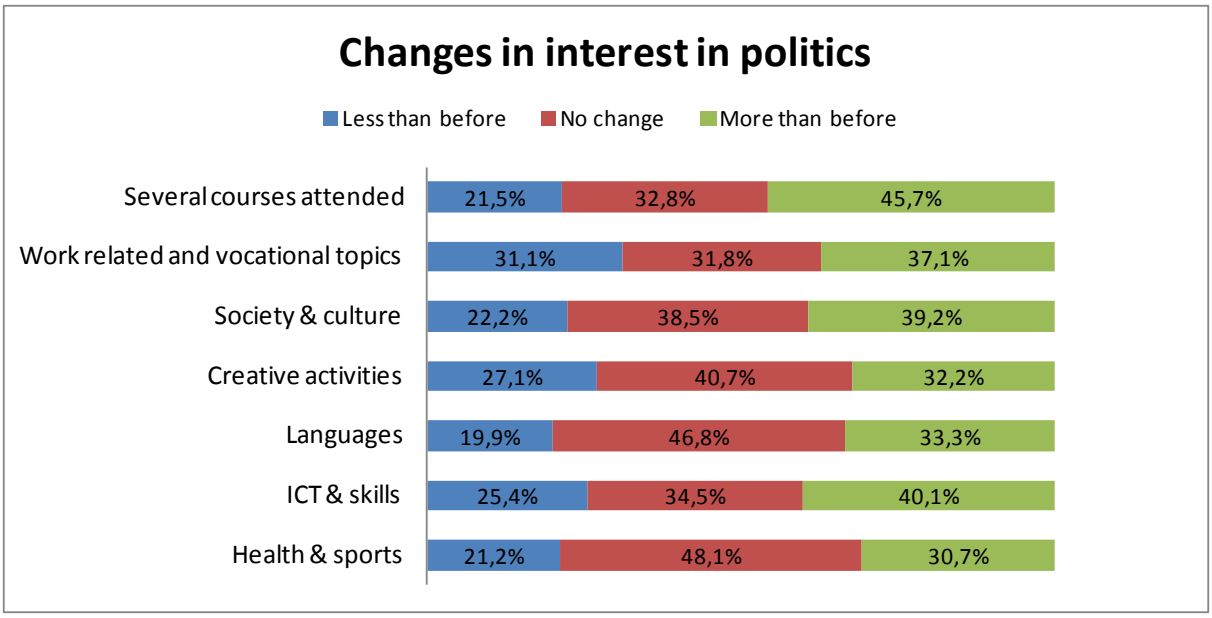


Figure 28 Changes in interest in politics by type of course

The above mentioned differences between countries and types of courses are difficult to explain without additional analysis and further contextual data about national situations. One explanation on the relative more increased trust in decision makers in Romania and Spain can be that trust is – perhaps – originally lower in these countries, and participation in education makes therefore bigger "difference", develops trust more than in some other countries, where the trust have been generally higher (like in Germany). There are also differences based on respondent profiles, and these need to be analyzed in more details later. For example respondents who have educational background that equals ISCED levels 1, 2 and 3, have experienced bigger positive changes in these two statements than adults with ISCED level 4, 5 and 6. This also validates the "saturation hypothesis": because the statements measure changes, those who already have more interest in politics (adults with higher educational level), experience less changes when they participate courses. Note that "Less than before" in these statements is not necessarily a negative change, as discussed earlier in Chapter 4.3.2.

4.9.2 Willingness to move in order to get a new job

Another similar statement with more "Less than before" answers but not necessarily as a negative outcome was willingness to move in order to get a job. This question was added in the questionnaire as one potential work related benefit, because EU policy (EU, 2010) stresses the importance of employability of the work force, and mobility is one key element on that. A total of 7612 respondents answered to the item "I am willing to move in order to get a new job". Most of them (43,5 %) told that training had not changed their willingness to move because of a new job, and 22 % was even less willing to move than before the course. This seemingly contradictory and apparently negative result for mobility of work force is easy to explain: taking a course and learning new things may open up new career and work opportunities close to current home, and therefore there is less need to move in order to get a job.

A closer analysis revealed that Students (M=4.66) and Unemployed (M=4.62) were most interested to move in order to get a new job. People in working life were slightly interested in moving whereas those outside labour market were even less interested in moving after training.

Table 43 Changes in "I am willing to move in order to get a new job" by employment status

	Mean	Std. Deviation
a) In working life (4009)	4.22 [b,c,d]	1.64
b) Student (822)	4.66 [a,c]	1.55
c) Outside labour market (1681)	3.61 [a,b,d]	1.52
d) Unemployed (944)	4.62 [a,c]	1.81
Total (n=7456)	4.18	1.66
1="Much less", 2="Less" , 3=Slightly less", 4= "No change", 5="Slightly more" , 6="More", 7="Much more"		
$F_{3,7452} = 116,452$, $p < .001$ Levene test of Homogeneity of Variances < .05 (Dunnett T3), The mean difference is significant at the 0.01 level.		

As Figure 29 show, this benefit is not "relevant" for those who are not looking for jobs actively (people in working life) or at all (retired people).

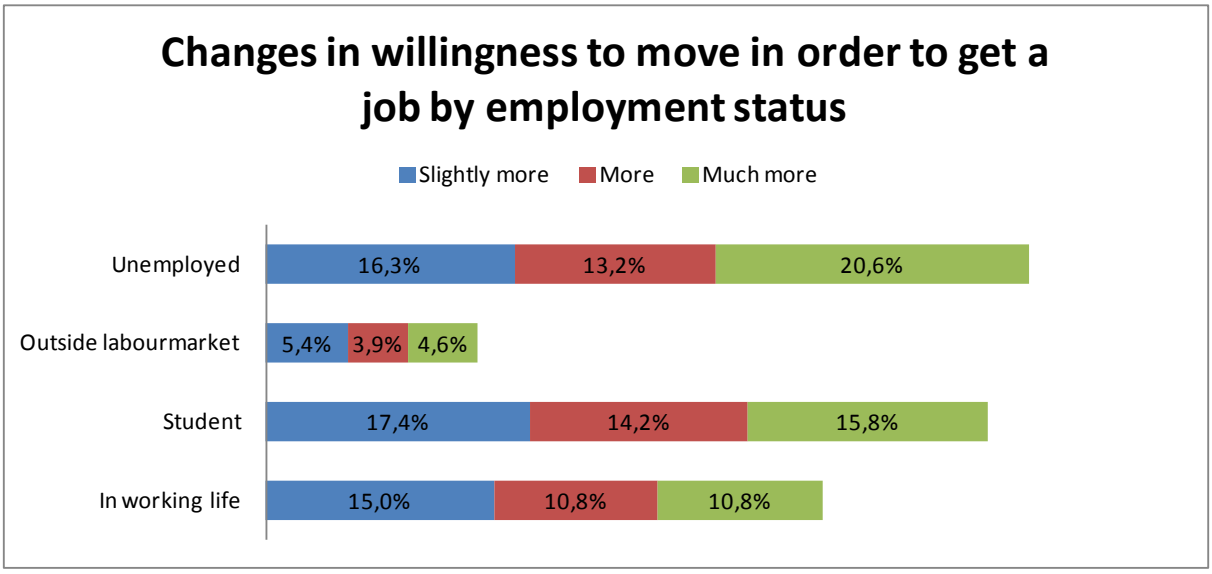


Figure 29 Changes in willingness to move in order to get a job by employment status

As the following table show, the work-related courses generate more changes in participants' willingness to move because of a new job. This can be explained also by different participant profiles, because these kinds of courses are more often selected by people who are more actively looking for career opportunities.

Table 44 Changes of willingness to move in order to get a new job by course type

Type of course (n)	willingness to move in order to get a new job		
	M	*SD*	*p*
a) Health & Sports (892)	4.10	1.44	.00[f]
b) ICT & skills (975)	4.19	1.74	.00[f]
c) Languages (1155)	4.15	1.58	.00[f]
d) Creative activities (1043)	3.94	1.60	.00[f]
e) Society & culture (815)	4.16	1.55	.00[f]
f) Work & vocation (921)	4.91	1.80	.00[a,b,c,d,e,g]
g) Several courses (1743)	4.03	1.72	.00[f]
Total (n=7544)	4.18	1.67	

1=”Much less”, 2=”Less” , 3=Slightly less”, 4= ”No change”, 5=”Slightly more” , 6=”More”, 7=”Much more”
[A]Levene test of Homogeneity of Variances < .05 (Dunnett T3). $F_{6,7537} = 36{,}419$, $p < .001$

There are some differences between the countries as well, as the following figure show. Here only those are included who have experienced increased willingness to move. Note that the differences can be explained by different respondent profiles, as well as by national unemployment rates. For example in Spain there are more immigrants and unemployed adults participating work related courses, and therefore it is natural that willingness to move has increased there more than for example in Germany (with low unemployment rate) and in Finland (with a larger number of respondents who are retired or in working life).

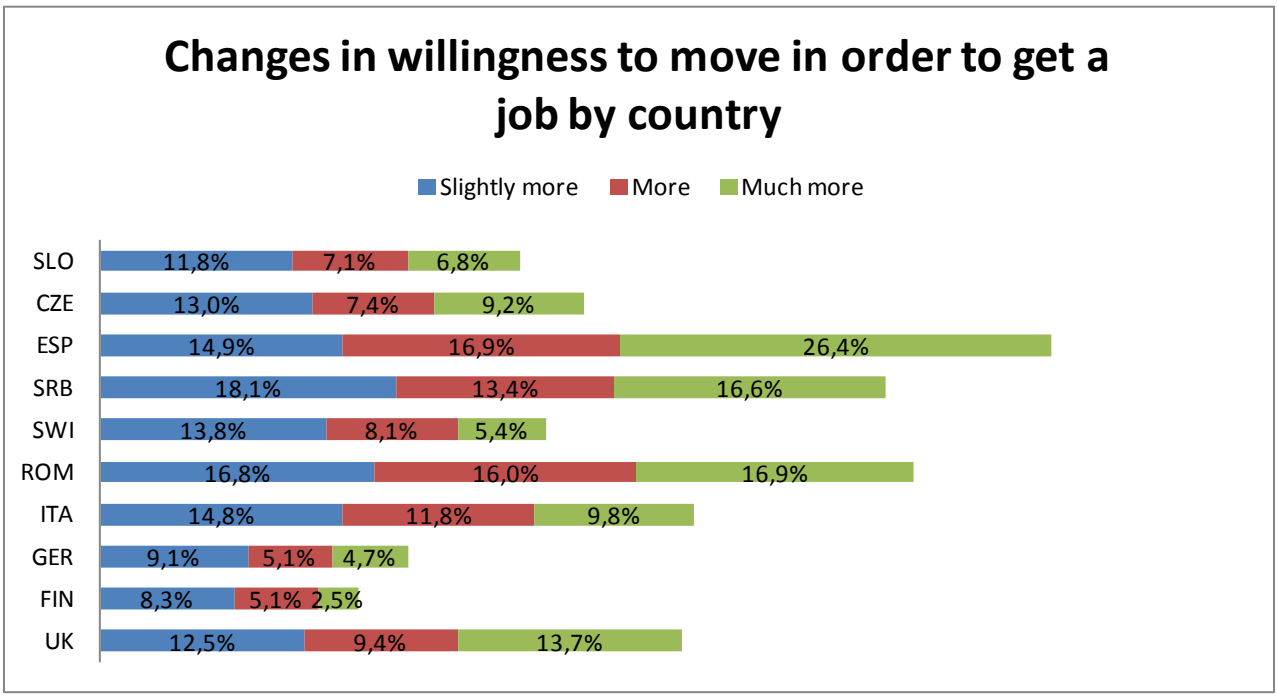


Figure 30 Country differences in willingness to move in order to get a job

4.9.3 Changes in smoking and in alcohol use

Out of all respondents 2551 were smokers and 4507 – a bit over half of the all respondents – were alcohol users. In the following analysis only these “users” are used and those who replied “I do not use at all” have been removed from the analysis. The results therefore show the potential changes in smoking and in alcohol use for those people, who have these habits. Note that change towards “less” is here a positive outcome, a benefit, at least from the perspective of national health.

There are quite big differences between countries on how many of the adult education participants smoke or use alcohol at all. The biggest share of non-smokers can be found in Finland (89 %), Italy (76 %), England and Germany (both 73 %). Fewer non-smokers were found in Serbia (53 %), Spain and Switzerland (59 % in both). A bit surprisingly the biggest shares of respondents who do not use alcohol at all were found in Romania (76 %) and in Italy (71 %), whereas in Switzerland only 20 % and in Finland 23 % of respondents were teetotalers. Note that these percentages are based on special group of adults (active adult learners) and therefore the numbers do not correlate (or reflect) the

national statistics of smoking and alcohol use in general (see for example OECD, 2012). Because participation in adult education correlates with healthy life habits (Feinstein & Hammond, 2004), the adult learners are not a representative sample of the whole population. In addition, the purpose of BeLL study is to measure change in these habits among those people, who have participated liberal adult education courses (compare medical studies using only those individuals who have participated in a special treatment; Hedt & Pagano, 2010).

When the changes in alcohol use and in smoking were analyzed, the general tendency seems to be that participation in liberal adult education courses reduces both habits. Spain was the only country where smoking had increased (Mean > 4).

Table 45 Changes in smoking by country

Change in smoking	Mean	Std. Deviation
a) ENG (n=175)	3.94	1.46
b) FIN (n=139)	3.55[h]	.96
c) GER (n=240)	3.76[h]	1.26
d) ITA (n=130)	3.92	.97
e) ROM (n=278)	3.68[h]	1.53
f) SWI (n= 107)	3.64	1.31
g) SRB (n= 452)	3.84	1.21
h) ESP (n=328)	4.23[b,c,e,j]	1.61
i) CZE (n=387)	3.86	.86
j) SLO (n=315)	3.71[h]	1.59
Total (n=2551)	3.84	1.33
1=”Much less”, 2=”Less” , 3=Slightly less”, 4= ”No change”, 5=”Slightly more” , 6=”More”, 7=”Much more”		
$F_{9,2541} = 5.18$, $p < .001$ Levene test of Homogeneity of Variances < .05 (Dunnett T3), The mean difference is significant at the 0.01 level.		

The seemingly odd result for Spain is clearly visible in the following frequency figure. As the bars show, in Spain there is a big amount of respondents who smoke more than before because of the course participation. This will be explained a bit later by the different course profiles (in Spain there are more Work & vocation related courses).

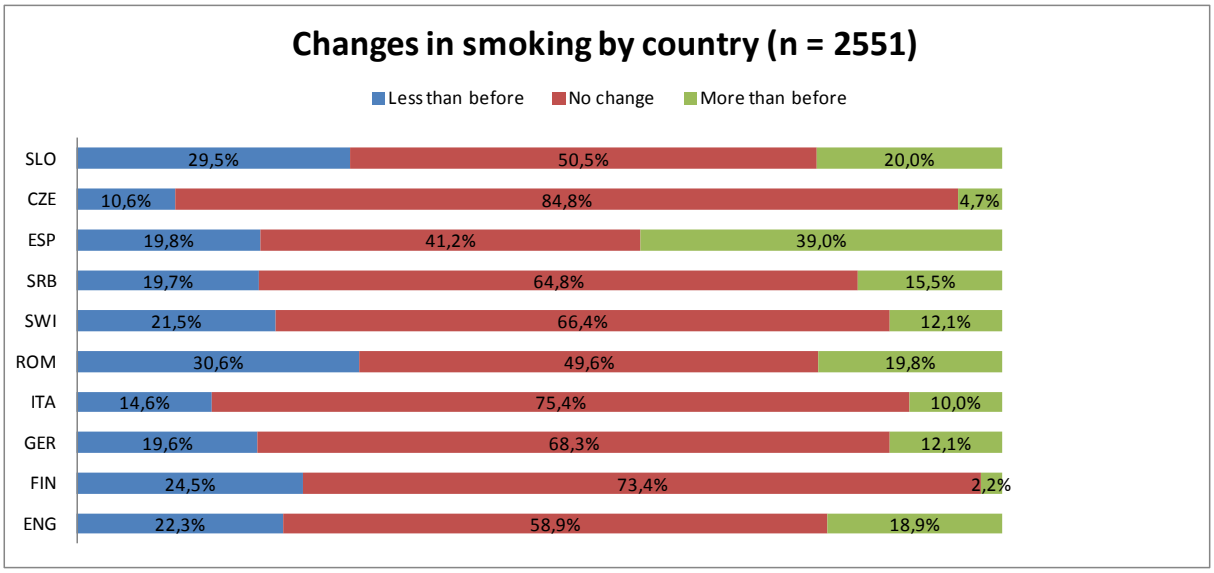


Figure 31 Changes in smoking by country

The biggest change in use of alcohol was in Romania, Slovenia, Spain and Finland, but it had remained almost same in Italy and in Switzerland.

Table 46 Changes in use of alcohol by country

Change in use of alcohol	Mean	Std. Deviation
a) ENG (n=445)	3,73[b,j]	1,00
b) FIN (n=942)	3,47[a,c,d,f,g,i]	1,02
c) GER (n=617)	3,71[b]	1,10
d) ITA (n=155)	3,92[b,e,h,j]	,86
e) ROM (n=246)	3,33[d,f,i]	1,52
f) SWI (n= 209)	3,82[b,e,i]	,98
g) SRB (n= 487)	3,73[b,i]	1,06
h) ESP (n=381)	3,46[d]	1,57
i) CZE (n=593)	3,77[b,e,i]	,83
j) SLO (n=432)	3,41[a,d,f,g,i]	1,42
Total (n=4507)	3,61	1,15
1=”Much less”, 2=”Less” , 3=Slightly less”, 4= ”No change”, 5=”Slightly more” , 6=”More”, 7=”Much more”		
$F_{9,4497} = 10.45$, $p < .001$ Levene test of Homogeneity of Variances < .05 (Dunnett T3), The mean difference is significant at the 0.01 level.		

There are some differences in variation between countries, and these can be also seen in frequencies, as the following figure show. Again in Spain there are a bit more respondents who have increased also alcohol use.

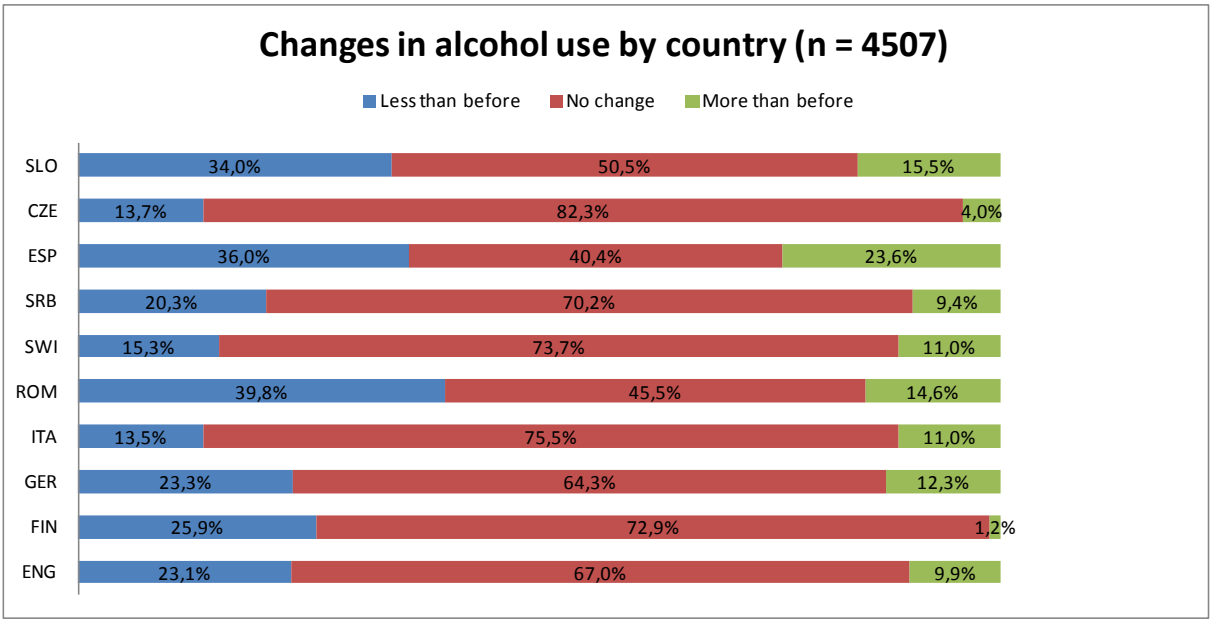


Figure 32 Changes in alcohol use by country

Changes in smoking and alcohol use were also analyzed in relation to course types. The results show that Work & vocation related courses increase smoking but there is no statistically significant relation between course type and changes in alcohol use.

It seems that participating courses related to Work & vocation has increased smoking whereas all other courses have decreased smoking habit. In the courses related to Society & culture there was only slight decreasing in smoking.

Table 47 Changes in smoking by course type

Type of course (n)	Changes in smoking		
	M	*SD*	*p*
a) Health & Sports (283)	3.80	1.31	.01[f]
b) ICT & skills (388)	3.75	1.35	.00[f]
c) Languages (395)	3.75	1.14	.00[f]
d) Creative activities (295)	3.77	1.15	.00[f]
e) Society & culture (259)	3.94	1.11	ns.
f) Work & vocation (396)	4.23	1.40	.01[a,b,c,d,g]
g) Several courses(508)	3.67	1.53	.00[f]
Total (n=2524)	3.84	1.33	
[A]Levene test of Homogeneity of Variances < .05 (Dunnett T3). $F_{6,2517} = 8.137$, $p < .001$			

Work & vocational courses differ from other course types statistically significantly, as Table 47 show. The same difference can be seen in Figure 33, which show that on Work & vocational courses the number of participants smoking more than before is twice as big as in other types of courses.

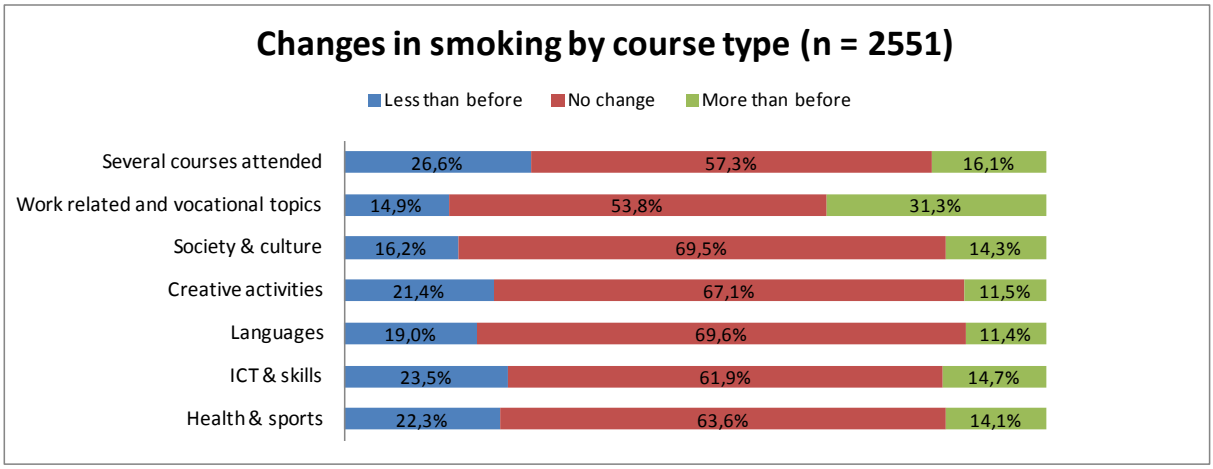


Figure 33 Changes in smoking by course type

Earlier studies (Feinstein & al., 2003; Schuller & al., 2002; Feinstein & Hammond, 2004) have found similar difference between health behaviour (like smoking and alcohol use) and type of education: vocationally oriented courses tend to increase smoking and alcohol use, whereas non-formal liberal courses tend to decrease these habits. One logical explanation might be that vocational courses are usually longer and the groups meet more frequently, and therefore the participants are more likely to gather occasionally at the end of the day for a meal or a drink. In BeLL data the mean length for Work & vocational courses was 143 hours, but the mean length for all courses only 63 hours; all liberal course topics mean lengths varied between 34 (Social & political education) and 76 hours (Skills & competencies).

This big difference between the course types explains the country difference for Spain: as the course profiles described in Chapter 4.2 (see also Appendix 3) show, Spain has relatively more respondents who have participated Work & vocational courses. Therefore this difference is not country related but more based on different course type profile in Spain.

All course types seem to help participants to reduce use of alcohol, as the following table show.

Table 48 Changes in alcohol use by type of course

Type of course (n)	Changes in alcohol use		
	M	*SD*	*p*
a) Health & Sports (493)	3.66	1.08	ns.
b) ICT & skills (511)	3.53	1.28	ns.
c) Languages (760)	3.69	.99	ns.
d) Creative activities (651)	3.69	1.00	ns.
e) Society & culture (430)	3.65	1.08	ns.
f) Work & vocation(515)	3.61	1.33	ns.
g) Several courses(1103)	3.54	1.20	ns.
Total (n=4463)	3.62	1.14	ns.
[A]Levene test of Homogeneity of Variances < .05 (Dunnett T3). $F_{6,4456} = 2.424$, $p < .05$			

There are no statistically significant differences between course types in changes of use of alcohol. However, the following frequency profiles show similar tendency of Work related courses to increase also alcohol use, not only smoking, even though this difference is not statistically significant.

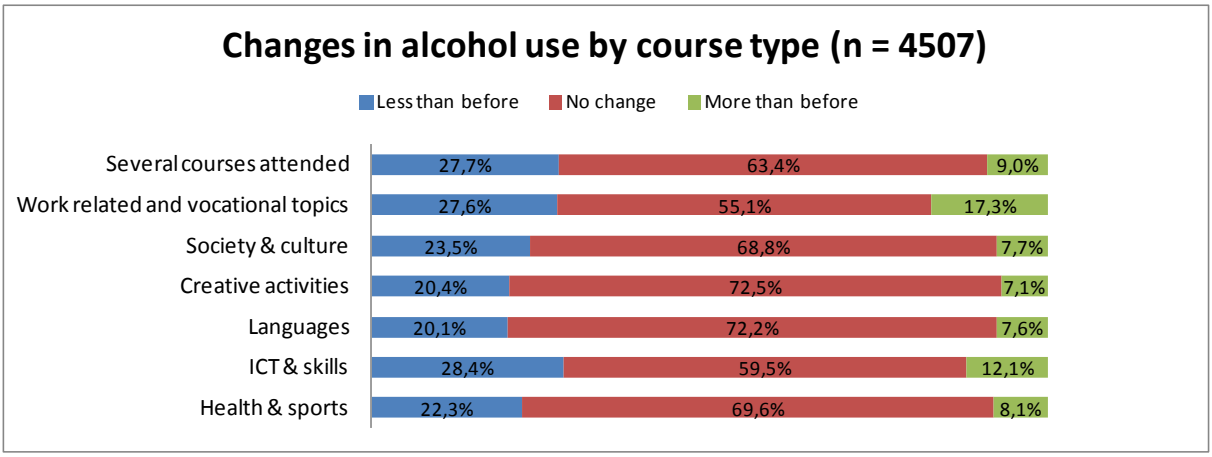


Figure 34 Changes in alcohol use by course type

4.10 Structural equation model – how the benefits develop

As described earlier (Chapter 4.4) the deeper statistical analysis was based on confirmatory factor analysis (CFA). The results of the confirmatory factor analysis were used to define ten first order factors and three second order factors measuring the benefits of lifelong learning in this study. A second order factor is a factor of first order factors. These factors were described earlier in Table 9. In the previous chapters the group differences in perceived benefits were analysed with the help of sum scores of the items loading in each factor. In this chapter the overall structure and relationships between the benefit factors will be explored with the help of structural equation model (SEM).

SEM-models and latent variables are considered better methods than traditional regression models to analyse complex interactions between variables. They also make it possible to depict several hypotheses in a single model (cf. Chen & Yang 2013, p. 68; compare Desjardins, 2008b). In the BeLL

study SEM-model enable the analysis of the complex relationships and potential interactions between benefits.

The statistical parameters of SEM-analysis indicated a good fit with the data: χ^2 (367, N=8, 417) = 5700.502, p < .000; comparative fit index (CFI)=0.93; Tucker-Lewin index (TLI)=0.92; root mean square error of approximation (RMSEA)= 0.04; and standardised root mean square residual (SRMR)=0.04 (Hu and Bentler 1999). Although the χ^2 value was obviously significant because of the large sample size (N=8,417), Bentler-Bonett's test of normed fit index (NFI) (NFI=1-5700.502: 77646.568=0.93 [≥ .90]) showed that the variance of the data was acceptable (Bentler and Bonett 1980)[10] Also the factor determinacies, which can range from 0 to 1 and represent the correlation between the estimated and true factor scores (Muthén and Muthén 2010), were satisfactory (0.88–0.99).

These parameters together with good internal consistency of factors, high factor loadings as well as good factor determinacies show that the theoretical framework built for BeLL study is working well, and that the measurement of the benefits and the SEM-model are reliable. Operationalization of the benefits has been successful, and only five statements had to be dropped from the factor analysis (see Appendix 4).

The following model (Figure 35) shows the overall structure and relationships between benefit factors. The observed variables (statements in the survey; numbers indicate the number of statement, see Chapter 4.4.2, Table 10 to Table 19) are enclosed in the boxes, circles with capital letters indicate second order latent factors and circles with normal letters are first order factors. Numbers next to arrows indicate correlation coefficients between benefits.

Note that in the SEM analysis "Control of own life" is used as first order factor, not as second order factor like ATTITUDES & SOCIAL CAPITAL and HEALTH, WORK & FAMILY. When the dimension of CONTROL OF OWN LIFE was tested separately as a second order factor it consisted of three first order factors "Locus of Control" (3 items), "Self-efficacy" (3 items) and "Sense of Purpose in Life" (2 items). But when this structure was included in the overall SEM-model the dimension had to be reformed as a one first order factor consisting directly of the eight items measuring the benefits "Locus of Control", "Self-efficacy" and "Sense of Purpose in Life". Therefore, to differentiate, this factor is a first order factor in SEM-analysis and written in small letters ("Control of own life") whereas it was used as a second order factor in earlier analysis (ANOVA and ANCOVA) and written in capital letters (CONTROL OF OWN LIFE). Note that these both factors measure exactly the same phenomena and are based on the same statements; the only difference is on how the factors are statistically formed.

[10] More recently Hu and Bentler (1999) have recommended that the cut-off criteria of NFI should be even ≥ .95, but in our case NFI=0.93 is satisfactory.

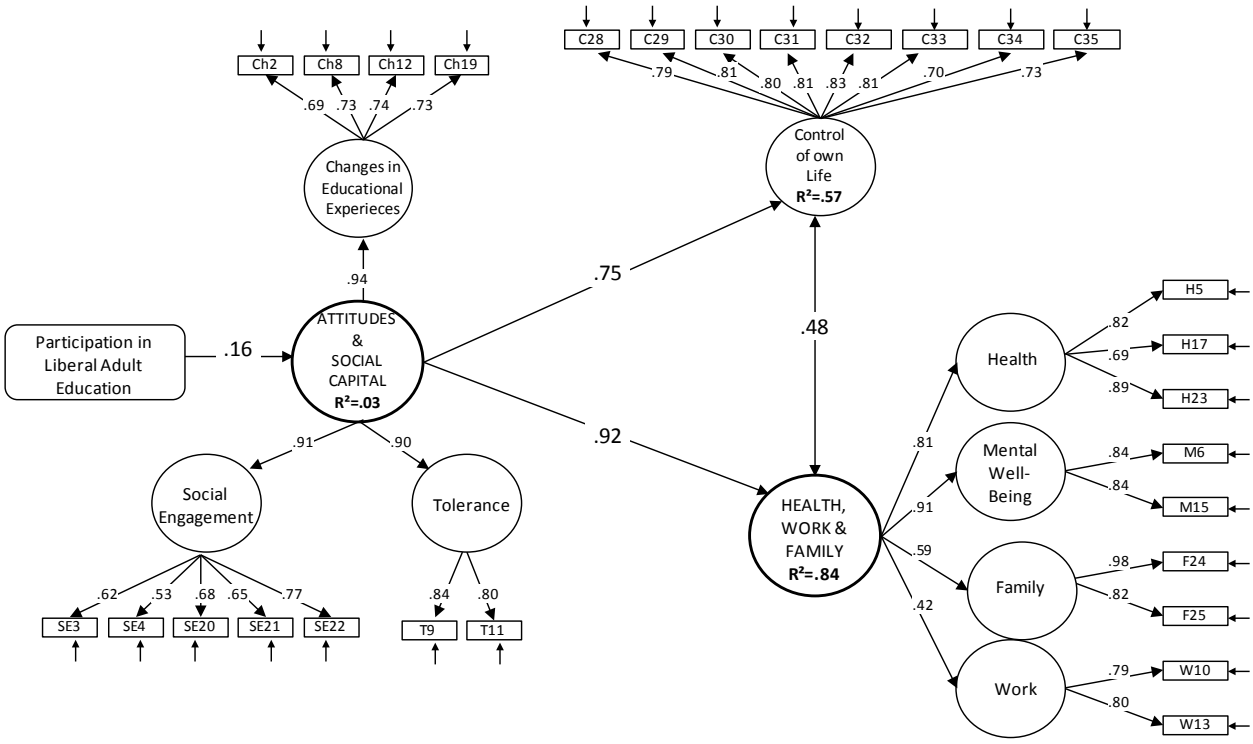


Figure 35 Model of the relations between the benefits of lifelong learning

The arrows between the second order latent factors (ATTITUDES & SOCIAL CAPITAL and HEALTH, WORK & FAMILY) and first order latent factor "Control of own life" indicate the direction of assumed influence. Statistically speaking the arrows also show the correlation between the factors. The double headed arrow between HEALTH, WORK & FAMILY and "Control of own life" show that the relationship between these two benefit factors is interactive. The coefficients of determination (R^2) values inside the circles indicate how many percent of variability is explained by the other factor. The Variance in changes in ATTITUDES & SOCIAL CAPITAL is explained by the Participation in Liberal Adult Education which is an observed variable with values varying between 1 and 4 (number of liberal adult education courses the respondent have participated). In this model 84 % of variance in changes concerning HEALTH, WORK & FAMILY are explained with the help of other factors.

In plain language the SEM model shows, that the benefits of liberal adult education can be summarized into these three main factors, which are connected to each other. It shows that participation in liberal adult education leads to a change in attitudes among participants (considering importance of adult education, learner self-confidence and tolerance), and to more active social engagement. This in turn generates a stronger sense among participants that they have control of their own life (feelings that can influence own life situation). It also leads directly to benefits related to health, work and family. The increased sense of control of own life and health, work and family related benefits also interact so that, for example, better health and increased career opportunities give more boost on self confidence, and vice versa.

In general, the change in ATTITUDES & SOCIAL CAPITAL is essential in relation to gained benefits. It seems to be a mediator that triggers and enables the developmental processes of other benefits. This interpretation is validated by qualitative analysis of open questions (see Chapter 5) and also by BeLL interviews. Especially the social interaction and new networks seem to generate processes, which lead also into development of other benefits.

The common challenge in SEM-analysis (or in any analysis dealing with causal relationships) is the difficulty to determine the direction of influences between variables, if follow-up data is not available. Affirmation of causality is an ordinary problem in this kind of cross-sectional research settings. In SEM-analysis the researchers have to decide how they build up the SEM-model, in practice what kind of causal or reciprocal links they assume to exist between the factors. In practice there are several alternatives what the SEM-model can look like in any analysis. This kind of methodological problem is all too familiar in educational research, and a common but not a reasonable solution to this kind of dilemma is conducting the analysis both ways to see which "works best". However, in BeLL analysis we followed the suggestion by Keith (2006, p. 249) who says that '*theory, previous research and logic are the appropriate tools for making such judgments*'. SEM-model was built by using the theoretical background of BeLL study and previous research (see Chapter 2.1) and also with the help of additional theories summarized in Chapter 7.2. In addition the results of BeLL interviews (see separate WP report) and the results of analysis of open questions (see next chapter) were used to build hypotheses about the potential links between the benefits. Analysis of qualitative data show that there are reciprocal relationships between benefit factors, and also that development of benefits is a rather individual process. There is interaction between benefits, and there are also individual differences how the benefits develop. Therefore it is fair to suggest that participation in education generates different kinds of benefits at the same time and that there is interaction between different developmental dimensions, as the SEM-model show.

5 Results of qualitative analysis of open benefit questions

5.1 Analysis procedure and tools

The survey questionnaire included two open benefit questions and the following instruction:

> *Please think back to your learning experiences and participation during the past 12 months in these liberal adult education courses and try to answer the following questions by writing your answer in the empty space provided below the questions.*
>
> *2.1 What immediate outcomes, if any, have you noticed from your participation in learning?*
> *2.2 What other outcomes, long term effects or changes have you noticed?*

These questions were asked before the list of potential benefits was introduced to the respondents. The purpose of these open questions was to collect first the spontaneous responses about experienced outcomes and changes caused by the liberal adult education courses the respondent had just listed in the beginning of the questionnaire. Because answers on these two questions were unprovoked, written by own words and based on the best remembered and experienced outcomes, the qualitative analysis of these answers give an additional and also a bit different picture about the benefits than the statistical analysis of structured statements[11].

[11] The difference between these two methods of data collection is the same as if a person is asked to list the movies he or she have seen from TV during the last 12 months, and then asked to tick the movies he or she have seen from a list of all potential movies actually shown on TV during the past year. It is likely that spontaneously remembered and mentioned movies are the ones that are more memorable and have made stronger influence on the respondent, and that list of movies is shorter than the number of movies the person have actually seen. On the other hand, when given a complete list of potential movies the respondent is likely to remember and recognize more and also different movies than in the open question.

It is fair to assume that the benefits mentioned spontaneously in the open questions (and also in the interviews) are those that are more present in their minds at the data collection situation, because the respondent remembered and wanted to mention just these specific benefits in the answer. These spontaneously mentioned benefits are also more likely those that are generally associated with education and also "expected" benefits, like improved Skills and competencies, or better learning motivation. On the other hand, tangible benefits which are not normally associated with education (like becoming a better parent, trust in people) are less likely to become mentioned spontaneously.

Another difference between survey statements and open questions is that the structured statements with Likert-scale measure the amount and direction of change, but open questions measure only the existence of the benefit (whether the respondent mention the benefit or not). Results of the analysis of open questions (and interviews) therefore verify the existence of the benefits, while survey verifies both existence (if positive change is reported, it is defined as benefit) and the direction and amount of change. Use of the open questions and interviews in the BeLL study serves therefore both complementarity and triangulation (Hammond, 2005, pp 247-250).

The following table show examples of answers given in the open questions:

Table 49 Examples of answers given into two open benefit questions

2.1 What immediate outcomes, if any, have you noticed from your participation in learning?	**2.2 What other outcomes, long term effects or changes have you noticed?**
*It has had a positive impact on the **skills I use in my day job**. It has helped me to develop a **deeper understanding of myself.** (ENG_open_100001)*[12]	*I feel **more confident** in the choices that I make about my future (ENG_open_100001)*
non (ENG_open_100002)	***I can use a computer better** (ENG_open_100002)*
*I **feel like I'm doing something with my life**. People at my voluntary work give me more **respect, and responsibility**. **Sense of achievement, progression towards personal goals** as well. (ENG_open_100003)*	*I have **learnt some things to apply to my hobby** of horse keeping that **improves the quality of my life**, and **makes my interest more in-depth**. It **keeps my mind active**, and **improves my wellbeing** by giving me **goals to achieve**. (ENG_open_100003)*
***I feel more energetic** during the weekdays. **Increased social contacts** became handy, since I retired from customer services. Especially I am **happy about language studies** for example in Spanish and in German languages, which I **use most often during my many trips** during the year in winter and autumn. (FIN_open_200391)*	*I feel **positive about** aging, when I **meet people** in study groups, and teachers are all experts in their course topics, and sympathetic as individuals among adult learners (FIN_open_200391)*

The qualitative analysis of these open benefit questions was based on the responses of the first 400 respondents per country minimum. A total of 4443 adult learners' responses were finally used in the analysis. Since there were two open questions, the number of answers to analyse was 8886. Despite of the large amount of data the analysis was qualitative and based on data driven content analysis approach (Gläser & Laudel, 2013), which was used in the previous Finnish study as well (Manninen 2010). The analysis was conducted in stages:

[12] The case codes indicate country and case number

1st stage: first 100 cases from UK and Finland were analysed by one researcher. The analysis was based on the search for benefits the respondents mention in their statements. The themes (benefits) were derived from the data using open coding. When the themes were the same as in the previous benefit studies (see Chapter 2.1) or in the Finnish study (Manninen 2010), these identical themes were named using the same terms as in the previous studies, in order to secure comparability with earlier studies. New themes found in the BeLL data were named separately using a descriptive theme name. The first analysis of 200 cases produced a list of themes that covered 42 benefits and 14 Skills and competencies. The first version of Excel template for analysis (see Figure 36 for final version of the template) and first version of guidelines with definitions of themes (see Appendix 6 for final version) was created.

2nd stage: The first 100 German cases were analysed to test the draft template and the themes in the guidelines. Some new themes were added after this stage.

3rd stage: the themes found so far were defined and an Excel template for analysis (Figure 36) was finalized. The partners were asked to analyse the first 100 cases of their own national data using the template and theme definitions. The results were collected and analysed using the Excel template. Proposals for new themes found in the national data were collected. This first trans-national round of analysis covered 1698 cases. The results of this analysis were discussed in the third project meeting, and some new themes found in the analysis were added in the templates. The definitions of themes were also clarified and more examples from data were added in the guidelines. The Excel template was updated accordingly.

4th stage: the final analysis was conducted with an additional next 300 cases for all countries, making the total number of cases analysed a minimum of 400 first cases per country. The total number of cases analyzed was finally 4443.

N=	418	Category mentioned by % of respondents:	0,2				31,6					5,5		0,0	
		Frequency in category:	1				132					23		0	
		Category (BeLL Concepts):	Locus of				Self-efficacy					Tolera		Trust	
		Frequence of theme:	1	0	0	0	66	49	8	6	3	15	8	0	0
Tall. id	**2.1 What immediate outcomes, if any, have you noticed from your participation in learning?**	**2.2 What other outcomes, long term effects or changes have you noticed?**	**Control of own life**				**Self-confidence**	**Confidence on own skills**	**Self-discovery**	**Self motivating**	**Self control**	**Cultural knowledge**	**Tolerance**		
1	It has had a pisotive impace on the **skills i use in my day job**. It has helped me to develop a **deeper understanding of myself.**	I feel **more confident** in the choices that i make about my future					1		1						
2	non	**i can youse a computer better**													
3	I **feel like I'm doing something with my life**. People at my voluntary work give me more **respect, an responsibility**. **Sense of achievement**, **progression towards personal goals** as well.	I have **learnt some things to apply to my hobby** of horse keeping that **improves the quality of my life**, and **makes my interest more in-depth**. It **keeps my mind active**, an **improves my wellbeing** by giving me **goals to achieve**.					1								
4	Consolidated **skills**, **practice** and **knowledge**	Enabled me to **develop my work practice** and **general awareness** of the principles of learning and teaching and diversity related issues													
5	Some improvement in **ability to lipread**. Other relevant **information** such as text facility for police emergency. **Sharing of experience** with otheres with similar problems.	As my ability to lipread improves it is **easier to communicate with others and manage everyday situations** such as shopping and meetings. Hence it is **easier to socialize and avoid becoming isolated.**													
6	My **writing skills** have improved. My **confidence** in reading out loud has improved.	I **used to hate poetry, now I can read and write it with pleasure**						1							

Figure 36 Excel template (part) used for analysis of open questions

The unit of analysis was a statement (such as *"improves the quality of my life")*. A statement is a word or sentence where the respondent mentions one benefit (here *quality of life*). One answer may contain one or more statements. In this analysis a total of 10.366 individual statements were identified from the data. These were coded under 50 themes (such as "quality of life") and 19 Skills and competencies (such as "language skills"). An example of analysis is given below.

Table 50 Example of analysis of answers to open questions 2.1 and 2.2

Examples of individual answers	**Statements (f = 10.366)**	**Themes (50 benefits + 19 Skills and competencies)**
*I have **learnt some things to apply to my hobby** of horse keeping that **improves the quality of my life** [..]. It **keeps my mind active**, and **improves my wellbeing** by giving me **goals to achieve**. (UK_open_100003)* I am **healthier and more mobile** when I do Pilates. I am **more critical of my own art work, and strive to reach a higher level.** *(UK_open_100009)*	*learnt some things to apply to my hobby*	skills (not specified)
	improves the quality of my life	quality of life
	keeps my mind active	mental well-being
	improves my wellbeing	well-being in daily life
	giving me goals to achieve	learning motivation
	healthier	physical well-being
	more mobile	health benefits
	more critical of my own art work	Self-expression and creativity
	strive to reach a higher level	learning motivation

The 50 themes and 19 Skills and competencies were subsequently positioned under 16 pre-defined BeLL benefit categories (such as "Self-efficacy" and "Skills and competences"). During the early stages of analysis process it was apparent that it was possible to position the qualitative themes found in the content analysis under the same BeLL concepts that were defined for survey (see Chapter 2.4, Table 51). This made it possible to compare the results of quantitative statistical analysis and those of qualitative analysis of open questions at benefit category level. The following table show examples, how three BeLL concepts were measured with structured questions in the survey questionnaire and what kind of qualitative themes were found in the analyses of open questions. The longer table with all BeLL concepts is available in Appendix 8.

Table 51 Some BeLL concepts, statements and themes found in qualitative analysis

CONCEPT	**DEFINITION**	**STATEMENTS IN SURVEY QUESTIONNAIRE**	**Themes found in qualitative analysis (n = 4443)**
Self-efficacy	People's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives (Schwarzer & Jerusalem 1995).	*34. If someone opposes me, I am able to find the means and ways to get what I want* *32. It is easy for me to stick to my aims and accomplish my goals* *33. I am confident that I could deal efficiently with unexpected events*	*Self-confidence f=393* *Confidence on own skills f=269* *Self-discovery f=120* *Self motivating f=104* *Self control f=96*
Tolerance	A fair, objective, and permissive attitude	*9. I have respect for other people's points of view*	*Cultural knowledge f=150* *Tolerance f=71*

	toward opinions and practices that differ from one's own.	*11. I have respect for other people's cultures*	
Social Network	A network of friends, colleagues, and other personal contacts.	*22. I meet other people* *3. I am involved in social networks (friends, colleagues etc.)*	*New networks f=235* *Social interaction f=471* *New friends f=211*

See Appendix 8 for full table with all 16 BeLL concepts

As the table show, the benefits found in the qualitative content analysis of open questions fit very well under the same theoretical BeLL concepts that were selected from literature and earlier studies and were used to generate statements for survey questionnaire. Similarity of qualitative themes validates the survey statements (they seem to measure phenomena that exist empirically as well) and the frequencies of the themes validate the relevance of the theoretical BeLL concepts. Note that the qualitative themes were defined inductively using data driven content analysis during the analysis process, as described earlier. Only after the themes were defined, they were grouped under theoretical BeLL concepts.

Table 51 show also the frequencies of qualitative themes. For example better self-confidence was mentioned 393 times as a benefit. Even though numbers and qualitative analysis are often considered as an unsuitable combination (for summary of discussion see Silverman 1993, pp 51-52), some researchers suggest that quantification can be used in qualitative content analysis to find out the frequencies of themes found in the analysis. This quantification gives an extra dimension in the analysis, but do not lose the qualitative aspects of it. Silverman (1993, p. 300) argues that "*quantification can neatly tie in with the logic of qualitative research when [..] we count participants' own categories as used in naturally occurring places*". In this analysis the quantification of qualitative themes (which are "participant's own categories") made it possible to identify the themes (benefits of learning) which were mentioned more often by the respondents. For example, the theme "motivation to learn" was mentioned 469 times, which means that 10.6 % out of 4443 respondents had mentioned it spontaneously as a benefit.

5.2 Results: benefits found in the qualitative content analysis

The complete table of results is presented in Appendix 7.

Figure 37 summarize the benefits found in the qualitative analysis. Social interaction, Motivation to learn and Self-confidence are the benefits that are mentioned spontaneously more often by the respondents. At the end of the list are the two benefits that were mentioned only by two respondents, Trust and Control of own life. Note that this does not mean that these benefits are rare or do not exist.

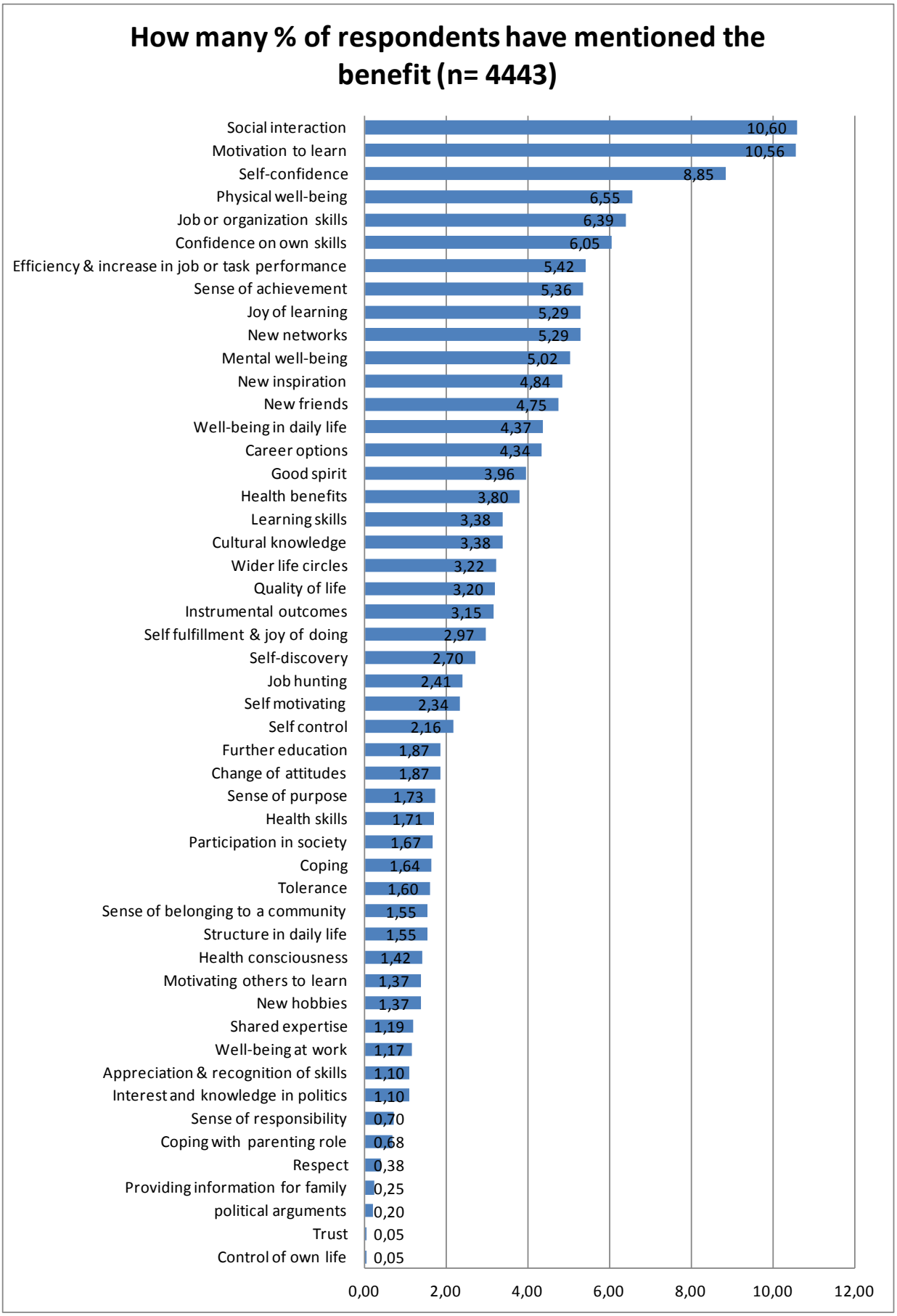


Figure 37 Benefit themes found in the qualitative analysis

Note that Job or organization skills, Learning skills and Health skills were categorized as benefits, not under Skills and competencies concept. Job or organization skills were defined as general statements where the skills themselves are not mentioned (for example ICT-skills), only that the person has been able to use these at work context or when working on voluntary basis in some organization. For example stament like *Better understanding of issues involved in my work* does not mention a specific skill or competence, only that the person's expertise have increased. Improved Learning skills *(heightened my awareness in my learning style)* were placed under Changes in educational experiences and Health skills (*I learned exercises for my back [] Some of the exercise I still practice even though the course is already finished*) were categorized under Health behaviour.

Skills and competencies found in the analysis are listed separately in the next figure. The respondents mentioned more often Language, Communication and ICT skills, as well as the increased General or new knowledge and unspecified Skills.

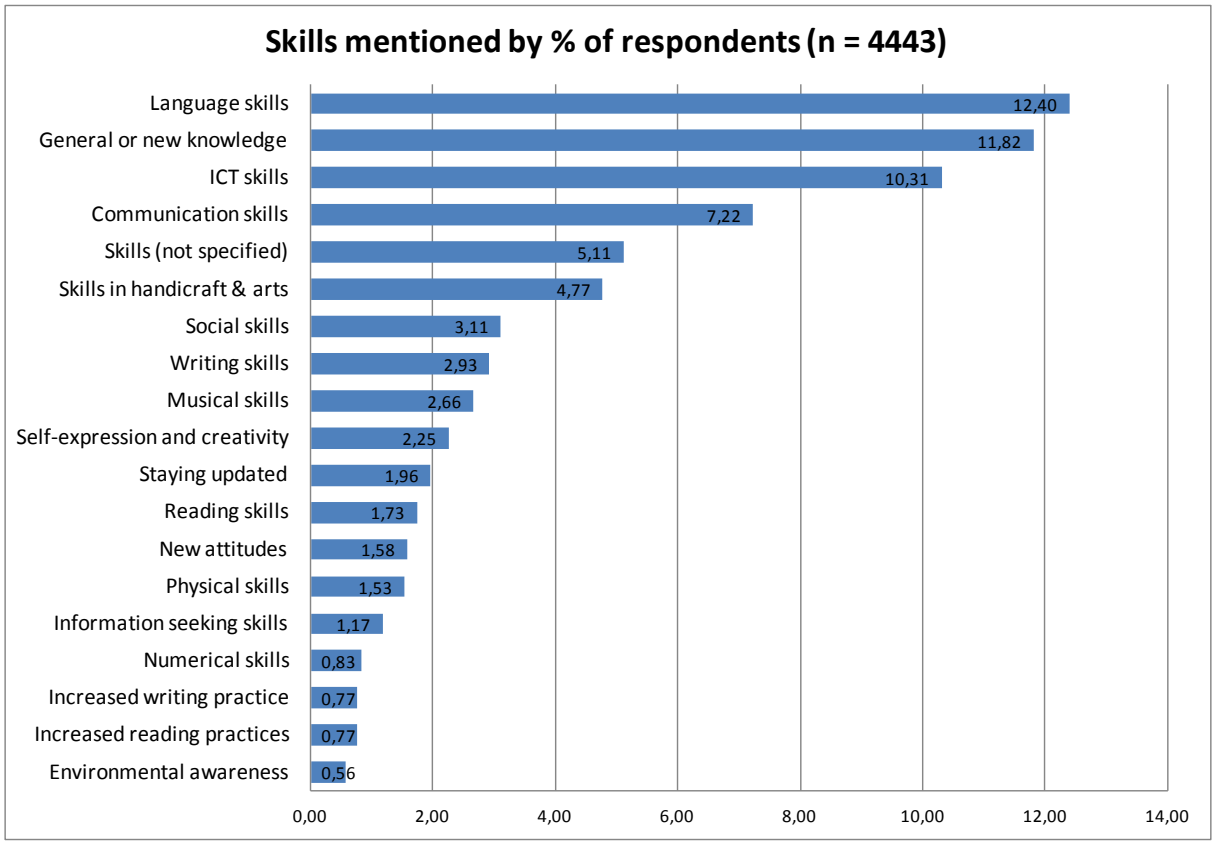


Figure 38 Skills and competencies found in the qualitative analysis

The themes were positioned under the 15 benefit categories (BeLL concepts) and frequencies of themes were summarized as well. This make it possible to summarize, combine and compare the results using the 14 BeLL benefit categories (Skills and competencies were not included in survey), see Figure 39.

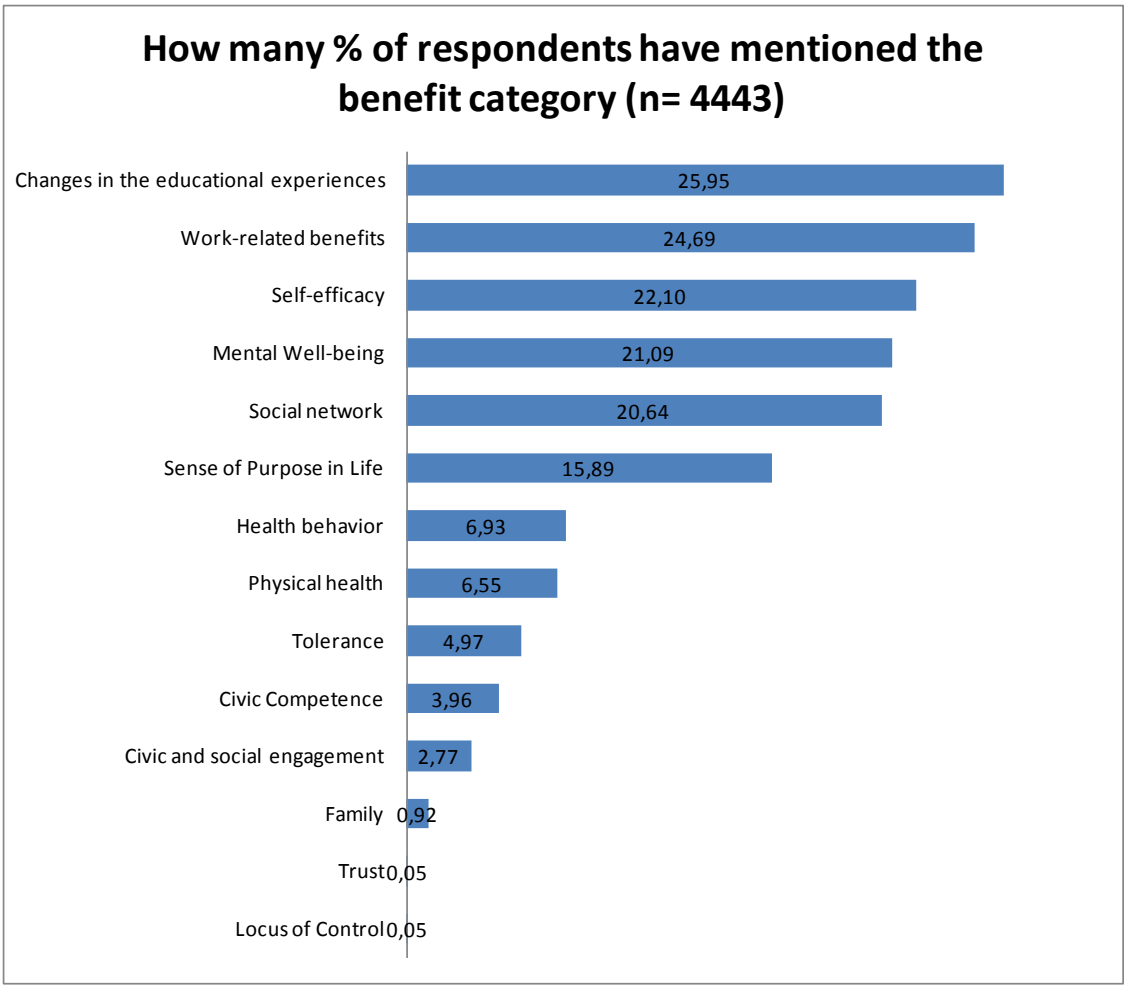


Figure 39 Frequencies of benefit categories

Because the benefit categories used in survey and in the qualitative analyses were the same it is possible to compare the results of quantitative and qualitative analysis. Figure 40 show the differences between the categories mentioned spontaneously in the open questions and the benefits found in the statistical analysis (see Chapter 4.4). Because during the factor analysis of statistical data some categories were combined, the categories in Figure 40 are not totally identical with the categories in qualitative analysis template. The categories (factors) marked with "*" are merged during factor analyses, and the same merging have been made in Figure 40 for the qualitative categories. For example factor "health behaviour" includes frequencies from qualitative categories "physical health" and "health behaviour". Percentages of factors indicate the number of respondents who have selected in the questionnaire the alternative "much more" (value 7) in the items measuring the changes in benefits. For example 15.8% of survey respondents have in Locus of control a sum score, which equals alternative "much more than before".

Note that if also the smaller positive changes (slightly more and more) were taken into account, the bars representing factors found in the survey would be longer. In this way the both bars show the percentage of respondents, who have felt that these benefit categories are the most important (either by mentioning it spontaneously or by selecting "much more" alternative in the questionnaire).

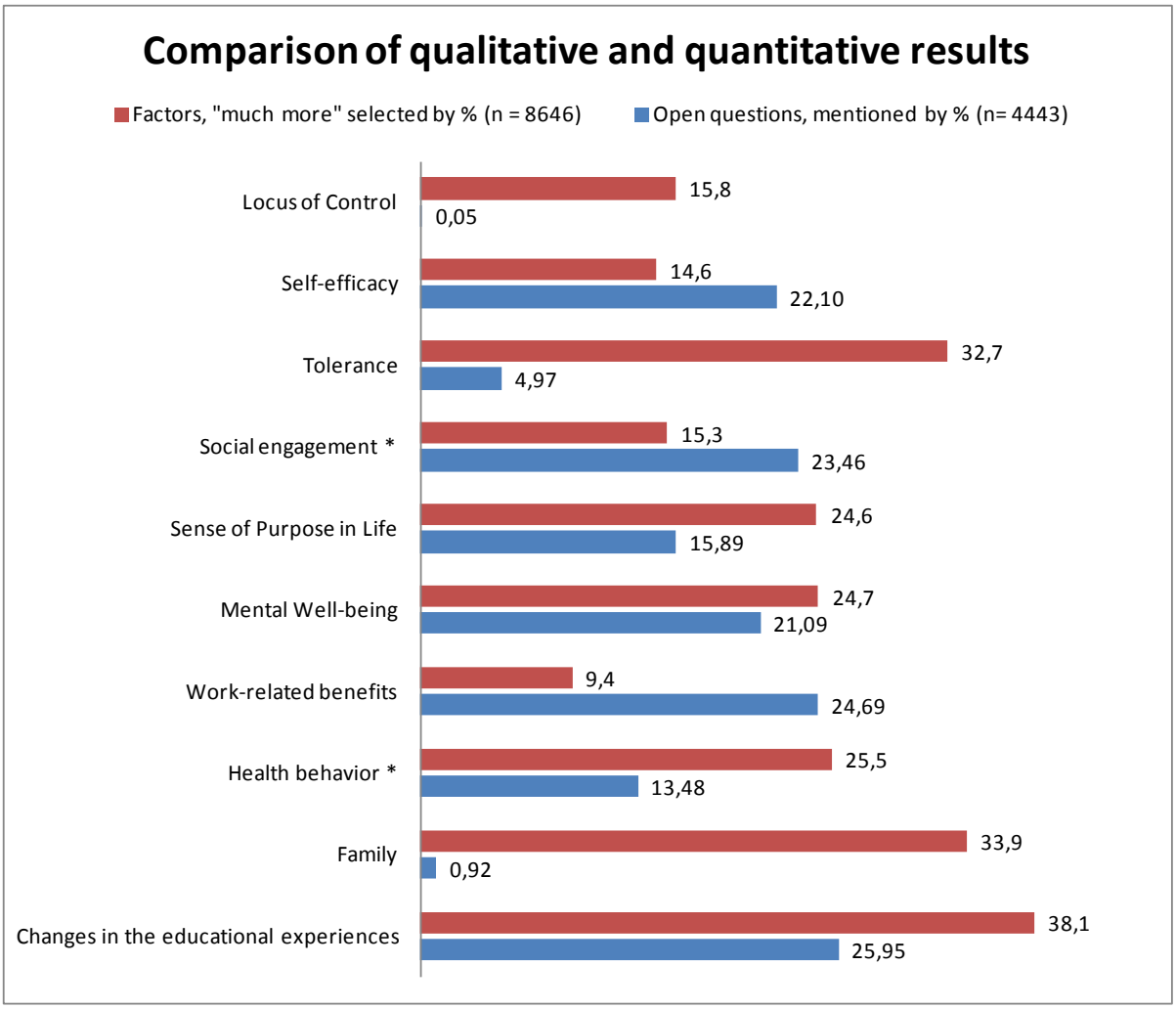


Figure 40 Comparison of benefit factors (survey data) and benefit categories (open questions)

As the figure show there are some differences on what benefits come out in survey statements and in the two open questions. For example only two respondents (0,05%) have mentioned spontaneously a benefit belonging to category Locus of control, but the statistical analysis of survey data show that 15,8% have experienced big changes in the items measuring psychological phenomena related to Locus of control. At first sight this result may seem contradictory, but one have to remember different nature of the questions used to collect the data, and also the nature of phenomena (here psychological construct Locus of control; Rotter, 1966). The percentages also measure different things: qualitative results show how many respondents have mentioned that benefit as the one that is the "top of iceberg" and best remembered, and quantitative results on the contrary are generalizable numbers indicating how many percent of liberal adult education course participants have experienced these benefits in their lives.

As described earlier, the open questions prompted the respondent to write down the best remembered outcomes and changes that come into his or her mind. The statements in the questionnaire, on the other hand, listed potential benefits, or like in this case, statements taken from psychological instruments measuring personality traits that are linked to feelings of external or internal locus of control. These statements were:

31. I feel that I have influence over the things that happen to me
28. When I make plans, I am certain that I can make them work
30. I am convinced that what happens to me is my own doing

In the qualitative analysis of open questions the following two statements were coded under theme "Control of own life", which remained as the only theme belonging to category "Locus of control":

> *[..] Looked at what I want from life, and am planning ahead, rather than reacting to external events*. (UK_OPEN_100261)

> *I found that for whatever it's a start and sustained effort can bring added value to the worth and try to thrive and have found that the impossible can become possible in some day* (RO_OPEN_500271)

It is obvious that the two qualitative statements are examples of the same psychological phenomena as the survey statements measure, reflecting increased sense of internal Locus of control (Rotter, 1966). However, since Locus of control is a psychological phenomenon which is not commonly recognized (even though it exists as a natural part of human behaviour), it needs to be measured indirectly using survey statements that are tested in many previous psychological studies. In plain language respondents don't spontaneously recognise or experience phenomena like "Locus of control" and potential changes in it, but when "tested" with questionnaire statements these changes can be made visible.

The other two bigger differences are related to benefit categories Tolerance and Family. These can be explained with social conventions like suitability or "keeping up the appearances". Open answers like "I am now much better father than before" are unlikely to appear in the qualitative data, because this kind of statements would reveal that the respondent was not a very good father before course. The Family related benefits are difficult to recognize spontaneously. These are also often tangible benefits which people are not looking for and are therefore difficult to recognize, and therefore mentioned seldom. In the interviews the benefit came out a couple of times, one example below show how one single parent have guilty conscience about participation, but realizes that it is good for her and for the child as well: the course helps a single parent to develop her well-being (unwind), which makes her a better parent, and forced absence of mother once a week also helps her child to become more independent:

> *"I actually had the feeling two months ago I think that I couldn't unwind properly but the course has helped me in this. It's good for him [*the child*] because he wants to feel emancipated and get to know the world." (GER_H)*

The same applies to Tolerance, which is a socially valued characteristic, and therefore lack of it is not necessarily brought into daylight easily. Work related benefits, on the other hand, are changes that are socially "accepted" and even expected, and therefore also easier to memorize and recognize, which explains that it comes out more often in the qualitative data.

5.3 Clustering the main benefit categories

As described in the previous section, the qualitative content analysis of the two open-ended questions (n = 4443 respondents) was combined with more structured quantification procedure (Silverman 1993), where the frequency of the qualitative themes found in the analysis was calculated. This quantification enables a descriptive analysis of qualitative results by giving also information, which benefits are more frequently mentioned in the open answers. The coding of open questions was organized using an Excel template, where number 1 was marked in the theme column, if the benefit was mentioned by the respondent (see Figure 36). The coding matrix is therefore also a data matrix,

where 1 indicates the existence of a specific benefit, and 0 (empty cell) respectively that the benefit was not mentioned by the respondent.

The data matrix allows therefore an additional statistical analysis of benefits found in the qualitative content analysis. These variables are dichotomous and therefore statistical methods like crosstabs analysis can be used to analyse the data. There are at least two theoretically interesting questions: (1) do the spontaneously mentioned benefits gather in some kind of groups or clusters, and (2) which benefits seem to co-exist in peoples' lives?

These same research questions were answered using the actual statistical data based on 8646 respondents' answers on Likert-scale questions using factor analysis and SEM-model, but this explorative additional analysis of qualitative themes gives another perspective and additional information about the benefits. The most interesting added value is that these qualitative results are based on spontaneous and best remembered (and experienced) benefits, and therefore the results should give a rather deep picture about the most important benefits the respondents have experienced and reported spontaneously, before they were given a longer list of potential benefits to select from.

To answer the first question we used Cluster analysis to find out, which benefit categories seem to form clusters. The second question was analysed using Crosstabs analysis, which helps to analyse whether respondents seem to mention the same two benefit categories more often. In other words, do those who have experienced changes in the Sense of purpose of life mention more often some other benefit categories, like Social network for example.

Clustering of the variables (not respondents) was made using Squared Euclidean measurement and Ward method. The clustering was done for benefit categories, but Locus of control, Trust and Family were not included in the analysis, because there were low frequencies in these categories (as shown in Figure 39). The next Figure shows the dendrogram describing the benefit clusters.

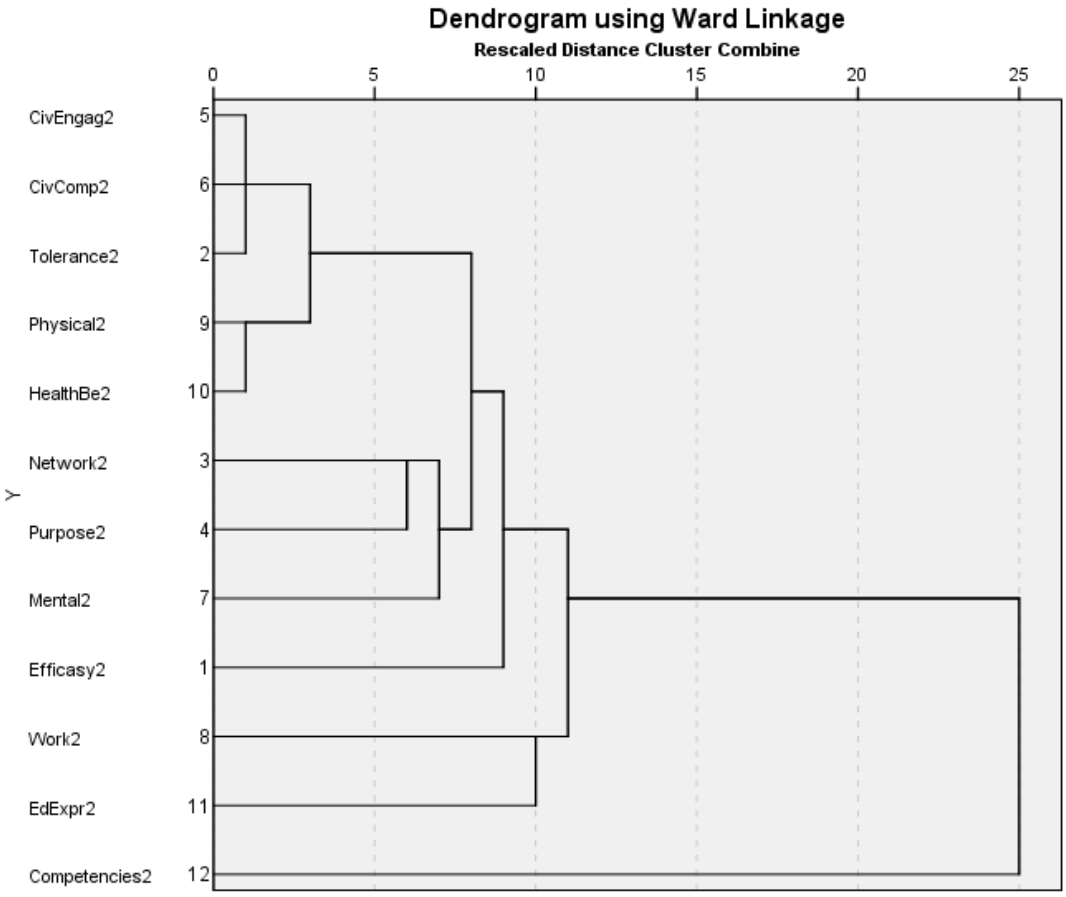


Figure 41 Cluster analysis of benefit categories

The results show that Civic and social engagement, Civic competencies and Tolerance form a first close cluster, as well as Physical health and Health behaviour do together. These benefit categories seem to be somehow related, and it is easy to find empirical interpretation for that as well: for example Health behaviour and Physical health are obviously linked in real life situations as well (compare also the results of factor analysis, Table 9 and Appendix 4).

In a similar way Social network, Sense of purpose in life and Mental well-being form a cluster. Later these three first clusters are linked together by Self-efficacy. Work-related benefits and Changes in educational experiences seem to have a more distant link to each other. Interestingly Skills and competencies are not too closely linked to any other benefit categories. More interpretation of these results is made later.

Crosstabs analysis was used to find out which benefits seem to exist more often together in the respondents open answers. In plain language the aim was to find the benefits that exist together more often, and which therefore are more likely to be linked somehow. Again the traditional correlation analysis of actual statistical data serves the same purpose, but as described earlier the data received through qualitative analysis of open questions is valuable in other ways, and brings additional perspective on benefits.

Pairwise cross tabulations of the dichotomous benefit variables (2*2 tables) were used to analyse relations between benefits. In addition to Chi^2 analysis we used adjusted residuals (Reynolds 1977) to identify the cells, in which the distribution of the observed count differed from the expected count. Adjusted residuals take into account the uneven distribution of observations in rows and columns, and are comparable with percentiles of the normal distribution. Therefore values greater than ±1.64

(which equals the risk level p=.05) suggest a statistically significant discrepancy between the observed and expected frequencies (Reynolds 1977, p. 12). An example is given in Table 52.

Table 52 Cross tabulation of Social network and Sense of purpose in life

Social network * Sense of Purpose in Life Crosstabulation

			Sense of Purpose in Life		
			Not mentioned	Mentioned	Total
Social network	Not mentioned	Count	3311	410	3721
		Expected Count	3211.8	509.2	3721.0
		% within Social network	89.0%	11.0%	100.0%
		% within Sense of Purpose in Life	86.3%	67.4%	83.7%
		Adjusted Residual	11.7	-11.7	
	Mentioned	Count	524	198	722
		Expected Count	623.2	98.8	722.0
		% within Social network	72.6%	27.4%	100.0%
		% within Sense of Purpose in Life	13.7%	32.6%	16.3%
		Adjusted Residual	-11.7	11.7	
Total		Count	3835	608	4443
		Expected Count	3835.0	608.0	4443.0
		% within Social network	86.3%	13.7%	100.0%
		% within Sense of Purpose in Life	100.0%	100.0%	100.0%

Pearson Chi-Square = 137.775, p < .000

This crosstabs analysis shows that Social network and Sense of purpose in life benefit categories are clearly interrelated somehow at statistically significant level. In this analysis the cell of interest is the cell that show the number of respondents (here 198 respondents) that have mentioned in their open answers benefits that belong into these both benefit categories. The adjusted residual in that cell (11.7) is statistically very significant, and show that there are much more respondents who have experienced both of these benefit categories than there should be, if the distribution was random. In plain language those who have created wider Social networks have also experienced an increase in Sense of purpose in life more often.

Table 53 summarize the results of crosstabs analysis for all benefit categories. It shows the positive adjusted residuals between pairs of benefit categories. In plain language the numbers indicate the benefit categories that have some kind of positive link to each other, i.e. that are mentioned together more often by the respondents . The bigger the number (adjusted residuals) the stronger is the link statistically.

Table 53 Crosstabs analysis of benefit categories: adjusted residuals

	Civic competence	Tolerance	Physical health	Health behaviour	Sense of purpose in life	Social network	Self-efficacy	Mental wellbeing	Changes in educational experiences	Work related benefits	Skills and competencies
Civic and social engagement	10.3				4.5	5.4					
Civic competence		2.5			4.4	2.4		3.5			
Tolerance						2.6					3.5
Physical health				19.3		3.1		14.9			
Health behaviour								5.2			
Sense of purpose in life						11.7	2.1	9.0	3.1		2.1
Social network							3.7	7.8	3.2		6.6
Self-efficacy								7.0	5.4	2.6	5.0
Mental well-being											
Changes in educational experiences											1.7
Work related benefits											

It should be noted that crosstabs analysis above is based on respondents' individual experience of benefits, but the previous cluster analysis was based on clustering of variables (benefit categories). These two analysis are summarized and combined in the following model, which describes how the benefit categories seem to be grouped (cluster analysis) and what kind of links these benefit categories seem to have to each other (crosstabs analysis). The font size of the benefit categories indicates the frequency of statements in that category. Note that the arrows show only interaction between benefits, and do not indicate causal impact or its direction, which cannot be analyzed with crosstabs methods.

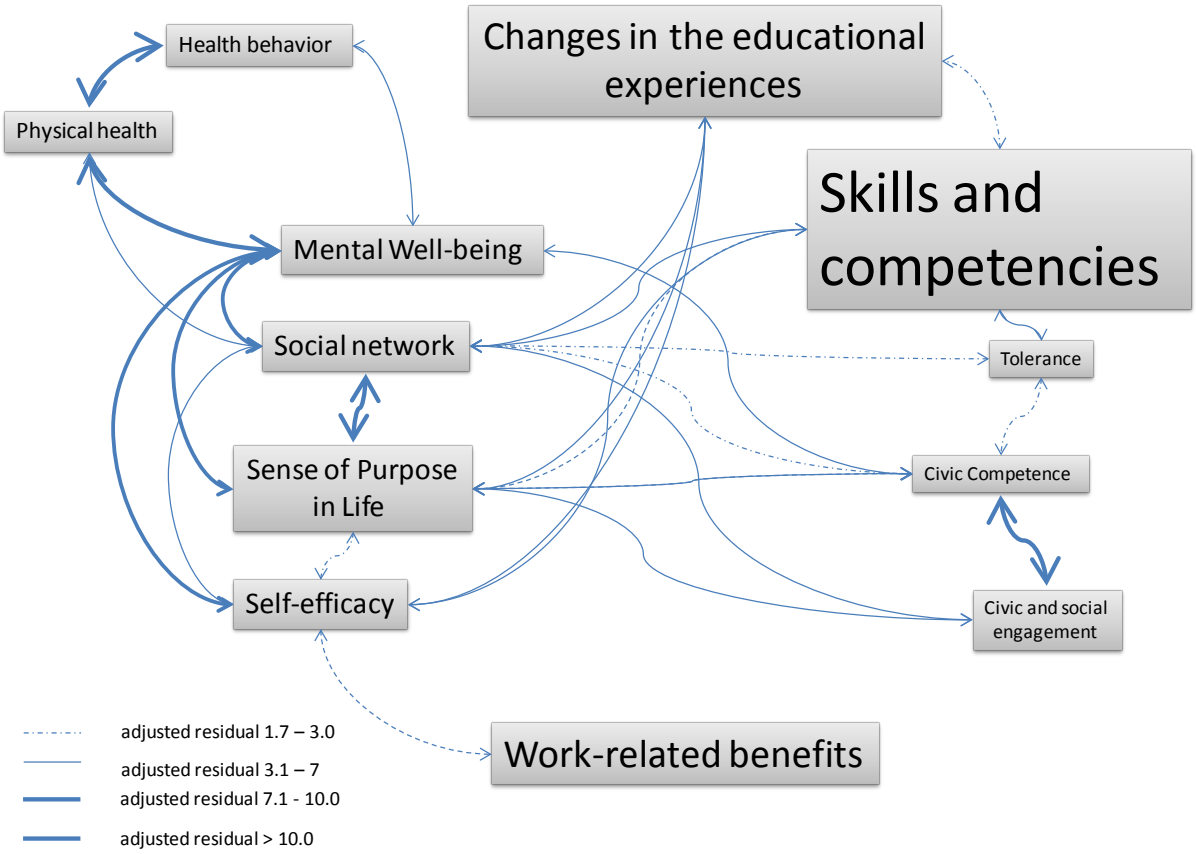


Figure 42 Mapping of benefit category clusters and the links between benefit categories

As the size of fonts reveal, the clusters and frequencies seem to indicate the same phenomena: there seem to be some benefits that only some subgroups of respondents seem to experience spontaneously. The model shows that Health behaviour and Physical health form a strong cluster, which is mentioned as "top" benefit by almost 7% of respondents. This cluster is linked to Mental well-being, which seem to act like a "mediating" benefit between another cluster of Social network, Sense of purpose in life and Self-efficacy. This cluster is more common, mentioned by 20% of respondents. In addition there is a more distant and rare cluster (mentioned by less than 5%) of active citizenship (Civic competence and Civic and social engagement, linked to increase in Tolerance). There are links to Skills and competencies, which clearly dominates as the main benefit category (mentioned by 73%) and into Changes in the educational experiences, but these seem to have weak connection to each other. Work related benefits seem to be quite isolated from other benefits, only linked weakly to increase in Self-efficacy. Work-related benefits and Changes in educational experiences both are mentioned by 25% of respondents.

The small benefit category Family (mentioned spontaneously in open answers by 41 out of 4443 respondents) was not included in this analysis and in the model, but separate analysis show that it was linked to Social network, Civic competence and Tolerance.

The general interpretation of model in Figure 42 could be, that Social network provided by the learning situation is rather central in the development of the benefits. It generates mental well-being, sense of purpose in life and better self-efficacy, and is also linked to better health. These processes seem to be supported by development of various Skills and competencies during the learning processes, and leads in changes in the educational experiences. In addition, there are smaller groups of participants who experience most strongly the health benefits of participation, and the smallest group who bring out spontaneously the increased active citizenship. Work-related benefits seem to

be quite common but not so strongly linked to other benefits. Main reason for that is the fact that the respondents who had participated language or ICT-courses and especially work-related courses tended to mention spontaneously mainly work-related benefits in their open answers:

> *It has had a positive impact on the skills I use in my day job* [UK_OPEN_100001]

Interestingly, also pure hobby related courses generate work-related skills. The following respondent had participated wood carving course at adult education centre:

> *Technical skill become better, social skills as well, good addition to my professional competencies* [FIN_OPEN_100343]

It could also be that these work related benefits are an "added bonus" people are not looking for when they participate non-vocational courses but which comes naturally, as a kind of side effect. The following examples from data seem to support this interpretation. The first respondent seems to have wider career options after learning new skills:

> *Confidence and new skills. Ability to widen career options* [UK_OPEN_100012]

> *By studying German language I made my language skills better. That skill I suppose I can use in working life and in my hobbies.* [FIN_OPEN_100366]

Another example are the benefits under theme "further education". Some respondents (1,9%) told that participation have brought in their minds the idea of going to formal education to get a formal degree:

> *Made me think about doing other courses or even an OU degree in the subject* [UK_OPEN_100057]

The central role of social networks and mental wellbeing is clearly visible in the qualitative data:

> *Intellectual stimulus. I am challenged to tackle pieces of writing and to participate in discussions which lead me to use and further develop a range of skills.* ***Both classes provide me with social contacts which have proved invaluable since my husband died. My mental wellbeing benefits because I have activities and topics to plan around which mean I am less isolated than I might otherwise have been****. Sharing ideas and responses is immensely important. There's not much point in having fascinating ideas about a play if there is no one to share them with.* [UK_OPEN_100291]

> ***Feel stronger emotionally. New friendships with other people*** *who are going through personal stress* [UK_OPEN_100348]

> ***Purpose, social contact****, thinking, enjoyment, sometimes frustration and despair and also excitement. Addictive, can't stop questioning etc.* ***Helps fight the drag of an ageing body****.* [UK_OPEN_100303]

> *Increades self-confidence in giving opinions and participating in discussion.* ***Better social and health and wellbeing outcomes thro' fellow students****, excellent tutors etc* [UK_OPEN_100056]

> ***Meeting people****, having a focus to my week, giving me something to look forward to. Enjoying the exercise and* ***helping me to keep fit. Helping me to come to terms with a loss I have***

had. I am pleased that I have been able to mix with people *with a shared interest and this is helping to rebuild my confidence to face the future.* [UK_OPEN_100063]

As mentioned earlier the learning process also encourages active citizenship – for some respondents - and changes educational attitudes. Learning outcomes in terms of Skills and competencies and work related benefits fuel the process as well.

> *Increased interest in the subjects concerned, expressed in further reading, analysis, & discussion with others.* ***Motivation to be more involved in positive community action. Reinforcement of my existing "Guardian-reader" liberal attitudes. I have helped found a new WEA branch to deliver this kind of course, and in our fourth year we are delivering 60 courses to around 1000 students. As a byproduct of this I am now on a committee of organizations co-operating to deliver adult learning in my area. This has resulted also in my taking an active interest in local and wider politics and the development of policy****.* [UK_open_100381]

> *Learned geriatrics and from voluntary work totally new things. Had no idea of these before. Got a new life contents after retiring after having worked 46 ½ years in the same workplace.* ***Work now on voluntary basis in sheltered home on weekly basis. My attitude on older people has changed because of information and experiences. I am motivated into this voluntary work.*** *I can get further training on it if I need it. I enjoy learning.* [FIN_open_200247].

The analysis of open questions show that Skills and competencies seem not be systematically linked to Changes in educational experiences, which gives reasons to believe that learning motivation, learner self-confidence etc. do not depend on the development of concrete skills and competencies, but more on other benefits like Social network and increased sense of Self-efficacy. The most isolated benefit category is Work related benefits, which might therefore be more unexpected side effects of participation in liberal adult education.

5.4 Credibility and dependability of the qualitative results

Qualitative analysis of two open questions for 4443 respondents in 10 countries is a demanding task, which include also dangers of validity and reliability – or credibility, transferability and dependability which are the respective terms used in qualitative research. According to Lincoln & Guba (1985; also Silverman 1993) the traditional positivist measures of validity and reliability should be replaced by other criteria in qualitative research. Instead of internal validity, they suggest assessing the credibility of results, which basically means that “the reconstructions of the researcher correspond to the constructions of the informants”. In plain language, this means that the results describe the experiences and conceptions of the respondents. In this study the qualitative analysis was data-driven, in other words, the benefit themes were defined and named using authentic statements. Analysis was also made in partner countries in original language, translations were only used in a later checking point.

Lincoln & Guba (1985) suggest that external validity should be evaluated by asking how transferable the results are. In qualitative research the results are usually transferable only to situations and settings similar to those where the data were collected. The research process should be described in such a detail that the readers are able to assess the transferability of the results in other populations and cultures. Since the results of this study are almost identical to those of earlier studies (e.g. Schuller et al. 2002; Feinstein et al. 2003; Manninen & Luukannel, 2008), it seems fair to assume that the results have some wider relevance as well, even though they undeniably revealed also some cultural and contextual differences. However, these differences were analyzed deeper, and they seemed to be based mainly on different respondent profiles, not on coding errors or on misinterpretation of guidelines or theme definitions, which would have reduced the credibility of the analysis.

In content analysis the traditional reliability criteria is valid for making sure that the analysis is flawless. In BeLL study the coding was made nationally by two independent coders. Intercoder reliability was not calculated, even though it would have been possible to do, because the aim was to get as good coding as possible, not to test how similar the coding was. Therefore the second coder was mostly pointing out cases where some discussion about codes and interpretations were needed, and then the coders agreed the corrections together. In addition, the transnational coding was compared in many ways using the Excel-template (Figure 36, also Table 54). For example frequencies and percentages of themes and categories per country were compared, as well as the average number of benefits coded per respondent.

Using this information additional checking of the coding was made by lead researcher of the survey Work Package, using Google Translate to translate answers into English. In some cases some coding errors were found, and the coding was checked again by partner if needed. During this checking process some changes were made for some cases between the themes within the same concept category (for example between Wider life circles and New hobbies, which both belong under the same theoretical concept, Sense of purpose in life), but not between concept categories. In Romania the number of codes was reduced a bit, because the first coding included some double coding for single statements, which was against the coding guidelines (see Appendix 6).

At the end of the coding process the remaining differences between countries were easy to interpret by different respondent or course profiles, and were therefore not likely to be coding errors. One good indicator is the average number of benefits mentioned by the respondents, which was finally 2,45 for all countries. As the following table show, there were very small differences between countries on that. This show that – interestingly – the respondents in different countries have reported spontaneously almost identical number of benefits, and that the coding process has been similar in different countries.

Table 54 Some comparative indicators of qualitative analysis in different countries

Country	n of cases analyzed	f of benefits found	average f of benefits mentioned per respondent	"No outcomes" (%)	No answer (%)
ENG	418	1086	2,60	1,0 %	10,3 %
FIN	415	1214	2,93	1,4 %	4,3 %
GER	400	1006	2,52	1,0 %	12,3 %
ITA	480	905	1,89	2,1 %	5,6 %
ROM	405	1133	2,80	3,2 %	8,4 %
SWI	275	698	2,54	2,2 %	9,5 %
SRB	417	1018	2,44	2,6 %	11,8 %
ESP	780	1568	2,01	10,5 %	26,2 %
CZE	385	898	2,33	2,1 %	3,6 %
SLO	468	1347	2,88	0,4 %	9,2 %
all	4443	10873	2,45	3,3 %	11,4 %

As the table show, Spain has a bit different percentage of answers which were empty (26,2 %) and answers, where the respondent implicitly wrote that learning had not generated any recognized benefits. This difference is probably based on the larger number of vocational course participants and immigrant respondents in Spain.

An additional method to check the reliability of the analysis was to compare different stages of analysis and the so called saturation point. No new themes were found at 4th stage, so it is fair to assume that the analysis of open questions 2.1 and 2.2 reached the so called saturation point (Strauss & Corbin, 1998, p. 136) which was also used in the earlier Finnish study (Manninen, 2010). The relative percentage of frequencies in themes and respective categories remained also almost unchanged (see Figure 43), which indicate that the qualitative analysis of 1698 cases (the first 100 cases per country) produced mainly similar results as the final analysis of 4443 cases (the first 400 cases per country).

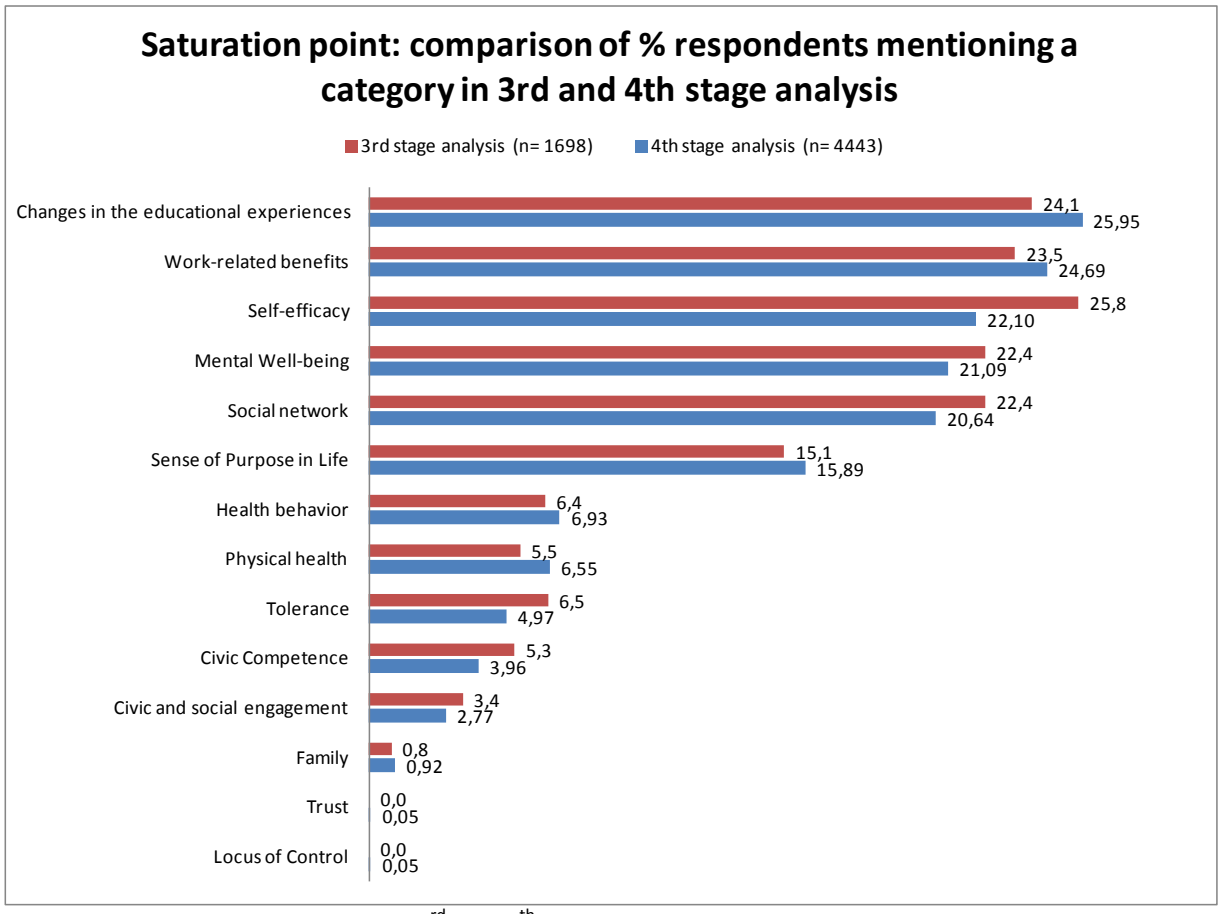


Figure 43 Comparison of results of 3rd and 4th stage content analysis

Lincoln & Guba (1985) suggest that rather than measuring reliability of the **results**, we should in qualitative analysis assess the dependability of the results. In BeLL study this means that whether the same respondents experience the same benefits if the data were collected at different situation or point of time. It is often unrealistic to assume that in behavioural sciences the results remain unaltered in the course of time since the phenomena themselves are constantly changing, and there are so many intervening variables. Instead, we should assess how the data collection situation has influenced the results. In this study data triangulation (individual interviews and open-ended questions in the survey) provided identical results and it is, therefore, fair to assume that the results have some stability over time.

6 How the elements of learning situation generate benefits

Earlier studies (eg. Hammond, 2005; Desjardins, 2003; 2008b) have indicated that the relationship of learning processes and wider benefits is a complex one. In order to analyze these relationships a set of structured and open questions was included in the survey questionnaire.

In the questionnaire the respondents were asked (question 2.4) to rate how important different elements in the learning situation have been for their learning and for the development of benefits. They were introduced a list of potential elements (teacher, teaching methods, group activities etc.) and asked in the following way to assess how important they considered these elements:

> *2.4 Now think back to your learning experiences during the past 12 months. Please estimate how important the following elements of learning situation were for the outcomes you listed above. Use a scale from (1) to (5), where (1) is not at all important and (5) very important.*

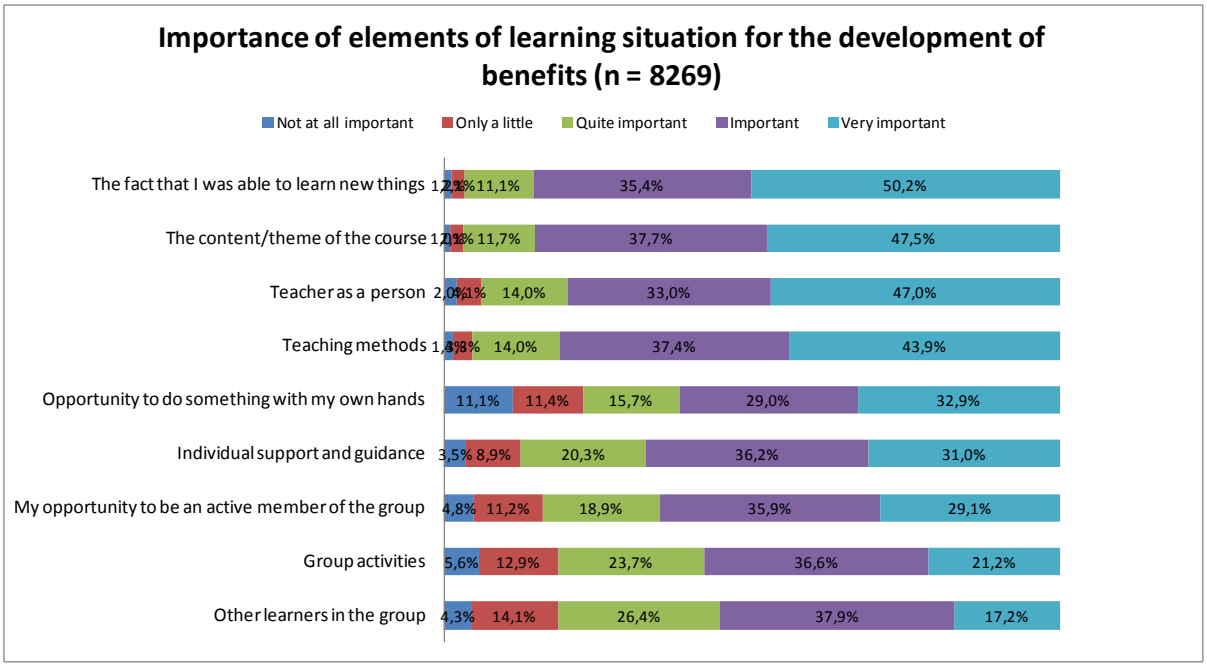


Figure 44 Importance of elements of learning situation for the development of benefits

The basic frequencies show that the respondents experience as most important elements the experience of learning new things, the contents of the course, teacher as a person and teaching methods. Group activities and other learners in the group are considered a bit less important elements.

Factor analysis was used to combine the elements into factors. Three factors were found in the analysis, and they were named “Teaching”, “Group” and “Self” (see Table 55). The two first factors were clear, indicating the importance of teaching, teacher and course contents, the second indicating the social dimension of learning (group processes and group membership). The third factor was named “Self”, because it seems to consist of elements related to individuals own personal learning experience: doing something with his/her own hands, getting individual support and learning new things.

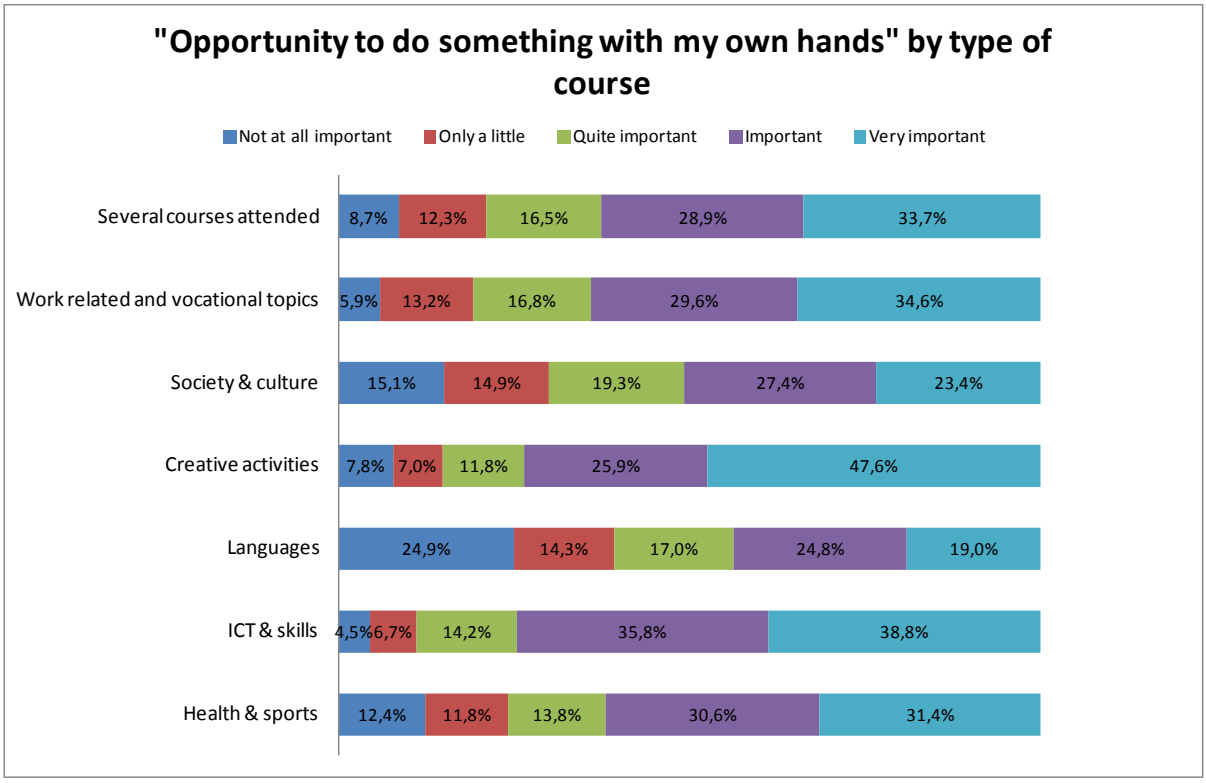
Table 55 Factor analysis of elements of learning situation

	Factor		
	”Teaching”	”Group”	”Self”

Teaching methods	.813		
Teacher as a person	.660		
The content/theme of the course	.532		
Group activities		.814	
Other learners in the group		.749	
My opportunity to be an active member of the group		.615	
Opportunity to do something with my own hands			.641
Individual support and guidance			.707
The fact that I was able to learn new things			.499

The group differences in individual statements and in factor scores were analyzed using ANOVA. There were statistically significant differences between all tested background variables in factor scores. For example women value more all elements except doing things with own hands, where there is no statistically significant difference by gender. At factor level women rate higher ”Teaching” related elements than men. There is a linear relation between ”Teaching” and age group, younger participants paying more attention on teacher and teaching – except for oldest age group, where again the importance of ”Teaching” is recognized more.

There are some differences between course types. “Group” is a bit less important in Health & sports related courses and in Language courses (perhaps participants focus on their individual performance?). ”Teaching” is valued highest in ICT & skills related courses, and also “Group” and ”Self”. “Self” is also important in Creative activities, but less in Language courses. This can be explained by statement “Opportunity to do something with my own hands”, which is naturally important for handicrafts and other creative courses. The following figure shows the differences in that element.



There is a linear and clear relationship between educational level and all factors: the lower the educational level, the higher all elements are valued in the learning situation. It seems that lower educated need more support from ”Teaching”, ”Group” and from “Self” through own positive learning experiences. The following figure show the linear trend on how the importance of “Teaching” became smaller when educational level becomes higher.

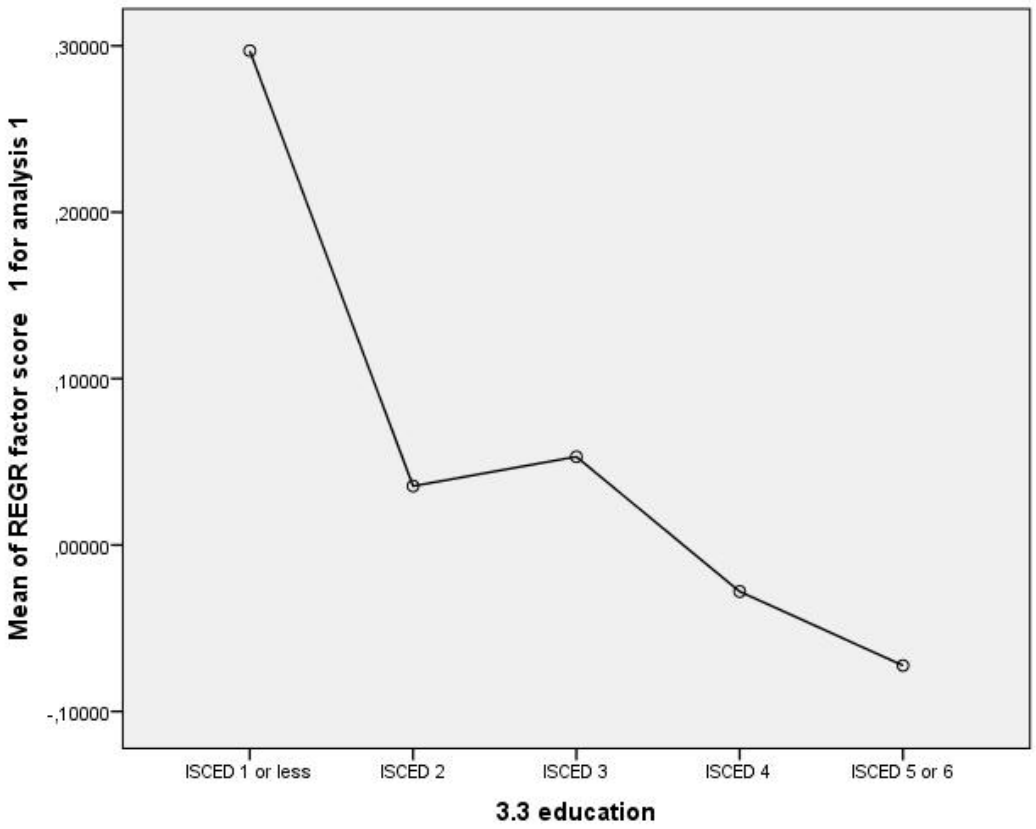


Figure 45 Comparison of ”Teaching” factor scores by different educational levels

The relationship is similar for “Group” and “Self”. The following figure shows the same result for “Self” related elements. Respondents with lower educational level value more individual support and enjoy learning in itself and doing things by own hands.

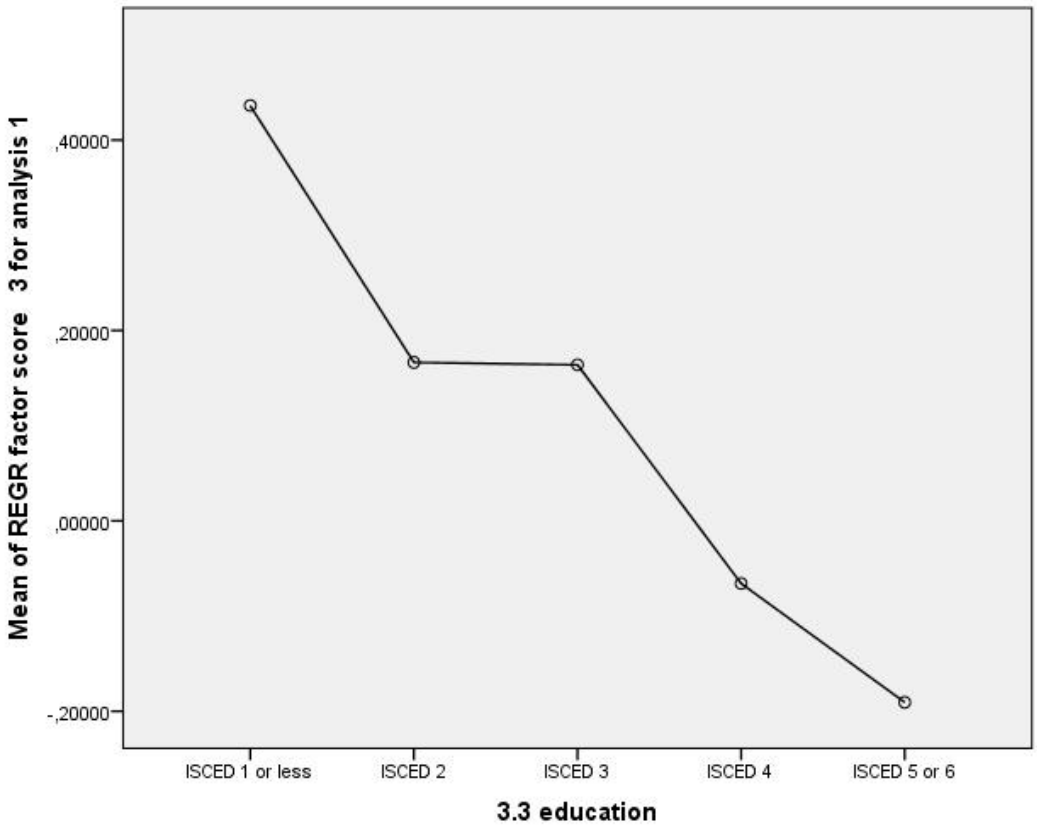


Figure 46 Comparison of ”Self” factor scores by different educational levels

Some differences at statement level (single elements) are described in the following figures. Educational level seems to be strongly linked to experiencing teacher’s personality (Figure 47) and group activities (Figure 48) as an important element.

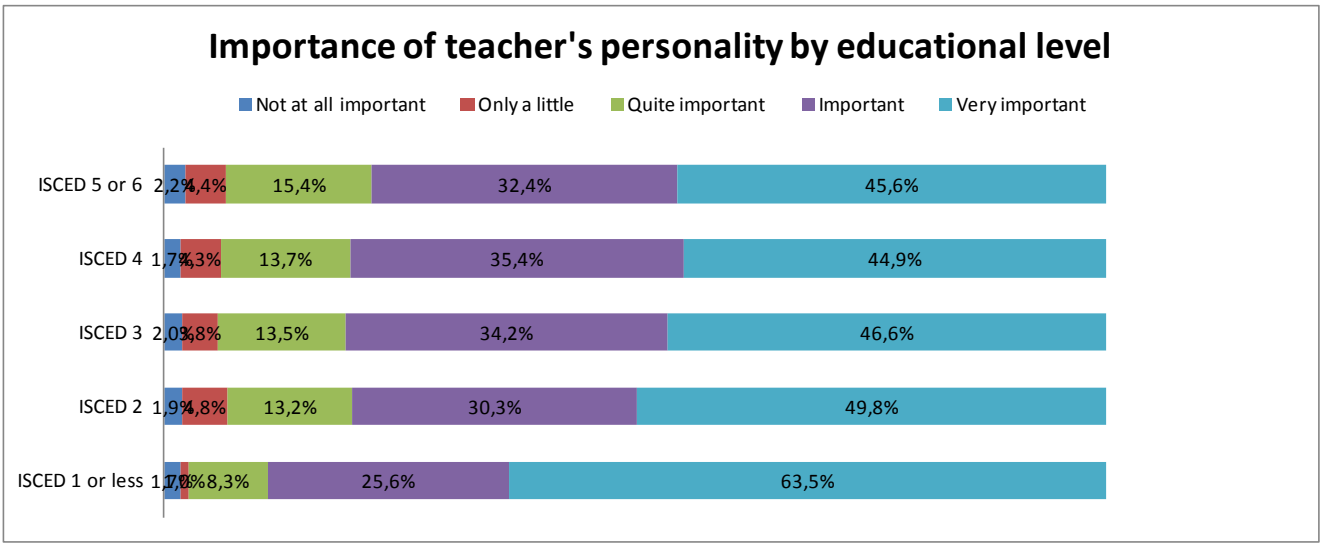


Figure 47 Importance of teacher’s personality for the development of benefits

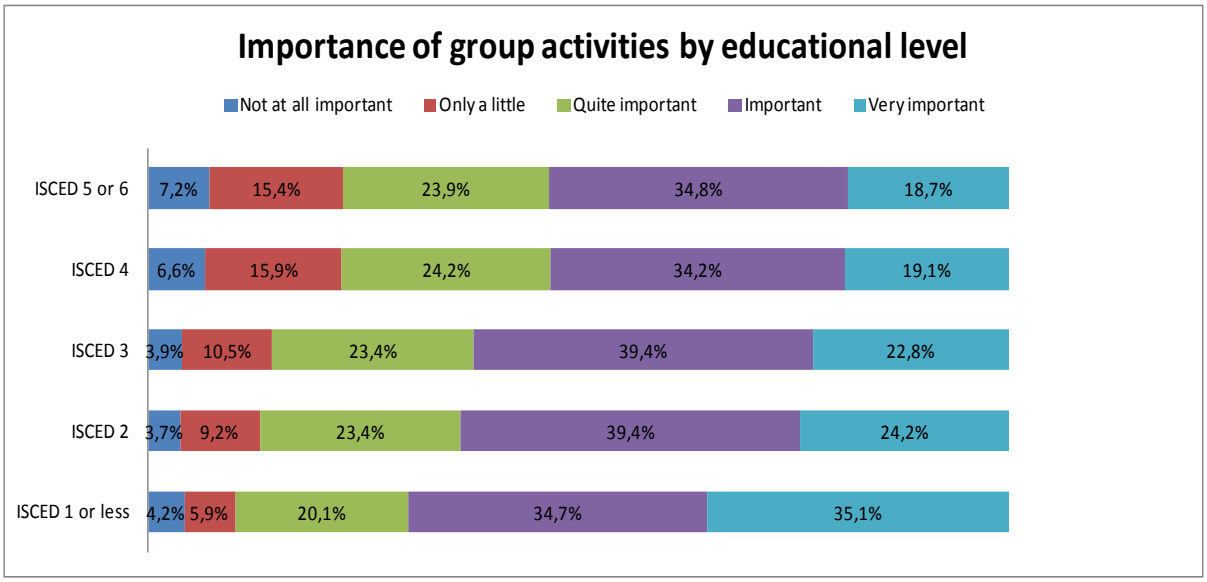


Figure 48 Importance of group activities for the development of benefits by educational level

This strong link between educational level and importance of various "external" elements for the development of benefits is easy to explain by educational background. The higher the educational level is, the better learning skills and at least wider learning experience the adults have. This in turn is likely to reduce the dependence of external support (by teacher or group) in a learning situation. From policy perspective this result stresses the importance of various elements in the learning situation for the lower educated adults. Training organizations and policy makers should provide sufficient resources for adult training courses, and adult educators should make optimal use of group processes.

After the list of structured statements the respondents were also asked to answer an open question, to give examples of how these elements have been important for the development of outcomes:

> *2.5 If Possible, please give one or two examples which illustrate, why and how these elements were important for the outcomes you stated earlier.*

The answers were analyzed using qualitative data driven content analysis following similar procedure as in the analysis of two open benefit questions 2.1 and 2.2 (see Chapter x for details). So far only 1312 cases have been analyzed, but the themes found give already a quite good picture about the elements that the respondents themselves see important for development of the benefits. The following figure show the main themes ("elements" mentioned by the respondents) found in the qualitative analysis. A more detailed table of themes and frequencies is available in Appendix 9.

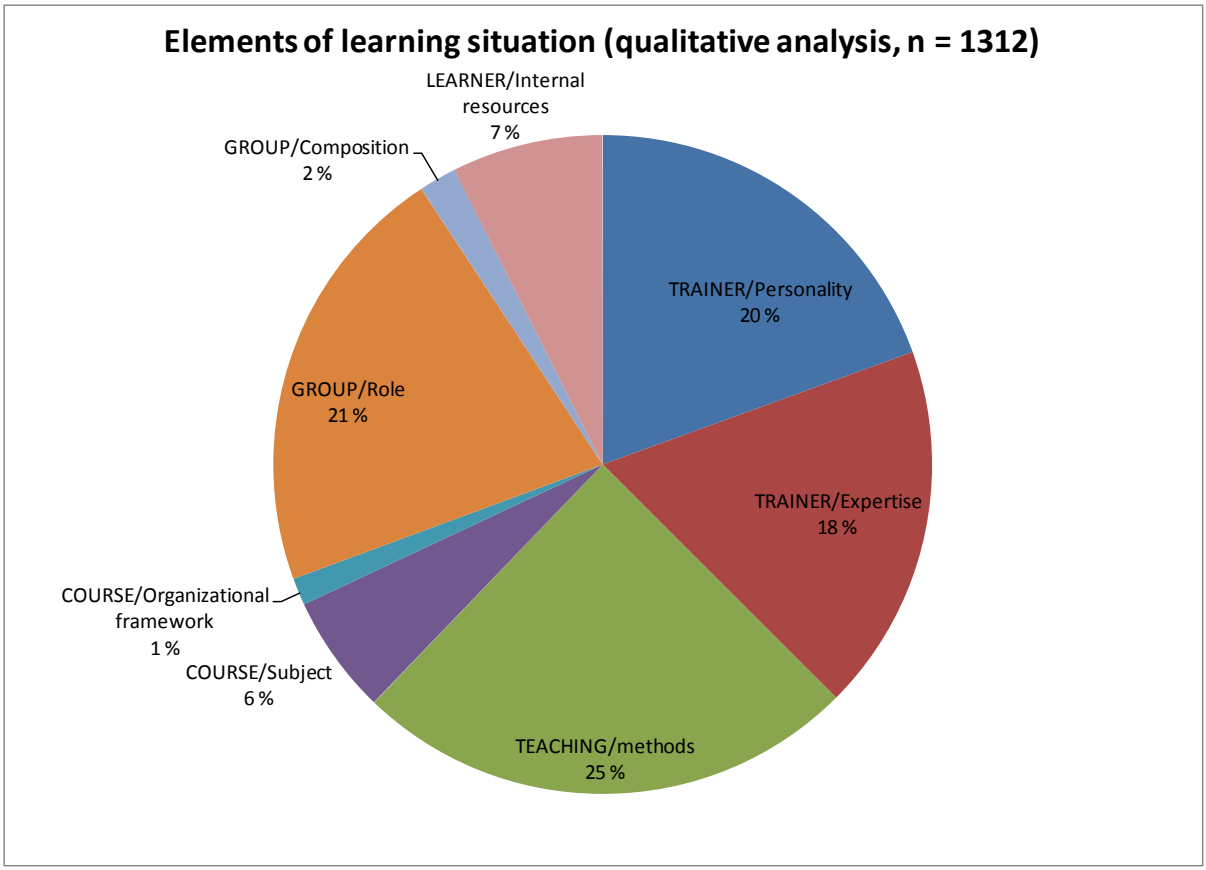


Figure 49 Elements that were experienced as important for development of benefits

A deeper qualitative analysis of open question 2.5 will be done later, using more cases and looking also for the processes **how** the elements support the development of benefits.

7 Summary

7.1 Summary of key findings

The BeLL study shows that participation in liberal adult education generates multiple benefits for individuals. These benefits are likely to have also impact on their immediate social groups like family, work place and other social networks, and therefore liberal adult education generate benefits for society as well. Out of the 8646 respondents 70 - 87 % has experienced positive changes in learning motivation, social interaction, general wellbeing and life satisfaction. Less frequently experienced changes related to work and career and on active citizenship, but even here 31 - 42 % has experienced some positive changes. Qualitative analysis of open questions in the survey (n=4443) show that people are able to recognize, name and describe these benefits.

Statistical analyzes of survey data (n= 8646) was used to define 10 benefit factors. These benefit factors were further summarized as second order latent factors indicating changes in CONTROL OF OWN LIFE, ATTITUDES & SOCIAL CAPITAL and HEALTH, FAMILY & WORK.

The factors were used to calculate sum scores which were used to analyze how different groups of people benefit from adult learning. There are some small but statistically significant differences between genders, types of courses and countries. Differences between countries can be mainly explained by different course or respondent profiles, but some differences in national results remain unexplained and need to be analyzed deeper later. For example there are quite big differences in changes in trust in decision makers and interest in politics between countries. Also the impact of adult learning seems to be different in some countries: respondents in Slovenia, Romania and Spain seem to experience more changes, even when background variables are controlled for.

The statistically significant differences by gender, age, employment status and course types are in practice rather small, and the main result is that all groups benefit from liberal adult education, and that all types of courses generate changes in peoples' lives.

Perhaps the most significant differences were found when development of benefits was compared by educational background. The lower the educational level is, the more changes participation in liberal adult education generates. Analysis of the BeLL data indicate, that the lower educational background the respondent have, the more they have experienced positive changes in motivation, see adult education as a more important opportunity, feel more confident as learners, and also more often encourage others to learn as well. These changes are biggest in the group, where educational background is at ISCED 1 or lower level (primary education, or first stage of basic education, or less). This means that liberal adult education can narrow gaps between different social groups caused by differences in childhood schooling opportunities. Liberal adult education is therefore an important "equalizer" of well-being and learning opportunities, because it is likely to increase the probability of future participation, particularly for those who have had poor previous educational experiences. Therefore it is a good low threshold learning service motivating especially lower educated to study further (compare Field, 2009, 36).

Lower educated also experience more positive changes in other benefits, in other words, they benefit more from participation. This can be explained by the fact that those who have higher educational level, already have also a better control of their own life, can support more their kids' learning, have better health etc., and therefore participation in adult education do not generate so big additional changes in their life as it does for lower educated.

Lower educated also seem to need more support from teacher and group. They see the different elements of learning situation more important for the development of benefits than those, who have better educational background and therefore better learning skills.

There are some age related differences which have policy relevance as well. For younger participants liberal adult education serves as a "stepping stone" into society, improving their sense of control of their own life. For older participants it is a "cushion" softening age related changes like retirement, loss of friends and family members, and skills decline.

The results also give evidence about the processes how the benefits develop. According to Kil, Motschilnig & Thöne-Geyer (2013) the wider benefits are achieved through two mechanisms:

1. Education and learning in itself can strengthen the development of personal characteristics and abilities, key skills, abilities and personal resources as well as reinforcing belief in the individual's ability to deal with disadvantageous situations. Education also helps individuals to make well-reflected decisions on their behaviour, which are related to their health and happiness.

2. Social interaction enables access to individuals and groups with a similar and heterogeneous socio-economic background, encourages social cohesion and provides the possibility of social involvement.

The BeLL survey results validate these assumptions. Two models were created to show how the benefits develop and how they are linked to each other, using both qualitative (analysis of open questions) and quantitative (structural equation model) data and methods. Both models indicate that social interaction and development of new social networks acts as a "seed" for generation of various benefits. Learning voluntarily and in a relaxed situation in a group seem to help learners to get positive learning experiences, gain self-confidence and other benefits, which in turn lead into wellbeing and into various wider benefits. The following figure summarizes the key message of the rather complex SEM-model which was presented earlier (Figure 35) in plain language.

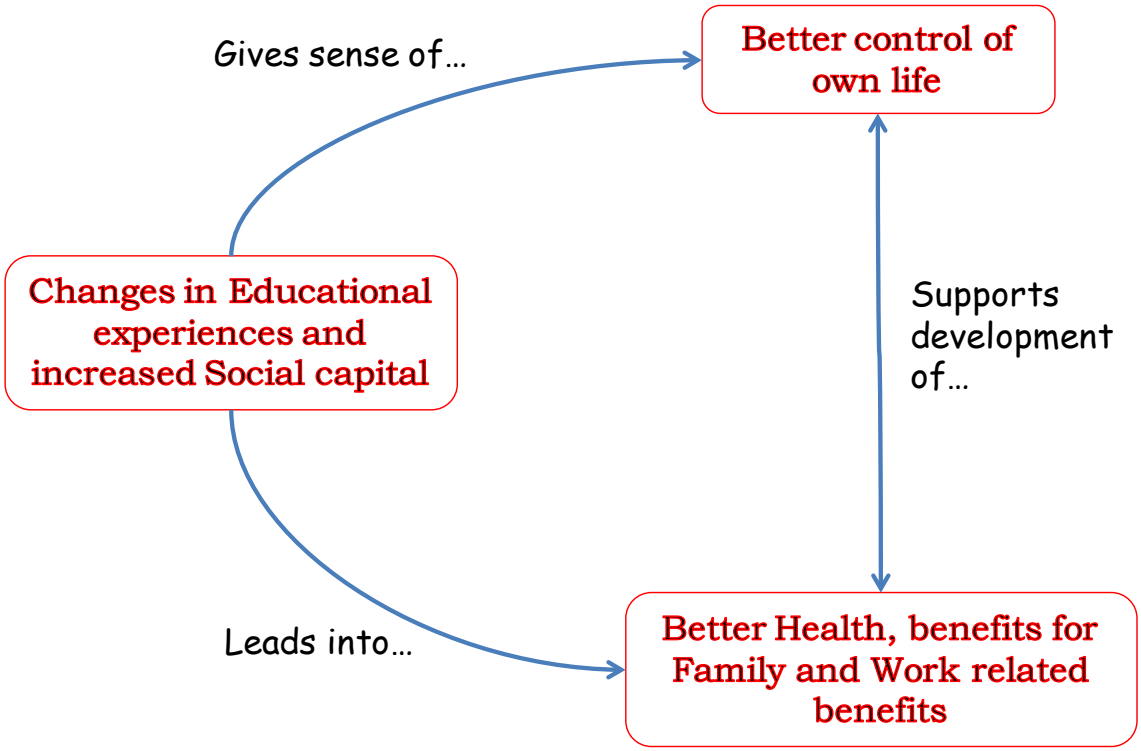


Figure 50 Development of benefits – the SEM model in plain language

7.2 Theoretical support for the results

The BeLL survey results and interpretations based on the SEM-model (Figure 35) and on the model summarizing the qualitative analysis of open questions (Figure 42) can be supported by theories and previous research. For example there is empirical evidence that social capital and health are related. Chen & Yang (2013) show that there is a connection between social capital and individual's possibilities to maintain good health. Elliott, Gale, Parsons & Kuh (2014) found a strong relationship between mental wellbeing of older adults and social cohesion (sense of neighbourhood belonging and social participation).

The general structure of the SEM-model can be validated by previous studies. Field (2009, 26) summarizes the results of several studies showing that extended social networks and increased social

capital in general play an important role in the development of benefits, as well as the development of shared norms and tolerance. There is also strong evidence that participation generates confidence and self-efficacy, or using a more general theoretical concept, sense of agency (Archer, 2003; defined as "perceived control over important life choices" by Field, 2009, 27) which equals 'Control of own life' in the SEM-model.

Strong theoretical support for the BeLL results can be found from Self-determination theory (SDT; Deci & Ryan 1985; for examples of empirical research see Deci & Ryan 2008; Sierens, Vansteenkiste, Goossens, Soenens & Dochy 2009; Baeten, Dochy & Struyven 2013). SDT is based on the observation that autonomous motivation and interpersonal contexts facilitate basic psychological human needs such as competence, autonomy and relatedness, and these are related to psychological health (Deci & Ryan 2008, 14). In addition, since liberal adult education is a voluntary activity, it is based on and generates autonomous motivation (as opposed to controlled motivation, like in non-voluntary education) which involves sense of volition and choice, which in turn generates better psychological, developmental and behavioural outcomes (Deci & Ryan 2008, p. 14-15), as well as high interest and enjoyment (Baeten & al. 2013, 485). It seems that voluntary participation in liberal adult education generates benefits because it offers activities focusing on topics that have personal relevance, provide social interaction and experiences of self-fulfilment and achievement. In SDT terms, liberal adult education provides "*a sense of volition and psychological freedom in learning (need for autonomy), feeling effective in learning (need for competence), and experiencing a sense of friendship and closeness to peers (need for relatedness)*" (Baeten & al. 2013, p. 485).

The central role of "Changes in educational experiences" in the SEM-model can be explained also with help of Motivational expectancy model (Pintrich 1988). It explains how motives activate, direct and maintain the learning activity. Activating elements are more or less stable personality elements (like curiosity, learner self-image), while directing factors (like outcome beliefs, task value) focus the persons interest on a specific target (a learning activity). Elements maintaining motivation ([test] anxiety, expectancy for success) influence learning activity while it is taking place or as feedback loop after the learning experience (like achievements) influencing therefore future motivation to participate or not. Since liberal AE courses are selected by learners themselves, the activating and directing elements (like curiosity, task value) are automatically present in the learning situation. Slow paced instruction, low expectancy levels and rarely used tests reduce anxiety, and small gradual achievements lead into positive learning experiences, and therefore also in changes in learner self-image and in self-confidence. These in turn may lead into better sense of control of own life, as the SEM-model suggest.

Increased learning motivation and perceived higher importance of adult education can also be explained using Pintrich's (1988) model. Many of its components depend on the image the person has about training. For example learner efficacy control is based on the images one has about adult training situations. Lower educated and less experienced adult learners depend more on prior schooling experiences, which therefore play a central role in their motivation (see Manninen 2003). New – positive – learning experiences at adulthood are therefore likely to change these images, and as described earlier, voluntary participation in liberal AE is more likely to generate these positive learning experiences.

The ability of liberal AE to change educational experiences links BeLL results into the long tradition of participation research (cf. Cross 1981; Rubenson 1979; Cookson 1986), where the expectancy – valence -analysis made by the individual (Rubenson 1979; compare Pintrich 1988) plays a central role, among many other factors. Expectancy is in many ways based on the images the person has about adult education, and about his/her learning abilities and the usefulness of education and training in general. Some models (cf. Manninen 2003; 2006) see learning behaviour as a process similar to customer behaviour, where adult learners are seen as decision makers, who more or less consciously

analyse their past experiences, current life- and work situation, and future expectations, and base their decisions to participate or not on these complex elements.

This "customer perspective" is linked to single statement in survey measuring willingness to tell others about own learning experiences and about learning opportunities (*19. I am encouraging others to learn too*). This question is based on Jensen's (1999) idea of Dream Society, where positive experiences are shared with others through "stories". Since the individual's social class influences the reference groups s/he finds attractive, the individual's background is likely to have some influence on what kind stories (Jensen 1999) about learning experiences one is likely to hear. In policy perspective a good improvement is, if lower educated and other less active groups (men, immigrants, young people) get positive learning experiences and start spreading the word ("telling stories") among their reference groups and significant others.

Positive learning experiences have also a clear link to family benefits, as the SEM-model indicates. Parents felt that they are now more supportive for their children's learning, which is likely to result from own learning experiences and from the increased perceived importance of education. Similar results have been found in earlier studies (Wolfe & Haveman, 2002), and the well-known correlation between parents' educational level and children's' educational attainment verify this as well.

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Appendixes

Appendix 1. Respondent profiles by country (Table 56 to Table 63)

Table 56 Number of liberal adult education courses attended by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
one course	356	546	375	352	801	138	653	565	940	608	5334
	50,2%	43,6%	41,6%	64,8%	76,8%	50,4%	66,6%	62,9%	95,0%	57,6%	61,7%
two courses	184	330	245	97	121	78	145	219	32	276	1727
	26,0%	26,4%	27,2%	17,9%	11,6%	28,5%	14,8%	24,4%	3,2%	26,2%	20,0%
three courses	87	187	148	53	55	39	144	78	8	110	909
	12,3%	14,9%	16,4%	9,8%	5,3%	14,2%	14,7%	8,7%	,8%	10,4%	10,5%
more than 3 courses	82	189	134	41	66	19	39	36	9	61	676
	11,6%	15,1%	14,9%	7,6%	6,3%	6,9%	4,0%	4,0%	,9%	5,8%	7,8%
	709	1252	902	543	1043	274	981	898	989	1055	8646
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 57 Gender by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
Male	173	278	221	113	379	97	276	298	305	303	2443
	24,8%	22,5%	25,4%	21,4%	36,8%	36,1%	28,3%	35,3%	31,1%	29,0%	28,8%
Female	524	957	649	415	651	172	700	546	676	741	6031
	75,2%	77,5%	74,6%	78,6%	63,2%	63,9%	71,7%	64,7%	68,9%	71,0%	71,2%
	697	1235	870	528	1030	269	976	844	981	1044	8474
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 58 Educational level by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
ISCED 1 or less	62	4	9	20	3	1	99	114	1	11	324
	9,1%	,3%	1,1%	3,8%	,3%	,4%	10,2%	13,2%	,1%	1,0%	3,8%
ISCED 2	53	65	171	90	2	17	10	308	23	86	825
	7,8%	5,2%	20,0%	17,3%	,2%	6,4%	1,0%	35,7%	2,3%	8,2%	9,7%
ISCED 3	107	249	188	194	368	81	355	282	210	690	2724
	15,7%	20,1%	22,0%	37,2%	35,9%	30,5%	36,4%	32,7%	21,3%	65,5%	32,2%
ISCED 4	125	353	47	181	90	34	101	70	382	0	1383
	18,4%	28,5%	5,5%	34,7%	8,8%	12,8%	10,4%	8,1%	38,7%	,0%	16,3%
ISCED 5 or 6	329	566	440	35	548	132	410	83	370	267	3180
	48,4%	45,6%	51,5%	6,7%	53,5%	49,6%	42,1%	9,6%	37,5%	25,3%	37,6%
Other	4	3	0	1	13	1	0	6	1	0	29
	,6%	,2%	,0%	,2%	1,3%	,4%	,0%	,7%	,1%	,0%	,3%
	680	1240	855	521	1024	266	975	863	987	1054	8465
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 59 Employment status by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
Employed full time	119	467	298	100	510	142	295	133	483	197	2744
	17,3%	37,6%	34,6%	18,8%	49,5%	52,2%	30,4%	16,0%	48,9%	19,2%	32,5%
Employed part time	81	74	165	37	66	59	35	77	110	19	723
	11,8%	6,0%	19,1%	7,0%	6,4%	21,7%	3,6%	9,3%	11,1%	1,9%	8,6%

Self-employed or free-lancer	52	61	83	49	71	27	109	41	127	37	657
	7,6%	4,9%	9,6%	9,2%	6,9%	9,9%	11,2%	4,9%	12,9%	3,6%	7,8%
Doing housework at home	48	20	58	19	19	5	10	42	16	15	252
	7,0%	1,6%	6,7%	3,6%	1,8%	1,8%	1,0%	5,1%	1,6%	1,5%	3,0%
Student full time	14	51	17	17	236	8	195	63	54	7	662
	2,0%	4,1%	2,0%	3,2%	22,9%	2,9%	20,1%	7,6%	5,5%	,7%	7,8%
Student part time	33	6	4	4	10	6	64	40	6	3	176
	4,8%	,5%	,5%	,8%	1,0%	2,2%	6,6%	4,8%	,6%	,3%	2,1%
Retired/early retire-ment	262	501	209	267	59	17	71	219	47	539	2191
	38,1%	40,4%	24,2%	50,3%	5,7%	6,3%	7,3%	26,4%	4,8%	52,5%	26,0%
Unemployed	78	61	26	37	48	7	190	215	144	203	1009
	11,4%	4,9%	3,0%	7,0%	4,7%	2,6%	19,6%	25,9%	14,6%	19,8%	12,0%
Other	0	0	2	1	11	1	1	0	0	7	23
	,0%	,0%	,2%	,2%	1,1%	,4%	,1%	,0%	,0%	,7%	,3%
	687	1241	862	531	1030	272	970	830	987	1027	8437
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 60 Employment status (subpressed) by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
In working life	252	602	546	186	647	228	439	251	720	253	4124
	36,7%	48,5%	63,5%	35,1%	63,5%	84,1%	45,3%	30,2%	72,9%	24,8%	49,0%
Student	47	57	21	21	246	14	259	103	60	10	838
	6,8%	4,6%	2,4%	4,0%	24,1%	5,2%	26,7%	12,4%	6,1%	1,0%	10,0%
Outside labourmarket	310	521	267	286	78	22	81	261	63	554	2443
	45,1%	42,0%	31,0%	54,0%	7,7%	8,1%	8,4%	31,4%	6,4%	54,3%	29,0%
Unemployed	78	61	26	37	48	7	190	215	144	203	1009

	11,4%	4,9%	3,0%	7,0%	4,7%	2,6%	19,6%	25,9%	14,6%	19,9%	12,0%
	687	1241	860	530	1019	271	969	830	987	1020	8414
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 61 Age groups by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
15-24	24	37	16	6	359	13	253	220	103	34	1065
	3,6%	3,2%	1,9%	1,1%	35,3%	5,0%	26,2%	26,5%	10,8%	3,4%	12,9%
25-36	98	89	134	59	342	74	460	169	370	143	1938
	14,8%	7,6%	16,0%	11,2%	33,6%	28,5%	47,7%	20,4%	38,7%	14,2%	23,6%
37-49	160	237	250	79	217	89	136	110	278	171	1727
	24,2%	20,3%	29,8%	15,0%	21,3%	34,2%	14,1%	13,3%	29,0%	17,0%	21,0%
50-64	199	502	279	187	69	72	80	175	189	408	2160
	30,2%	43,0%	33,2%	35,5%	6,8%	27,7%	8,3%	21,1%	19,7%	40,6%	26,3%
65-92	179	303	161	196	30	12	36	156	17	248	1338
	27,1%	25,9%	19,2%	37,2%	2,9%	4,6%	3,7%	18,8%	1,8%	24,7%	16,3%
	660	1168	840	527	1017	260	965	830	957	1004	8228
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 62 Citizenship of the respondents by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	

I am a citizen of this country	612	1225	810	494	991	229	929	732	951	997	7970
	89,3%	99,4%	94,1%	95,0%	96,2%	85,4%	96,4%	88,7%	99,2%	97,7%	95,3%
I am a citizen of another European country	47	8	33	13	35	33	15	24	7	15	230
	6,9%	,6%	3,8%	2,5%	3,4%	12,3%	1,6%	2,9%	,7%	1,5%	2,7%
I am a citizen of a non-European country	26	0	18	13	4	6	20	69	1	8	165
	3,8%	,0%	2,1%	2,5%	,4%	2,2%	2,1%	8,4%	,1%	,8%	2,0%
	685	1233	861	520	1030	268	964	825	959	1020	8365
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 63 Mother tongue of the respondents by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
Different mother tongue than the one used in the questionnaire	143	38	77	22	64	34	28	219	17	81	723
	21,1%	3,1%	8,8%	4,1%	6,2%	12,7%	2,9%	26,2%	1,7%	7,9%	8,6%
Same mother tongue as the one used in the questionnaire	534	1185	801	509	971	234	938	616	965	945	7698
	78,9%	96,9%	91,2%	95,9%	93,8%	87,3%	97,1%	73,8%	98,3%	92,1%	91,4%
	677	1223	878	531	1035	268	966	835	982	1026	8421
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Appendix 2. Analysis of Question 1.2: Categories for course topics

This guideline and list of categories was used to analyze the following question in the BeLL survey:

Q1.2: *Please give the name, topic and total length (in hours) of your liberal adult education courses (max. 3).*

Course topics were categorized manually, using the name and topic of the course.

main category	Subcategories and code	Definition	Examples
Society and culture	1 social education	Soft skills, Communicating, Parenting, Recycling/ Environment/ sustainable Development, social support	• Equality & Diversity • Advice and guidance level 3 • Safeguarding Children • First Aid • Women's Lives • Cancer in the Workplace
	2 political education	Active citizenship, politics, policy, working in associations	• Shop Steward • Current affairs and international issues • Burning issues (media and news)
	4 history	History courses	• British Monarchs from Elizabeth I to Elizabeth II • Byzantium • Archaeology and History: Aims and Methods • A Brief History of Australia
	5 Culture	Talking & reflecting about music, literature, architecture, philosophy, arts, art history	• Buildings in Derbyshire • art history • Free Will: Philosophy • Enjoying opera • An Introduction to Medieval Art
	24 science courses	science related topics	• Genes and the Genome • astronomy • Animal science

			• Inside Human Cells and Tissues
Languages	3 languages	Language courses as a hobby (note that basic language skills for immigrants should be coded into basic language skills)	• Intermediate German • Japanese AS plus A2 • Learning Russian • Beginner's Spanish • Italian for beginners
ICT & skills	6 ICT	Computers and ICT at more advanced level (not basic ICT skills, which has an own category)	• Computer Skills Workshop • Designing websites • Spreadsheets
	15 basic competencies	Basic competencies like managing own life and economy, employability skills etc. Basic skills courses where the type of skill is not defined	• Money Management: managing income and costs • Employability Skills: getting back to work • Essential skills
	16 basic literacy skills	courses on basic literacy skills	• Adult literacy
	17 basic numeracy skills	courses on basic numeracy skills (counting, pure math's, using numbers)	• Maths • Foundation Maths
	18 basic language skills	courses on basic language skills for immigrants (learning the language of new home country)	• English for immigrants • Catalan for immigrants
	19 basic ICT skills	courses on basic ICT skills (courses for beginners)	• Learning how to use computers • computers for beginners • over 50's computers for beginners.
	20 special skills	learning some special or rare skills and competencies, for example sign language, shorthand writing, magic tricks etc.	• Shorthand writing 1: Learning how to use shorthand writing
Health & Sports	7 Health related courses	Courses promoting health awareness and behavior	• Mental Health Awareness • Understanding dementia • Health and safety
	8 sports	Doing sports, dance	• contemporary dance for mature movers • Tai Chi for beginners • yoga
Creative activities	9 handicrafts	Pottery, sewing, wood carwing	• pottery & ceramics level one • Resin Jewellery

			• Pottery • Upholstery
	10 musik	playing music and instruments	• Intermediate Guitar • African Drumming
	11 singing & perform-ing arts	singing, improvisation, poetry recital	• Raise Your Spirit in Song • Singing Class • Choral singing • Improvisation and acting • Poetry group
	12 arts	doing arts: painting, photography…	• Painting • Life Drawing 2 term 2 • Digital Photography Level 2
	13 baking and food	food related courses	• Delicious pastries • Mushrooms in kitchen
	14 Creative writing	courses developing creative writing skills	• Creative Writing • the short story • scriptwriting • writing plays
	22 animals	courses related on pets or other animals	• Care and riding of horses • Animal Management • Rescue dog course
	23 nature	courses related to nature, plants, outdoors	• Neighborhood Nature • garden history • Geological walks in the peak district
Work related & vocational topics	21 work related and vocational courses	courses giving vocational skills or degrees	• Certificate in Legal Studies • ANA Certificate • diploma in veterinary nursing • Access to HE • NVQ IN BUSINESS ADMIN
Several courses attended			

Appendix 3. Course types by country

Table 64 Detailed list of course topics by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
Social education	11	20	61	4	162	4	68	9	110	16	465
	1,6%	1,6%	6,8%	,8%	15,6%	1,5%	7,0%	1,0%	11,1%	1,5%	5,4%
Political education	2	38	43	3	8	0	44	1	5	3	147
	,3%	3,1%	4,8%	,6%	,8%	,0%	4,5%	,1%	,5%	,3%	1,7%
Languages	60	194	144	55	49	80	281	61	187	179	1290
	8,7%	15,6%	16,1%	10,5%	4,7%	29,6%	28,8%	7,0%	18,9%	17,2%	15,1%
History	34	6	8	6	1	0	0	0	4	2	61
	4,9%	,5%	,9%	1,1%	,1%	,0%	,0%	,0%	,4%	,2%	,7%
Culture	38	2	25	73	28	2	2	32	2	13	217
	5,5%	,2%	2,8%	13,9%	2,7%	,7%	,2%	3,7%	,2%	1,2%	2,5%
ICT	44	23	4	11	40	39	18	38	71	28	316
	6,3%	1,9%	,4%	2,1%	3,9%	14,4%	1,8%	4,3%	7,2%	2,7%	3,7%
Health related courses	11	13	6	18	50	2	40	7	48	11	206
	1,6%	1,0%	,7%	3,4%	4,8%	,7%	4,1%	,8%	4,9%	1,1%	2,4%
Sports	18	91	116	23	132	41	113	6	193	2	735
	2,6%	7,3%	12,9%	4,4%	12,7%	15,2%	11,6%	,7%	19,5%	,2%	8,6%
Handicrafts	68	117	13	2	28	6	6	2	85	14	341
	9,8%	9,4%	1,4%	,4%	2,7%	2,2%	,6%	,2%	8,6%	1,3%	4,0%
Music	5	23	12	1	16	1	11	0	7	0	76
	,7%	1,9%	1,3%	,2%	1,5%	,4%	1,1%	,0%	,7%	,0%	,9%
Singing & performing	10	99	2	5	79	1	13	2	23	4	238

arts	1,4%	8,0%	,2%	1,0%	7,6%	,4%	1,3%	,2%	2,3%	,4%	2,8%
Arts	23	62	50	9	23	4	35	3	34	15	258
	3,3%	5,0%	5,6%	1,7%	2,2%	1,5%	3,6%	,3%	3,4%	1,4%	3,0%
Baking and food	0	8	6	0	2	0	3	0	39	6	64
	,0%	,6%	,7%	,0%	,2%	,0%	,3%	,0%	3,9%	,6%	,7%
Creative writing	11	16	10	8	1	2	4	0	1	2	55
	1,6%	1,3%	1,1%	1,5%	,1%	,7%	,4%	,0%	,1%	,2%	,6%
Basic competencies	2	0	0	2	15	0	20	50	15	51	155
	,3%	,0%	,0%	,4%	1,4%	,0%	2,1%	5,7%	1,5%	4,9%	1,8%
Basic literacy skills	21	0	4	0	0	0	1	41	0	2	69
	3,0%	,0%	,4%	,0%	,0%	,0%	,1%	4,7%	,0%	,2%	,8%
Basic numeracy skills	6	0	0	0	0	0	0	2	0	0	8
	,9%	,0%	,0%	,0%	,0%	,0%	,0%	,2%	,0%	,0%	,1%
Basic language skills	8	0	19	10	0	0	0	16	2	2	57
	1,2%	,0%	2,1%	1,9%	,0%	,0%	,0%	1,8%	,2%	,2%	,7%
Basic ICT skills	27	5	16	126	23	0	14	85	10	238	544
	3,9%	,4%	1,8%	24,0%	2,2%	,0%	1,4%	9,7%	1,0%	22,8%	6,4%
Special skills	6	7	10	21	1	0	0	0	15	1	61
	,9%	,6%	1,1%	4,0%	,1%	,0%	,0%	,0%	1,5%	,1%	,7%
Work related and vocational topics	77	24	59	0	185	32	53	356	96	76	958
	11,1%	1,9%	6,6%	,0%	17,8%	11,9%	5,4%	40,6%	9,7%	7,3%	11,2%
Animals	6	18	0	0	2	0	0	0	22	0	48
	,9%	1,4%	,0%	,0%	,2%	,0%	,0%	,0%	2,2%	,0%	,6%
Nature	8	11	0	6	14	0	0	0	16	0	55
	1,2%	,9%	,0%	1,1%	1,4%	,0%	,0%	,0%	1,6%	,0%	,6%
Science courses	3	0	0	1	16	1	0	0	3	0	24
	,4%	,0%	,0%	,2%	1,5%	,4%	,0%	,0%	,3%	,0%	,3%
Several courses at-	194	466	289	142	162	55	249	165	0	377	2099

tended	28,0%	37,5%	32,2%	27,0%	15,6%	20,4%	25,5%	18,8%	,0%	36,2%	24,6%
	693	1243	897	526	1037	270	975	876	988	1042	8547
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 65 Main course categories by country

	Country										Total
	ENG	FIN	GER	ITA	ROM	SWI	SRB	ESP	CZE	SLO	
Health & sports	29	104	122	41	182	43	153	13	241	13	941
	4,2%	8,4%	13,6%	7,8%	17,6%	15,9%	15,7%	1,5%	24,4%	1,2%	11,0%
ICT & skills	114	35	53	170	79	39	53	232	113	322	1210
	16,5%	2,8%	5,9%	32,3%	7,6%	14,4%	5,4%	26,5%	11,4%	30,9%	14,2%
Languages	60	194	144	55	49	80	281	61	187	179	1290
	8,7%	15,6%	16,1%	10,5%	4,7%	29,6%	28,8%	7,0%	18,9%	17,2%	15,1%
Creative activities	131	354	93	31	165	14	72	7	227	41	1135
	18,9%	28,5%	10,4%	5,9%	15,9%	5,2%	7,4%	,8%	23,0%	3,9%	13,3%
Society & culture	88	66	137	87	215	7	114	42	124	34	914
	12,7%	5,3%	15,3%	16,5%	20,7%	2,6%	11,7%	4,8%	12,6%	3,3%	10,7%
Work related and vocational topics	77	24	59	0	185	32	53	356	96	76	958
	11,1%	1,9%	6,6%	,0%	17,8%	11,9%	5,4%	40,6%	9,7%	7,3%	11,2%
Several courses attended	194	466	289	142	162	55	249	165	0	377	2099
	28,0%	37,5%	32,2%	27,0%	15,6%	20,4%	25,5%	18,8%	,0%	36,2%	24,6%
	693	1243	897	526	1037	270	975	876	988	1042	8547
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Appendix 4. Factors and sum variables of benefits of lifelong learning

Items → Factors (sum scores) → Second order factors	Factor loading	N	Cr.α (n)	M	SD	g_1	g_2
FACTOR/SUM SCORE: Locus of Control (3 items)		8320	.85 (8066)	5.11	1.05	-.30	.25
31. I feel that I have influence over the things that happen to me.	.81						
28. When I make plans. I am certain that I can make them work.	.79						
30. I am convinced that what happens to me is my own doing.	.80						
FACTOR/SUM SCORE: Self-Efficacy (3)		8289	.85 (8044)	5.04	1.05	-.22	.23
34. If someone opposes me. I'm able to find the means and ways to get what I want.	.70						
32. It is easy for me to stick to my aims and accomplish my goals	.83						
33. I am confident that I could deal efficiently with unexpected events.	.81						
FACTOR/SUM SCORE: Sense of Purpose in Life (2)		8373	.78 (8170)	5.40	1.10	-.49	.33
29. I know what I want from my life	.81						
35. I am positive about life	.73						
→ COMBINED INTO SECOND ORDER FACTOR: CONTROL OF OWN LIFE (8 items) (LOCUS+EFFICACY+LIFE)		8412	.93 (7853)	5.16	.99	-.35	.46
FACTOR/SUM SCORE: Tolerance (2)		8378	.80 (8147)	5.6	1.12	-.62	.15
9. I have respect for other people's points of view.	.84						
11. I have respect for other people's cultures.	.80						
FACTOR/SUM SCORE: Social Engagement (5)		8491	.78 (7717)	5.07	.99	-.42	.91
3. I am involved in social networks (friends. colleagues etc.).	.62						
4. I am engaged in my local community.	.53						
20. I have trust in other people generally.	.68						
21. I am likely to take part in voluntary activity.	.65						
22. I meet other people.	.77						
FACTOR/SUM SCORE: Changes in educational Experiences (4)		8562	.80 (7975)	5.75	.93	-1.08	2.60
2. I am motivated to learn.	.69						
12. I feel confident as a learner.	.74						
8. I see adult learning as an important opportunity.	.73						
19. I am encouraging others to learn too.	.73						
→ COMBINED INTO SECOND ORDER FACTOR: ATTITUDES & SOCIAL CAPITAL (11)		8577	.89 (7444)	5.42	.88	-.79	2.22

(TOLERANCE+SOCIAL ENGAGEMENT+CHANGES IN ED. EX.)							
FACTOR/SUM SCORE: Health (3) *5. I try to lead a healthy lifestyle.* *17. I am satisfied with my physical health.* *23. I pay attention to my health.*	 .82 .69 .89	8421	.84 (8056)	5.35	1.19	-.41	-.14
FACTOR/SUM SCORE: Mental Well-being (2) *6. Taking all things together I am happy.* *15. I am satisfied with my life.*	 .83 .84	8417	.82 (8134)	5.47	1.11	-.66	.71
FACTOR/SUM SCORE: Work (2) *10. I have opportunities to increase my income.* *13. I have alternative job or career opportunities*.	 .79 .80	7827	.77 (7475)	4.44	1.33	-.35	.61
FACTOR/SUM SCORE: Family (2) *24. I have confidence in my ability as a parent.* *25. I am supportive of my children's learning.*	 .98 .82	2861	.89 (2735)	5.43	1.31	-.57	-.05
→ **COMBINED INTO SECOND ORDER FACTOR: HEALTH, FAMILY & WORK (9)** (HEALTH+MENTAL+WORK+FAMILY)		8506	.83 (2468)	5.15	.93	-.36	.95
The following single statements (benefits) were analyzed separately, because they do not load into factors:							
26. Change in smoking (smokers only, non-smokers removed)	-	2551	-	3.84	1.33	-.37	1.02
27. Change in alcohol use (alcohol users only)	-	4507	-	3.61	1.15	-.90	1.08
1. I feel good at work nowadays	-	7638	-	5.05	1.29	-.401	.335
7. I am willing to move in order to get a new job	-	7612	-	4.18	1.67	-.225	-.259
14. I have trust in decision makers	-	7978	-	4.37	1.36	-.193	.305
16. I am interested in politics	-	8146	-	4.15	1.62	-.334	-.275
18. I know how to make myself heard in a group	-	8180	-	5.12	1.23	-.390	.231

Scale: Much less (1) Less (2) Slightly less (3) No change (4) Slightly more (5) More (6) Much more (7)
Sumvariables include cases with missing information [MEAN(item1.item2.item3.item4)]
Cronbach's α is based on cases with no missing information.
Kolmogorov-Smirnov test <.05; All sumvariables varied between 1-7 (Min.-Max.)
g_1 = Skewness; g_2 = Kurtosis

Appendix 5. Statistical tables (Table 66 **to** Table 80**)**

Table 66 Group comparison of benefits in relation to participants' Age group

Age group	Locus of Control[A]			Self-Efficacy[A]			Sense of Purpose in life			CONTROL OF OWN LIFE[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) 15-24 (n=1050)	5.27	.97	.01[bcde]	5.26	1.03	.00[bcde]	5.55	1.08	.00[bcd]	5.34	.90	.00[bcde]
b) 25-36 (n=1918)	5.05	1.06	.00[a]	5.02	1.07	.00[a]	5.32	1.08	.00[ae]	5.11	.99	.00[a]
c) 37-49 (n=1693)	5.11	1.06	.00[a]	5.04	1.08	.00[a]	5.37	1.09	.00[a]	5.15	1.01	.00[a]
d) 50-64 (n=2087)	5.08	1.03	.00[a]	4.97	1.01	.00[a]	5.36	1.09	.00[a]	5.11	.97	.00[a]
e) 65-92 (n=1220)	5.10	1.07	.01[a]	5.02	1.02	.00[a]	5.49	1.14	.00[b]	5.17	1.01	.00[a]
Age group	Tolerance[A]			Social Engagement			Changes in educational Experiences[A]			ATTITUDES & SOCIAL CAPITAL		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) 15-24 (n=1050)	5.69	1.08	.00[b]	5.12	.92	.00[be]	5.68	.91	.00[e]	5.43	.81	.01[be]
b) 25-36 (n=1918)	5.46	1.14	.01[acde]	4.90	.98	.00[ade]	5.63	.95	.00[cde]	5.27	.88	.00[acde]
c) 37-49 (n=1693)	5.59	1.13	.01[be]	5.00	.99	.01[de]	5.79	.91	.00[b]	5.40	.87	.00[be]
d) 50-64 (n=2087)	5.65	1.07	.00[b]	5.11	.95	.01[bce]	5.79	.87	.00[b]	5.46	.83	.01[be]
e) 65-92 (n=1220)	5.75	1.11	.01[bc]	5.29	1.03	.00[abcd]	5.86	.95	.00[ab]	5.57	.95	.01[abcd]

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Age group	Health[A]			Mental well-being			Work[A]			Family[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) 15-24 (n=1050)	5.33	1.16	.00[be]	5.55	1.10	.01[bc]	4.72	1.32	.00[de]	5.02	1.48	.01[c]
b) 25-36 (n=1918)	5.13	1.19	.00[ade]	5.35	1.11	.00[ade]	4.74	1.30	.00[de]	5.40	1.31	ns.
c) 37-49 (n=1693)	5.26	1.19	.00[de]	5.39	1.08	.01[ae]	4.68	1.26	.00[de]	5.51	1.25	.01[a]
d) 50-64 (n=2087)	5.44	1.11	.00[bce]	5.49	1.06	.01[be]	4.09	1.24	.00[abce]	5.36	1.32	ns.
e) 65-92 (n=1220)	5.68	1.18	.00[abcd]	5.65	1.14	.01[bcd]	3.78	1.32	.00[abcd]	5.51	1.37	ns.

Age group	HEALTH, FAMILY & WORK[A]		
	M	*SD*	*p*
a) 15-24 (n=1050)	5.20	.85	.01[d]
b) 25-36 (n=1918)	5.10	.93	.00[e]
c) 37-49 (n=1693)	5.17	.92	ns.
d) 50-64 (n=2087)	5.08	.89	.01[ae]
e) 65-92 (n=1220)	5.25	1.02	.00[bd]

*The mean difference is significant at the 0.01 level (Bonferroni); [A]Levene test of Homogeneity of Variances < .05 (Dunnett T3).

Table 67 Group Comparison of benefits in with Participants' Educational Level

Educational Level	Locus of Control[A]			Self-Efficacy[A]			Sense of Purpose in life[A]			CONTROL OF OWN LIFE[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) ISCED 1 or less (n = 300)	5.22	1.29	ns.	5.23	1.32	.01[de]	5.71	1.24	.00[de]	5.36	1.17	.01[de]
b) ISCED 2 (n = 757)	5.18	1.10	ns.	5.13	1.11	.01[de]	5.56	1.13	.00[de]	5.26	1.03	.01[de]
c) ISCED 3 (n = 2626)	5.19	1.02	.00[de]	5.14	1.03	.00[de]	5.48	1.09	.00[de]	5.24	.96	.01[de]

d) ISCED 4 (n = 1355)	5.05	.97	.00[c]	4.94	1.00	.01[abc]	5.33	1.05	.00[abc]	5.08	.93	.01[abc]
e) ISCED 5 or 6 (n = 3128)	5.03	1.04	.00[c]	4.96	1.03	.01[abc]	5.29	1.08	.00[abc]	5.07	.98	.00[abc]
Educational Level	Tolerance[A]			Social Engagement[A]			Changes in educational Experiences[A]			ATTITUDES & SOCIAL CAPITAL[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) ISCED 1 or less (n = 308)	5.88	1.26	.00[de]	5.26	1.26	.01[d]	6.02	1.09	.00[cde]	5.65	1.04	.01[cde]
b) ISCED 2 (n = 774)	5.85	1.06	.01[cde]	5.22	1.07	.00[de]	5.84	.99	.01[d]	5.56	.93	.00[de]
c) ISCED 3 (n = 2629)	5.67	1.08	.01[bde]	5.11	.94	.01[de]	5.75	.88	.00[a]	5.44	.83	.01[ade]
d) ISCED 4 (n = 1353)	5.51	1.12	.00[abc]	4.99	.92	.01[abc]	5.68	.89	.01[ab]	5.33	.84	.01[abc]
e) ISCED 5 or 6 (n = 3135)	5.51	1.12	.00[abc]	5.02	.98	.01[bc]	5.73	.93	.00[a]	5.37	.88	.01[abc]
Educational Level	Health[A]			Mental well-being[A]			Work[A]			Family		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) ISCED 1 or less (n = 312)	5.81	1.26	.00[cde]	5.57	1.41	ns.	4.59	1.78	ns.	6.03	1.40	.00[cde]
b) ISCED 2 (n = 784)	5.72	1.12	.00[cde]	5.70	1.06	.00[cde]	4.30	1.48	ns.	5.73	1.38	.01[cde]
c) ISCED 3 (n = 2641)	5.45	1.12	.00[abde]	5.51	1.09	.01[bde]	4.46	1.34	ns.	5.40	1.32	.01[ab]
d) ISCED 4 (n = 1358)	5.26	1.15	.00[abc]	5.38	1.07	.01[bc]	4.38	1.24	ns.	5.21	1.24	.00[ab]
e) ISCED 5 or 6 (n = 3142)	5.16	1.21	.00[abc]	5.40	1.09	.01[bc]	4.47	1.28	ns.	5.37	1.27	.01[ab]
Educational Level	HEALTH, FAMILY & WORK[A]											
	M			*SD*			*p*					
a) ISCED 1 or less (n = 318)	5.49			1.12			.00[cde]					
b) ISCED 2 (n = 798)	5.37			.95			.00[cde]					
c) ISCED 3 (n = 2675)	5.20			.90			.00[abde]					
d) ISCED 4 (n = 1368)	5.06			.88			.00[abc]					
e) ISCED 5 or 6 (n =	5.05			.91			.00[abc]					

3156)			
*The mean difference is significant at the 0.01 level (Bonferroni); [A]Levene test of Homogeneity of Variances < .05 (Dunnett T3).			

Table 68 Group comparison of benefits with participants' employment status (n = 8293)

Employment status	Locus of Control			Self-Efficacy[A]			Sense of Purpose in life			CONTROL OF OWN LIFE[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) Full time (n=2704)	5.07	1.03	ns.	4.99	1.06	.01[ce]	5.33	1.07	.01[g]	5.11	.98	ns.
b) Part time (n=705)	5.00	.99	.01[c]	4.89	1.00	.01[cdeh]	5.27	1.06	.01[g]	5.03	.92	.01[cde]
c) Selfemp/freel. (n=648)	5.21	1.04	.01[b]	5.17	1.04	.01[ab]	5.44	1.06	ns.	5.25	.98	.01[b]
d) Housework (n=237)	5.25	.98	ns.	5.18	1.04	.01[b]	5.56	.97	ns.	5.29	.90	.01[b]
e) Student full (n=656)	5.17	.98	ns.	5.18	1.00	.01[ab]	5.45	1.08	ns.	5.25	.91	.01[b]
f) Student part (n=173)	5.18	.98	ns.	5.14	.96	ns.	5.41	1.06	ns.	5.22	.89	ns.
g) Ret/early r. (n= 2042)	5.11	1.08	ns.	5.02	1.02	ns.	5.46	1.14	.01[ab]	5.16	1.01	ns.
h) Unemployed (n=981)	5.11	1.06	ns.	5.10	1.10	.01[b]	5.43	1.11	ns.	5.19	.99	ns.
Employment status	Tolerance[A]			Social Engagement[A]			Changes in educational Experiences			ATTITUDES & SOCIAL CAPITAL		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) Full time (n=2714)	5.52	1.12	.01[dg]	4.94	.99	.00[dg]	5.71	.91	.00[g]	5.33	.87	.00[dg]
b) Part time (n=708)	5.53	1.11	.01[dg]	4.96	.89	.00[dg]	5.71	.89	ns.	5.34	.80	.00[dg]
c) Selfemp/freel. (n=644)	5.54	1.12	.01[g]	5.07	.97	.00[g]	5.84	.90	.00[e]	5.44	.85	ns.
d) Housework (n=240)	5.84	1.11	.01[ab]	5.31	1.04	.01[abh]	5.90	.92	.01[e]	5.62	.89	.01[abeh]
e) Student full (n=659)	5.55	1.10	.01[g]	5.07	.89	.00[g]	5.61	.89	.01[cdg]	5.35	.80	.01[dg]
f) Student part (n=175)	5.74	1.13	ns.	5.10	.90	ns.	5.77	.94	ns.	5.46	.83	ns.
g) Ret/early r. (n= 2044)	5.74	1.09	.01[abce]	5.26	1.00	.00[abceh]	5.83	.93	.00[ae]	5.55	.91	.00[abe]

												[h]
h) Unemployed (n=989)	5.63	1.11	ns.	5.02	.99	.01[dh]	5.72	.93	ns.	5.39	.86	.01[dg]
Employment status	Health[A]			Mental well-being			Work[A]			Family[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) Full time (n=2722)	5.18	1.19	.00[dgh]	5.39	1.08	.00[g]	4.56	1.25	.00[cg]	5.43	1.24	ns.
b) Part time (n=710)	5.21	1.10	.01[dg]	5.39	1.03	.00[g]	4.57	1.24	.00[cg]	5.21	1.25	.01[d]
c) Selfemp/freel. (n=645)	5.20	1.19	.01[dg]	5.49	1.05	ns.	4.91	1.23	.00[abgh]	5.39	1.24	ns.
d) Housework (n=243)	5.53	1.15	.01[abc]	5.63	1.13	.01[h]	4.53	1.54	.00[g]	5.73	1.30	.01[b]
e) Student full (n=661)	5.24	1.17	.00[g]	5.43	1.11	.01[g]	4.68	1.18	.00[g]	5.14	1.55	ns.
f) Student part (n=175)	5.24	1.20	.00[g]	5.56	1.15	ns.	4.89	1.34	.00[g]	5.46	1.47	ns.
g) Ret/early r. (n= 2068)	5.65	1.15	.00[abcefh]	5.64	1.09	.01[abeh]	3.79	1.28	.00[abcdefh]	5.42	1.40	ns.
h) Unemployed (n=988)	5.40	1.11	.01[ah]	5.31	1.15	.01[dg]	4.51	1.41	.00[cg]	5.53	1.35	ns.

Employment status	HEALTH, FAMILY & WORK[A]		
	M	*SD*	*p*
a) Full time (n=2729)	5.08	.90	.01[cdg]
b) Part time (n=718)	5.09	.85	.01[d]
c) Selfemp/freel. (n=650)	5.22	.89	.01[a]
d) Housework (n=247)	5.37	.96	.01[abe]
e) Student full (n=661)	5.12	.85	.01[d]
f) Student part (n=175)	5.25	.91	ns.
g) Ret/early r. (n= 2114)	5.20	.98	.00[a]
h) Unemployed (n=999)	5.13	.94	ns.

*The mean difference is significant at the 0.01 level (Bonferroni); [A]Levene test of Homogeneity of Variances < .05 (Dunnett T3).

Table 69 Group comparison of benefits with the number of participated courses

Number of courses	Locus of Control			Self-Efficacy			Sense of Purpose in life			CONTROL OF OWN LIFE		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) one course (n = 5129)	5.05	1.05	.00[cd]	5.01	1.06	.01[d]	5.36	1.09	.01[cd]	5.12	.99	.01[cd]
b) two courses (n = 1657)	5.14	1.02	ns.	5.04	1.03	ns.	5.43	1.11	ns.	5.18	.98	ns.
c) three courses (n = 885)	5.21	1.09	.00[a]	5.11	1.07	ns.	5.54	1.11	.00[a]	5.25	.99	.01[a]
d) >3 courses (n = 649)	5.29	1.03	.00[a]	5.17	1.04	.01[a]	5.51	1.10	.01[a]	5.30	.99	.00[a]
Number of courses	Tolerance[A]			Social Engagement			Changes in education-al Experiences [A]			ATTITUDES & SOCIAL CAPITAL		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) one course (n = 5155)	5.52	1.14	.00[bcd]	4.97	.99	.00[bcd]	5.65	.94	.00[bcd]	5.32	.88	.00[bcd]
b) two courses (n = 1673)	5.67	1.08	.01[acd]	5.13	.95	.01[acd]	5.84	.89	.01[acd]	5.49	.84	.01[acd]
c) three courses (n = 890)	5.82	1.07	.01[ab]	5.28	1.01	.01[ab]	5.96	.89	.01[ab]	5.63	.85	.01[ab]
d) >3 courses (n= 660)	5.90	1.00	.00[ab]	5.42	.96	.00[ab]	6.03	.85	.00[ab]	5.73	.82	.00[ab]
Number of courses	Health[A]			Mental well-being[A]			Work[A]			Family[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) one course (n = 5185)	5.26	1.19	.00[bcd]	5.39	1.11	.00[bcd]	4.43	1.31	ns.	5.31	1.32	.00[bcd]
b) two courses (n = 1682)	5.44	1.17	.00[a]	5.52	1.08	.01[ad]	4.39	1.35	ns.	5.61	1.27	.00[a]
c) three courses (n = 892)	5.56	1.18	.00[a]	5.59	1.12	.00[a]	4.42	1.42	ns.	5.68	1.28	.00[a]
d) >3 courses (n = 662)	5.59	1.14	.00[a]	5.71	1.04	.01[ab]	4.57	1.35	ns.	5.88	1.12	.00[a]
Number of courses	HEALTH, FAMILY & WORK											
	M			*SD*			*p*					

a) one course (n= 5239)	5.08	.93	.00[bcd]
b) two courses (n= 1699)	5.20	.92	.00[ad]
c) three courses (n= 903)	5.29	.93	.00[a]
d) >3 courses (n= 665)	5.37	.89	.00[ab]
*The mean difference is significant at the 0.01 level (Bonferroni); [A]Levene test of Homogeneity of Variances < .05 (Dunnett T3).			

Table 70 Group comparison of benefits with type of course (n = 8547)

Type of course (n)	Locus of Control[A]			Self-Efficacy[A]			Sense of Purpose in life[A]			CONTROL OF OWN LIFE[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) Health & Sports (921)	5.07	1.00	.01[cfg]	4.98	1.02	.01[fg]	5.38	1.03	.01[cfg]	5.11	.95	.01[cfg]
b) ICT & skills (1125)	5.12	1.11	.01[cdf]	5.06	1.13	.00[cf]	5.42	1.17	.01[cf]	5.17	1.06	.00[cf]
c) Languages (1242)	4.90	1.00	.01[abefg]	4.85	.99	.01[befg]	5.19	1.07	.01[abfg]	4.96	.96	.01[abefg]
d) Creative activities (1106)	4.96	1.03	.01[bfg]	4.90	1.03	.00[fg]	5.28	1.09	.00[fg]	5.02	.96	.00[fg]
e) Society & culture (877)	5.08	1.02	.01[cfg]	5.01	1.04	.01[cf]	5.33	1.09	.00[fg]	5.13	.98	.01[cfg]
f) Work & vocation(927)	5.33	1.04	.00[abcdeg]	5.32	1.05	.00[abcdeg]	5.60	1.11	.01[abcde]	5.39	.95	.00[abcde]
g) Several courses(2036)	5.23	1.03	.01[acde]	5.14	1.04	.01[acdf]	5.53	1.08	.01[acde]	5.27	.97	.01[acde]
Type of course (n)	Tolerance[A]			Social Engagement[A]			Changes in educational Experiences[A]			ATTITUDES & SOCIAL CAPITAL[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a)Health & Sports (924)	5.40	1.09	.00[befg]	5.01	.87	.00[cg]	5.57	.87	.01[befg]	5.28	.80	.01[bfg]
b) ICT & skills (1135)	5.63	1.20	.01[acg]	5.06	1.07	.00[cg]	5.77	.98	.01[acdg]	5.43	.96	.01[acg]
c) Languages (1244)	5.43	1.15	.01[befg]	4.79	.94	.00[abdef]	5.62	.95	.01[bfg]	5.21	.88	.00[befg]

						g						
d) Creative activities(1116)	5.48	1.13	.00^{fg}	5.03	1.00	.00^{cg}	5.58	.92	.00^{bfg}	5.31	.88	.00^{fg}
e) Society &culture(885)	5.62	1.11	.01^{acg}	5.09	1.00	.00^{cg}	5.72	.92	.01^{ag}	5.42	.87	.00^{cg}
f) Work & vocational (943)	5.76	1.08	.00^{acd}	5.05	.99	.00^{cg}	5.86	.91	.00^{acd}	5.48	.83	.00^{acdg}
g) Several courses (2043)	5.81	1.03	.01^{abcde}	5.29	.96	.00^{abcdef}	5.96	.85	.00^{abcde}	5.63	.82	.00^{abcdef}
Type of course (n)	Health^{A}			Mental well-being^{A}			Work^{A}			Family^{A}		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a)Health & Sports (929)	5.71	1.06	.00^{bcdef}	5.54	.99	.00^{ce}	4.38	1.17	.00^{f}	5.18	1.27	.01^{bfg}
b) ICT & skills (1157)	5.43	1.25	.00^{acde}	5.43	1.24	.01^{cg}	4.38	1.48	.00^{f}	5.63	1.40	.00^{acd}
c) Languages (1241)	4.96	1.21	.00^{abdfg}	5.26	1.10	.01^{abdfg}	4.33	1.27	.00^{f}	5.20	1.16	.01^{bfg}
d) Creative activities(1117)	5.18	1.14	.00^{abcg}	5.47	1.09	.01^{cg}	4.31	1.30	.00^{f}	5.15	1.29	.01^{bfg}
e) Society & culture (885)	5.12	1.13	.01^{abfg}	5.31	1.10	.01^{afg}	4.43	1.21	.00^{f}	5.45	1.28	ns.
f) Work & vocational (947)	5.33	1.15	.01^{acefg}	5.52	1.09	.01^{ce}	4.82	1.41	.00^{abcdeg}	5.53	1.35	.01^{acd}
g) Several courses (2056)	5.58	1.15	.00^{cdef}	5.62	1.07	.01^{bcde}	4.44	1.37	.00^{f}	5.70	1.26	.00^{acd}
Type of course (n)	HEALTH, FAMILY & WORK^{A}											
	M			*SD*			*p*					
a)Health & Sports (933)	5.22			.80			.00^{cde}					
b) ICT & skills (1176)	5.19			1.03			.01^{cde}					
c) Languages (1261)	4.91			.94			.00^{abfg}					
d) Creative activities (1121)	5.02			.87			.01^{abfg}					
e) Society & culture (895)	5.03			.90			.01^{abfg}					
f) Work & vocational (953)	5.26			.91			.00^{cde}					
g) Several courses (2072)	5.30			.92			.00^{cde}					
*The mean difference is significant at the 0.01 level (Bonferroni); ^{A}Levene test of Homogeneity of Variances < .05 (Dunnett T3).												

Table 71 Results of ANCOVA analysis of CONTROL OF OWN LIFE

Dependent variables								
Benefits	Locus of Control[A]		Self-Efficacy		Sense of Purpose in life[A]		CONTROL OF OWN LIFE[A]	
	p	η_p^2	p	η_p^2	p	η_p^2	p	η_p^2
Covariates								
Educational background	p < .001	.002	p < .001	.003	p < .001	,005	p < .001	.004
Main Effects								
Gender	ns.	.149	p < .01	.478	ns.	,106	p < .05	.272
Age group	ns.	.140	p < .05	.252	ns.	,195	ns.	.179
Course type	p < .05	.919	p < .01	.764	p < .01	,720	p < .01	.818
Interaction								
Gender * Age group	ns.	.087	ns.	.037	ns.	,106	ns.	.068
Gender * Course type	ns.	.071	ns.	.101	ns.	,151	ns.	.094
Age group * Course type	ns.	.578	p < .05	.674	p < .05	,690	ns.	.659
Gender * Age group * Course type	ns.	.004	ns.	.003	ns.	,003	ns.	.003
Confidence Interval Adjustment Bonferroni (Signifigance Level p < .01) [A]Levene's Test of Equality of Error Variances < .05 (The error variance of the dependent variable is not equal across groups)								

Table 72 Results of ANCOVA analysis of ATTITUDES & SOCIAL CAPITAL

Dependent variables								
Benefits	Tolerance[A]		Social Engagement[A]		Changes in educational Experiences[A]		ATTITUDES & SOCIAL CAPITAL[A]	
	p	η_p^2	p	η_p^2	p	η_p^2	p	η_p^2

Covariates								
Educational background	p < .001	,006	p < .001	,002	p < .01	,001	p < .001	,003
Main Effects								
Gender	ns.	,002	p < .05	,446	p < .01	,461	p < .05	,402
Age group	ns.	,220	p < .05	,324	p < .01	,400	p < .05	,329
Course type	p < .01	,878	p < .01	,796	p < .05	,966	p < .01	,864
Interaction								
Gender * Age group	ns.	,049	ns.	,007	ns.	,025	ns.	,016
Gender * Course type	ns.	,134	ns.	,166	ns.	,126	ns.	,141
Age group * Course type	ns.	,573	p < .05	,691	ns.	,487	ns.	,653
Gender * Age group * Course type	ns.	,003	ns.	,003	ns.	,005	ns.	,003
Confidence Interval Adjustment Bonferroni (Signifigance Level p < .01) [A]Levene's Test of Equality of Error Variances < .05 (The error variance of the dependent variable is not equal across groups)								

Table 73 Results of ANCOVA for HEALTH, FAMILY & WORK related benefits

Dependent variables										
Benefits	Health[A]		Mental well-being[A]		Work[A]		Family[A]		HEALTH, FAMILY & WORK[A]	
	p	η_p^2	p	η_p^2	p	η_p^2	p	η_p^2	p	η_p^2
Covariates										
Educational back-ground	p < .001	,018	p < .001	,003	ns.	,000	p < .001	,009	p < .001	,012
Main Effects										
Gender	ns.	,170	ns.	,133	ns.	,336	ns.	,309	ns.	,019
Age group	p < .01	,396	ns.	,191	p < .001	,731	p < .05	,350	p < .05	,283
Course type	p < .01	,708	p < .05	,628	ns.	,419	ns.	,663	p < .05	,722
Interaction										
Gender * Age group	ns.	,090	ns.	,052	ns.	,225	ns.	,063	ns.	,119

Gender * Course type	ns.	,257	ns.	,161	ns.	,249	ns.	,156	p < .05	,311
Age group * Course type	p < .01	,787	p < .05	,725	p < .01	,764	ns.	,463	ns.	,658
Gender * Age group * Course type	ns.	,003	ns.	,003	ns.	,004	ns.	,012	ns.	,003
Confidence Interval Adjustment Bonferroni (Signifigance Level p < .01) [A]Levene's Test of Equality of Error Variances < .05 (The error variance of the dependent variable is not equal across groups)										

Table 74 Development of ”Health” by age and course type

Age group	”Less effective” and “more effective” Course types		Sig.
15-24[A]	ICT & skills (M= 4.67)	Health & sports (M=5.7)	p < .001
	Languages (M=4.82)		p < .001
	Society & culture (M=5.2)		p < .01
	ICT & skills (M=4.67)	Work related and vocational topics (M=5.56)	p < .001
	Languages (M=4.82)		p < .001
25-36[A]	ICT & skills (M=5.02)	Health & sports (M=5.65)	p < .001
	Languages (M=4.6)		p < .001
	Creative activities (M=5.0)		p < .001
	Society & culture (M=4.94)		p < .001
	Work related and vocational topics (M=5.19)		p < .001
	Several courses attended (M=5.26)		p < .01
	Languages (M=4.6)	ICT & skills (M=5.02)	p < .01
		Creative activities (M=5.0)	p < .01
		Work related and vocational topics (M=5.19)	p < .001
		Several courses attended (M=5.26)	p < .001
37-49	Languages (M=4.72)	Health & sports (M=5.63)	p < .001
	Creative activities (M=5.15)		p < .01
	Society & culture (M=5.04)		p < .001
	Languages (M=4.72)	ICT & skills (M=5.34)	p < .001

		Creative activities (M=5.15)	p < .01
		Work related and vocational topics (M=5.25)	p < .001
		Several courses attended (M=5.43)	p < .001
50-64 [A]	Languages (M=5.17)	Health & sports (M=5.77)	p < .001
	Creative activities (M=5.19)		p < .001
	Society & culture (M=5.13)		p < .001
	Work related and vocational topics (M=5.13)		p < .01
	Languages (M=5.17)	Several courses attended (M=5.61)	p < .001
	Creative activities (M=5.19)		p < .001
	Society & culture (M=5.13)		p < .001
	Work related and vocational topics (M=5.13)		p < .01
65-92		Health & sports (M=5.64)	
		ICT & skills (M=5.46)	
		Languages (M=5.69)	
		Creative activities (M=5.52)	
		Society & culture (M=5.49)	
		Work related and vocational topics (M=6.28)	
		Several courses attended (M=5.82)	
The mean difference is significant at the .01 level (Bonferroni multiple comparisons). [A]Levene's Test of Equality of Error Variances < .05			

Table 75 Changes in CONTROL OF OWN LIFE by country and course type

Dependent variables								
Benefits	Locus of Control[A]		Self-Efficacy[A]		Sense of Purpose in life[A]		CONTROL OF OWN LIFE[A]	
	p	η_p^2	p	η_p^2	p	η_p^2	p	η_p^2
Covariates								
Gender	ns.	.000	< .001	.002	ns.	.000	< .05	.000
Age group	ns.	.000	ns.	.000	< .001	.004	< .01	.001
Educational	ns.	.000	< .01	.001	< .001	.003	< .01	.001

background								
Main Effects								
Country	< .001	.595	< .001	.679	< .001	.662	< .001	.665
Course type	< .01	.252	< .05	.187	< .01	.236	< .01	.243
Interaction								
Country * Course type	< .001	.022	< .001	.020	< .001	.019	< .001	.022
Confidence Interval Adjustment Bonferroni (Signifigance Level p < .01) [A]Levene's Test of Equality of Error Variances < .05 (The error variance of the dependent variable is not equal across groups)								

Table 76 Changes in CONTROL OF OWN LIFE by respondents' country

Country	Locus of Control[A]			Self-Efficacy[A]			Sense of Purpose in life[A]			CONTROL OF OWN LIFE[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) UK (n=678)	4.94	1.06	.00^{ehj}	4.83	1.06	00.^{bcdfi}	5.19	1.17	.01^{efhj}	4.96	1.03	.00^{eghj}
b) FIN (n=1224)	5.07	.96	.00^{cdefhij}	4.87	.89	01.^{acdi}	5.36	1.03	.00^{cdefhij}	5.07	.90	.01^{cdefhij}
c) GER (n=837)	4.82	.99	.00^{beghj}	4.76	.99	00.^{abdfi}	5.11	1.10	.00^{beghj}	4.88	.95	.00^{beghj}
d) ITA (n=449)	4.84	.92	.00^{beghj}	4.74	.89	00.^{abcfi}	5.03	.98	.00^{beghj}	4.88	.90	.01^{beghj}
e) ROM (n=1038)	5.50	1.00	.00^{abcdfgij}	5.53	1.06	00.^{abcdfgij}	5.82	1.01	.00^{abcdfgij}	5.59	.93	.00^{abcdfgij}
f) SWI (n= 267)	4.73	.85	.00^{beghj}	4.63	.83	01.^{beghj}	4.87	.97	.01^{abeghij}	4.73	.81	.00^{beghj}
g) SRB (n= 978)	5.08	1.03	.01^{cdefhij}	5.08	1.01	01.^{abcdefhij}	5.37	1.09	.01^{cdefhij}	5.15	.96	01.^{acdefhij}
h) ESP (n=849)	5.52	1.05	.00^{abcdfgij}	5.42	1.08	00.^{abcdfgi}	5.87	1.08	00.^{abcdfgij}	5.58	.92	.00^{abcdfgij}
i) CZE (n=985)	4.83	1.02	.00^{beghj}	4.76	1.09	00.^{eghj}	5.17	1.00	.01^{befghj}	4.89	.98	.00^{beghj}
j) SLO (n=1015)	5.27	1.09	.01^{abcdefghi}	5.28	1.03	01.^{abcdefgi}	5.57	1.12	.01^{abcdefghi}	5.34	1.02	.01^{abcdefghi}
*The mean difference is significant at the 0.01 level; [A]Levene test of Homogeneity of Variances < .05 (Dunnett T3).												

Table 77 Changes in ATTITUDES & SOCIAL CAPITAL by country and course type

Dependent variables								
Benefits	Tolerance[A]		Social Engagement[A]		Changes in educational Experiences[A]		ATTITUDES & SOCIAL CAPITAL[A]	
	p	η_p^2	p	η_p^2	p	η_p^2	p	η_p^2
Covariates								
Gender	< .01	,001	< .001	,005	< .001	,006	< .001	,006
Age group	< .001	,003	< .001	,008	< .001	,006	< .001	,008
Educational background	< .001	,002	< .01	,001	ns.	,000	< .05	,001
Main Effects								
Country	< .001	,621	< .001	,810	< .001	,602	< .001	,761
Course type	< .01	,239	< .001	,307	< .001	,300	< .001	,298
Interaction								
Country * Course type	< .001	,020	< .001	,021	< .001	,021	< .001	,022
Confidence Interval Adjustment Bonferroni (Signifigance Level p < .01) [A]Levene's Test of Equality of Error Variances < .05 (The error variance of the dependent variable is not equal across groups)								

Table 78 Changes in ATTITUDES & SOCIAL CAPITAL by respondents' Country (n = 8320)

Country	Tolerance[A]			Social Engagement[A]			Changes in educational Experiences[A]			ATTITUDES & SOCIAL CAPITAL[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) UK (n=690)	5,64	1,21	.01^{efghi}	5,20	1,06	.00^{cefgi}	5,81	1.00	.00^{hi}	5,50	,97	.01^{cefghi}
b) FIN (n=1226)	5,64	,97	.01^{cefghi}	5,26	,85	.00cdefgi	5,80	,81	.01^{eghi}	5,53	,75	.00^{cefghi}
c) GER (n=854)	5,45	1,17	.01^{behij}	4,80	,99	.01^{abdefghij}	5,66	,96	.00^{ehi}	5,24	,88	.00^{abceij}

d) ITA (n=467)	5,43	1,17	.00^{ehij}	5,02	,92	.01^{bcefhi}	5,72	,89	.00^{ehi}	5,38	,91	.00^{efhi}
e) ROM (n=1040)	5,91	,96	.00^{abcdfghi}	5,49	,90	.00^{abcdfgij}	5,97	,85	.01^{bcdfghij}	5,74	,77	.00^{abcdfgij}
f) SWI (n= 265)	5,30	1,13	.01^{abehj}	4,57	,77	.01^{abcdeghj}	5,60	,92	.00^{ehi}	5,08	,76	.01^{abdeghij}
g) SRB (n= 978)	5,41	1,11	.01^{abehij}	5,01	,87	.01^{abcefhij}	5,64	,91	.01^{behi}	5,31	,81	.01^{abefhij}
h) ESP (n=886)	6,14	,99	.00^{abcdefgij}	5,34	1,03	.00^{cdfgi}	6,12	,86	.01^{abcdefgij}	5,77	,80	.00^{abcdfgij}
i) CZE (n=977)	5,13	1,17	.00^{abcdeghj}	4,39	,88	.00^{abcdeghj}	5,29	,92	.00^{abcdefghj}	4,85	,80	.01^{abcdefghj}
j) SLO (n=995)	5,75	1,08	.00^{cdfghi}	5,17	,99	.01^{cefgi}	5,78	,94	.00^{ehi}	5,49	,91	.00^{cefghi}
*The mean difference is significant at the 0.01 level; ^{A}Levene test of Homogeneity of Variances < .05 (Dunnett T3).												

Table 79 Changes in HEALTH, FAMILY & WORK by country and course type

Dependent variables										
Benefits	Health^{A}		Mental well-being^{A}		Work^{A}		Family^{A}		HEALTH, FAMILY & WORK^{A}	
	p	η_p^2	p	η_p^2	p	η_p^2	p	η_p^2	p	η_p^2
Covariates										
Gender	< .001	,003	< .001	,002	ns.	,000	< .001	,006	< .001	,002
Age group	< .001	,020	< .001	,006	< .001	,029	ns.	,000	< .001	,002
Educational background	< .001	,009	< .05	,001	ns.	,000	ns.	,001	< .001	,005
Main Effects										
Country	< .001	,585	< .001	,616	< .001	,567	< .001	,620	< .001	,702
Course type	< .001	,414	ns.	,147	< .01	,226	ns.	,071	< .01	,238
Interaction										
Country * Course type	< .001	,040	< .001	,027	< .001	,025	< .05	,028	< .001	,028
Confidence Interval Adjustment Bonferroni (Signifigance Level p < .01) ^{A}Levene's Test of Equality of Error Variances < .05 (The error variance of the dependent variable is not equal across groups)										

Table 80 Comparison of changes in HEALTH, FAMILY & WORK by Country

Country	Health[A]			Mental well-being[A]			Work[A]			Family[A]			HEALTH, FAMILY & WORK[A]		
	M	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*	*M*	*SD*	*p*
a) UK (n=691)	5,22	1,24	,01^{behij}	5,35	1,21	,01^{bdehij}	4,60	1,33	,01^{bcdehij}	5,74	1,37	,01^{dfi}	5,13	1,06	,01^{dehi}
b) FIN (n=1235)	5,46	1,10	,01^{acdfghi}	5,62	,98	,00^{acdfghi}	4,17	1,24	,00^{aefg}	5,58	1,17	,00^{dhi}	5,16	,85	,01^{defhi}
c) GER (n=862)	5,22	1,20	,00^{behij}	5,27	1,15	,01^{bdehj}	4,29	1,23	,01^{aefgi}	5,42	1,27	,00^{hi}	5,02	,92	,00^{ehij}
d) ITA (n=460)	5,14	1,06	,00^{behij}	5,02	1,02	,01^{abceghj}	4,20	,98	,00^{aefg}	5,01	1,02	,00^{abehj}	4,91	,90	,01^{abeghij}
e) ROM (n=1041)	5,58	1,10	,00^{acdfghi}	5,76	1,01	,01^{acdfgij}	5,11	1,28	,00^{abcdfghij}	5,81	1,40	,01^{dfgi}	5,50	,78	,00^{abcdfgij}
f) SWI (n= 268)	4,95	1,10	,00^{behj}	5,09	1,01	,01^{beghj}	4,70	1,05	,00^{bcdehij}	5,06	1,25	,01^{aeh}	4,93	,83	,01^{behij}
g) SRB (n= 979)	5,13	1,18	,00^{behij}	5,36	1,08	,01^{bdefhij}	4,83	1,21	,00^{bcdehij}	5,35	1,26	,01^{ehi}	5,12	,88	,01^{dehi}
h) ESP (n=884)	6,03	1,01	,00^{abcdefgij}	5,94	1,06	,00^{abcdfgij}	4,26	1,62	,01^{aefg}	6,02	1,31	,01^{bcdfgij}	5,58	,88	,00^{abcdfgij}
i) CZE (n=987)	4,79	1,20	,00^{abcdeghj}	5,08	1,06	,00^{abeghj}	4,05	1,15	,01^{acefg}	4,64	,97	,00^{abceghj}	4,63	,81	,00^{abcdefghj}
j) SLO (n=1014)	5,57	1,16	,00^{acdfghi}	5,59	1,12	,01^{acdefghi}	4,17	1,46	,00^{aefg}	5,64	1,30	,01^{dhi}	5,23	1,00	,00^{cdefhi}
*The mean difference is significant at the 0.01 level; [A]Levene test of Homogeneity of Variances < .05 (Dunnett T3).															

Appendix 6. Guidelines & Definitions of themes for analysis of open questions 2.1 and 2.2

Short guidelines

The following table includes **definitions of the potential themes** for content analysis. These themes are based on qualitative content analysis already done using 100 first cases in the German, Finnish and UK data. Some themes are also taken from the previous Finnish study. The themes are classified under the

same concepts we are using in BeLL quantitative survey. This will make it possible to compare statistical results and results based on qualitative analysis of open questions in the survey. Some concepts may not "come up" in open answers (for example, at the moment no themes are under TRUST concept), and there might "pop up" themes that does not fit into our list of Concepts.

The purpose of this table is to help content analysis of open answers in partner countries. Content analysis can be done with the help of Excel template provided by Jyri, OR by using for example MAXQDA-program to do the analysis. In both cases it is **important** to use these themes and their definitions, so that we get a common and comparable analysis in the end. In practice this means that when we do the first round of analysis of national data (100 cases in all countries), the analysis will follow this rule:

- if a statement (a benefit, outcome) mentioned in your data fit into these themes, you code it using that pre-defined theme.
- if it does not fit into any theme, you create a new theme, add it to the table and define it.
- if the new theme can be categorized under some existing CONCEPT (first column), you place the new theme under that concept. If not, you place it in the end of the table, and we define together later under which concept it belong (or a new concept if necessary).

Glossary:
Statement: one piece of text in open answer, where one benefit/outcome is mentioned (example: "*It is a way to structure my daily life*")
Theme: a category in Excel-template, where a statement can be classified. These are based on qualitative content analysis of the statements in the open answers (example: Structure in daily life)
Concept: a theoretical concept, which is pre-defined in BeLL study as one main benefit category. In the analysis the themes are classified under a specific concept (example: Sense of purpose in life)

Example

The open answers in the questions 2.1 and 2.2 describe the experienced outcomes and benefits. Our task is to do content analysis of these answers so that we are able to define, what kind of benefits people mention, and how many mention which benefits. Each answer often includes several benefits. In our analysis these benefits are "named" as statements. One statement is the unit of analysis, and for each statement we have to decide which theme this belongs to. An example:

Example of open answer:		This open answer include the following **statements** (one outcome, benefit)		These statements can be coded under the following pre-defined **themes**:		These themes fit under the following **concepts**:
*Apart from **learning Italian**, I have **gained confidence in speaking the***	→	*1) learning Italian*	→	Language skills	→	Competencies
	→	*2) I have gained confidence in speaking the language in a face to face*	→	Confidence in own skills	→	Self-efficacy

language *in a face to face and supportive environment. In addition I have gained much more* ***understanding about Italians,*** *and therefore I also* ***trust my Italian neighbor*** *much more than before.*	→	*and supportive environment*	→		→	
		3) gained much more understanding about Italians		Cultural knowledge		Tolerance
	→	*4) I also trust my Italian neighbor much more than before*	→	?? (No pre-defined theme yet, but obviously this belongs under CONCEPT "trust" → you add new theme under that concept, for example simply a theme called "trust in people")	→	Trust

In this example case you:

- code the statements 1, 2 and 3 into those predefined themes
- add a new theme in the table, define it and code the statement 4 into this new theme.

Definitions of themes for qualitative content analysis of open survey questions

Concept (same as in BeLL survey)	Themes (benefits) & Definitions	Examples of statements
LOCUS OF CONTROL 1. Zimbardo (1985, p. 275): "A locus of control orientation is a belief about whether the outcomes of our actions are contingent on what we do (internal control orientation) or on events outside our personal control (external control orientation)" 2. J.B. Rotter (1966): "**Locus of Control** refers to the extent to which individuals believe that they can control events that affect them. Individuals with a high *internal locus of control* believe that events result primarily from their own behaviour and actions. Those with a high *external locus of control* believe that powerful others, fate, or chance primarily determine events. Those with a high *internal locus of control* have better control of their behaviour and tend to exhibit more political behaviours than *externals* and are more likely to attempt to influence other people; they are more likely to assume that their efforts will be successful. They are more active in	Control of own life	*Looked at what I want from life, and am planning ahead, rather than reacting to external events.(UK261)*

seeking information and knowledge concerning their situation than do *externals.* The propensity to engage in political behaviour is stronger for individuals who have a high *internal locus of control* than for those who have a high *external locus of control." (s. Link 3.)*		
SELF-EFFICACY 1. Bandura, A (1994): Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs produce these diverse effects through four major processes. They include cognitive, motivational, affective and selection processes. (for more comprehensive information see: http://www.des.emory.edu/mfp/BanEncy.html) 2. Bandura, A (2006): Guide for constructing self-efficacy scales (http://www.des.emory.edu/mfp/014-BanduraGuide2006.pdf) 3. Cervone, Artisitco& Berry (2006): Perceived self-efficacy refers to beliefs – specially, beliefs regarding one's own capabilities for performance, means to our judgments of what we think we can and can't do. ~ represents the extent to which we believe that we are the authors of what we do and can have an impact on what happens to us. (Self-efficacy and Adult Development. In: Hoare, C. (Ed.): Handbook of Adult Development and Learning. New York.)	**Self-confidence** Better self-confidence due to participation, helps to cope with life in general. Self-confidence can be defined as "a feeling of trust in one's abilities, qualities, and judgement http://oxforddictionaries.com/definition/english/self-confidence?q=self+confidence, 18.11.2012	*I feel more confident in the choices that i make about my future.(UK 1)* *More confidence when taking a class of learners. (UK 16)*
	Confidence in own skills Better confidence in own *skills and abilities*, helping to engage in new activities where these skills are needed. [compare previous]	*Have become quite analytical of strengths and weaknesses. (UK 14)* *My confidence in the subject has increased. (UK 17)* *More satisfaction with my own artistic work (GE 83)*
	Self-discovery To get to know oneself. It's defined as "the process of acquiring insight into one's own character" (Oxford English Dictionary 2006,	*It has helped me to develop a deeper understanding of myself.(UK 1)*

	p.1305).	*I was astonished that I have a certain potential and resources, which I can promote and activate through the course participation (GE 85)*
	Self motivating A sense of more active role in own life, and more self-initiative. Self-motivation is the ability to do what needs to be done, without influence from other people or situations. People with self-motivation can find a reason and strength to complete a task, even when challenging, without giving up or needing another to encourage them.http://www.businessdictionary.com/definition/self-motivation.html, 18.11.2012	*also have generally become more [] self motivating.(UK 18)* *I have become more able to study or work alone. (UK 28)*
	Self-control "The ability to control one's emotions or behavior, especially in difficult situations"(Oxford English Dictionary 2006, p. 1305)	*Can concentrate for longer periods (UK 76)*
TOLERANCE Cambridge Dictionary: ~ is the willingness to accept behavior and beliefs which are different from your own, although you might not agree with or approve of them (http://dictionary.cambridge.org/dictionary/british/tolerance_1) Oxford Dictionary: a) the ability or willingness to tolerate the existence of opinions or behavior that one dislikes or disagrees with (http://oxforddictionaries.com/definition/english/tolerance) Forbearance and generosity (or broad-mindedness) regarding alien opinions, beliefs, strange habits or behavior, thus similar to freedom from prejudice. Also the tendency to actively confront intolerance. *[nach: Dorsch Psych. WB (1987, S. 692f):*	**Cultural knowledge** A new understanding and awareness of different cultures and cultural differences.	*I have more understanding of other cultures (UK 17)* *Knowledge of Far Eastern health practices (GE 80)*
	Tolerance The ability or willingness to tolerate the existence of opinions or behaviour different to one's own and can be defined as "a fair, objective, and permissive attitude toward opinions and practices	*I have [] much more tolerance. (UK 17)*

	that differ from one's own". (http://dictionary.reference.com/browse/tolerance	
TRUST 1. Trust (...) consists of an attitude or a mindset – what one thinks – albeit with likely behavioural consequences" (OECD/CERI 2007, p. 80) 2. Newton &Zmerli (2011): A difference can be made between interpersonal trust and institutional (political trust) 3. Oxford Dictionary: firm belief in the reliability, truth, or ability of someone or something; a) acceptance of the truth of a statement without evidence or investigation, b) the state of being responsible for someone or something, c) a person or duty for which one has responsibility (http://oxforddictionaries.com/definition/english/trust?q=trust)	Trust	I have more confidence in the people around me (SRB220) have more confidence in the people I work with (SRB223)
SOCIAL NETWORK 1. A network of friends, colleagues, and other personal contacts (http://dictionary.reference.com/browse/social+network) 2. A network of social interactions and personal relationships (http://oxforddictionaries.com/definition/social+network) 3. Social structure made of nodes that are generally individuals or organizations. A social network represents relationships and flows between people, groups, organizations, animals, computers or other information/knowledge processing entities. The term itself was coined in 1954 by J. A. Barnes. (http://www.webopedia.com/TERM/S/social_network.html)	**New networks** New networks of people generated during the courses; these are not "friends", but more as "people you know" and who form a network one can use or be part of. [compare new friends, which is more "value in itself" without instrumental value	*developed a good network of peers to ask questions of.(UK 16)*
	Social interaction Group processes, discussions and social situations are seen as benefit as such. Social interaction can be defined as "to act in such a way as to have an effect on each other"(Oxford English Dictionary 2006, p. 739).	*Meeting different people. (UK 14)* *Social interaction with others. (UK 33)* *I am pleased that I have been able to mix with people with a shared interest (UK 63)*
	New friends Meeting new people who become friends, who one meets also	*meeting of new friends (UK 26)* *Friendship (UK 26)*

	outside learning situation and/or like spending time with. [compare new networks, which are more task oriented]	
SENSE OF PURPOSE IN LIFE Definition (Ryff, 1989): having goals in life and a sense of directedness, a feeling that there is meaning to present and past life, harbouring a belief that gives purpose, and having aims and objectives for living. Central to the definition of purpose in life is a feeling that life has meaning.	**New inspiration** Getting new ideas, hints, interests, that make living more interesting and opens up new perspectives.	*caused me to embrace different forms of art I would never have entertained before (UK 59)* *Introduction to literature I would never have considered reading before the course. (UK 70)* *I discovered a new hobby (GE 100)*
	Structure in daily life Participation has helped to generate or maintain regular time table or time schedule, with weekly activities to attend to.	*It is a way to structure my week.(UK 35)* *Gave me a reason to go out after the death of my husband.(UK 41)* *having a focus to my week, giving me something to look forward to.(UK 63)*
	Sense of belonging to a community Feeling that is part of some social group or society in general, instead of being alone at home and feeling isolated.	*I feel a greater sense of belonging to the community.(UK 17)*
	Self fulfillment & joy of doing Feeling to be able to do something new, concrete, and enjoying this; sense of achieving what a person wants from his/her life.	*I feel like I'm doing something with my life. (UK 3)* *it helps me to feel that I am achieving. (UK 19)*
	Wider life circles: Participation has changed lifestyle, helped do something else, get new things to do and alternative ways of spending spare time.	*More visits to art galleries & museums. (UK 84)*

	(New) Hobbies: Getting new concrete hobby or pursuing deeper in the old ones.	*An increased enthusiasm [in] pursuing my varied hobbies (UK 77)* *I discovered a new hobby (GE 100)*
	Respect Feeling that one is respected more because of participation and new skills.	*People at my voluntary work give me more respect. (UK 3)*
CIVIC AND SOCIAL ENGAGEMENT 1. Definition: Civic and social engagement (CSE) can include: joining associations, volunteering, more active role in community (OECD, 2007, Understanding the Social Outcomes of Learning. Paris: OECD) 2. Also: related to Active Citizenship in the EU, which is defined as: "Political participation and participation in associational life characterized by tolerance and non-violence and the acknowledgement of rule of law and human rights" (Weerd, de M., Gemmeke, M., Rigter, J. &Rij, van C. (2005): Indicators for monitoring active citizenship and citizenship education. Amsterdam, p. II. 3. Indicators for Active Citizenship are: - Voluntary work in organizations and networks; Organizing activities for the community; Voting in elections; Participation in: - political parties, - interest groups, forms of peaceful protest, public debate	**Participation in society** Participation has motivated or opened up opportunities to join associations, or become more active in society otherwise.	*opened up new opportunities to join Geological societies and go on a Field Course with the Field Studies Council. (UK 58)* *Greater awareness of the value of organizations such as WEA and U3A. Volunteering commitment to both U3A and WEA. (UK 81)*
	Interest and knowledge of politics Increased interest and knowledge of politics, either by following societal discussions more closely or participating politics in more concrete ways.	*More interest in longer term effects on economic and political issues. Greater interest in contacting local politicians on topics. (UK 84)* *My interest in politics increased; I know more about Europe (GE 6);* *Aid to decision-making for EU-parliament selec-*

		tions (GE 16)
CIVIC COMPETENCE 1. Civic Competence equips individuals to fully participate in civic life, based on knowledge of social and political concepts and structures and a commitment to active and democratic participation. (taken from EU2006a: Recommendation of the EU Parliament and the Council on key competences for Lifelong Learning, p. 16-18). 2. the ability and willingness to engage in active participation, based on an attitude of trust in other people, in all the contexts of social life: school, local community, working place, recreational activities'. From an individual point of view, civic competence is a tool for empowering the individual and giving them the motivation, autonomy and responsibility to control their own lives beyond the social circumstances in which they find themselves. From a social point of view civic competence, by helping to create social capital, underpins democracy and social and economic development. (http://www.civicoproject.eu/project_en.php 3. Hoskins, B. & Crick, R. D. (2010). Learning to Learn and Civic Competences: different currencies or two sides of the same coin? European Journal of Education, Vol. 45 (1), 121-137. --> Report from Centre for Research on Lifelong Learning (CRELL); definition: Civic competence is a complex mix of knowledge, skills, understanding, values and attitudes and dispositions. "Skills for civic competence relate to the ability to engage effectively with others in the public domain, and to display solidarity and interest in solving problems affecting the local and wider community. This involves critical and creative reflection and constructive participation in community or neighbourhood activities as well as decision-making at all levels, (...)" (p. 8).	**Change of attitudes** Participation has made one to re-think about one's attitudes and beliefs, or opened up new perspective on things.	*My attitudes about EU and free movement of labour force has changed [Fin]*
	Shared expertise Sharing of new skills and knowledge in social situations, in neighborhood or third sector organizations in volunteer work etc. [compare job related skills, where individual uses him/herself new skills on current paid job]	*Sharing of experience with others with similar problems.* *Able to share knowledge with others (colleagues, friends and fami-*

		ly)(UK 136)
	Sense of responsibility Feeling that is willing, able and perhaps also expected to take more responsibility in different situations (in housing committee, voluntary work, political party etc.).	*People at my voluntary work give me more [] responsibility;(UK 3)* *Eager for responsibility(UK 103)*
	Advocacy for political convictions: Being to be responsible for one's own political convictions based on a gained knowledge.	*I will always stand up for Europe (GE 14)* *Got Better argumentation aid (GE 21)* *To take my view in the public (GE 18)*
MENTAL WELL-BEING 1. Definition WHO: Mental health is not just the absence of mental disorder. It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. (http://www.who.int/features/qa/62/en/index.html) (http://www.who.int/features/factfiles/mental_health/en/index.html) 2. Foresight Mental Capital and Wellbeing Project. Wellbeing and work; Future challenges, The Government Office for Science, London, UK): Mental well being is a dynamic state in which the individual is able to develop their potential, work productively and creatively, build strong relationships with others, and contribute to their community. It is enhanced when an individual is able to fulfil their personal and social goals and achieve a sense of purpose in society 3. Report paper IMPACT Consortium on first outcomes of "European Pact for Mental Health and Well-being" (EU 2011) (http://ec.europa.eu/health/mental_health/docs/outcomes_pact_en.pdf) Definition: mental well-being denotes a state of mental health, happiness, life satisfaction and quality of life. Although mental health is a crucial com-	**Mental well-being** Denotes a state of mental health, happiness, life satisfaction and quality of life. A "deeper" expression of psychological state of mind than "good spirit" or "well-being in daily life" [compare next themes]. Outcome has a deeper influence in respondent's life, helping to avoid depression or other mental disorders, which are specifically mentioned.	*[ ] to concentrate on other than my mental health problems. (UK 61)*

ponent of mental well-being, mental well-being is also determined by circumstances not related to mental health.		
	Well-being in daily life: Same as well-being at work, but in this case feelings of well-being are related in everyday life in general.	*Better [] wellbeing outcomes thro' fellow students, excellent tutors etc. (UK 56)* *I enjoyed the course and I paint at home to relax myself.(UK 66)* *It keeps my mind active, and improves my wellbeing (UK 3)* *More joy of life (…)* *More calm and contentment (GE 58)*
	Well-being at work Statements where well-being in own work is specially mentioned. Having more energy, being less tired and stressed, learning offering a contrast for work duties. [compare well-being in daily life].	*I have more energy to do my work (FIN 2)* *joy during my work (GE 59)*
	Good spirit Being in a good mood. Not so deep" state of mind as avoiding depression [compare mental well-being]. Feelings that learning helps to have better mood, less stress, or more positive spirit.	*Thinking more positive(UK 27)* *Helps me to view my life more positively (UK 41)*
	Coping To „deal efficiently with something difficult" (Oxford English Dictionary 2006, p. 315). Participation has helped to cope with difficulties in life in order to maintain better mental well-being and life-satisfaction.	*Helping me to come to terms with a loss I have had (UK 63)* *An ability to get away from "day to day" stresses and have time to "indulge myself" (UK 48)* *Helps to escape*

		from everyday life (GE 100) Being more effective to cope with daily life demands (GE 87)
	Quality of life Learning has helped to maintain or develop better life situation, life circumstances or activities, which in turn helps to maintain good mental health.	*improves the quality of my life (UK 3)* *As my ability to lipread improves it is easier to communicate with others and manage everyday situations such as shopping and meetings. (UK 5)*
	Sense of purpose Feeling that one's life has a purpose, and own actions make a difference, serve a general purpose.	*I have a purpose (UK 19)* *now I can say I might be 80 but I am not dead and mean it. (UK 55)*
WORK RELATED BENEFITS Definition: benefits and outcomes which help the individual to get, keep or advance in his/her job, get better income or any other benefits which are related to employment	**Further education** Participation has encouraged to study further a formal degree.	*Made me think about doing [] even an OU degree in the subject (UK 57)*
	Instrumental outcomes Participation has helped to get some concrete instrumental outcomes, like a certificate, degree, better salary, new things (book, article etc.). Instrumental outcomes serve as a means of pursuing an aim (see Oxford English Dictionary 2006, p.737).	*publishing our latest book. (UK 26)* *Opportunity to study get my Assessor certificate (UK 112)* *I will create my own homepage in the way it will be pop on the first pages of the internet (GE 74)*
	Career options	*ability to widen*

	A Career is an occupation undertaken for a significant period of a person's life, usually with opportunities for progress (Oxford English Dictionary 2006, p. 213). Participation has helped one to advance in career or open up new career opportunities.	*career options. (UK 12)* *To advance in my current career (UK 15)* *Better motivation for independent (stand-alone) artistic work (GE)*
	Job related skills The acquisition of skills to fulfill a current job. Participants have been able to use new skills in current job. Note: here the skills themselves are not mentioned (for example ICT-skills), but the fact that person has been able to use these at work context.	*Learning about current job (UK 15)* *Better understanding of issues involved in my work.(UK 21)* *I can use it all for my professional advancement (GE 75)*
	Job hunting Participation has helped or expected to help in searching and/or getting a (new) job	*Hopefully helps in job hunting [Fin]*
	Efficiency & increase in job-performance Participation has helped to perform better in the job. Efficiency in general describes the extent to which time, effort or cost is well used for the intended task or purpose (Wikipedia).	*Enhancement of job performance (GE 59)* *Professionalisation in my job (GE 86)* *Being faster in PC-work (GE 92)* *Increase of efficiency [Effizienzsteigerung]* *Schnelles Arbeiten. effizienteres Arbeiten* *"Effizienteres Arbeiten mit neuer SoftwareSiehe oben"*

	Appreciation & recognition of skills Recognition of a person's knowledge and skills at work in order to accept his/her participation at work tasks. Appreciation (Anerkennung; acknowledgement, recognition) refers to competences or to an achievement or performance. The same term is used in the context of validation of competences: If the assessment is successful, you get a "anerkennung", which means a recognition that you have indeed the specific competences that were assessed.	*(I receive) appreciation at work [Anerkennung im Job]* *Bestätigung als Ausblidnerin im Betrieb*
PHYSICAL HEALTH Definition: a relative state in which one is able to function well physically, mentally, socially, and spiritually in order to express the full range of one's unique potentialities within the environment in which one is living.	**Physical well-being** Defined as something a person can achieve by developing health-related components of his/her lifestyle. Fitness reflects a person's cardiorespiratory endurance, muscular strength, flexibility, and body composition.	*I am healthier and more mobile when I do Pilates. (UK 9)* *My regular back troubles are almost gone (GE 50)*
HEALTH BEHAVIOR Definition: Feinstein and Hammond (2004): learning has positive effects on a wide range of health behaviors, such as giving up smoking, increasing exercise, positive changes in behavior and attitudes, and more healthy living. Contributors to physical wellbeing may include proper nutrition, body-weight management, abstaining from drug abuse, avoiding alcohol abuse, responsible sexual behavior (sexual health), hygiene, and getting the right amount of sleep. http://www.medicalnewstoday.com/articles/150999.php, 11.01.2013	**Health consciousness** Being aware about health issues. Statements state that one has become more aware and conscious about health issues, but here is no concrete change of behavior yet. [compare next, which include actual change as well]	*Likelihood that I will look after my own health better. (UK 31)* *Better understanding for health related activities (GE 54)* *Motivation to do sports (GE 66)*
	Health skills New skills which help to become more healthy or stay healthy	*I learned exercises for my back []* *Some of the exercise I still practice even though the course is already finished (GE 50)*
	Health benefits Statements indicating that participation have helped to change life style and habits so that the physical health will be better. Changes in alcohol use etc.	*Health benefits: Better breathing technique and posture. (UK 45)* *I am healthier and more mobile when I*

		do Pilates (UK 9)
FAMILY Definition: Educational attainment of parents has positive effects in family life and kids. Adult learners become better parents, are more patient, understanding and better supporting their children (Wolfe and Haveman, 2002; The Centre for Literacy, 2010). The concept is here limited to parent – child relationships.	**Coping with parenting role** Development of parenting skills, attitudes and self-confidence as a parent.	*because I am a carer of two children with autistic disorders, I have been able to concentrate on things I have an interest in, which refreshes me, enabling me to cope better with my role as a carer.(UK 48)*
	Providing information for family: Information gained in a course given to family members**.**	*Informatively, permanent understanding of Europe for children, grandchildren (GE 32)*
CHANGES IN THE EDUCATIONAL EXPERIENCES 1. Definition: according to all participation studies (for example Rubenson 1979; Rubenson 2001; Manninen 2004 and 2006; Rubenson& Desjardins 2009; Hippel&Tippelt 2010) previous learning experiences direct future participation. In this study three key concepts have been selected to measure potential changes in educational experiences: learning motivation, learner self confidence and value of learning. 2. These concepts interact closely in real life situations. For example Pintrich's motivational expectancy model (Pintrich 1988; Pintrich&Ruohotie 2000) include several components of motivation, such as learner efficacy control and outcome beliefs, task value, and expectancy for success. Learner self-confidence is a broad, multidimensional construct involving assumptions about oneself (self-estimation) and about the value of one's abilities, actions and results. Its sub-constructs are self-confidence, self-worth and self-efficacy. (Ruohotie 2000, 8). These are also related to expectancy-valence –analysis made by the individual in participation situations (Rubenson 1979). 3. Value of training is the rather permanent meaning something has	**Joy of learning** Learning as itself has been enjoyable experience and is reported as a benefit.	*Joy of creating something(UK 14)* *Relief to be able to "prove" that my brain still works! (UK 25)* *Satisfied my curiosity (GE 97)* *Joy of using my brain (GE 63)*

for an individual. Values are very highly prized, and as a result become an 'ideal' which affects the individual's choices and actions. (Ruohotie 2000, 8). Whether adult learning is perceived as an value and an opportunity is also based on the images the person has about adult education and about its usefulness in general. Especially less experienced adult learners depend more on prior schooling experiences and related images, which therefore play a central role in their motivation and participation (Manninen 2003). In a similar way Rubenson& Desjardins (2009, 197; also Hippel&Tippelt 2010) suggest that the constraining and enabling features of social and material conditions should be taken more into account, as well as "habitus" or "social milieus" which dictate whether learning experiences are socially shared.		
	Motivation to learn Participation has motivated the respondent to learn and participate more	*[] strive to reach a higher level.(UK 9)* *It inspires me to learn further subjects.(UK 17)* *More courses will be taken (GE 70)* *I want to learn Turkish until I'm going to speak perfect (GE 81)*
	Learning skills Learning is the process of transforming experience into knowledge, skills and attitudes, or memorizing information (see Jarvis, P. (1990): An International Dictionary of Adult and Continuing Education. Routledge: London/New York.) Respondent has developed his/her learning skills, or become more aware about these skills. Also "use of brain", better memory and stimulation of brains.	*heightened my awareness in my learning style (UK 14)* *I attend courses to stimulate my brain. (UK 47)*
	Motivating others to learn The respondent is encouraging others to participate as well, managed to get friends etc. to study.	*I have been able to motivate others to study, too [Fin]*
	Sense of achievement	*took this course in order to do some-*

	Positive feeling brought by ability to learn new things or something different than usually. [compare "self-fulfillment & joy of learning", which is more a "light" joy of learning, which can happen in every lesson; eg. "joy of painting in general" versus "joy of realizing that can paint at all"]	*thing practical/with hands as a contrast to more 'intellectual' interests.(UK 47) Excitement in learning something new. (UK 74) Discipline and learning success (GE 51)*
SKILLS AND COMPETENCIES Skills needed to perform a task. Are part of competences which can be regarded as a combination of knowledge, skills, behaviour, attitudes and personal qualities for the performance of specific tasks, job or situation (Gonczi 2003, 183; Nab, Pilot, Brinkkemper, & Ten Berge 2010, 22). Gonczi, A. 2003. Competency-based learning: a dubious past – an assured future? In Understanding Learning at Work. 4th edition. London, UK: Routledge. 180-196. Nab, J., Pilot, A., Brinkkemper, S. & Ten Berge, H. 2010. Authentic competence-based learning in university education in entrepreneurship. Int. Journal Entrepreneurship and Small Business 9 (1), 20 – 35.	**Skills (**not specified) Reference to new skills in general, not specified what skills. Skills can be defined as an ability and capacity to smoothly and adaptively carry out complex activities or job functions involving ideas (cognitive skills), things (technical skills), and/or people (interpersonal skills). www.businessdictionary.com/definition/skill.html	*I have learnt some things to apply to my hobby. (UK 3) Consolidated skills. (UK 4)*
	Physical skills Motor skills, also concerning a sporting activity	*Improvement of my skills in tennis*
	ICT skills Skill related to use of Information and Communication Technology (Internet, computers, telephones etc.)	*I can use a computer better.(UK 55)*
	Skills in handcraft & arts Skills related to handicrafts, arts (painting, sculpting)	*added to my skills in making jewellery. (UK 22)*
	Language skills Ability to use foreign languages	*more Japanese vocabulary. (UK 25) Repetition of grammar (GE 57) Conversation in Portuguese (G 17)*
	New attitudes Change of attitudes concerning the learning task, learning to ap-	*I used to hate poetry, now I can read and write it*

	preciate other aspects of the field as well.	*with pleasure. (UK 6)* *New view on topics (GE 13)*
	General or new knowledge Less specific statement which is not subject specific and indicate just development of knowledge in general. Definitions of knowledge include for example ""The domain of true propositions or statements" or "Mastery of some principle". (Jarvis, P. (1990): An International Dictionary of Adult and Continuing Education. Routledge: London/New York.)	*enhancing knowledge. (UK 1)* *Better education level (GE 20)*
	Self-expression and creativity Learning outcomes helped to become more creative (means to produce or use original and unusual ideas) and express one's personality, emotions or ideas better through works of art, literature, music or acting.	*In one course I have been taught to think 'out of the box' and out of my comfort zone.(UK 9)* *provided ideas for my creative writing.(UK 22)*
	Information seeking skills Skills needed when searching new information. [compare ICT skills: use of Internet is an ICT skill, but use of library data bases is more an information seeking skill].	*Greater knowledge [] of use and interpretation of historical sources, etc.(UK 82)*
	Better reading skills Better skills in reading in mother language. Can be basic literacy skills or more advanced skills of reading, analyzing texts etc.	*I have gained insight into the methods one uses to analyze different texts. This discipline is of benefit on all sorts of levels when reading the wide variety of material.(UK 90)* *My spelling has improved in my reading and under-*

		standing more about words and their meaning.(UK 111)
	Increased reading practices: People's interest in reading generally has increased and they begin to read more.	
	Numerical skills (Increased) ability to do either basic or higher maths.	*I am able to do calculations that I couldn't do before. (UK 13)*
	Writing skills Increased ability to write in mother language.	*My writing skills have improved. (UK 8)*
	Increased writing practices: People's interest in writing generally has increased and they begin to write more.	*Encouraged to write (GE 95)* *I could reduce my "writer's block" (GE 99)*
	Social skills Participation has improved ability to attend social situations, participate group sessions and interact with other people.	*Peoples skills. (UK 27)* *Much more social able. (UK 61)*
	Staying updated A general statement indicating that participation has helped to update one's information about current issues, trends and developments. "Increased awareness of "modern" knowledge, Having up to date knowledge on certain topics. http://oxforddictionaries.com/definition/english/update?q=update, 11.01.2012	*Generally helped to follow what is going on [Fin]* *Application of actual possibilities (apps, navigation system, health)(GE 27)*
	Communication skills Ability to share or exchange ideas or information in a socially adequate way. Improved skills of communication in different situations (speaking in mother language, meetings etc), or special communication skills like lip reading or sign language.	*Some improvement in ability to lipsread. (UK 5)*
	Environmental awareness	*Protection of rare*

	Increased knowledge in environmental issues (nature, environmental protection etc.)	*plants and animal of my homeland (GE 26)*
	Musical skills Learning an instrument, improving playing an instrument, singing etc.	*I learned how to play the guitar (GE 90)*
NO OUTCOMES	**No outcomes** Answer is written, but specifically stating that there are no outcomes	
NO ANSWER	**EMPTY** (have not answered at all)	

Appendix 7. Results of the content analysis of open questions 2.1 and 2.2

Category (BeLL Concepts):	**Frequency in category:**	**Category mentioned by % of respondents:**		**Frequency of theme:**	**Theme mentioned by % of respondspondents:**
Locus of Control	2	0,05	Control of own life	2	0,05
Self-efficacy	982	22,10	Self-confidence	393	8,85
			Confidence on own skills	269	6,05
			Self-discovery	120	2,70
			Self motivating	104	2,34
			Self control	96	2,16
Tolerance	221	4,97	Cultural knowledge	150	3,38
			Tolerance	71	1,60
Trust	2	0,05	Trust	2	0,05
Social network	917	20,64	New networks	235	5,29
			Social interaction	471	10,60
			New friends	211	4,75
Sense of Purpose in Life	706	15,89	New inspiration	215	4,84
			Structure in daily life	69	1,55
			Sense of belonging to a community	69	1,55
			Self fulfilment & joy of doing	132	2,97
			New hobbies	61	1,37
			Wider life circles	143	3,22

			Respect	17	0,38
Civic and social engagement	123	2,77	Participation in society	74	1,67
			Interest and knowledge in politics	49	1,10
Civic Competence	176	3,96	Change of attitudes	83	1,87
			Shared expertise	53	1,19
			Sense of responsibility	31	0,70
			political arguments	9	0,20
Mental Well-being	937	21,09	Mental well-being	223	5,02
			Well-being in daily life	194	4,37
			Well-being at work	52	1,17
			Good spirit	176	3,96
			Coping	73	1,64
			Quality of life	142	3,20
			Sense of purpose	77	1,73
Work-related benefits	1097	24,69	Further education	83	1,87
			Instrumental outcomes	140	3,15
			Career options	193	4,34
			Job or organization skills	284	6,39
			Job hunting	107	2,41
			Efficiency & increase in job or task performance	241	5,42
			Appreciation & recognition of skills	49	1,10
Physical health	291	6,55	Physical well-being	291	6,55
Health behavior	308	6,93	Health consciousness	63	1,42
			Health skills	76	1,71
			Health benefits	169	3,80
Family	41	0,92	Coping with parenting role	30	0,68
			Providing information for family	11	0,25

Changes in the educational experiences	1153	25,95	Joy of learning	235	5,29
			Motivation to learn	469	10,56
			Learning skills	150	3,38
			Motivating others to learn	61	1,37
			Sense of achievement	238	5,36
Skills and competencies	3264	73,46	Skills (not specified)	227	5,11
			Physical skills	68	1,53
			ICT skills	458	10,31
			Skills in handicraft & arts	212	4,77
			Language skills	551	12,40
			New attitudes	70	1,58
			General or new knowledge	525	11,82
			Self-expression and creativity	100	2,25
			Information seeking skills	52	1,17
			Reading skills	77	1,73
			Increased reading practices	34	0,77
			Numerical skills	37	0,83
			Writing skills	130	2,93
			Increased writing practice	34	0,77
			Social skills	138	3,11
			Staying updated	87	1,96
			Communication skills	321	7,22
			Environmental awareness	25	0,56
			Musical skills	118	2,66
No outcomes	146	3,29	No outcomes	146	3,29
No answer	507	11,41	No answer	507	11,41
Total	10873		Total	10873	

Appendix 8. Theoretical concepts, statements in the questionnaire and qualitative themes found in the content analysis of the open questions

CONCEPT	DEFINITION	STATEMENTS / ITEMS IN SURVEY QUESTIONNAIRE	Themes found in qualitative analysis (n = 4443)
Locus of Control	Individuals with a high *internal locus of control* believe that events result primarily from their own behaviour and actions. Those with a high *external locus of control* believe that powerful others, fate, or chance primarily determine events. (Rotter 1966; Zimbardo 1985, 275)	*31. I feel that I have influence over the things that happen to me* *28. When I make plans, I am certain that I can make them work* *30. I am convinced that what happens to me is my own doing*	*Control of own life 2*
Self-efficacy	People's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives (Schwarzer & Jerusalem 1995; Bandura 1994; Scholz, Gutierrez, Sud & Schwarzer, 2002).	*34. If someone opposes me, I am able to find the means and ways to get what I want* *32. It is easy for me to stick to my aims and accomplish my goals* *33. I am confident that I could deal efficiently with unexpected events*	*Self-confidence 393* *Confidence on own skills 269* *Self-discovery 120* *Self motivating 104* *Self control 96*
Tolerance	A fair, objective, and permissive attitude toward opinions and practices that differ from one's own.	*9. I have respect for other people's points of view* *11. I have respect for other people's cultures*	*Cultural knowledge 150* *Tolerance 71*
Trust	An attitude or a mindset related to trustworthiness of other people, politicians, institutions etc. (OECD, 2007b, 80; Newton & Zmerli, 2011).	*20. I have trust in other people generally* *14. I have trust in decision makers*	*Trust 2*
Social Network	A network of friends, colleagues, and other personal contacts .	*22. I meet other people* *3. I am involved in social networks (friends, colleagues etc.)*	*New networks 235* *Social interaction 471* *New friends 211*
Sense of Purpose in Life	A feeling that there is meaning to present and past life, having aims and objectives for living (Ryff, 1989).	*29. I know what I want from my life* *35. I am positive about life*	*New inspiration 215* *Structure in daily life 69* *Sense of belonging to a community 69* *Self fulfilment & joy of doing 132* *New hobbies 61*

			Wider life circles 143 *Respect 17*
Civic and Social Engagement	Joining associations, volunteering, more active role in community (OECD, 2007a, 67). Also Active Citizenship, which is defined as "Political participation and participation in associations" (Weerd, Gemmeke, Rigter & Rij, 2005).	*4. I am engaged in my local community* *21. I am likely to take part in voluntary activity*	*Participation in society 74* *Interest and knowledge in politics 49*
Civic Competence	Equips individuals to fully participate in civic life, based on knowledge of social and political concepts and structures and a commitment to active and democratic participation (EU, 2006)	*18. I know how to make myself heard in a group* *16. I am interested in politics*	*Change of attitudes 83* *Shared expertise 53* *Sense of responsibility 31* *political arguments 9*
Mental Well-being	A state of wellbeing in which individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (WHO).	*6. Taking all things together, I am happy* *15. I am satisfied with my life*	*Mental well-being 223* *Well-being in daily life 194* *Well-being at work 52* *Good spirit 176* *Coping 73* *Quality of life 142* *Sense of purpose 77*
Work-related Benefits	Benefits and outcomes which help the individual to get, keep or advance in his/her job, get better income or any other benefits which are related to employment.	*10. I have opportunities to increase my income* *13. I have alternative job or career opportunities* *7. I am willing to move in order to get a new job* *1. I feel good at work nowadays*	*Further education 83* *Instrumental outcomes 140* *Career options 193* *Job or organization skills 284* *Job hunting 107* *Efficiency & increase in job or task performance 241* *Appreciation & recognition of skills 49*

Physical Health	A subjective perception of the relative state in which one is able to function well physically.	*17. I am satisfied with my physical health*	*Physical well-being 291*
Health Behaviour	Healthy habits, such as giving up smoking, increasing exercise, positive changes in behaviour and attitudes, and more healthy living (Feinstein & Hammond, 2004)	*23. I pay attention to my health* *5. I try to lead a healthy lifestyle* *26. I smoke…* *27. I drink alcohol…*	*Health consciousness 63* *Health skills 76* *Health benefits 169*
Family	Becoming a better parent, more patient, understanding and better supporting their children (Wolfe & Haveman, 2002).	*24. I have confidence in my ability as a parent* *25. I am supportive of my children's learning*	*Coping with parenting role 30* *Providing information for family 11*
Changes in the Educational Experiences	Learning motivation, learner self confidence, learner efficacy control and outcome beliefs, task value, and expectancy for success (Pintrich, 1988; Ruohotie, 2000, 8; also expectancy-valence –model of participation, Rubenson, 1979).	*2. I am motivated to learn* *12. I feel confident as a learner* *8. I see adult learning as an important opportunity* *19. I am encouraging others to learn too*	*Joy of learning 235* *Motivation to learn 469* *Learning skills 150* *Motivating others to learn 61* *Sense of achievement 238*
Skills and competencies	Knowledge, skills, attitudes and personal qualities for the performance of specific tasks (Nab, Pilot, Brinkkemper & Ten Berge, 2010, 22).	(Used only in the analysis of qualitative data)	Skills (not specified) 227 Physical skills 68 ICT skills 458 Skills in handicraft & arts 212 Language skills 551 New attitudes 70 General or new knowledge 525 Self-expression and creativity 100 Information seeking skills 52 Reading skills 77 Increased reading practices 34 Numerical skills 37 Writing skills 130 Increased writing practice 34

			Social skills 138 Staying updated 87 Communication skills 321 Environmental awareness 25 Musical skills 118

Appendix 9. Frequencies of themes found in the analysis of Open Question 2.5
(1312 cases, 9 countries, Italy missing)

2.5 If Possible, please give one or two examples which illustrate, why and how these elements were important for the outcomes you stated earlier.

	Frequency of subcat-egory	% men-tioned elements	Category :	Main category	Frequency in catego-ry:	% men-tioned elements
Enthusiastic	36	2,3	Personality	TRAINER	233	15,1
Empathetic	36	2,3				
Inspiring	80	5,2				
Patient	14	0,9				
Encouraging	45	2,9				
Friendly	22	1,4				
Knowledgeable	91	5,9	Expertise		216	14,0
Is committed to learner's achievement	22	1,4				
Uses comprehensible language	16	1,0				
Provides clarity	15	1,0				
Adapts instructions to the learners experience and skills	33	2,1				
Creates a humane learning climate	32	2,1				
Provides adequate learning material	7	0,5				
feedback	26	1,7	Teaching methods	TEACHING	296	19,1

Individual support and guidance	52	3,4				
Practical exercises	78	5,0				
Interactive	65	4,2				
Varied	32	2,1				
Contextual	30	1,9				
Handicrafting	13	0,8				
Interesting	70	4,5	Subject	COURSE	70	4,5
Affordable fees	7	0,5	Organizational framework		16	1,0
Appropriate timetabling	5	0,3				
Physically suitable	4	0,3				
Provides support	107	6,9	Role	GROUP & OTHER PARTICIPANTS	256	16,6
Acts as reflector	32	2,1				
Provides knowledge and exchange	95	6,1				
(Cultural) diversity	13	0,8	Composition		22	1,4
Homogeneity	9	0,6				
Concentration	3	0,2	Learner's internal resources	LEARNER HIM/HERSELF	89	5,8
Willingness to learn	47	3,0				
Self-responsibility	39	2,5				
Not relevant	346		Not relevant		346	

Appendix 10. Survey questionnaire (English paper version)