



Developing a Curriculum for eHAP

e-learning for the Health Agents Programme in Europe

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HÁSKÓLI ÍSLANDS

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e-learning for the Health Agents Programme in Europe

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This thesis is a part of *eHAP - e-learning for the Health Agent Programme in Europe* which was funded by the Lifelong Learning programme Leonardo da Vinci.

This thesis is a part of a research that was conducted by using mixed methods and is a component of a master's degree in Sports and Health Science from the University of Iceland. The total value of my project is 60 ECTS credits and it was built on the work of developing of a curriculum of continuing education and e-learning for professionals in the health promotion workforce. This was a journey, which started by identifying core competencies relevant for the eHap programme, the development of modules based on these findings, and finally piloting of one of the modules.

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Reykjavík, in December 2011

Ágrip

E-learning for the Health Agents Programme in Europe (eHAP) er samstarfsverkefni milli fimm Evrópulanda, þ.e. Íslands, Danmerkur, Noregs, Belgíu og Portúgals, sem styrkt var af Leonardo Da Vinci sem er starfsmenntahluti menntaáætlunar Evrópusambandsins.

Í Evrópu í dag eru sex af sjö helstu áhættuþáttum fyrir ótímabærum dauða tengdir því hvernig við nærumst og hreyfum okkur. Heilsusamlegt mataræði og regluleg hreyfing eru mikilvægir þættir sem stuðla að góðri heilsu. Tilgangur eHAP-verkefnisins er að auka færni í starfi með áherslu á heilsu og næringu í tengslum við heilsueflingu á breiðum starfsvettvangi í sem flestum löndum í Evrópu og nýta til þess þekkingu og námsefni sem þegar er til í þátttökulöndunum.

Markhópur verkefnisins var fólk á vinnumarkaði sem lauk námi fyrir 10-20 árum og starfar við heilsueflingu á vinnustað sínum þ.á.m. leik-, grunn-, og framhaldsskólakennarar, matreiðslumenn, kokkar og starfsmenn innan heilbrigðiskerfisins sem stuðla að almenningsheilsu.

Þróunin og skipulagningin á námskeiðslíkaninu sem kynnt er í þessari ritgerð byggir á niðurstöðum úr svonefndri Delphi-rannsókn sem fólst í rýnihópavinnu og tvítekinni spurningalistakönnun. Aðal markmið var að meta einn af fimm hlutum námskeiðslíkansins með tilliti til fjarnáms og upplýsingatækni, sem er sameiginlegur öllum hlutum. Við matið námskeiðslíkaninu voru notaðar bæði megindlegar og eigindlegar rannsóknaraðferðir.

Niðurstöður Delphi hlutans drógu fram sjö megin færnisvið en þátttakendum í þeim hluta fannst meiri þörf á endurmenntun tengdri næringu, heilsu og heilsueflingu heldur en aukinni upplýsingatækni. Mat á námskeiðslíkaninu leiddi í ljós almenna ánægju og var efnið talið stuðla að aukinni kunnáttu, færni og hæfni ólíkra starfsstétta í heilsueflingu. Jákvætt viðhorf var einnig gagnvart mikilvægi upplýsingatækni fyrir þróun í starfi.

Verkefni eins og eHAP sýna að endurmenntun á netinu þar sem nemendur læra á eigin hraða og tíma getur gefið aukið tækifæri fyrir sí- og endurmenntun fyrir þær starfstéttir sem beita sér fyrir almennri heilsueflingu. Það er því verðugt verkefni að bjóða upp á fjölbreyttar kennsluaðferðir þar sem upplýsingatækni er nýtt til að auka fagþekkingu samhliða færni í miðlun.

Abstract in English

E-learning for the Health Agents Programme in Europe (eHAP) is a collaboration between 5 European countries: Iceland, Denmark, Norway, Belgium and Portugal. The project was funded by the Life Long Learning Programme Leonardo da Vinci.

In Europe today, six out of seven risk factors for premature deaths are related to how we eat, drink and exercise. Healthy diet and regular physical activity are important factors for good health. The main goal of the eHAP programme is to increase competences related to health and nutrition in health promotion among the broad workforce promoting health in one way or another across Europe, by using the existing knowledge and study materials from the participating countries.

The target group consisted of people who finished their education approximately 10-20 years ago, who promote health in their workplace, i.e. in the educational system, catering and the primary health care sector.

The development and design of the curriculum presented in this thesis was built on the findings of a modified Delphi study that was conducted by focus group interviews and two rounds of online questionnaires. The main goal was to evaluate one of five learning modules of the curriculum with regard to distance learning and information communication technology (ICT) which is a common ground for all the five modules. In the evaluation of the module, both on qualitative and quantitative research was relied on.

Findings from the Delphi study narrowed suggestions down to seven core competencies, and experts within the workforce felt the strongest need for continuing education related to nutrition, health and health promotion rather than ICT skills. Evaluation of the pilot module showed general satisfaction and the study material was thought to contribute to added knowledge, skills and competencies within the heterogeneous health promotion workforce. The importance of ICT skills for further development in their work was also generally accepted.

Projects like eHAP show that online continuing education which allows for learning at one's own preferred time and speed gives an **opportunity for strengthening continuing education for the workforce engaging in general health promotion**. It thus is a worthy project which offers diverse teaching methods where ICT is used both for strengthening further professional knowledge as well as skills in communicating health.

Table of Contents

Acknowledgement	6
Ágrip	7
Abstract in English.....	8
Table of Contents.....	9
Figures.....	11
Tables	11
1 Introduction	13
2 Literature Review	15
2.1 Health promotion and communicating health.....	15
2.1.1 Health today in the EU	15
2.1.2 What is health promotion?	16
2.1.3 Why should health promotion focus on nutrition and physical activity?	17
2.1.4 Health promotion strategies	19
2.1.5 Communicating health	20
2.2 The Delphi method.....	23
2.3 Information and communication technology in health promotion	23
2.3.1 ICT skills and health promotion.....	23
2.3.2 Continuing education needs of health professionals.....	25
2.3.3 Distance learning, e-learning, blended learning and learning management system (LMS).....	26
2.3.4 Blended learning and health promotion.....	27
2.3.5 E-tivities – the way to successful online learning.....	28
2.3.6 E-Health and health behavior change	29
2.4 Development of a curriculum in health promotion	31
2.5 Summary of review	31
3 Background and methods	33
3.1 Delphi study - participants	33
3.1.1 Delphi study - competencies	34

3.2	The eHAP programme – learning modules	34
3.3	The pilot module for eHAP project.....	36
3.4	Pilot course participants.....	38
3.5	Online questionnaire.....	38
3.6	Interviews via Skype and e-mail	39
4	Results	40
4.1	Results from the Delphi study	40
4.2	Results from the evaluation of the pilot module	44
4.3	Results from the online questionnaire.....	44
4.4	Results of the open questions.....	52
4.5	Interviews with participants after the piloting.....	52
4.5.1	More blended learning within the course.....	52
4.5.2	Feedback from the teacher to the students.....	53
4.5.3	Internationalized within Europe.....	53
4.5.4	Motivation and online learning	54
4.5.5	Is the course a viable choice for the health workforce?	54
4.5.6	Isolation and online distance learning	55
5	Discussion	56
5.1	Gathering the competencies with the Delphi study	56
5.2	Continuing education in health promotion workforce	56
5.3	Gained knowledge and skills in health promotion	57
5.4	The use of e-learning.....	57
5.5	Use of and the creation of the web based platform	59
5.6	Use of ICT and the e-tivities	59
5.7	Feedback from teacher and peers.....	60
5.8	Recommendation to co-workers and internationalization	61
5.9	Strengths and weaknesses of the project	62
6	Conclusions.....	64
7	Appendix.....	72
7.1	My contribution to the eHAP project.....	72

7.2 The eHAP project: Delphi-study framework for focus groups and questionnaire for rounds 2-3	73
7.3 Questionnaire that was conducted online after the course ..	88
7.4 Questions that were asked via Skype and by email after the course was completed	93
7.5 eHAP publication – development and implementation of Modules based on the principles of E-learning.....	94

Figures

Figure 1 HAPA health behavior change model.....	22
Figure 2 Modules that were created.....	35
Figure 3 Structure of the full programme towards becoming a Health Agent	36

Tables

Table 1 The three target groups.....	40
Table 2 Country of Delphi study participants.....	40
Table 3 Competencies related to change in health behavior	41
Table 4 Competencies related to communication	42
Table 5 Seven core competencies identified as relevant for Health Agents and the eHAP programme	42
Table 6 Age of participants.....	44
Table 7 Participants educational background	44
Table 8 How important/unimportant was the course for participant's workplace	45
Table 9 Have participants gained knowledge on how to use counseling as a way of doing health promotion.....	45
Table 10 Has the course increased participants skills to promote good health?	46
Table 11 Did participants like/dislike the blended learning/e-learning approach?	46

Table 12 Did participants like/dislike the flexibility for learning within the course?	46
Table 13 Did participants like/dislike the layout of the platform Fronter	47
Table 14 How well/badly were participants able to manage time and combine the course with their daily routine at work	47
Table 15 Did participants like/dislike the online lecture?	48
Table 16 Did participants like/dislike the e-tivity they performed?.....	48
Table 17 Did participants gain ICT knowledge throughout the course?	49
Table 18 Have participants gained better perspective on health and health education and how ICT tools may help in their work/profession.....	49
Table 19 Would more ICT engagement in participant's profession make a difference for them within their working environment?	50
Table 20 Did the participants think the work hours within the course were reasonable?.....	50
Table 21 Was the reading material and the course content up to participants expectations.....	51
Table 22 Would participants recommend this course to a friend or work colleague	51

1 Introduction

The European project "e-learning for the Health Agents Programme in Europe" (eHAP) was developed to educate *Health Agents*, i.e. people who should be able to integrate activities of health promotion in the main tasks and responsibilities of their workplace, and as such promote positive changes towards health in their surroundings. It was funded with support from the Leonardo da Vinci programme, which is a part of the European Commission's Lifelong Learning Programme. The main goal of the eHAP programme is to provide continuing education for professionals working within public health. The aim is to provide up to date nutritional, physical activity and health knowledge on the level needed and at the same time integrate blended learning and ICT (Information Communication Technology) in the process.

The assessment of the competences and the needs of professionals that are working with public health throughout Europe was developed by six European partners: University of Iceland, University College Sealand in Denmark, Akerhus Oslo in Norway, Katholike Hogeschool in Leuven Belgium, Escola Superior de Tecnologia da Saude de Lisboa in Portugal and IDAN vocational centre in Iceland. All the partners are engaged in education in Europe.

In order for the eHAP programme to have a strong European profile, the decision was made to conduct a Delphi study which is a method that is built around structured groups with a panel of experts that are interactive and is based on a multistage process. The Delphi method is designed to transform opinions into a group consensus. It is a flexible method which is often used within the field of health science (Hasson, Keeney, & McKenna, 2000).

The following three target groups within the workforce were chosen to gather all the competences that were needed:

- Teachers and other staff in nursery, primary and secondary schools
- Chefs and other catering staff
- Health professionals involved in public health activities

At the end of the three rounds of the modified Delphi study, the results were gathered and each partner built a curriculum module with the main competencies as a focal point. This thesis shows the result of the piloting of

module two called *Communication and Health Behavior Change with Special Emphasis on Motivational Interviewing*; the module was built on the findings of the Delphi study.

The main reason for this project was to build compatible learning modules from findings gathered by the Delphi study. The evaluation of the pilot module is being presented in this thesis. The blended learning approach and information technology are very important factors in continuing education and are the main focal points within each of the five modules that were created by the eHAP partners. Working on the eHAP project has been very rewarding and gratifying. The work that I personally have put into the project has also been considerable. The Delphi study was very educational for me as a master student where I assisted in gathering the experts for the panel and also worked as a mediator and assistant in the interviews and online questionnaire for the Delphi study. With shared workload the European partners developed and designed the questionnaire that was used in the Delphi study. After the findings of the Delphi study there was collaboration between Anna Sigga, Hulda and me in making module 3 for Iceland. It was then decided with the eHAP partners that the Danish module 2 would be the piloting module for the project and in this thesis the evaluation of that pilot module is being presented. In the piloting of the module I assisted the teacher of the course in keeping track of the students and helping the students with the ICT that was being presented in the course. After piloting module two, I developed and designed a questionnaire that was presented to students online. However, the responses were not in our favor so it was decided to do Skype and email interviews, which strengthened the results of the evaluation of the pilot module.

This thesis presents a part of this journey, with the following main aims:

- Find core competencies needed within the health promotion workforce.
- Build a curriculum based on the core competencies.
- Pilot a part of the curriculum, with emphasis on distance learning and Information Communication Technology (ICT) which is a common ground for all the five modules.

2 Literature Review

2.1 Health promotion and communicating health

Health promotion is the concept of trying to encourage people, and to enhance their motivation to strive for optimal health by supporting them in changing their lifestyle to gain better health (O'Donnell, 2009). The communication of health from the health practitioners point of view is an essential part of health promotion and takes place on many levels both with individuals and groups (Corcoran, 2007, p. 31).

2.1.1 Health today in the EU

According to the World Health Organization (WHO) the definition of health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (World Health Organization, 1948). The leading causes of death in the European countries are cardiovascular disease, cancer and respiratory diseases which can be prevented by better nutrition and physical activity (The Health-EU Portal, 2012).

The mortality rate for non-communicable diseases is three out of five people who every year die from diseases such as heart disease, stroke, cancer and chronic lung disease. Every year 36 million people die from non-communicable diseases and in the developing world over 9 million people die before the age of sixty in the prime of their life. These diseases are mostly preventable by healthy, well-balanced nutrition and physical activity (WHO Regional office for Europe, 2011). Daily physical activity contributes to the prevention of several chronic diseases such as cardiovascular disease, osteoporosis, diabetes, obesity, cancer, hypertension and depression (Warburton, Nicol, & Bredin, 2006).

Physical activity and nutrition are listed as key priorities in the European Union Public Health policies. The European Union feels the need to combine forces and resources by involving all stakeholders, including the food and advertising industries, civil society and the media. The main goal is to achieve an increasing awareness on health related matters and improving habits relating to nutrition and physical activity (The Health-EU Portal, 2010). The World Health Organization (WHO) recommends the evolvement of governmental strategies and policies of health promotion, physical activity and prevention of non-communicable diseases such as

cardiovascular disease, cancer and diabetes (World Health Organization, 2008).

The main health issues in the Nordic countries are the same as WHO describes it to be worldwide. That is why there is a need for the government to implement a wide range of policies and development of comprehensive strategies to fight back against the development of lifestyle related diseases. The necessity of finding a solution against unhealthy diet, physical inactivity and overweight must be found at a national level but with the support of the Nordic and at international level. The effort and incentive at the international and European level would be looked upon with the promotion of stakeholder cooperation and shared responsibility of all partners (The Nordic Council of Ministers, 2006).

2.1.2 What is health promotion?

The definition of health promotion according to the World Health Organization (WHO) 1986:

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social wellbeing, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy lifestyles to wellbeing.

Optimal health is an active balance of physical, emotional, social, spiritual and intellectual health. Lifestyle change can be achieved by variation between learning experiences that enhance awareness, increase motivation, build skills and more importantly open access to an environment that helps people make positive changes regarding their health (O'Donnell, 2009). Health promotion has a wide range of variety within populations which includes educational, social, economic and political trials to promote better health within the population. The practice of health promotion is pursued in different fields, including schools and health care facilities, and by a diverse group of people for example health educators, nurses, physicians and teachers (Butler, 2001, p. 23). Professionals working within the field of health promotion must work as a

team and across sectors with common goals for a coordinated response to each individual (WHO Regional Office for Europe, 2010).

2.1.3 Why should health promotion focus on nutrition and physical activity?

Unhealthy diets, physical inactivity and consequential obesity are estimated to increase direct cost for health care systems in Europe in the future (Fry & Finley, 2005). If the rise in childhood obesity has not turned around in the future, the amount of individuals who have ill health will increase. The key priority in the European Union Public Health policies is to improve dietary intake and increase physical activity (Commission for the European communities, 2007).

2.1.3.1 Nutritional recommendations in Europe

In Europe a diet is considered to be well balanced when food intake provides adequate amounts of energy and nutrients for good health and well-being (European Food Safety Authority, 2011). The recommended dietary intake for people is based on population reference intakes, average requirements, adequate intake and the lower threshold intake. Food based dietary guidelines are being used in all the European countries and are quite similar in all the countries (European Food Safety Authority, 2011).

One of the major causes of the obesity and overweight epidemic in Europe is caused by a diet that is high in saturated fat, energy dense foods and not enough fruit and vegetable intake combined with a sedentary lifestyle (WHO Regional Office for Europe, 2001).

Worldwide people are consuming too many calories and doing minimum exercise. Nordic citizens do not follow the official recommendations on diet and physical activity. Many Nordic children and adults have low intake of fruits, vegetables and fish. They also consume fattier food in particular more saturated fat than the dietary guidelines recommend. Children also have a high intake of sugar and their consumption is well above recommendation (The Nordic Council of Ministers, 2006). Children and adolescents who consume vegetable rich diets have less risk of developing lifestyle diseases due to increased BMI, waist circumference and cholesterol (Grant et al., 2008). Also, fruit and vegetable consumption have positive health effects on chronic conditions such as heart disease and stroke with adults (He, Nowson, Lucas, & MacGregor, 2007).

2.1.3.2 Physical activity and the European recommendations

One of the major independent risk factors of chronic disease and premature death is being inactive. It is also very important to realize that physical activity is a significant factor for treatment of many chronic diseases (The Nordic Council of Ministers, 2006). Physical activity can reduce the risk of cardiovascular disease, some types of cancers, type two diabetes but also in controlling body weight (World Health Organization, 2009).

When it comes to physical activity it is accounted for in many ways including work, transport, domestic duties and leisure time. In high income countries most of the physical activity occurs in leisure time compared to low income countries, where it is mostly accounted for in work, transport or chores. Around 21-25% of colon and breast cancer burden, 27% of diabetes and 30% of ischemic heart disease is caused by physical inactivity and is therefore a leading global risk factor and is responsible for 6% of all deaths globally (World Health Organization, 2009).

The Nordic countries all have similar recommendations when it comes to physical activity. The basic recommendation for adults and the elderly are 30 minutes of moderate physical activity per day and for children it is moderate to vigorous physical activity for 60 minutes a day (The Nordic Council of Ministers, 2006). WHO recommends the same time for physical activity for children as the Nordic countries but for adults the minutes to be physically active drop to 21 minute per day, however the intensity when exercising also increases. But for added health benefits the time for physical activity needs to be increased up to 43 minutes per day with a combination of moderate and vigorous intensity (World Health Organization, 2011). Approximately 35% of all the people within the WHO European region are currently not doing any physical activity a day. Men in high income countries are more active than women and around 50% of women are inactive (WHO Regional Office for Europe, 2008). Around 50% of the population in the Nordic countries do not meet the recommendations for daily physical activity (The Nordic Council of Ministers, 2006).

Natural environments and therefore outdoor activity can have direct and positive impact on wellbeing and health among individuals (Bowler, Buyung-Ali, Knight, & Pullin, 2010). Exercising outdoors is combined with greater feelings of revitalization and increased energy, it also shows a decrease in tension and depression for individuals (Coon et al., 2011). A recent study also showed that men did more outdoor physical activity than women. The life changing experience of having children also decreased the

time people were physical active. There is a need to promote physical activity where the whole family can be involved and spend time together in being physical active outdoors using the environment to be mobile (Sjögren, Hansson, & Stjernberg, 2011).

2.1.3.3 Obesity as risk factor for many diseases

Worldwide one of the major health epidemics is obesity and the prevalence of obesity has increased in adults as well as in children over the last five decades (WHO Regional Office for Europe, 2008). The prevalence of obesity nearly doubled from 1980-2008. In the WHO European Region roughly 50% of men and women were overweight in the year 2008. At the same time around 23% of women and 20% of men were considered to be obese. The latest estimates in the European Region show that overweight affects around 30-70% and obesity affects 10-30% of adults (WHO Regional Office for Europe, 2008). Results are similar in the Nordic countries where over 40% of adults are overweight and 15-20% of children carry the same burden (The Nordic Council of Ministers, 2006). In a recent report from the Icelandic directorate of Health (2011) the steady increase in childhood obesity seems to be starting to level off and overweight has also reached a plateau compared to recent years among school children within the capital area of Reykjavik. A certain balance may have been reached (Jónsson, Héðinsdóttir, Erlendsdóttir, & Guðlaugsson, 2011).

Obesity is a risk factor for premature death, mostly from cardiovascular disease, diabetes, cancer and chronic diseases (Pi-Sunyer, 2009). The mortality rate in Europe is mainly from cardiovascular disease accounting for 40% of all deaths and cancer is in second place (OECD, 2010, pp. 30-34).

There are numerous reasons for why individuals cannot keep up a healthy weight throughout their life course, some of them being environmental factors that are beyond personal control. For obesity prevention to work there needs to be a broad range of strategies, many of which health professionals are not capable of providing alone. Knowledge, skills and experience to be able to help is lacking (Kumanyika et al., 2008).

2.1.4 Health promotion strategies

An effective health promotion strategy is driven by principles and actions that are designed to make people take control over the determinants of their health (Keleher, MacDougall, & Murphy, 2007, p. 9). There is a

growing need for health practitioners to have the correct tools to move forward with the right strategies for a better health promotion (Corcoran, 2007, p. 156).

In the last decade's health promotion has primarily been focusing the promotion from the health sector and on broad public health issues such as preventing cardiovascular disease, diabetes and smoking. There is a much bigger need to look into what causes these diseases such as unhealthy nutrition and physical inactivity. If health promotion is targeted to go straight to the root of the problem and to get individuals to change their unhealthy behavior there will most definitely be an improvement in health (Keleher, et al., 2007, p. 9). Studies have shown that it works well to combine health promotion interventions which promote better health with the ones who prevent diseases (Diehr, Derleth, Cai, & Newman, 2007). There has been an associated need to build evidence about what works in health promotion from the perspective of the social determinants of health on how to guide practitioners and decision makers in their battle for better health for the population (Keleher, et al., 2007, p. 9).

Health promotion should plan, implement and evaluate information in a way that the participant is allowed to take in the information, digest it and then implement it as soon as possible. By identifying the social and psychological factors for the group/population and matching their preferences to the information, the outcome is more likely to be applicable, achievable and successful for the participants (Corcoran, 2007, p. 52).

2.1.5 Communicating health

When health practitioners are promoting healthy life style the communication should be well organized and effective it should also include an evaluated progress which can be used to prevent morbidity and mortality as well as to promote an idea of better health and wellbeing among people (Corcoran, 2007, p. 3). Health specialists have an important role in the improvement of individual, group or community health by supporting people on how to begin or increase their health promoting behavior and/or to decrease health damaging behavior (Jones & Donovan, 2004).

When health education is thought of it is usually about how to give information, instruction or enhancing understanding about health. It is also about encouraging individuals or communities to put health on their personal agenda, to consider their health instead of coming to terms with ill health later in life as well as advising parents about development and

childcare. A significant amount of health education focuses on negative or ill health, in other words they do not usually focus on enhancing better health. Some health educators put out a considerable amount of information on how to prevent or correct ill health problems for example by educating people about exercising to prevent coronary heart disease instead of focusing on how to achieve better health i.e. also making the good better (Carr, Unwin, & Pless-Mullooli, 2007, p. 101).

Each day there are different challenges in the field of health promotion and health education. Health practitioners are faced with new challenges to prevent ill health and promote preventive behavior among populations mainly as response for changing the patterns of mortality and morbidity around the world. This is often seen in the developing countries in situations where the need for health promotion is far greater than the budget and resources present. When faced with these challenges the foundation of health promotion needs to be presented by a good health practitioner who has great communications skills and can enable health promotion through planning, designing, implementing and evaluating programmes, campaigns or policies (Corcoran, 2007, p. 4).

When communicating health the promotion itself is an essential part and takes place in many levels for example with individuals, groups, organizations, communities or mass-media. In communicating health the main focus is on health information. If health promoters want to be successful in promoting good health campaigns they need to design all interventions using theoretical concepts and use the application of theory to practice interventions (Corcoran, 2007, p. 31). Jones and Donovan (2004) suggest that there is a misunderstanding between health practitioners and health researches which often is seen by difference in how models and theory are combined and then used as intervention.

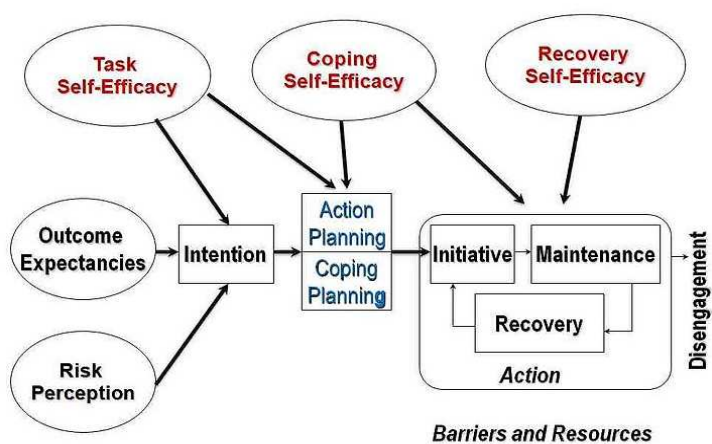
2.1.5.1 Models for health promotion

One of the original models that were developed to understand health behavior change was the health belief model. It joins together the fundamental structure of planned behavior such as attitudes, social norms and perceived behavioral control. The health belief model notices the importance of environmental hindrances and/or favors but does not elaborate on them (Institute of Medicine, 2002).

The Health Action Process Approach (HAPA) is also a model for health behavior change. The model combines perceived risk from the health belief

model with outcome expectations and self-efficacy variables from social cognitive theory. It takes into the equation the time dimension, motivational phase and an action phase. The HAPA model states that in all the phases of health change the main point is self-efficacy for individuals (Contento, 2011). Other models do also exist, but whatever model is used, there needs to be a specific outcome, value, attitude, who it affects and self-efficacy issues that are taken to consideration for the individuals as well as groups (Contento, 2011, p. 202).

Figure 1 HAPA health behavior change model



Health behavior change refers to changing the unhealthy aspects of your life with healthier choices. The HAPA model is an approach based on psychological theory of health behavior change. The model is an open framework for different motivational and volitional structured to explain and predict individual changes in health behavior such as dietary behavior and physical activity (Contento, 2011).

2.2 The Delphi method

The Delphi method main objectives are to develop a technique to reach the most reliable consensus of opinion in a group of experts by series of intensive rounds of questionnaires with controlled opinions of feedback from participants. The Delphi method works really well to reach a group consensus on any given subject. The method has been used to develop educational and training systems (Hasson, et al., 2000; Powell, 2003). When researchers have a diverse group of participants in terms of geographies, the Delphi study is thought to be a reliable research method (Rowe & Wright, 1999).

The Delphi study is very adaptable and is dedicated to the study aims and goals; therefore it is easy for researchers to adjust to this method because it helps them to evaluate the topic in a flexible and interactive way, also it helps them gathering the data they need. It has been well suited as a research instrument when the goal is to improve understanding of problems and/or develop a forecast for any given topic (Hasson, et al., 2000).

Panels of experts in their respective field are the participants in the Delphi study and they need to reach a consensus on the topic the study presents them with. After a couple of rounds of controlled feedback the experts have reached their agreement and that is called a group consensus in the Delphi method (Powell, 2003).

2.3 Information and communication technology in health promotion

In the 21st century the possibilities for information and communication technology, also known as ICT, is enormous and new and emerging technologies may be very useful in the field of health promotion. New technologies present an opportunity for the fight against the major global health challenges such as health behavior change and prevention of chronic diseases (Eng, 2004).

2.3.1 ICT skills and health promotion

ICT is referred to as an online learning programme, courses and resources emerging in education with the help of an ongoing innovation of teachers, students and other computer programme builders (Massy, 2006, p. 417).

There are continuous demands within Europe to have better health and social care mainly because of the demographic change, rising incidence of

chronic disease and unmet needs for more personal care. Professionals need to work as a team, use the emerging communication technology and advanced information technology in health promotion (WHO Regional Office for Europe, 2010).

Information technology that is used in health promotion is beneficial both for the health practitioner as well as the person receiving the information. Health practitioners are expected to use information technology in their daily work. Worldwide there are constant changes in technology and practitioners need to keep up with developments for efficient health promotion (Corcoran, 2007, p. 116). The innovation is great in the field of blended learning and there is an even greater need for more technological infrastructure and more teacher training (Massy, 2006, p. 417). Health promotion should be in a position to promote and enable access to evidence based knowledge, in particular when information technology allows wider access to materials (Corcoran, 2007, p. 156). In a study for continuing education for nurses it showed that if students use computers more often and are more technology driven they have more positive perception of online learning. The flexibility and the convenience is a vital part of the advantages of online learning. Students [nurses] have found online learning as a new suitable way to enhance their knowledge and get more education (Karaman, 2011).

The college years can be a time that students may be influenced to make healthier changes in their lives to improve their health. Many universities have noticed the urgency to offer personal health courses to increase health knowledge among students. Health courses with the purpose of basic knowledge about their bodies and environment but also on how to become healthy and remain healthy throughout life. The college students who used the opportunity to go to courses which emphasized on health and health related matters had increased their knowledge on personal health from the beginning of the semester till the end of the semester (Silvestri & Bonis, 2009).

In a study by Franko et al., (2008) based on an internet nutrition and physical activity educational programme for college students, after six months of intervention the students had increased their fruit and vegetable intake compared to the control group and also improved their motivation to change eating behaviors. The participants increased their social support and self-efficacy for dietary change and their attitude toward exercise became more positive but no behavioral changes in physical activity were noted. The long term effects that the intervention had on students was not

strong, however the attitude measures did show better longer-term effects (Franko et al., 2008). Long term maintenance of behavioral changes has been a problem in a number of nutrition education studies (Ahern, 2007). The internet-based programme is an effective way to reach students in college campuses for nutrition education, health promotion and change in health behaviors (Franko, et al., 2008).

In similar manner as the two above mentioned examples of successful integration of ICT and health promotion, health professionals equipped with the newest ICT skills and up-to-date knowledge on health promotion strategies, nutrition and physical activity should be able to make the best of their competences and promote health more effectively and to a broader audience than without ICT skills.

2.3.2 Continuing education needs of health professionals

A steady increase in frequency of infectious and chronic diseases as well as the regression in public health infrastructure in the United States and other countries has resorted in a renewed interest in professional preparation and training of the public health workforce. To protect public health there is a need for a great change in the education and training of public health workers (Allegrante, Barry, Auld, Lamarre, & Taub, 2009).

In a study by Allegrante et al., (2001) on continuing educational needs of the currently employed public health education workforce the following competencies were listed: need for advocacy, business management and finance, communication, community health planning and development, coalition building and leadership, computing and technology, cultural competency, evaluation and strategic planning (Allegrante, Moon, Auld, & Gebbie, 2001) . A knowledgeable and skilled health promotion workforce is a key factor of the capacity required to promote the health of populations (Wise, 2003).

A workforce that is competent and has the skills, knowledge and abilities to translate policy, theory and research into effective action has become critical to the future growth and development of global health promotion. Competences refer not only to knowledge, but also to skills and attitudes and have been shown to provide a useful ground for health promotion training, academic preparation and continuing professional development (Battel-Kirk, Barry, Taub, & Lysoby, 2009).

With the world and technology rapidly changing there is a growing need for continuing education. The teaching method should be flexible and the

students need to be cooperative, students need to attain their knowledge by the blended learning methods i.e. face-to-face and campus based learning in the form of: lectures, group work, field studies, project work and seminars. It is very important when students go through this kind of course that they have a separate study guide with narrowed down information about the whole programme and each module before starting the course. By being able to study through distance learning there is an increase in the opportunity for people [nurses] who work in the field to maintain and continue their education (Danielson, Krogerus-Therman, Sivertsen, & Sourtzi, 2005)

2.3.3 Distance learning, e-learning, blended learning and learning management system (LMS)

Distance learning is referred to when the teacher and the student are separated and students do not need to attend the traditional school room to get their education. Online learning and e-learning are strongly related to distance learning, however, online and e-learning have the possibility to educate online and at the same time e-learning accounts for all the use of electronic supported devices with or without using the internet (Geirsdóttir et al., 2007) .

Blended learning methods are thought of when education is hybrid e.g. mix of face-to-face learning, campus-based learning and online learning (Geirsdóttir, et al., 2007). Blended learning is sometimes thought of as different teaching methods. But another variation of the term blended learning is the use of media which Graham thinks is too broad a concept (Graham, 2006). To define what kind of learning method is being used, the suggestion has been made that if 30-79% of the learning material in the course is being shared online it is correct to call it blended learning. However, if the learning material that is being shared online is under 30%, it is campus-based learning, and online learning if it is 80% or more online (Allen, Seaman, & Garrett, 2007).

Learning Management Systems also known as LMS are platforms like WebCT and Moodle which have been used in many universities. LMC is a learning platform that is online and knowledge building for students. The activities students can perform on the LMS are among other things blogs, social networks, emails, student group work etc. It is also a good opportunity for teachers to see if the students are active within the platform since these data are available (Geirsdóttir, et al., 2007).

2.3.4 Blended learning and health promotion

Blended learning is considered as a relatively new and promising technology driven trend for different approaches in education (Voos, 2003). Research have shown that online learning does produce stronger student learning outcomes, more so than only face-to-face learning, and also that online learning is an as effective learning method as face-to-face but not better (U.S. Department of Education, 2009). Blended learning makes access to learning material easier for example for students who have families, or have multiple demands of workload, since it increases the flexibility in their education (Voos, 2003).

The blended learning technique is a strategy that has found a solid acceptance in higher education and corporate training programmes over the last decade and has been achieved by combining the face-to-face and online instruction for students (Graham, 2006; Voos, 2003). The students that arrive at higher education in the UK are more linked in and more up to date than before. The role of creativity, imagination and feasible innovation in connecting with the technologies and pedagogies of the future has become very important (Salmon, 2009).

Wolgering et al., (2009) compared whether the classical problem based learning or blended learning could better increase student motivation and support the learning process with the student's cooperation, orientation and more reliable tutoring. The results showed that students who used blended learning technique increased their motivation for education. The tutors did not see any difference between groups, but students who did the blended learning showed more satisfaction in their studies compared with traditional educational methods.

According to a study by Edginton and Holbrook (2010) the enthusiasm students had for blended learning was seen by interaction with the online course modules but also by face-to-face interaction with the professor during problem solving tutorials that increased significantly between the beginning and end of a 6-week of a blended pharmacokinetics course. Students concerns about blended learning method decreased but they also became more aware of the importance of managing their own time and being organized to be able to complete the online part of the course on time.

When compared to traditional lecture based courses the blended learning is seen as more flexible time schedule for students, with better learning outcomes, increased access to knowledge at all times and has higher satisfaction levels among faculty members and students (Albrecht,

2006). Of course e-learning will never replace the physical interaction between students and teachers, however this modern technology has the potential to achieve great support for further education within various professions (Costa et al., 2010).

A recent study by Moule et al., (2010) on nurses and health care students and their experiences on online learning in higher education in UK showed that the students were engaging in their education but the scope of their use remained on the instruction level whereas the students did what their teacher instructed them to do without the initiative from the students themselves. Healthcare students were able to develop essential factors of community practices and mutual participation. Particular issues emerged for the online community, including the permission of access to the online environment to support mutual participation. Professional knowledge and computer skills also increased (Moule, 2006).

There is an option, which comes with blended learning, for adults to stay in their work field without being forced to resign their job to continue their education without needing to go to the campus but also have the flexibility within their studies. In the coming decades adult students will have more exciting learning options to choose from while they are grooming themselves for a new job or simply updating their skills within their work field which is in the best interest for both the students and the workforce (Bonk, Kim, & Zeng, 2006; Costa, et al., 2010, p. 565).

Due to the global recession the School of Education in the University of Iceland felt the need to offer more innovative ways to educate their undergraduate students. Over the recent years there has been a steady increase in the number of courses taught in the blended learning method in University of Iceland. In the years 2010-2011 over 85% of the courses that were taught within the School of Education were co-taught whereas campus and distance learners were in the same group. However, there is a difference between blended learning and co-teaching whereas the distance learners do not need to show up for classes but campus students show up for traditional classes usually every week (Jóhannsdóttir & Jakobsdóttir, 2010).

2.3.5 E-tivities – the way to successful online learning

E-tivity is a word that is built around active and interactive online learning. E-tivities should be motivating, engaging and purposeful. They are based on

interaction between students, participants and usually through written message contributions (Salmon, 2002, p. 1).

An e-moderator (electronic moderator or an online teacher) designs and leads the e-tivities which take place over a period of time. E-tivities are cheap and pretty easy to run and often through online bulletin boards, forums or conferences (Salmon, 2002, p. 1).

The importance of e-tivities for the online learning world is great because they are versatile and are well practiced principles and pedagogies for learning but concentrate on releasing the best of networking technologies for the student. There are many ways of online teaching but e-tivities are designed for efficiency and are also reusable which is of great value to the teacher and the course. On the other hand they are time consuming to create for a new teacher. They involve electronic resources that are already made by the e-moderator. They can be used by participants who never meet each other or combined with classroom activity (Salmon, 2002, p. 3).

The change in learning has become huge over the years due to development of ICT. There is a different way of teaching for e-moderators/teachers, with a different workload for them as they spend more time in creating new study materials and choosing the right material for their students instead of staying in the classroom, and this works well in higher education (Salmon, 2000, p. 9). With the great innovation in technology in the world there are a lot of e-learning tools on the market. It may be difficult for teachers to choose from which ones they want to incorporate in their courses (Wenger, White, & Smith, 2009).

2.3.6 E-Health and health behavior change

The internet and other digital technologies have become increasingly popular by each year and it has affected the health care industry. Scientifically based knowledge is not easy to find online and not everybody can understand the information, for example a simple Google search on the word “health” gives over 204 million hits which gives an idea on how much information is available online. The quality of this information is hard to evaluate and can be misinterpreted by individuals and even health care workers, if they do not engage in lifelong learning (Ahern, 2007).

The use of information technology “e-Health” in improving or promoting health and health care has been high on the health care development agenda for some time now.

Four main themes have been identified:

- use of information technology as an intervention medium
- use of information technology as a research focus
- use of information technology as a research instrument
- use of information technology as a professional development

Over the last several years information technology in health care has grown immensely. However, as reflected in a small proportion of research papers the exploitation in health care promotion has only recently started to emerge. There is a lot of health promoting information on the Internet but relatively little research has been published on the issue. There has also been concern over scientifically based knowledge and other information and how the user can make the distinction between the two choices (Lintonen, Konu, & Seedhouse, 2008).

E-health is considered as the use of information and communication technology to improve people's health and health care (U.S. Department of Health and Human Services, 2012). E-health is being portrayed as a promising element to address the limited capacity of the health care system to provide health behavior change and chronic disease management interventions. E-health is defined as the use of emerging interactive technologies e.g. internet, CD-ROM, personal digital assistants, interactive television and voice response systems, computer kiosk and mobile computing to enable health improvement and health care services. E-health programmes offer the potential for enhanced reach for all populations, relatively low cost, scalability, time efficiency and the opportunity to provide tailored and customized information for each patient or consumer (Ahern, Kreslake, & Phalen, 2006).

One of the greatest things about e-health programmes is how the individual can interact online at any given time for 365 days a year and from any location with an internet access. These characteristics of e-health programmes can empower individuals and in the end enhance their self-efficiency and self-management towards better health (Ahern, 2007).

People who search for health or medical information on the Internet are statistically associated with education level, internet experience, frequency of internet access and marriage status (Lorence, Park, & Fox, 2006). Higher educated people are more likely to seek health information on the internet than lower educated, also females are more open to searching the internet for health information (Pálsdóttir, 2008). Around 77% of health information seekers reported that the Internet had effected the improvement of their

health or medical information and services (Lorence, et al., 2006). Research have shown that females are more open to online learning and older students also want more face-to-face learning compared to online learning (Billings, Connors, & Skiba, 2001; Dabaj, 2009; Jakobsdóttir, 2008).

2.4 Development of a curriculum in health promotion

The development of a curriculum is difficult and a challenging task. The typical way is to develop a curriculum and then consult with the stakeholders but more current ways are to collaborate with stakeholders and try to reach an agreement for the right curriculum for the students/learners. With the steady changes in technology and education in the world it is useful to look into all perspectives when making a curriculum (Danielson, et al., 2005; Keogh, Fourie, Watson, & Gay, 2010). Research have shown that online curriculum is well accepted by students despite the fact that it is more time consuming to complete, but it's also more likely that students use the new gained skill to directly apply them to their work (Lewin, Singh, Bateman, & Glover, 2009).

In the recent decade people have increased the use of the Internet to seek health information and to communicate with others who have similar disease or illness, to get health advice and to communicate with health care advisors (Kerr, Weitkunat, & Moretti, 2005, p. 286). There is a significant increase in need for more education in online health searches to educate and help consumers search online more efficiently and to be able to make the distinction between good and bad health information that is on the internet.

2.5 Summary of review

The eHAP project main objective was to develop a learning programme to increase the possibilities for health professionals to expand their knowledge, skills and competencies by having the opportunity to receive continuing education in health promotion. With the help of different teaching methods such as blended learning and more ICT knowledge the option for continuing education will be available for professionals without them having to resign their job to get it.

In this thesis the focus is on the Delphi study that was used to gather the competencies needed in the health promotion workforce but also on the

evaluation of the pilot module that was built on the findings of the Delphi study. The following two research questions were developed for this thesis:

- *What are the core competencies needed within the health promotion workforce?*
- *How do the participants like a pilot version of the course in module 2 and the online learning method which is the main focus point in all the modules?*

3 Background and methods

For the eHAP programme to have a strong foundation, the European partners decided to conduct a Delphi study to gather the competencies that were needed within the health promotion workforce. These competencies were then used as a basis to develop all the five learning modules.

The evaluation of the pilot course (module 2), the focus was on how participants liked the course content, online learning and the e-learning they performed during the trial of the course. The pilot module was based on health communication and health behavior change with special emphasis on motivational interviewing. To evaluate the piloting of the module, both qualitative and quantitative research was used i.e. mixed methods.

In this chapter the method of the Delphi study, criteria for the selection, participants, research design and statistical methods are listed. This chapter describes the criteria for selection and details of participants, research design and statistical methods in evaluation of the pilot version of module 2.

3.1 Delphi study - participants

A modified Delphi study was conducted in the period between April and December 2010. A total of 134 participants took part in the Delphi study from five different European countries: Denmark, Norway, Iceland, Belgium and Portugal. The experts that qualified for the study were all handpicked and asked to participate in the Delphi study. They all had vast experiences in the health promotion workforce, which gave participants strategic roles or placed them in a position where they were able to consider the overall perspectives of their workforce sector and its role in public health. The following three target groups were identified:

- Teachers and other staff in nursery, primary and secondary schools
- Chefs and other catering staff
- Health professionals involved in public health activities

3.1.1 Delphi study - competencies

The questionnaire for the Delphi study was designed and developed in cooperation with the six European partners in the eHAP project. The questionnaire was rated on the scale from 1-6 where 1 was not applicable, 2 not relevant, 3 a bit relevant, 4 relevant, 5 very relevant and 6 extremely relevant to participants' professional work field. The questionnaire was based on assessing the needs for nutritional update, the use of ICT in the daily profession and to create a consensus on the competencies needed when working with public health in different contexts throughout Europe (see appendix 7.2).

Three rounds of the modified Delphi study were conducted in each country; the first round was held with mediators leading the discussion until the experts reached an agreement on the competencies needed in their profession (in Iceland there were two separate groups; one for teachers and health professionals and another for chefs and catering staff). In round two and three there was an online questionnaire, the experts answered questions the for the second time by themselves, but the third time around participants saw the average voting their peers had given and could either agree on them or not. Following the findings, a list of seven core competencies was considered to be relevant by the three target groups. These core competencies then were used to further develop the five learning modules that were created by the eHAP partners.

3.2 The eHAP programme – learning modules

All the modules are a mix of e-learning and face-to-face activities. They go beyond traditional education because modern ICT tools are considered an important factor. The main purpose of the modules is to increase knowledge, skills and competencies for the health promotion workforce in one way or another.

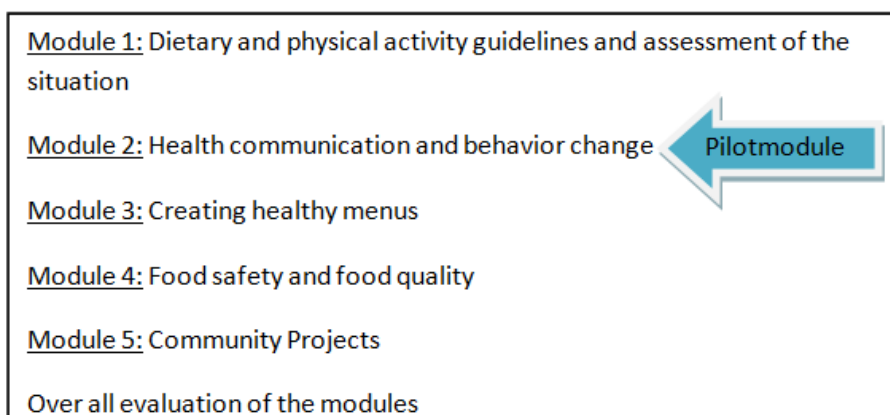


Figure 2 Modules that were created

All the modules are based on the same overall concept that has the main focus point on how to become a Health Agent and how to communicate health related matters to students or others who are interested in health education as a part of their continuing education.

The eHAP partners cooperated in developing the five modules for the overall project. Norway was in charge of module 1: Dietary and physical activity guidelines and assessment of the situation; Denmark organized module 2: Health communication and behavior change, which was also the pilot module; Iceland took care of developing module 3 and 4: Creating healthy menus, and Food safety and food quality. Portugal took care of module 5: Community projects (see appendix 7.5).

The full course consists of an introduction, five thematic modules and a final evaluation. Students can take a single module or do the full programme. The full programme accounts for 20 ECTS credits, but the introduction part is 2 ECTS, the modules from 1-5 account for 3 ECTS each and the final evaluation is 3 ECTS credits. In the curriculum it is suggested that finishing all parts of the programme is awarded with an Health Agent diploma.

The timeline for the each module is six weeks and expected workload for each module is 75-90 hours. Each module consists of several steps and ends with an evaluation activity related to the module. Learning outcomes of the modules are reached through online courses, reading material, face-to-face sessions and digital interaction. The learning outcome is reached by an online portfolio where all the work is gathered and the teacher can evaluate the project. There is also self evaluation. For full description of the

eHAP programme see appendix 7.5. (Kruse, Ólafsdóttir, Mosdøl, & Gray, 2011).

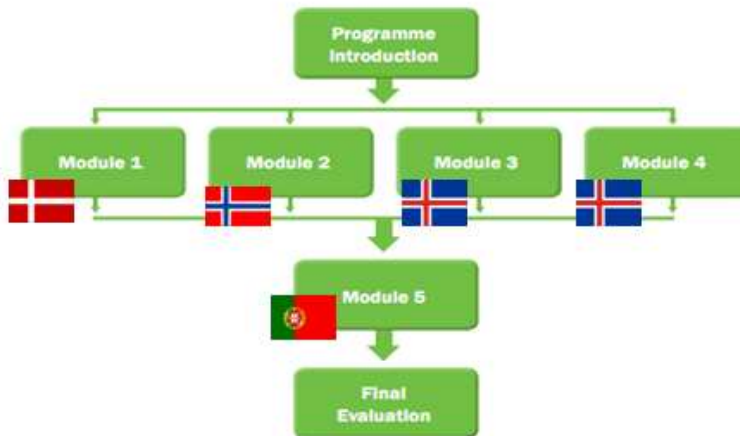


Figure 3 Structure of the full programme towards becoming a Health Agent

3.3 The pilot module for eHAP project

Module 2 was chosen the piloting module for the eHAP project. It focuses on health communication and behavior change with emphasis on motivational interviewing. The main aim of the piloting was to test a part of the curriculum, but even more importantly, to test the use and integration of the ICT part, both as a way of teaching the curricula and in teaching the use of ICT in health promotion. The main learning content of module 2 is structured on data that is built on the results from the Delphi study that identified change in health behavior and communication among the core competencies. The curriculum for the pilot course was not full 6 weeks as is suggested in the curriculum. The course was cut down to 3 weeks in total work for the students and it was based on an online lecture and online learning, reading material and digital interaction between students.

The participants started working on the LMS platform called Fronter which was used for the course. Fronter was chosen to be the LMS platform for the eHAP project by ICT experts at the University College Sealand in

Denmark as they identified it as number one choice for LMS for the whole institution. In the pilot module there was a teacher from Denmark in charge of the course and an assistant from Iceland that helped the students if needed. The course was taught in English.

In the main module the learning should be based on blended learning. However, in the piloting of the module it was decided to do an online course only since participants came from five different European countries. Also, different time zones made it hard to organize scheduled meetings allowing for face-to-face sessions overseas (with Skype or other equipment). The majority of the learning material, or over 80%, was mediated online, that's why the piloting module is considered as an online course (Allen, et al., 2007). The assignments the students were given were mediated online with the help of Fronter. The curriculum for the participants was as follows:

- Students needed to upload a professional background and pictures etc.
- Watch a video lecture online on the topic of the module
- Watch three video clips on Youtube on motivational interviewing
- Read three chapters on motivational interviewing
- Do one e-tivity assignment

In all the assignments the students needed to be active and interactive and make comments on their own work as well as other students' work. After the online video lecture, students were able to comment on the lecture. They also learned how to be in charge of motivational interviews by the YouTube video clips (created by the teacher of the course) and the reading material. The students made an e-tivity assignment based on motivational interviewing regarding how they would react to a certain situation under certain circumstances they tried to figure out a way to help each other change their behavior, with the help from their peers. Then they uploaded their assignments to Fronter and the other students were interactive and commented on other students' cases, helping out and figuring out together what was best to do in each situation. There was no grade or evaluation given in the pilot module; however, in the full modules of the eHAP programme the evaluation is in the form of a portfolio evaluated by the teacher, and a self assessment.

3.4 Pilot course participants

Fifteen people belonging to the target groups were asked to participate in the pilot module from the five European countries, three participants from each country, i.e. Belgium, Denmark, Norway, Iceland and Portugal. The participants that qualified for the pilot module were people working within the health promotion workforce.

The time period for the pilot course was from 1st to 21st of September 2011. However, the deadline was postponed by two weeks due to several reasons, for example the piloting was supposed to be during the spring/summer but was delayed until September. Fronter served as a platform for the evaluation of the course because of the questionnaire at the end of the course was located there.

Eight out of fifteen participants finished the course by answering an anonymous questionnaire online at the end of the course. Five out of the eight participants who finished the course were interviewed via Skype and e-mails to get a better perspective on the results that had already been given with the online questionnaire.

3.5 Online questionnaire

The online questionnaire at the end of the course was built around the main points that were needed to evaluate the course content, the teaching method and the e-learning process. It was also structured around the results of the Delphi study and the curriculum itself.

To scale the responses in the questionnaire, a five point Likert scale was used (Likert, 1932). Participants filled in their responses horizontally, starting with the most positive answer and ending with the most negative one (see appendix 7.3). Data was collected from the online questionnaire which was set up in a programme called Survey Xact and gave quantitative results. The results were then exported from Survey Xact directly into Microsoft Excel where tables with descriptive statistics were created.

By the end of the questionnaire there was an open question where participants could give their opinion on the course. An e-mail reminder was sent out twice to participants to remind them about answering the online questionnaire.

3.6 Interviews via Skype and e-mail

Qualitative data was gathered after the course finished with interviews by e-mail and Skype conversations which were conducted between the student and the interviewer/researcher and took approximately 10-15 minutes each. Five out of eight participants who finished the course gave their approval for an interview. Three participants from three different countries gave their approval for a Skype interview. Two other participants answered open questions via e-mail. The interview questions that were developed were based on the findings from the quantitative online questionnaire (see appendix 7.4).

The Skype interviews were all recorded with the consent of the participants. The interview recordings were listened to, transcribed, coded, and the information summarized all of which are presented in this thesis.

4 Results

4.1 Results from the Delphi study

The main competencies needed within the health promotion workforce were gathered with the help of the Delphi study. The three main target groups were represented by 40-50 participants each (table 1).

Table 1 The three target groups

	Total	Percentage
Teacher in nursery, primary or secondary school	44	32,8%
Chef and manager working in catering	40	29,9%
Professions in primary health care which are important for p	50	37,3%
Total	134	

A total of 134 participants took part in the Delphi study from five European countries, i.e. Iceland, Portugal, Denmark, Norway and Belgium. The distribution between the countries was fairly even, or about 20% of the total from each of the five countries (table 2).

Table 2 Country of Delphi study participants

	Total	Percentage
Belgium	28	20,9%
Denmark	28	20,9%
Iceland	25	18,7%
Norway	27	20,1%
Portugal	26	19,4%
Total	134	

The competencies are evaluated from 1 being the lowest and 6 the highest or most needed competencies. The top ranking competencies for each question on health behavior was used as a platform for creating learning module 2 which is also the pilot module (table 3). Table 3 shows how the participants responded on the relevance of competencies related to change

in health behavior within their profession. When participants responded on their need for further education the reply was usually lower than the relevance for their profession.

Table 3 Competencies related to change in health behavior

4.	Competencies related to change in health behaviour include the abilities to:	Belgium n=54	Denmark n=50	Iceland n=43	Norway n=49	Portugal n=48
a.	Assess the mindset of the users to find the most appropriate strategy to					
Q32	How relevant is this competency to your profession?	4,1	4,4	4,5	4,3	4,9
Q33	How relevant would further education regarding this competency be?	3,9	4,1	4,7	4,3	4,8
b.	Discuss how different social factors (for instance culture, family situation					
Q34	How relevant is this competency to your profession?	4,5	4,5	4,6	4,8	4,7
Q35	How relevant would further education regarding this competency be?	4,3	4,1	4,6	4,6	4,4
c.	Describe how social and cultural differences can be taken into account when					
Q36	How relevant is this competency to your profession?	4,2	4,4	3,9	4,7	4,7
Q37	How relevant would further education regarding this competency be?	3,9	4,0	4,0	4,5	4,4
d.	Discuss how different intervention strategies may widen or narrow the					
Q38	How relevant is this competency to your profession?	3,7	4,0	4,0	4,4	4,3
Q39	How relevant would further education regarding this competency be?	3,5	3,7	4,3	4,2	4,1
e.	Offer appropriate activities to encourage your users to become more physically active.					
Q40	How relevant is this competency to your profession?	3,7	4,2	3,9	3,9	4,8
Q41	How relevant would further education regarding this competency be?	3,5	3,8	4,2	3,5	4,5

Table 4 shows that the competencies for the use of ICT tools within the participants work field was thought of as a bit relevant or relevant and the further education regarding the competency was not thought of as highly and in other fields.

Table 4 Competencies related to communication

5.	Competencies related to communication with the users include the abilities to:	Belgium n=54	Denmark n=50	Iceland n=43	Norway n=49	Portugal n=48
a.	Use an adequate language when communicating with your users (according					
Q43	How relevant is this competency to your profession?	4,6	5,0	4,6	5,0	5,3
Q44	How relevant would further education regarding this competency be?	3,9	4,4	4,6	4,2	4,8
b.	Describe how to come in contact with users using appropriate media in					
Q45	How relevant is this competency to your profession?	3,9	4,3	4,2	4,1	4,6
Q46	How relevant would further education regarding this competency be?	3,6	4,0	4,6	4,0	4,3
c.	Make use of ICT tools (for instance podcasts, presentations, websites etc) in					
Q47	How relevant is this competency to your profession?	4,2	3,9	4,2	4,4	4,8
Q48	How relevant would further education regarding this competency be?	3,9	3,7	4,6	4,2	4,7

The seven core competencies were used as a foundation to build all the five learning modules in the eHAP programme. Learning module 2 was developed and designed with competencies four and five as a foundation for the course content (table 5).

Table 5 Seven core competencies identified as relevant for Health Agents and the eHAP programme

1. Competencies related to basic knowledge of nutrition and physical activity include the abilities to:

- 1.a Explain the basis of the national guidelines for nutrition and physical activity.
1. b Consider central aspects of the nutritional recommendations for different age groups at life stages.
- 1.c Develop your own knowledge and search for scientifically based information within the areas of nutrition and physical activity.
- 1.d Distinguish between scientific advice and other types of information related to diet or physical activity.

2. Competencies related to analysis of the situation include the abilities to:

- 2.a Assess your users' situation in terms of their nutritional status and eating habits.
- 2.b Assess your users' situation in terms of their physical activity levels.

3. Competencies related to food, cooking and the production chain include the abilities to:

- 3.a Plan menus and prepare food in order to make nutritionally adequate meals.
- 3.b Plan menus which will be appropriate to people with different needs related to age groups and life stages, special dietary needs, cultural and sensory requirements.
- 3.c Plan and prepare meals which will ensure the quality and safety of the food.
- 3.d Modify the nutritional composition of a meal by exchanging ingredients or using different cooking methods.
- 3.e Read and interpret nutritional labelling.
- 3.f Discuss important aspects related to ways in which food is produced.
- 3.g Discuss how food production, distribution, presentation and the marketing of food can influence our food choices.

4. Competencies related to change in health behaviour include the abilities to:

- 4.a Assess the mindset of the users to find the most appropriate strategy to initiate change in diet or physical activity patterns.
- 4.b Discuss how different social factors (for instance culture, family situation etc.) influence our eating patterns.
- 4.c Describe how social and cultural differences can be taken into account when developing appropriate strategies to promote health.
- 4.d Discuss how different intervention strategies may widen or narrow the socioeconomic differences in diet, physical activity levels or health.
- 4.e Offer appropriate activities to encourage your users to become more physically active.

5. Competencies related to communication with the users include the abilities to:

- 5.a Use an adequate language when communicating with your users (according to their education, social and cultural situation).
- 5.b Describe how to come into contact with users using appropriate media when designing, planning and implementing small interventions in the area of your profession.
- 5.c Make use of ICT tools (for instance podcasts, presentations, websites, etc.) when designing, planning and implementing small interventions in the area of your profession.

6. Competencies related to planning and implementing small interventions include the abilities to:

- 6.a Include objectives related to food and nutrition in general tasks performed by your profession (for instance health promotion activities in teaching plans, dietary plans in health care for the elderly and dietary variation in the canteen menu).
- 6.b Include objectives related to physical activity in general tasks performed by your profession.
- 6.c Describe how to design, plan and implement small, simple interventions to improve the health and wellbeing of your users.
- 6.d Write proposals for bids/tenders with regard to purchasing foods to promote good nutrition, health and safety within your workplace.
- 6.e Compare and choose the best of different strategies to improve the situation related to your users' diet or physical activity.
- 6.f Manage the finances of small interventions within your workplace.

7. Competencies related to professional conduct and collaboration include the abilities to:

- 7.a Reflect on the social responsibility of your daily practice concerning your users' health (for instance which food is presented for, or recommended to, the users).
- 7.b Motivate and lead colleagues in teamwork with the aim of promoting a balanced diet, physical activity and health among the users.
- 7.c Describe the areas of competence in other professions in order to know whom to contact for further expertise when this is needed.

4.2 Results from the evaluation of the pilot module

In this chapter the main results from the evaluation of the pilot module will be presented. Results from the online questionnaire, Skype and email interviews that were done after the piloting of module 2 are listed in this chapter.

4.3 Results from the online questionnaire

Main findings of this study were analyzed and presented in seventeen tables and two open questions along with Skype/email interviews that were conducted after the course was finished. The participants that finished the course were all female and five out of eight participants were in the age range 41-50 years old (table 6).

Table 6 Age of participants

	Response	Percentage
20-30 years old	2	25,0%
31-40 years old	0	0,0%
41-50 years old	5	62,5%
51-60 years old	0	0,0%
61 and over	1	12,5%
Total	8	100,0%

The majority of the participants or 5 out of 8 registered themselves as health professionals working within public health in primary health care. Two out of eight participants were teachers in primary and secondary school, but only one participant had a chef and catering background (table 7).

Table 7 Participants educational background

	Response	Percentage
Teachers of primary and secondary school	2	25,0%
Chefs and catering	1	12,5%
Health professionals working on public health in primary health care	5	62,5%
Total	8	100,0%

Three out of eight participants thought that the course was relevant to their workplace. Four out of eight participants were neutral towards the relevance of the subject for their workplace (table 8).

Table 8 How important/unimportant was the course for participant's workplace

	Response	Percentage
Highest and most positive score	1	12,5%
	2	25,0%
	4	50,0%
	1	12,5%
Lowest and most negative score	0	0,0%
Total	8	100,0%

Participants agreed that they had gained knowledge on how to use counseling as a way of doing health promotion. Furthermore seven out of eight participants thought they had gained knowledge on counseling as a way of doing health promotion (table 9).

Table 9 Have participants gained knowledge on how to use counseling as a way of doing health promotion

	Response	Percentage
Highest and most positive score	3	37,5%
	4	50,0%
	1	12,5%
	0	0,0%
Lowest and most negative score	0	0,0%
Total	8	100,0%

Five out of eight participants answered with a high and positive score and said they had increased their skills to promote good health as a health agent/health specialist (table 10).

Table 10 Has the course increased participants skills to promote good health?

	Response	Percentage
Highest and most positive score	2	25,0%
	3	37,5%
	2	25,0%
	1	12,5%
Lowest and most negative score	0	0,0%
Total	8	100,0%

Majority of participants liked the blended learning and e-learning approach. Two participants answered in a more neutral way, but none of them disliked the approach (table 11).

Table 11 Did participants like/dislike the blended learning/e-learning approach?

	Response	Percentage
Highest and most positive score	3	37,5%
	3	37,5%
	2	25,0%
	0	0,0%
Lowest and most negative score	0	0,0%
Total	8	100,0%

All participants were positive towards the flexibility in learning/studying within the course and responded with a high and positive score (table 12).

Table 12 Did participants like/dislike the flexibility for learning within the course?

	Response	Percentage
Highest and most positive score	4	50,0%
	4	50,0%
	0	0,0%
	0	0,0%
Lowest and most negative score	0	0,0%
Total	8	100,0%

Five out of eight participants thought the layout of the platform, *Fronter*, was helpful as seen in a positive score. Two out of eight participants answered in a more neutral way. Only one participant gave the platform a low and more negative score (table 13).

Table 13 Did participants like/dislike the layout of the platform Fronter

	Response	Percentage
Highest and most positive score	1	12,5%
	4	50,0%
	2	25,0%
	1	12,5%
Lowest and most negative score	0	0,0%
Total	8	100,0%

The majority of participants or seven out of eight responded with a positive score on how well they were able to manage their study time in combination with their daily work routine. Only one out of eight participants answered with a more negative score (table 14).

Table 14 How well/badly were participants able to manage time and combine the course with their daily routine at work

	Response	Percentage
Highest and most positive score	2	25,0%
	5	62,5%
	0	0,0%
	1	12,5%
Lowest and most negative score	0	0,0%
Total	8	100,0%

A vast majority of the participants or seven out of eight liked the online lecture in the course and only one participant responded with a more negative score (table 15).

Table 15 Did participants like/dislike the online lecture?

	Response	Percentage
Highest and most positive score	3	37,5%
	4	50,0%
	0	0,0%
	1	12,5%
Lowest and most negative score	0	0,0%
Total	8	100,0%

Table 16 shows inconsistency in the results when participants were asked if they liked the e-tivity they performed in the course. Four out of eight participants liked the e-tivity they performed in the course but also three out of eight participants disliked the e-tivity and responded more negatively.

Table 16 Did participants like/dislike the e-tivity they performed?

	Response	Percentage
Highest and most positive score	3	37,5%
	1	12,5%
	1	12,5%
	3	37,5%
Lowest and most negative score	0	0,0%
Total	8	100,0%

Table 17 shows that only two out of eight participants thought they had gained ICT knowledge throughout the course. Three out of eight participants were neutral on the subject and also three out of eight participants thought that they had gained none or little ICT knowledge throughout the course.

Table 17 Did participants gain ICT knowledge throughout the course?

	Response	Percentage
Highest and most positive score	2	25,0%
	0	0,0%
	3	37,5%
	2	25,0%
Lowest and most negative score	1	12,5%
Total	8	100,0%

The majority of participants or six out of eight thought that they gained a better perspective on health and health education and how ICT tools may help them in their work or profession, one was neutral and one gave a negative score (table 18).

Table 18 Have participants gained better perspective on health and health education and how ICT tools may help in their work/profession

	Response	Percentage
Highest and most positive score	3	37,5%
	3	37,5%
	1	12,5%
	0	0,0%
Lowest and most negative score	1	12,5%
Total	8	100,0%

The majority of participants or six out of eight thought that the use of ICT within their profession would make a difference for them within their working environment. Two out of eight participants were neutral on the subject (table 19).

Table 19 Would more ICT engagement in participant's profession make a difference for them within their working environment?

	Response	Percentage
Highest and most positive score	4	50,0%
	2	25,0%
	2	25,0%
	0	0,0%
Lowest and most negative score	0	0,0%
Total	8	100,0%

Six out of eight participants thought that the work hours within the course were reasonable and answered with a high positive score, whereas one was neutral and one gave the lowest, most negative score (table 20).

Table 20 Did the participants think the work hours within the course were reasonable?

	Response	Percentage
Highest and most positive score	2	25,0%
	4	50,0%
	1	12,5%
	0	0,0%
Lowest and most negative score	1	12,5%
Total	8	100,0%

Table 21 shows that four out of eight participants liked the reading material and the course content was up to their expectations. Two out of eight participants responded in a more neutral way on the subject and another two did not find the reading material and the course to be up to their expectations.

Table 21 Was the reading material and the course content up to participants expectations

	Response	Percentage
Highest and most positive score	2	25,0%
	2	25,0%
	2	25,0%
	0	0,0%
Lowest and most negative score	2	25,0%
Total	8	100,0%

The majority of the participants would recommend the course to a friend or work colleague. Two out of eight participants responded with a more negative score (table 22).

Table 22 Would participants recommend this course to a friend or work colleague

	Response	Percentage
Highest and most positive score	3	37,5%
	2	25,0%
	1	12,5%
	2	25,0%
Lowest and most negative score	0	0,0%
Total	8	100,0%

4.4 Results of the open questions

The open questions at the end of the questionnaire allowed a different view on the results that otherwise would not have been noticed. One participant complained that the social part of education was lacking and wanted to have face to face sessions with students/teacher and/or via Skype or other virtual rooms that could help getting the social part into the education.

The majority of the students liked the way the lecture was made online so that participants could watch it again without problems and said that the teacher's language was easy to understand. The interaction between the student and the teacher was lacking and the feedback from the teacher back to the students. The quality of the reading material could have been better and it was hard to read because the text was not clear.

Participants talked about liking the course and would love to learn more about the subject of motivational interviewing. Some of the participants said that the language was a barrier and they had hard time reading the English both because it was in another language but also because of the new terminology.

Finally participants were asked if there was anything they would change within their workplace after the course. Some of the participants said they were already using motivational interviewing in their workplace so that they would just keep on doing it and others said that they would definitely use it in upcoming staff interviews.

4.5 Interviews with participants after the piloting

After the piloting of the module, five participants from four different countries were interviewed and asked about their opinion on the course in English.

4.5.1 More blended learning within the course

After the participants were interviewed via Skype/email at the end of the piloting of the course the results showed that participants from Iceland, Portugal and Denmark commented on that it would have been great to have all the students opinions and comments on the course so that they could debate about different opinions on the subjects. On the other hand one participants said that too much face-to-face was not good because it is

more time consuming and not as flexible. Participants also thought that the pilot module was lacking a virtual room for all the participants could gather or meet up and view their opinions on the subject.

Here are some answers participants gave:

It's good to have feedback from your peers.

It would be good to go online and talk on Skype to other students to get feedback from your peers.

4.5.2 Feedback from the teacher to the students

It is very important in a course like this that the teacher has the skills to develop the student's interest and keep it. All the five participants were in agreement that the teacher needed to give the students more feedback on their work in the course. One participant said that the teacher might have to be more hands-on when there are new and younger students involved but for more educated students it is not necessary for the teacher to be as steering. Another participant said that it mattered how well educated students were before they entered the course, the higher their latest degree the less the teacher needed to be steering.

Here are a few examples on how the participants answered:

The teacher could have had more hands-on the course and given more feedback to the students.

It is a huge de-motivation when the teacher does not give feedback to the student and is enemy number one in building a good motivation for students.

4.5.3 Internationalized within Europe

Participants from Iceland, Portugal and Denmark thought that this kind of course could definitely be internationalized within Europe and that it was a course that students with different background could go through and learn from.

There is a lot to gain from this kind of project for example optimizing the learning of a large number of students and there is a diverse range of students that benefit from the collaboration. One participant suggested that in order for the project to be internationalized there needed to be more collaboration among students and teachers.

Here are examples on how participants answered:

This kind of course could be internationalized within Europe.

This kind of course would be difficult to internationalize but could be done with a few adjustments in each country.

4.5.4 Motivation and online learning

Participants thought that the motivation to study was not lacking for students that go through the course in distance learning. The students that go through this kind of continuing education have already finished their education and have got their degrees and are ready to expand their knowledge by adding to their comprehension on the subject but also to get ahead in their workplace.

Participants from Denmark said that if students are not motivated all ready when they start the course there needs to be an extra motivation for those students.

Here are examples of comments:

Students need to have independent will to study and not rely solely on the teacher to give them their next assignment.

I have already finished my education but would like to get an extra experience and more knowledge by doing this course.

4.5.5 Is the course a viable choice for the health workforce?

A vast majority of the participants thought that it is a good possibility for people to go through this kind of course even if they are currently in the workforce and have family and hobbies, because of the flexibility and the different way to gain knowledge in your own pace and at your own time.

One participant said that if students are organized and can manage their time and schedule this kind of course is not a problem for people who are working within their profession and have families. It is better to be just in one course at a time and finish that before you start on another one or need to juggle multiple courses throughout the semester.

One participant said that it was challenging for people in the workforce, with families to take out time to do this kind of project but they also need to consider what you gain from doing this course for example acquiring new skills and the flexible learning according to students needs and the learning pace.

Here are a few answers from participants:

"When you reach a certain age you don't think about doing the assignments badly but you do your best each and every time, you want to live up to your own expectations".

"If I would want to exploit this to my best advantage I would have to go through all the five modules to become a Health Agent so I would get the diploma and therefore get higher salary".

"I feel so lucky that I was able to be a part of this course it has expanded my horizon both the subject and for possibilities in continuing education".

4.5.6 Isolation and online distance learning

All the participants that were interviewed where in agreement that the isolation distance learning students sometimes come across was not an obstacle in this course.

Here below are a few answers from participants:

This course is an excellent opportunity for more mature students that do want additional education in the form of distance online learning without the need to quit their job to gain it.

If you are organized and can manage your time and schedule this kind of course will not be a problem for people who are working within their profession.

Who creates an online course has to think about strategies to overcome this isolation by involving students in order to motivate them to learn.

5 Discussion

One of the main objectives of this research was to examine distance learning, e-learning and ICT within the continuing educational system, for people that are working with health promotion and want continuing education without having to resign from their job. Distance learning is an option for students to stay in their work field without being forced to resign their job to get more education. Students can continue their education without having to go to the campus but also have the flexibility within their studies which is in the best interest for both the students and the workforce (Bonk, et al., 2006, p. 565). By studying through distance learning there is more opportunity for students who work in the field to maintain and continue their education (Danielson, et al., 2005).

5.1 Gathering the competencies with the Delphi study

Participants in the Delphi study were all experts in their fields and had been working there for a while. Many competencies were suggested to start with, but with a lot of effort on behalf of the experts we were able to narrow them down to seven core competencies that were thought to be needed the most within the health promotion workforce. These were in turn used to build all the five learning modules for the eHAP project. Given that to reach the most reliable consensus of an opinion on any subject by a group of experts, the Delphi study is a good research method (Hasson, et al., 2000; Powell, 2003). Therefore, we did find the results to be a steady ground to build the curriculum on.

The results from the Delphi show that compared to the need for knowledge related to nutrition, health and health promotion, participants did not think they were in need of continuing education in the field of ICT tools. However, the eHAP partners argued that despite these findings the need for added ICT knowledge was urgent within the health promotion workforce. It is possible that stakeholders do not think about or are not aware of the immense possibilities that added ICT skills can offer.

5.2 Continuing education in health promotion workforce

The course participants consisted of fifteen students, two males and thirteen females. All the participants who finished the course were female

in the age range of 41-50 which is exactly the age group that the project was targeting. Females are thought to be more open to online learning (Billings, et al., 2001; Dabaj, 2009). This age group has commonly been in the workforce for a long time and there has been some time since they graduated from school and finished their education which is why they are in need of a continuing education that will strengthen them as professionals. This target group is perhaps not up to date regarding ICT and innovation within health promotion whereas there is a steady development in the field of technology and the changes have been immense over the recent years. New technologies present a different opportunity in health promotion for health practitioners and the fight against the major global health threats (Eng, 2004) .

5.3 Gained knowledge and skills in health promotion

The course was relevant to the participants' workplace and they could use their newly gained knowledge in their profession. One participant said that she was conducting staff interviews the same week and was going to use the motivational interviewing technique on the staff, so the recently gained knowledge instantly came in good use for the participants' profession. Participants figured they had gained knowledge during the course on how to use motivational interviewing and counseling as a way of health promotion. They also increased their skills to promote better health as health agent/health specialist during the time span of the course. A knowledgeable and skilled health promotion workforce is a key factor of the content that is required to promote health of populations (Wise, 2003). A competent workforce has skills, knowledge and abilities in translating policy, theory and research into effective action has become critical for the development of global health promotion (Battel-Kirk, et al., 2009).

5.4 The use of e-learning

According to participants they liked the e-learning that was accumulated within the course. They also thought the work hours within the course were reasonable as well as the flexibility for the learning/studying and could manage their time to study in combination with their daily routine at work. The blended learning has a more flexible time schedule for students and they notice the importance of managing their time and their need to be organized to be able to complete the course (Albrecht, 2006). The main

objectives for the course were that students could study within their own time frame and at their own speed. To change the education and the training of public health workers there is a need of a different approach and strategy in education for these students (Allegrante, et al., 2009). Online learning is a new suitable way to enhance students' knowledge and get more education (Karaman, 2011). As seen in a study by Costa et al (2010), the potential of e-learning is enormous whereas educators can teach large numbers of professionals by avoiding travel/accommodation costs, giving people that live far away from traditional educational sites a better chance for a continuing education.

Participants liked the way the lecture was available online so that they could watch it at the time of their choice. Different approaches in education with the help of technology makes access to learning material easier and giving the students more flexibility in their education (Voos, 2003). The flexibility and the convenience is a vital part of the advantages of online learning (Karaman, 2011).

The motivation to study was not missing for students who went through the course by engaging in e-learning. Simply because they had already been motivated just by deciding to take the course, that extra knowledge that was being presented to participants in the form of continuing education was recognized by them as a great opportunity. In a study by Wolgering et al., (2009) results showed that students who used blended learning technique increased their motivation for education.

The results showed that participants thought it was a great opportunity for people to go through this kind of a course, even if they had to juggle time for family, work and school. The flexibility and the online learning was a prerequisite for the participants to actually do the course. By being able to study through distance learning there is an increased opportunity for people who work in the field to maintain their education and start their continuing education (Danielson, et al., 2005).

The results indicated that the majority of participants did not think that the isolation that distance learning students sometimes go through applied to this course although one participant complained that the social part of education was lacking. This course was thought of as an excellent opportunity for more mature students that do want additional education in the form of online distance learning without the need to resign their job.

5.5 Use of and the creation of the web based platform

There were different views by the participants regarding the platform “Fronter” where they both liked it and disliked it. When web based platforms are being created there is always a way to make it better and more engaging for the student. It does take a lot of work for the teacher to create such a course and it is time consuming. However, when teachers start new courses they always need to put in a lot of time to make it their own and gather all the knowledge they want to teach during the course. But when the platform is finally ready, the teacher has gained more experience in working with the ICT, teaching with the help of e-learning and the blended learning approach. Next time around it will be less time consuming to start a new course and the layouts are also re-usable, and even some of the study material. The innovation is great in the field of blended learning and therefore more technological infrastructure is needed, and of course more teacher training (Massy, 2006, p. 417). With the fast pace of technology and growing technical solutions it has been suggested that it is becoming more difficult for the teacher to choose from all the tools available than before (Wenger, et al., 2009). There have been enormous changes in the development of ICT which teachers and students need to take into consideration and use to their advantage in continuing education (Salmon, 2000, p. 9).

5.6 Use of ICT and the e-tivities

Results were inconsistent when participants were asked if they liked the e-tivity performed in the course. Different levels of computer skills that participants have need to be taken in account. For some this task would have been easy but for others it might be harder to finish because of lower computer knowledge. E-tivities should be motivating, engaging and purposeful and based on interaction between students and usually through written message contributions. They involve the students and computer based resources that have already been made (Salmon, 2002, p. 1/3).

Participants were not in agreement as to whether they thought they had gained ICT knowledge throughout the course and some thought they had not gained any ICT knowledge. However, when looking at these results it is necessary to take into account the different professional backgrounds of the participants as some may have a lot of ICT skills and others less. If the ICT skills that participants have are high prior to the course it is unlikely that ICT knowledge will increase throughout the course. However, they will be

able to use new and different ideas for better health promotion. Worldwide there are constant changes in technology and health practitioners are more and more expected to use information technology in their daily work (Corcoran, 2007, p. 116). Students who use computers more often and are more technology driven have a more positive perception of online learning (Karaman, 2011).

Participants figured that they had gained a better perspective on health and health education and how ICT tools can help them in their work or profession. Communication technology is one of the approaches to better health and social care which is needed in terms of health promotion (WHO Regional Office for Europe, 2010). The possibilities for ICT are enormous and how this new emerging technology can be used in the field of health promotion is limitless (Eng, 2004).

5.7 Feedback from teacher and peers

According to participants, the interaction between the student and the teacher was lacking and the feedback from the teacher back to the students was also lacking. One of the participants complained that the social part of education was not up to par and felt that participants were missing out on a face-to-face school room activity. Older students want more face-to-face learning compared to online learning (Billings, et al., 2001; Dabaj, 2009; Jakobsdóttir, 2008). In the full length of the five modules there will be more face-to-face learning for the students. E-learning will never equal the physical interaction between students and teachers, however, this modern technology has the potential to achieve great support for further education within various professions (Danielson, et al., 2005).

The participants wanted more online connection between themselves and the teacher and they also wanted more feedback from their peers. But it is always debatable on how much interaction students want because of the flexibility of the time frame in the course. Some wanted a virtual room where all the students could meet up and chat about the subject e.g., Facebook or Skype. For online learning to be successful there needs to be an active and interactive communication between students and teachers (Salmon, 2002, p. 1). The students often take charge in communication within the online community and step in the role of the teacher of the course without the students even knowing they are doing it, when commenting or talking to their peers (Anderson, Rourke, Garrison, & Archer, 2001).

The teacher needs to be more hands-on in this project especially in the beginning when it is new to the students. He also needs to give more feedback to the students to keep them motivated. Participants also thought that the more mature students might require less guidance from the teacher and therefore be more self-sufficient. Students who are getting their higher education are more linked in and up to date than before. They make their own choices regarding education and understand the technology better (Salmon, 2009). There is a different way of learning and teaching by the fast development in technology and it works well in higher education (Salmon, 2000, p. 9).

5.8 Recommendation to co-workers and internationalization

The majority of the participants would recommend this course to their work colleagues which is great because of the popularity of the course within the professional workforce is helpful as a marketing tool. All the five modules are ready to be used as a foundation to educate the health workforce, and the material may be amended to national needs in every country or be used with a blended group from different countries at one time. The Open Educational Resources, also known as OER, include any teaching or learning material, in full courses, programs, course materials, modules etc. and in any medium that resides in a public domain and has been released under an open license that allows access and use by others without any limitations (Commonwealth of Learning and UNESCO, 2011).

This kind of an e-learning course could most definitely be internationalized within Europe according to the majority of the participants. It is ideal for students with different educational and professional backgrounds to go through and learn from. It is great because there is a possibility to teach large number of students without the limitation of the typical classroom teaching. E-learning is a way that strengthens the development of health care professionals (Higher Education Funding Council for England, 2005).

Blended learning has found a solid acceptance in higher education over the last decade and has been achieved by combining face-to-face and online instruction for students (Graham, 2006; Voos, 2003). Worldwide there are constant changes in technology so the professional within the workforce will need to stay ahead of developments to be efficient in promoting better health (Corcoran, 2007, p. 116).

Overall, the participants liked the course and wanted to learn more, some participants were already using motivational interviewing in their workplace, others were definitely going to begin using it.

5.9 Strengths and weaknesses of the project

When the pros and cons of the project are examined there some issues that come to mind.

One of the strengths of this study is definitely how the competences were gathered with the Delphi study. Without that there would not have been as much consistency in finding the competences, where the study got experts' shared opinion on what competences are needed within the health promotion workforce. By participating in a project as this one, and on international level where five nations are working together, overall the eHAP project is seen with a broader perspective and there are various opinions and experiences that need to be taken into account. The cooperation with the other countries also gives the advantage of being able to deliver more work in both amount and diversity if it is distributed among the countries.

The majority of the participants came from the group of health professionals who were working within public health in primary health care, but background education and interest in the topics of health promotion, even within professions differed between countries. Two out of eight participants came from the group of teachers of primary and secondary school and only one participant came from the chefs and catering background. The results may bit be totally valid because of too few participants to begin with, but also because of fewer participants in the two fields, i.e. teachers of primary and secondary schools and the chefs and catering background. The practice of health promotion is pursued in different fields, including schools and health care facilities, and by a diverse group of people, for example health educators, nurses, physicians and teachers (Butler, 2001, p. 23).

One reason for the teachers to drop out, or not participating from the beginning might be the delay in starting the piloting from May until September (see methods chapter). Another reason might be the delay of the piloting, the participants who had agreed to do the course they might have lost interest.

Whereas only eight participants out of fifteen finished the course and five out of them also went through the interview there is a possibility that the respondents are a group of people that already have a lot of ICT skills and do a lot of work online. Because Skype and e-mails require a minimum knowledge of ICT there is also the possibility that they are using computer on a daily basis at work, whereas those not participating or finishing are less likely to do so.

It also needs to be taken into consideration that the deadline for students to do the course was 21 days which might not be sufficiently flexible for some students. The deadline was postponed by two weeks to try to persuade students to finish their work on the website which took a lot of effort from the teacher of the course. There might be several reasons for this problem and one of them could be that the school year had recently started and school was starting again after summer vacation, causing teachers especially to drop-out or cancel participation. Also the original plan was to run the piloting a few months earlier, during spring, and many of the planned participants had been contacted at that time. Postponing of the piloting might also have caused a loss of interest in taking part.

The reading material and the course content were in most instances up to participants' expectations. But participants also thought that the text on the platform Fronter was unclear and was difficult to read. This was however due to bad quality in scanning the documents before they were put on the platform. This shows how important it is to consider every detail of the curriculum and study materials for the students.

An interesting perspective was seen when participants said that it was better to have one course going over a period of time instead of multiple courses all at once.

Health promotion information on the Internet is widespread and there has been a lot of concern by health professionals over scientifically based knowledge and other information and how the people can make the distinction between the two (Corcoran, 2007, p. 156; Greenberg, D'Andrea, & Lorence, 2004; Lintonen, et al., 2008). With the possibility of continuing education for the health promotional workforce there are more opportunities for them to gather and evaluate the scientifically based knowledge that is being presented on the internet and in the media.

6 Conclusions

Over the recent years there has been a steady growth in diseases related to how we eat, drink and exercise all of which is a part of public health promotion. The influence of a diverse continuing education will be very profitable for people working within the public health workforce because of the rapidly changing and innovative technology in the world. By using blended online learning people can stay in their work field and will not be forced to resign their job to gain extra continuing education, increasing the flexibility within their studies.

The group that was targeted in the eHAP project, and thus in this study, were mature people who have been apart of the workforce over the last decades and are in need of updating their education in terms of e-learning, online learning and information communication technology. All of the participants were female and the majority of them were health professionals working within public health in primary health care. To be able to reach that particular group of professionals, it is important to make use of newly gained technology in education, such as e-learning, and making continuing education a flexible possibility and easily accessible for students.

The results showed that the course was relevant to the participants' workplace and they could use their newly gained knowledge and skills to promote better health in their professional work. Participants thought they could manage their time to combine the course with family-life, work and their daily routine.

The development in continuing education in the field of e-learning, online learning and ICT is steady and the ongoing growth reaches towards endless possibilities in technology. With projects like eHAP there is an immense opportunity for the health promotional workforce to start looking in the direction of continuing education as a way of staying ahead in their profession and up to date with the new and innovative technology in public health which is bursting at the seams and is limitless for continuing education in the near and distant future.

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7 Appendix

7.1 My contribution to the eHAP project

- Took part in developing and designing the questionnaire for the Delphi study
- Got together participants for the Delphi study along with Anna Sigríður Ólafsdóttir and Hulda Sigurjónsdóttir from Iceland. Called participants and asked them to take part and also pushed them to finish the study.
- Controlled the focus group interviews and worked as a mediator in the focus group – Delphi study
- Took part in work seminars abroad and here in Iceland – there where also Skype meetings about twice a month.
- Organised and developed module 3 in eHAP project with Anna Sigga and Hulda.
- Wrote about e-learning for the final publication in cooperation with Svend Rossen and Ane Kruse from Denmark.
- Kept track of participants in the piloting of the module, wheareas participants could talk to me and I would help them out with the ICT and the study projects.
- Wrote and developed questionnaire for the pilot module, that was put online for participants to answer
- Wrote and developed another questionnaire that was for the Skype and email interviews.
- Took the Skype and e-mail interviews at the end of piloting the course.

7.2 The eHAP project: Delphi-study framework for focus groups and questionnaire for rounds 2-3

Notes for the focus group mediator:

The mediator will lead the discussion and take notes in this questionnaire. It is encouraged to use your local language. Please indicate the composition of your focus group and gain as much insight as possible about their background and educational profile, tasks done and job description. The sample used for the first round of the Delphi-study can be less standardised and with a more flexible approach than expected at later rounds. Some of the partners have focus groups planned for one particular target group. Others may decide to do this round more as structured interviews. The most important aspect of this round is to get a wide response on the initial ideas to form a more appropriate questionnaire at round 2 and 3. It is assumed that the partners all together will cover all of the three main target groups for the eHAP. In round 2 and 3, we should aim at having answers from all three main target groups for the eHAP in each of the partner countries.

The focus group/interview should start with an introduction by the mediator. Let group read the leaflet EU Health Program page 3-6 (can be downloaded on http://ec.europa.eu/health/ph_programme/documents/prog_booklet_en.pdf). The following text (preferably presented orally in native language by the mediator) will cover the main topics for the introduction:

“The EU agenda *“Together for Health: A strategic Approach for the EU 2008-2013”* is established to contribute to increased solidarity and prosperity in the European Union by protecting and promoting human health and safety and by improving public health. The eHAP project was originally inspired by the EU Health Programme. To be able to make a strong European profile and link the competences needed for working with public health in the EU to eHAP our questionnaire is inspired by the objectives in the EU agenda. The agenda consist of three overall objectives. The first objective *improve citizens’ health security* is concerned with improving citizens security against health threats and securing their safety through developing the capacity to respond to communicable and non-communicable diseases. The second objective *promote health and reduce health inequalities* is concerned with actions on health key factors such as promoting and improving physical and mental health by focusing on key

settings such as education and the workplace. The third objective *generate and disseminate health information and knowledge* is focused on exchanging knowledge and best practice on health issues by collecting, analyzing and disseminating health information. Furthermore our questionnaire is inspired by Roger Hughes' article "Competencies for Effective Public Health Nutrition Practice: a developing consensus".

The eHAP programme aims at providing further education for agents working with public health. The aim is to provide nutritional knowledge on the level needed and at the same time integrate ICT in the process. As a part of the European project 'e-learning for Health Agents Programme in Europe' (eHAP) which is a part of the Lifelong Learning program Leonardo da Vinci we would like to assess the competences and needs of Health Agents throughout Europe. Health Agents is in this term to be considered in a broad sense.

This questionnaire is focused on assessing the needs for nutritional update, the use of ICT in the daily praxis and to create a consensus on the competences needed when working with public health in different contexts throughout Europe. To better understand the need of the individual Health Agent, we would like your help on assessing need and competences of three different target groups.

- 1: Teachers of Primary & Secondary School
- 2: Chefs and Catering managers
- 3: Others who hold an education concerning health and working with a focus on public health in primary health care

The consortium developing eHAP is six European partners all engaged in educating health professionals throughout Europe. We would like for the eHAP to have a strong European profile and in meeting this aim we intend to make a survey in a European context to gain the knowledge needed to make such a European profile.

The target groups are chosen to give a picture of the broad group of participant conveying the message of health to a number of persons in society. The first part of the discussion is related to how your profession can contribute to the overall objectives in the EU health Programme. In this policy your area work are mentioned. We have some examples of tasks. What do you think about these tasks? Would you consider it relevant for your profession? We use the word users in the meaning pupils/students/employees/consumers/patients that your profession relates to in their daily work."

Please start by gaining some background information about how they describe the nature of their work and who their users are. What are the general nature of their work and required education?

The tables below should be filled in by the mediator of the focus group. Please read each description of the tasks, and later the competencies and need for training and allow the group/interviewee to comment and discuss. End each line by asking the group/interviewee to give an overall rating. End each part by asking whether there are any other tasks/competencies which they think is relevant for their profession.

SECTION 1: General question regarding tasks:

Rating 1= Not applicable, 2=Not relevant, 3=a bit relevant, 4= relevant, 5=very relevant, 6=extremely relevant

Task	Rating	Comment
1. To analyse the health profile of your users (i.e pupils/staff/students/consumers/patients) and identify needs for interventions in the area of food, nutrition and physical activity		
2. To include messages/examples of how to promote a balanced diet, physical activity and overall health into other activities which is part of your daily routine activities (for instance integrating health messages and related activities into pedagogical activities or talking to your users on how to make healthy shopping list)		
3. To discuss with your users their own health habits		
4. To encourage your users to take part in activities which will promote a balanced diet, physical activity and good health also when they are outside your influence		
5. To discuss and encourage your users to develop their own action competencies (for		

instance engage in sports or composing healthy meals)		
6. To make use of ICT tools to encourage your users to health promoting activities (for example reminders by e-mail, sms or mms to take part in a certain activity)		
7. To initiate web-based searches for information about diet, physical activity and health issues and assist in sorting the quality of different information sources		
8. In situations where your profession are actively involved in deciding which food is made accessible for the users, to actively engage in securing healthy food choices		
9. To make a plan for how to promote of a balanced diet, physical activity and overall good health in the tasks of your daily practices		
10. To make plans and routines for when to call on other experts if you encounter a challenge which is outside area of expertise		
11. To coordinate efforts to promote health with other professions at the local level		

OPEN QUESTION: In addition to the tasks mentioned, can you think of other examples of other tasks which can be relevant for your profession in order to reach the public health objectives?

SECTION 2: Having discussed possible tasks your profession may do in order to promote a balanced diet, physical activity and health, which competencies do you consider important for your profession?

Rating 1= Not applicable, 2= Not relevant, 3= A bit relevant, 4= relevant, 5=very relevant, 6=extremely relevant

Competency	Rating	Comment
1. To assess your user's situation in terms of their nutritional status, eating habits & physical activity level and identify if there is a problem		
2. To be able to compare different strategies to solve any problems and single out the most appropriate strategy to do something about for the situation if needed		
3. To combine and prepare food to make nutritional adequate meals		
4. To know how to modify the nutritional composition of a meal by exchanging ingredients using other cooking methods		
5. To be able to plan menus which will be appropriate to people with different needs related to life stage, special dietary needs, cultural and		

sensoric requirements.		
6. To know about the production chain for food and how different factors influence our eating patterns		
7. To read and interpret nutrition labelling		
8. To plan and perform cooking which ensures the quality and safety of the food		
9. To consider the basis for the national guidelines for nutrition and physical activity		
10. To be able to consider important aspects of the nutritional recommendations through the lifespan		
11. To facilitate physical activities at the appropriate level for your users		

12. To be able to discuss how social & cultural differences can influence what is appropriate to recommend in different situations		
13. To be able to use an adequate language with the users (according to their education, social and cultural level).		
14. To know how to implement objectives from the area of health, nutrition and physical activity into the general tasks related to your profession (for instance health promotion activity into teaching plans, dietary plans into health care for the elderly. Dietary variation in the menu into the cantina)		
15. To know the competence area of other professions in order to be able to call on their expertise when needed		
16. To know how to design, plan and implement small		

interventions with in the area of your profession for promoting health and well being of the users		
17. To be able to know how to plan the finances and management of small interventions in the area of your profession.		
18. To be able to make use of media in designing, planning and implementing small interventions in the area of your profession.		
19. To be able to make use of ICT tools in designing, planning and implementing small interventions in the area of your professions		
20. To be able to discuss how different intervention strategies may widen or narrow the socioeconomic differences in diet, physical activity levels and health		
21. To know how to assess the mindset of the users to find		

the most appropriate strategy to initiate change diet and physical activity patterns		
22. The ability to update your own knowledge within the area of nutrition, physical activity and health		
23. To be able to search for scientifically based information in the areas of health, nutrition and physical activity		
24. To distinguish between scientific advises from other types of information		
25. To be able to consider the social responsibility of your daily practice concerning the users health (for instance which food is presented for or encouraged to the user)		
26. To be able to plan proposals for bids/tenders in regards with food, nutrition, health and safety.		

27. To motivate and lead colleagues in teamwork with the aim of promoting a balanced diet, physical activity and health within your professional role		
28. To regularly update your knowledge within the area of nutrition, physical activity and health		

OPEN QUESTION: Other competencies needed to reach public health goals?

SECTION 3: Go through the competencies again (including the newly suggested competencies from the open question): Ask the focus group: in which areas do your professions have a need for further training?

Rating 1= Not applicable, 2=Not relevant, 3= a bit relevant, 4= relevant, 5=very relevant, 6=extremely relevant

Competency	Rating	Comment
1. To asses your user's situation in terms of their nutritional status, eating habits & physical activity level and identify if there is a problem		
2. To be able to compare different strategies to solve any problems and single out the most appropriate strategy to do something about for the situation if needed		
3. To combine and prepare food to make nutritional adequate meals		
4. To know how to modify the nutritional composition of a meal by exchanging ingredients using other cooking methods		
5. To be able to plan menus which will be appropriate to people with different needs related to life stage, special dietary needs, cultural and		

sensoric requirements.		
6. To know about the production chain for food and how different factors influence our eating patterns		
7. To read and interpret nutrition labelling		
8. To plan and perform cooking which ensures the quality and safety of the food		
9. To consider the basis for the national guidelines for nutrition and physical activity		
10. To be able to consider important aspects of the nutritional recommendations through the lifespan		
11. To facilitate physical activities at the appropriate level for your users		
12. To be able to discuss how social & cultural differences can influence what is appropriate to recommend in different situations		
13. To be able to use an adequate language with the		

users (according to their education, social and cultural level).		
14. To know how to implement objectives from the area of health, nutrition and physical activity into the general tasks related to your profession (for instance health promotion activity into teaching plans, dietary plans into health care for the elderly. Dietary variation in the menu into the cantina)		
15. To know the competence area of other professions in order to be able to call on their expertise when needed		
16. To know how to design, plan and implement small interventions within the area of your profession for promoting health and well being of the users		
17. To be able to know how to plan the finances and management of small interventions in the area of your profession.		
18. To be able to make use of media in designing,		

planning and implementing small interventions in the area of your profession.		
19. To be able to make use of ICT tools in designing, planning and implementing small interventions in the area of your professions.		
20. To be able to discuss how different intervention strategies may widen or narrow the socioeconomic differences in diet, physical activity levels and health		
21. To know how to assess the mindset of the users to find the most appropriate strategy to initiate change diet and physical activity patterns		
22. The ability to update your own knowledge within the area of nutrition, physical activity and health		
23. To be able to search for scientifically based information in the areas of health, nutrition and physical activity		
24. To distinguish between scientific advises from other		

types of information		
25. To be able to consider the social responsibility of your daily practice concerning the users health (for instance which food is presented for or encouraged to the user)		
26. To be able to plan proposals for bids/tenders in regards with food, nutrition, health and safety.		
27. To motivate and lead colleagues in teamwork with the aim of promoting a balanced diet, physical activity and health within your professional role		
28. To regularly update your knowledge within the area of nutrition, physical activity and health		

OPEN QUESTION: Competencies needed related to the suggested competencies from part 3.

7.3 Questionnaire that was conducted online after the course

Questionnaire after participation in module 2 (Motivational interviewing)

A. What gender are you?

1. Male
2. Female

B. How old are you?

1. 20-30 years old
2. 31-40 years old
3. 41-50 years old
4. 51-60 years old
5. 61 and over

C. What is your background / former education?

1. Teachers of primary and secondary school
2. Chefs and catering
3. Health professionals working on public health in primary health care

Please evaluate "this course" by the following questions with 1 being the highest and most positive score, and 5 being the lowest and most negative score.

D. How relevant was this course for your workplace?

Highest
and
most positive
score

Lowest
and
most negative
score

1

2

3

4

5

☐☐☐☐☐

E. Have you gained knowledge on how to use counseling as a way of doing health promotion?

Highest
and
most positive
score

Lowest
and
most negative
score

1

2

3

4

5

☐☐☐☐☐

- F. Has the course increased your skills to promote good health as a health agent / health specialist?

Highest
and
most positive
score

Lowest
and
most negative
score

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- G. How did you like the blended learning/e-learning approach?

Highest
and
most positive
score

Lowest
and
most negative
score

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- H. How was the flexibility for learning/studying within the course?

Highest
and
most positive
score

Lowest
and
most negative
score

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- I. When you enter the platform Fronter was the layout helpful?

Highest
and
most positive
score

Lowest
and
most negative
score

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

J. How well could you manage your time and combine the course with your daily routine at work?

Highest
and
most positive
score

Lowest
and
most negative
score

1

2

3

4

5

☐☐☐☐☐

K. How did you like the online lecture?

Highest
and
most positive
score

Lowest
and
most negative
score

1

2

3

4

5

☐☐☐☐☐

L. How well did you like the e-tivity you performed in the course?

Highest
and
most positive
score

Lowest
and
most negative
score

1

2

3

4

5

☐☐☐☐☐

M. Did you gain ICT (information and communication technology) knowledge through out the course?

Highest
and
most positive
score

Lowest
and
most negative
score

1

2

3

4

5

☐☐☐☐☐

N. Have you gained a better perspective on health and health education and how ICT tools may help you in your work/profession?

Highest
and
most positive
score

1

☐

2

☐

3

☐

4

☐

5

☐

Lowest
and
most negative
score

O. Would more engagement in ICT within your profession/worklife make a change for you and your users?

Highest
and
most positive
score

1

☐

2

☐

3

☐

4

☐

5

☐

Lowest
and
most negative
score

P. Where the work

Highest
and
most positive
score

1

☐

Q. Was the reading

Highest
and
most positive
score

1

☐

P. Where the workhours within the course reasonable?

Highest
and
most positive
score

1

☐

2

☐

3

☐

4

☐

5

☐

Lowest
and
most negative
score

Q. Was the reading material and the course content up to your expectations?

Highest
and
most positive
score

1

☐

2

☐

3

☐

4

☐

5

☐

Lowest
and
most negative
score

- R. Would you recommend to a friend/workcolleague to attend this course?
- R. Would you recommend to a friend/workcolleague to attend this course?
- R. Would you recommend to a friend/workcolleague to attend this course?

Highest
and
most positive
score

Lowest
and
most negative
score

1

2

3

4

5

☐☐☐☐☐

- S. Is there something that you would like to add after attending this course. Was something missing ? Or could have been different?

- T. Is there anything that you would change within your workplace after this program?

7.4 Questions that were asked via Skype and by email after the course was completed

1. DO you think that there was a need for more blended learning within the course? f.ex. face-to-face sessions
2. Do you think the teacher needed to be more hands-on in the teaching, because it is a continuing education and the students have been out of school for awhile?
3. Do you think the teacher needed to give more feedback to students?

4. In your opinion is do you think this kind of course could be internationalized in Europe for R. Would you recommend to a friend/workcolleague to attend this course?

Highest
and
most positive
score

Lowest
and
most negative
score

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

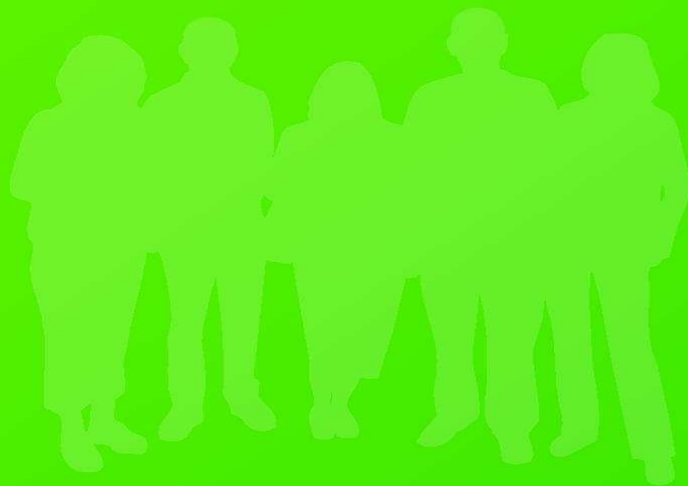
- S. Is there something that you would like to add after attending this course. Was something missing ? Or could have been different?

- T. Is there anything that you would change within your workplace after this program?

**7.5 eHAP publication – development and implementation of
Modules based on the principles of E-learning**

E-learning for the Health Agents Programme in Europe

Development and Implementation of Modules
Based on the Principles of E-learning





Education and Culture

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Foreword

The large increase in obesity and obesity-related disorders all across Europe is a cause for great concern. This applies in particular to the expanding waistlines of children, thought to be driven by low-energy lifestyles and high-energy foods, which may have grave and long term consequences for the health of entire populations. Many of the most important risk factors for premature death relate to how we eat, drink and move.

Several calls for immediate action have been made, but the complexity of the problem may suggest that multiple and coordinated actions are necessary. It is therefore vital that European countries work together on promoting good nutrition and healthy living, pooling their knowledge and sharing best practice. Furthermore, significant changes and long term solutions can most likely only be achieved if different sectors and professions work together towards promoting health.

Professionals who work in a variety of places such as canteens and meals provision, health centres and other parts of the primary health care system, as well as at various levels of the education system can play important roles in health promotion by taking health issues into their concerns and priorities and integrate aspects of health promotion as part of their core activities. However, these aspects have rarely been included in the curricula of the professions mentioned, and up-to-date and easily accessible and affordable continuing education appears to be lacking. The development of advanced information and communication technologies (ICT) opens up the possibility for more flexible strategies for lifelong learning and in-service training. Learning about health should primarily be informal and, in this sense, become a part of the individual's health behaviour. ICT tools may be used to offer relevant, interesting and easily accessible education to communicate health in a broad sense and in a creative manner.

The “e-learning for the *Health Agents* Programme” (eHAP) aims to take advanced e-learning concepts and apply them in continued and further education for professionals working – in one way or another – with health and nutrition in European countries. The programme presented in this publication can be considered as a prototype framework for a work-based course using e-learning. The prototype can be adapted to form curricula for courses where the needs of specific settings are taken into account.

This publication aims to provide guidelines for institutions that want to develop e-learning courses for *Health Agents*. The basic insights concerning health promotion are common for all member states, while guidelines for diets and health are country-specific and may be culturally determined. The document therefore leaves space for interpretation and translation into specific contexts.

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Contents

1	Introduction	9
1.1	The Challenge	9
1.2	Meeting the needs of future Health Agents: Identification of core competencies	12
1.3	The European qualification framework and eHAP	15
1.3.1	Defining EQF levels for the eHAP programme	15
1.3.2	European Credit Transfer and Accumulation System (ECTS) and eHAP	16
2	Practical Instructions for Organisers of Vocational Education Programmes Using ICT	17
2.1	Information technology and health promotion	17
2.2	The process of learning	17
2.3	Characteristics of e-learning	19
2.3.1	Computer-supported collaborative learning (CSCL)	20
2.3.2	E-tivities	20
2.3.3	E-learning objects	21
2.4	Tools for Producing e-learning Objects, Instructional Videos, Tutorials and More	21
2.4.1	Tools for converting PowerPoint presentations into e-learning objects.	21
2.4.2	Tools for capturing computer screens	22
2.4.3	Video hosting services (Screencast/YouTube/Vimeo)	22
3	Structure of the Programme and its Modules	23
3.1	Organisation of the modules	23
3.2	Timeline	24
3.3	Necessary engagement by the moderator and the participants	25
3.4	Self-assessment as an important learning tool	25
4	Content of the Modules	27
4.1	Programme introduction	27
4.2	Module 1: Dietary and physical activity guidelines and assessment of the situation	28
4.3	Module 2: Health communication and behaviour change	28
4.4	Module 3: Creating healthy menus	30
4.5	Module 4: Food safety and food quality	31
4.6	Module 5: Community projects	32
4.7	Final evaluation	33
5	Final remarks	34
6	References	35
7	Appendix: Overview of the Format and Teaching Strategy of Each Module	37



*If I had my way
I'd make health catching
instead of disease.*

~ Robert Ingersoll

1 Introduction

The e-learning for the *Health Agents Programme* (eHAP) is developed to educate *Health Agents*. The concept of a *Health Agent* finds its inspiration in the term *Change Agent* as it is used in organizational theory. In the eHAP programme, a *Health Agent* is a person who can integrate activities of health promotion in the main tasks and responsibilities of his or her workplace. Through improved human capability and alterations in organizational routines and systems, the *Health Agent* can enhance the health of the local community in which he or she works. The eHAP is aimed at persons who work in the primary health care sector, in the educational system and in catering.

The programme presented in this publication can be considered as a prototype framework for a work-based course using e-learning. The prototype can be adapted to form curricula for courses where the needs of specific settings are taken into account.

1.1 The Challenge

The rise in obesity rates across Europe and resultant ill health, such as type 2 diabetes mellitus, certain forms of cancer and cardiovascular diseases, are about to create an unprecedented public health challenge. Overweight affects between 30%-80% of the adult population in different regions of Europe and up to 1/3 of the child population [1]. Poor diets, lack of physical activity and consequential obesity are estimated to increase direct costs for health care systems in the EU substantially [2]. Particularly the rise in childhood obesity will accentuate the burden of ill health unless the rise in obesity is turned. Dietary improvements and increased physical activity levels are listed as key priority areas in European Union Public Health policies [3].

Promotion of a healthier diet through increased intake of fruit, vegetables, wholegrain and fish and a more balanced intake of sugar, fats and fibre may have beneficial health effects, also independently of their effect on weight. These benefits include primarily reduced risks of several forms of cancer [4], cardiovascular diseases and diabetes [5]. The same is the case for physical activity, which in addition to reducing the risk of several diseases will promote physical strength and function as well as psychological well-being [6].

An energy imbalance caused by higher energy intake, lower physical activity levels, or both, is the primary cause of obesity, but shifts in this balance for whole populations can to a large extent be attributed to factors in the environment. The 2007 Foresight Report "Tackling Obesities: Future Choices," commissioned by the British government, summarises the complex multi-factorial and interrelated causes of the obesity epidemic. The report argues that our societies have become obesogenic, defined as "the total sum of influences in the environment on promoting obesity in individuals and populations." Thus, the responsibility for action rests with actors at all social levels as well as the individual [7].

These considerations are very much in line with the WHO definition [8] of health promotion:

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social wellbeing, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy lifestyles to wellbeing.

Current thinking in health promotion has seen a shift from primary focus on the individual, observed particularly from a health care perspective, to building strategies of what works in health promotion from the perspective of the social determinants of health [9]. The Commission's White Paper on a strategy on nutrition, overweight, and obesity-related health [3] further acknowledges that integrated and complimentary actions at different levels, also outside the health care system, are needed. The "Public Health Action Programme (2008-2013)" of the European Union (EU) points out that health professionals as well as professions employed in a variety of places such as canteens, schools, health centres, youth education, nutrition counselling, and fitness centres can be important partners in health promotion. Schools, for instance, can play an important role in health education not only through learning but also by implementing health promoting school policies, organizing daily schedules to promote physical activity and serving high quality food.

The growing recognition that the health of the population is a wider responsibility can also be seen in the ways in which corporate social responsibility (CSR) is being discussed. CSR is concerned with how companies manage their business to encourage a positive impact on, for instance, the environment, communities and various stakeholders. While the responsibility for protecting the workers from harm is of primary importance, businesses can also protect the health of their employees by ensuring healthy food in their canteens and promoting physical activity during working hours.

Lifestyle changes can be achieved through learning experiences that enhance awareness, increase motivation, build skills and, most importantly, open access to an environment that helps people make positive changes regarding their health [10]. Synergistic relationships, health education, health promoting policies and the environment can be developed by involving a wide variety of stakeholders in promoting health. Thus, the educational components of health promotion activities can be supported and strengthened by parallel activities related to the environment [11]. Reviews of intervention studies to prevent obesity and promote healthy diets and physical activity also show that the most successful interventions are those which are multi-component[12].

However, a recent analysis of European public health policies has found few references to how an effective workforce should be developed to reach the goals indicated. This includes lack of references to *who* should work towards the goals and *how the required knowledge, skills and competencies needed should be systematically built up* at different levels [13]. Health promotion, nutrition and physical activity are to a limited degree part of standard curricula for health professionals throughout Europe, not to mention the teaching professions. Catering staffs also have highly variable training in aspects relevant to health promotion. Anecdotal evidence points to the fact that many of these professions lack up-to-date, easily accessible and affordable continuing education regarding health promotion, nutrition and physical activity. Thus, to reach the public health goals, there is a need for further development of the workforce so it can work effectively towards promoting health among their user groups and create more health promoting environments for all.

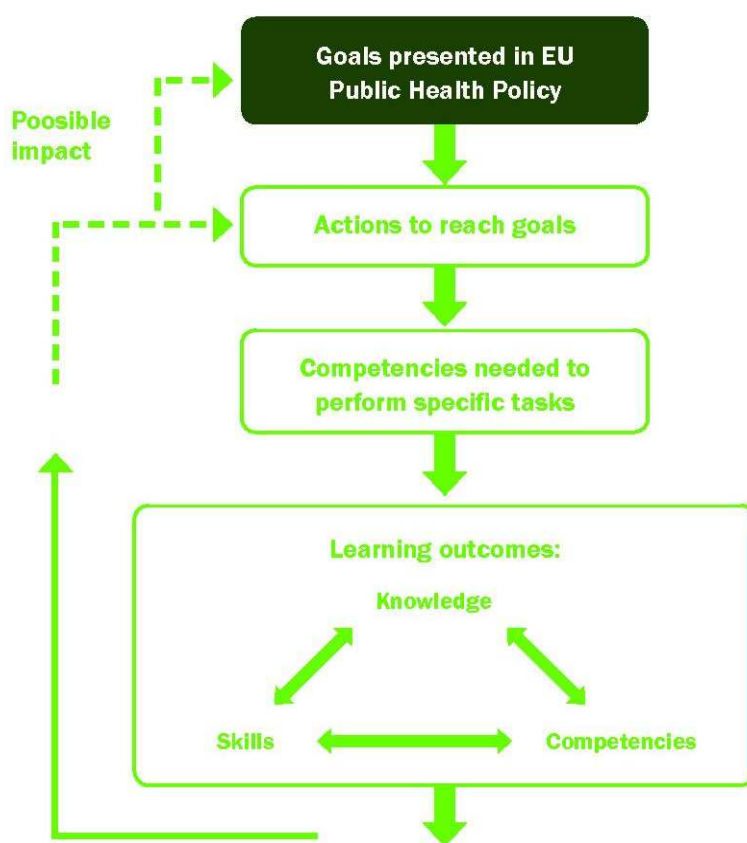


Figure 1: Development of the eHAP programme

1.2 Meeting the needs of future Health Agents: Identification of core competencies

A review of the international literature on health promotion competencies recommends that frameworks and core competencies are developed to guide health promotion training, academic preparation and continuing professional development. Such competencies should be based on analyses of current trends and forecasted changes within relevant environments, while taking into account aspects relevant to different contexts. These steps should be taken to ensure that the competencies are appropriate for future practice and workforce planning [9].

The aim of the eHAP programme was to develop a framework for courses which specifically address the subject of health promotion relevant to various workplaces. As illustrated in figure 1, the goals presented in the EU Public Health Policy were considered as a broad starting point. These goals had an impact on the selection of competencies which were further developed into learning outcomes for the eHAP programme. To develop the target groups and content of the eHAP programme, two main steps were taken:

Step 1: An analysis was performed to identify categories of front-line staff and sectors of the workforce which were indicated as possible partners in improving population health.

Step 2: A Delphi survey was conducted among experts relevant to the sectors to identify core competencies needed to promote health among their user groups.

In step 1 the categories of front-line staff to be targeted by the eHAP programme were identified through analyses of European and national policy documents, action plans and contact with key persons from national institutions or similar as relevant in each of the participating countries. In the first step, three main sectors of the workforce were identified and considered to be relevant target groups for the eHAP programme:

- Teachers and other staff in nursery, primary and secondary schools
- Chefs and other catering staff
- Health professionals involved in public health activities

In step 2, a modified Delphi study method was implemented to identify core competencies relevant for development of the eHAP programme. The Delphi technique is used to obtain the most reliable consensus of opinion among experts and builds upon a series of questionnaires or rounds to gather information until group consensus is reached. The method has been used frequently to develop education and training programmes [14]. Between 7 and 10 stakeholders considered to be experts representing each of the three sectors were recruited in five European countries: Denmark, Iceland, Belgium, Portugal and Norway. The experts had experiences or qualifications which gave them strategic roles or placed them in a position where they were able to consider the overall perspectives of the workforce sector and its role in public health.

The study was conducted in the period between April and December 2010. The starting point for the Delphi study was a preliminary list of competencies identified through published literature. The overall question the experts were asked to consider, keeping in mind the front-line staff of

their sector, was: “If your profession/sector should do more to promote health through nutrition and physical activity, which competencies would they need?” For each suggested competency, the experts were asked rate two questions: 1) How relevant is this competency for your profession, and; 2) How relevant would further education regarding this competency be?

After two rounds of modifications through structured feedback, a list of core competencies was identified. This list, presented in Table 1, contained competencies that were considered to be relevant by the collective groups of experts representing each of the three sectors. When the core competencies were used further to develop learning objectives for the eHAP programme, variations in scoring by sectors were taken into account. The variations were considered to represent variations in aspects relevant to their daily practice (profession specific) and related to the environment in which they work (context specific).

Table 1: The seven core competencies identified as relevant for Health Agents and the eHAP programme

1. Competencies related to basic knowledge of nutrition and physical activity include the abilities to:

- 1.a Explain the basis of the national guidelines for nutrition and physical activity.
- 1. b Consider central aspects of the nutritional recommendations for different age groups and life stages.
- 1.c Develop your own knowledge and search for scientifically based information within the areas of nutrition and physical activity.
- 1.d Distinguish between scientific advice and other types of information related to diet or physical activity.

2. Competencies related to analysis of the situation include the abilities to:

- 2.a Assess your users' situation in terms of their nutritional status and eating habits.
- 2.b Assess your users' situation in terms of their physical activity levels.

3. Competencies related to food, cooking and the production chain include the abilities to:

- 3.a Plan menus and prepare food in order to make nutritionally adequate meals.
- 3.b Plan menus which will be appropriate to people with different needs related to age groups and life stages, special dietary needs, cultural and sensory requirements.
- 3.c Plan and prepare meals which will ensure the quality and safety of the food.
- 3.d Modify the nutritional composition of a meal by exchanging ingredients or using different cooking methods.
- 3.e Read and interpret nutritional labelling.
- 3.f Discuss important aspects related to ways in which food is produced.
- 3.g Discuss how food production, distribution, presentation and the marketing of food can influence our food choices.

4. Competencies related to change in health behaviour include the abilities to:

- 4.a Assess the mindset of the users to find the most appropriate strategy to initiate change in diet or physical activity patterns.
- 4.b Discuss how different social factors (for instance culture, family situation etc.) influence our eating patterns.
- 4.c Describe how social and cultural differences can be taken into account when developing appropriate strategies to promote health.
- 4.d Discuss how different intervention strategies may widen or narrow the socioeconomic differences in diet, physical activity levels or health.
- 4.e Offer appropriate activities to encourage your users to become more physically active.

5. Competencies related to communication with the users include the abilities to:

- 5.a Use an adequate language when communicating with your users (according to their education, social and cultural situation).
- 5.b Describe how to come into contact with users using appropriate media when designing, planning and implementing small interventions in the area of your profession.
- 5.c Make use of ICT tools (for instance podcasts, presentations, websites, etc.) when designing, planning and implementing small interventions in the area of your profession.

6. Competencies related to planning and implementing small interventions include the abilities to:

- 6.a Include objectives related to food and nutrition in general tasks performed by your profession (for instance health promotion activities in teaching plans, dietary plans in health care for the elderly and dietary variation in the canteen menu).
- 6.b Include objectives related to physical activity in general tasks performed by your profession.
- 6.c Describe how to design, plan and implement small, simple interventions to improve the health and wellbeing of your users.
- 6.d Write proposals for bids/tenders with regard to purchasing foods to promote good nutrition, health and safety within your workplace.
- 6.e Compare and choose the best of different strategies to improve the situation related to your users' diet or physical activity.
- 6.f Manage the finances of small interventions within your workplace.

7. Competencies related to professional conduct and collaboration include the abilities to:

- 7.a Reflect on the social responsibility of your daily practice concerning your users' health (for instance which food is presented for, or recommended to, the users).
- 7.b Motivate and lead colleagues in teamwork with the aim of promoting a balanced diet, physical activity and health among the users.
- 7.c Describe the areas of competence in other professions in order to know whom to contact for further expertise when this is needed.

1.3 The European qualification framework and eHAP

The European Union member states are called upon to create a national qualification framework (NQF) in order to increase the transparency of competencies. An NQF is a set standard of qualifications agreed upon by educational authorities and stakeholders. Even though the eHAP programme is not set in an NQF setting, it is important to refer to a system on which qualifications are based. This is done to create a link between the European Qualification Framework (EQF) to increase the transparency of qualifications and competences.

The EQF is a descriptor defining levels of qualification. The EQF is not to replace individual NQF's but rather to be a shared framework to compare competences. By using the reference framework, the recognition of qualifications within the EU becomes more transparent and facilitates mobility of EU citizens. The core element of the EQF are the eight levels describing what the participant knows, understands and is able to do regardless of what system awarded the qualifications. The main descriptors are skills, competences and knowledge based on tool called Learning Outcomes. The EQF descriptors constitute a common basis for cooperation and comparison. In this context it is important to realise that the EQF does not award qualifications [15].

Transparency and recognition of competences and qualifications are issues that are focused on in the eHAP programme. We mapped the competences domestically, each partner referring to their own National Qualification Framework (NQF). This was then matched to the European Qualification Framework (EQF) indicating that the target group for the eHAP programme may be referred to levels 4-6 on the EQF. The eHAP programme may be implemented and even developed further on a national or international level, and a transfer of the methodology and structure of the programme should even be transferable to other sectors.

1.3.1 Defining EQF levels for the eHAP programme

The European Commission has established criteria and procedures for referencing national qualifications levels to the EQF which elaborate on what areas should be taken into consideration when referencing NQFs to the EQF[16]. In this perspective the eHAP programme has given special attention to the requirement of learning outcomes. As mentioned before, the contents of the eHAP programme are described on EQF levels depending on the target group. We have attempted to portray the reference levels in terms of learning outcomes describing descriptors according to the European Qualifications Framework for lifelong learning (EQF) thus making the comparison of qualifications possible. The following points describe the different levels to which the programme can be adapted, depending on the target group.

- In level 4 the participant will have theoretical knowledge in different contexts and gain cognitive and practical skills which he/she can apply in order to solve specific problems. He/she will obtain competencies in self-management within certain guidelines which are usually predictable. He/she will also be able to manage the routine work of others with responsibility of limited evaluation.

- In level 5 the participant will gain comprehensive knowledge within a specific field of work or study and at the same time is aware of his/her boundaries. The participant will also gain a comprehensive range of skills required to develop productive solutions for different tasks. He or she will also be able to exercise management supervision and review and develop personal actions and behaviour towards oneself and others.

In level 6 the participant will involve reflection and critical understanding of advanced theories and principles in the study field or working environment. The participant will acquire this knowledge through different means and be able to mediate knowledge. The participant will also be able to demonstrate the acquired knowledge through applying advanced skills and demonstrating procedures by using innovation to solve complex and unpredictable tasks. Finally, he or she will manage and utilise complex and diverse technical or theoretical methods to demonstrate acquired knowledge, skills and competencies as well as taking responsibility for managing professional development, whether it is on an individual basis or for a group [15].

The qualification level of the target group for eHAP is on EQF levels 4-6 based on needs evaluation from the Delphi study. For an example of this, see Figure 2.

Figure 2 : Example of participant competence levels

A chef will find him/herself at levels 4-5 on the EQF when it comes to cooking skills and menu planning but might find him/herself less adequate in respect of calculating menus and assessing different dietary needs. The same can be said for a health worker who will have a higher level of competences as regards dietary guidelines but have a lower level of competence when it comes to questions that apply to the quality and safety of food.

1.3.2 European Credit Transfer and Accumulation System (ECTS) and eHAP

ECTS credits are used in higher education programmes in Europe by those countries involved in the Bologna Process. The ECTS system is closely linked to Learning Outcomes, which state what the learner has gained upon completion of a programme rather than being a teacher-centred system as is more traditional.

The eHAP programme will contain 20 ECTS credits in five modules. The participant can choose between the complete programme or a minimum of 5 ECTS. The credits are based on the participant's workload as defined by the learning outcomes which are achieved through learning outcomes. One ECTS credit is equivalent to 25-30 hours of work. The aim of the ECTS credit award system is to make the transfer of awarded credits between or within institutions easier and more transparent. The accumulation of credits must be facilitated in an organisation qualified to deliver education on a higher level [17].

The eHAP participant should receive a diploma supplement certifying the credits upon completion of the eHAP programme.

2 Practical Instructions for Organisers of Vocational Education Programmes Using ICT

2.1 Information technology and health promotion

Information and communication technologies (ICT) are referred to as online learning programs, courses and resources emerging in education with the help of an on-going innovation of teachers, students and computer program builders [18]. ICT used in health promotion is beneficial both for the professionals who are involved in delivering the health promoting activities and for those receiving them. There is a lot of potential for information technology regarding health promotion due to rising costs of health care, changing demographics and an increasing public pressure to include other forms of health care. Health professionals and other professions are increasingly expected to use ICT in their daily work [19]. The eHAP programme is inspired by the dynamics of e-learning and the flexibility that it gives the participant. To get a better view of the dynamics of e-learning this chapter will address these issues. First, there will be an introduction of the processes of learning relating to the eHAP programme. Next, an introduction is given to the concept of e-learning and e-learning objects. Finally, an explanation of several e-learning tools is provided.

2.2 The process of learning

In any given situation of learning four questions need to be answered: 1) Who is learning – how are the learners defined and located? 2) Why are they learning – what encourages them to make the effort? 3) What do they learn – what are the contents and outcomes? 4) How do they learn – what are the processes of learning[20]? The learners in the eHAP programme (referred to as the participants) have been identified as professionals who, in one way or another, work with broad aspects of public health, thus answering question number 1.

An assessment of needs and competencies has been conducted through the Delphi survey, as described in Chapter 1.2, and the eHAP programme meets the demand of the competencies in question, answering question number 3. The more complex questions of “2) What encourages them to make the effort?” and “4) What is the nature of the learning processes?” requires a more thorough explanation where learning is viewed as a process between acquisition and interaction.

Learning can broadly be defined as: *“any process that in a living organism leads to a permanent capacity change and which is not solely due to biological maturation or aging”* [20]. This is a very open definition, but has been chosen to show that the process of learning is very complex. To understand the process of learning, the conditions of learning must be considered.

Learning always involves two different processes; an external process between the learner and his or her environment and an internal psychological process of elaboration and acquisition[20]. Many learning theories do not take this into consideration, but as the eHAP programme is based

on competencies in the profession of the participant it is important to include the environment and its impact as well.

The Danish learning theorist Knud Illeris illustrates the process of learning in a model including three dimensions.

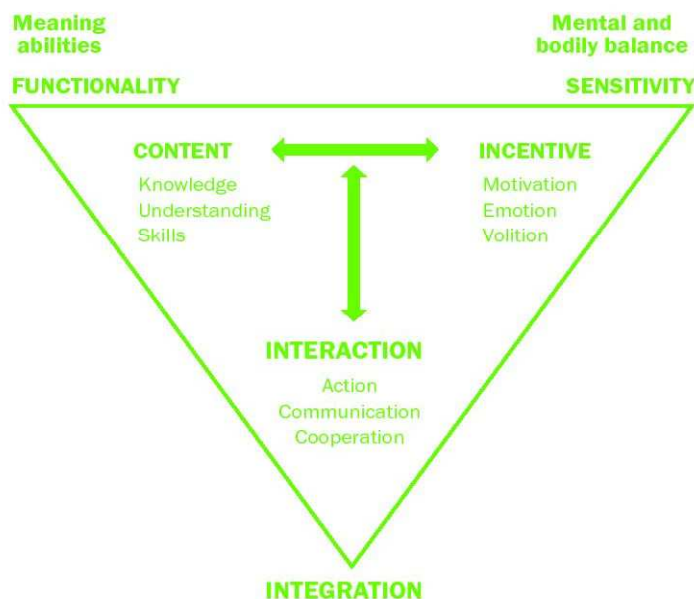


Figure 3: Learning in a three-dimensional model as described by Illeris [20]

The model includes three dimensions: 1) Content which involves the knowledge, understanding and skills obtained by participating in any given situation of learning; 2) Incentive which includes the motivation of learning and the emotions it involves; and 3) Interaction which involves the integration of the content in question, the incentive to learn and the way in which the learning takes place. Learners are always under the influence of the environment that they are in at the given time of the learning process[20].

Taking the “Three Dimensions” into consideration concerning the eHap programme, the dimension of *content* is the knowledge, understanding and skills concerning health promotion and ICT that participants will obtain. The dimension of *incentive* will involve the participants’ motivation to engage in the various learning objectives. The blended learning methods involve both online learning and face-to-face learning. Using a variety of methods gives the participants an opportunity to decide when to study. Furthermore, since the content of the modules is derived from the needs and competence assessment in the Delphi survey it should also be a drive for wanting to engage in the eHAP programme as it is closely connected to the needs of the labour market.

The methods of learning in the eHAP programme involve ICT and blended learning and this brings about the importance of the last dimension - *interaction*. Interaction between the participants will not only be limited to the classroom but will be open for on-going online discussions at any time. This is inspired by the dynamics of social online networks. The eHAP education will be hosted on an online learning platform (LMS) where the participants can engage in online activities 24 hours a day and participate in discussions, share knowledge and listen or watch online lectures when the time is right for them. This means that the participants, for example, can log on to their smart phone or PC on the bus home from work and watch an online lecture or participate in a debate. The interaction between the participants in this programme is therefore a crucial factor concerning the processes of learning and has been carefully considered in order to create an up-to-date further education option meeting the needs of the labour market. This answers question number 4.

The last question which remains to be answered (number 2) is why the participants will make the effort to learn. The eHAP programme is developed in close collaboration with the labour market and hence meets the needs of participants working with health in a variety of settings. Furthermore, the programme is constructed in such a way that most of the learning can take place when it is suitable for the individual. This should be a strong incentive to engage in the eHAP programme and therefore the participants should be willing to make the effort.

To give a better picture of the learning possibilities of involving ICT in the learning processes, the next chapter will address this issue.

2.3 Characteristics of e-learning

E-Learning is defined as any learning that uses information and communication technologies and is looked at as a way to strengthen the development of the student. The potential of e-learning is enormous as educators can teach high numbers of professionals while at the same time avoiding travel or accommodation cost, thus giving people who live far away from traditional education sites or have demanding jobs a better chance to participate in further education. Of course, e-learning will never replace the physical interaction between students and teachers. However, this modern technology has the potential to achieve great support for further education within various professions [21]. It will also increase the “authenticity” of the learning process as it is closely related to the field of practice. The solution that the learner reaches is often connected directly to the field of practice and is then implemented in practice as a result of the learning taking place where it is needed – in the labour market [22]. This also increases the motivation of the learner and is, therefore, an important element when developing further education in today’s society. This is one of the main reasons why the eHAP programme seeks to implement ICT as a vital part of the education. In coming decades, adult students will have more exciting learning options to choose from while they are grooming themselves for a new job or simply updating their skills within their work field [18]. The eHAP programme is an example of further education which uses the dynamics and flexibilities of e-learning.

2.3.1 Computer-supported collaborative learning (CSCL)

In opposition to a traditional view on education where learning is regarded as a transfer of data and knowledge, computer supported collaborative learning (CSCL) represents a method of e-learning in a more modern way where learning is regarded as construction in a social context. There are many ways to facilitate CSCL. Often online discussions and knowledge building activities that take place on a learning platform (Learning Management System - LMS) or in Web 2.0 tools are defined as user generated tools. Examples are blogs, wikis and social network services such as Facebook, Skype etc.

The concept of collaborative or group learning is designed to encourage or engage students to work together on learning tasks. In the eHAP project we use Gilly Salmon's expression for CSCL, called *E-tivities* [23].

2.3.2 E-tivities

E-tivity is a word that is built around active and interactive online learning. E-tivities should be motivating, engaging and purposeful. They are based on interaction between students or participants and usually take place through written message contributions. An E-moderator (electronic moderator or an online teacher) designs and leads the e-tivities which take place over a period of time. E-tivities are cheap and relatively easy to run - often through online bulletin boards, forums or conferences [23].

The importance of e-tivities for the online learning world is great because they spread around in networks. They are well practiced principles of pedagogy for learning and concentrate on releasing the best of networking technologies for the learner. There are many ways of online teaching but e-tivities are designed for efficiency and are also reusable. They can be used by participants who never meet each other or combined with classroom activity [23]. Figure 4 illustrates a model with an e-tivity where the learning activity starts with an online e-learning object (podcast) followed by online discussion and ending up with an assessment of the e-tivity.



Figure 4: The dynamics of e-tivities

2.3.3 E-learning objects

An e-learning object can be described as a learning object which is a part of an e-tivity. The e-learning object is a collection of information which is provided in a digital form in order to meet a study aim. In traditional learning settings this might be content which is provided in a face-to-face lecture. As an e-learning object, the lecture is now provided online and is available for the student when needed. An e-learning object can then be considered as traditional learning content transformed into a digital version available online. When available online, the e-learning object is then reusable in many settings. An e-learning object can be used as a substitute or a supplement. If the lecture is recorded and produced to be available online, then it can substitute a face-to-face lecture making it possible for the students to watch the lecture when they have the time. The online lecture can also be a supplement since it can be used, for example, for repetition to be watched several times. The eHAP programme will consist of e-learning involving both face-to-face teaching but also a variety of e-learning objects to ensure flexibility for the participants, so they can engage in the learning processes when suitable in their everyday work lives.

There are many e-learning tools available with varying degrees of complexity. A number of tools for producing e-learning objects are listed below.

2.4 Tools for Producing e-learning Objects, Instructional Videos, Tutorials and More

2.4.1 Tools for converting PowerPoint presentations into e-learning objects.

PowerPoint has been widely used to prepare presentations, animations, slide shows and multimedia for educational purposes. PowerPoint presentations can easily be saved as video files with added voice narration. In PowerPoint 2010, users no longer need any third party software application to save presentations in video format. One can simply save the presentation as Windows Media Video (wmv) and then share it with anyone.

iSpring Free

If you have an earlier version of PowerPoint than 2010, you can use a free program called iSpring Free to obtain the same possibilities. iSpring Free is an add-in for PowerPoint to create Flash movies from your presentations, keeping all visual parameters, animations etc. When downloading iSpring Free a tab in your PowerPoint will be created and hereafter you just click the tab to create the flash video. To get voice narration you add voice narration to the individual slides in PowerPoint before you convert the entire presentation.

2.4.2 Tools for capturing computer screens

Jing by Tech Smith captures anything on you see on your computer screen (including PowerPoint presentations) as an image or a short video and lets you share it instantly via web, email, IM, Twitter or your blog. It is limited to five minutes in length. Jing lets you capture screen shots or capture screen motion and record audio at the same time. Captured images can be annotated with text, arrows and highlights, which is useful if you want to create brief instructional videos or presentations to demonstrate how to do something on the computer. Jing is free but you can get a commercial version where you will be provided with the ability to save files in MP4 format, which makes it easy to upload high quality copies of your Jing presentations to YouTube and similar hosting sites.

Camtasia Studio by Tech Smith allows you also to record anything that you can view on your computer screen, including software applications, web pages, PowerPoint presentations, and much more. You can embed a video recording (picture in picture) of the teacher/instructor speaking to make it more lively. With the Camtasia screen recorder you can create interactive training and support videos that are on-demand for instant viewing. In Camtasia studio there are good facilities for editing recordings and adding effects. Camtasia is also excellent for producing videos in a shareable format by selecting preset or custom production settings. The program is not free and a fee will need to be paid in order to use it.

2.4.3 Video hosting services (Screencast/YouTube/Vimeo)

Video hosting services are websites or software where users can distribute their video clips. A video hosting service allows individuals to upload video clips to an Internet website. The video host will then store the video on a server, and provide different types of code to allow others to view this video. Examples of video hosting services are YouTube, Screencast and Vimeo. From the hosting server you will normally be provided with a link or an embedding code you can place in your LMS, in blogs, wikis, emails, social network services etc. in order to share your videos with others at a simple click. Normally, the video clips will be streamed, which means that the video is not downloaded but constantly received and presented while being delivered by a streaming provider.

Podcasting (iTunes)

A podcast is a series of digital media files (either audio or video) that are released episodically and downloaded, unlike streamed webcast as described under video hosting services above. When you want to subscribe to a podcast, you can for example use iTunes, which is the most common service for podcasting. You can subscribe to any podcast in iTunes by entering the actual podcast feed URL. iTunes will then subscribe you to the podcasts and begin downloading immediately. Once you subscribe to a podcast, iTunes checks for new episodes at regular intervals. When the episodes are downloaded to your computer you can synchronize your iPod with iTunes (on your computer) and watch or listen to the podcast from your iPod.

3 Structure of the Programme and its Modules

The modules are a mix of e-learning and face-to-face activities. The main purpose of the modules is to increase knowledge, skills and competencies with respect to health promotion for professions in the three sectors targeted by the eHAP programme: 1) Teachers and other staff in nursery, primary and secondary schools; 2) Chefs and other catering staff; and 3) Health professionals involved in public health activities. The modules go beyond traditional education, as modern ICT tools are taken as point of departure.

In the short run, participating professionals will be able to develop e-tools in specific domains according to the topics dealt with in the different chapters. In the long run, the target group should be able to develop e-tools in the broad context of health promotion. The modules can be considered as guidelines to adapt to a society in which media become more and more important. Having completed the entire programme, the participants obtain the title *Health Agent*.

3.1 Organisation of the modules

The full course consists of an introduction, five thematic modules and a final evaluation. The programme introduction presents the main ICT skills (see Chapter 2) and is obligatory also for participants who wish to take single thematic modules only. The main modules have four thematic modules which can be offered independently, and a fifth module which can only be taken if all of the previous thematic modules have been completed successfully. The final evaluation can only be taken if all previous modules have been completed. Chapter 4 presents the main content of each of the modules, while the appendix gives further guidelines for the moderator of the programme.

Each module consists of several steps and ends with an evaluation activity related to the module. Learning outcomes of the modules are reached through online courses, reading, face-to-face sessions and digital interaction. The evaluation activity related to each module is based on a product and the process. Products are produced as part of an e-tivity. A self-assessment tool can be used for the process evaluation. Both the products and the self-assessments are integrated into a portfolio created by each participant. In line with the aims of eHAP, participants should compile their portfolios online. It is up to the organiser of the course to decide where the portfolios are hosted. Examples are blogs or the organiser's communication platform, for instance Facebook.

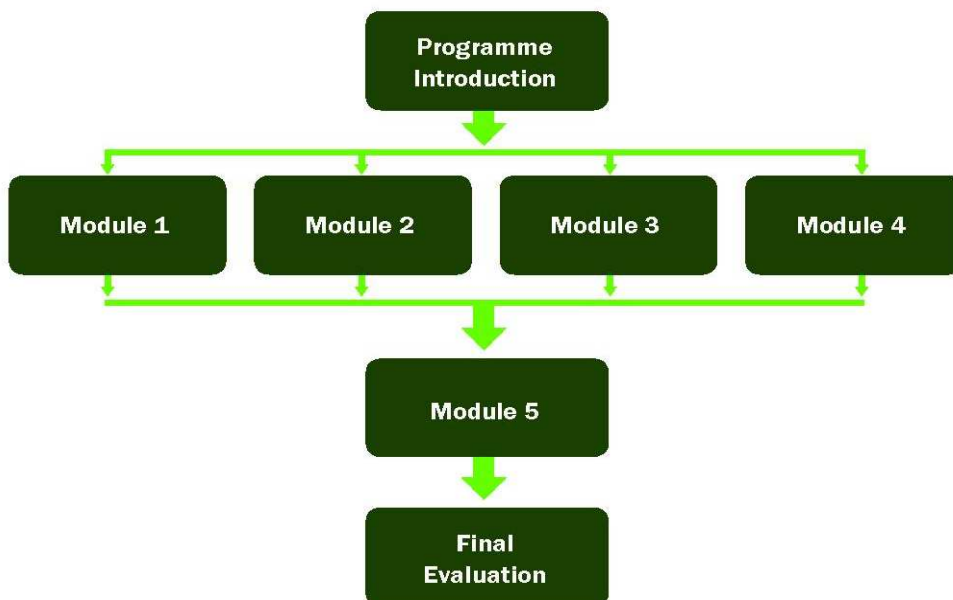


Figure 5: Structure of the full programme towards becoming a Health Agent

3.2 Timeline

One of the advantages of e-learning is that participants can, at least to a large extent within the wider framework, plan their work individually. However, each of the modules has an expected total workload of 75 to 90 hours, which corresponds to 3 ECTS per module. This time includes all learning related activities, including face-to-face sessions. The evaluation of each thematic module is expected to take approximately 8 hours. The average workload of each module may vary more as compared with traditional learning methods. The programme introduction counts for 2 ECTS, while the final evaluation counts for 3 ECTS. Hence, the full programme adds up to 20 ECTS. Professional background and ICT skills may determine the possible weekly workload of the participants. Some organisers may choose to stretch the modules over a longer period of time to accommodate the needs of the participants who may be employed in full time work.

3.3 Necessary engagement by the moderator and the participants

Participating in the modules involves a number of expectations both for the participants and the moderator. The overall structure nevertheless leaves a lot of freedom to the organiser, but there are some overall tasks to be performed.

E-learning requires a certain flexibility of the moderator. Since fixed contact points are limited, the digital follow-up needed of participants is often underestimated. The preparation of the e-learning requires the development of online course material, a broadening of the offered reference list in order to make the list relevant for a specific region or country, and a formulation of a detailed description of the tasks for the participants. Apart from the preparatory work, continuous follow-up and feedback sessions regarding the participants' work are required. The participants' work includes topic related self-studies – such as making a video about nutritional guidelines – and more general work such as building a portfolio or an assessment. Finally, face-to-face moments are intensive and a necessary part of the programme.

First of all, participants are expected to be able to work independently. They will be asked to give feedback on their colleagues' work. Simultaneously, they will receive comments from both colleagues and the moderator. Based on these comments, participants are requested to critically evaluate themselves and in this way improve their learning process as well as the final product. Self-assessment is part of each module. The self-studies involve the development of e-tools. It is obvious that participants should be willing to learn how to work with modern ICT tools. Finally, face-to-face moments are an integral part of the modules.

Comment: face-to-face interaction can be replaced by videoconferencing. This might be a solution for bridging geographical distances or allowing participants with restricted mobility to attend the course.

3.4 Self-assessment as an important learning tool

The self-assessment is a tool to map the personal learning process. The participants select two fulfilled tasks and provide comments on their own work.

There are three main purposes for using self-assessment during the course of the programme, i.e. to:

- Gain insight in the personal learning process
- Visualise the personal growth process, with attention to strengths and weaknesses
- Learn to react adequately on suggested strengths and weaknesses

The method used for self-assessment is a series of questions which the participant can use to reflect on different aspects of the learning process. The self-assessment is suggested to contain the mentioned elements formed as questions for the participant:

1. Choose an example from the tasks in the portfolio. You search for an activity where you experienced difficulties or had expected difficulties.
 - a. Describe the activity.
 - b. What was difficult?
 - i. Why?
 - ii. How did you handle the problem/ difficulty?
 - iii. What was the final result of this approach?
 - c. What have you learned from this situation?
 - d. Could you apply your insight in other parts of the course?

2. Choose an example from the tasks in the portfolio. You search for an activity where you experience no difficulties.
 - a. Describe the activity.
 - b. What was easy?
 - c. What did you learn?
 - d. Did this approach have an influence on any other activity of the course?

The participant will write down reflections and experiences related to the different elements in a document approximately the length of 2-4 pages. The moderator will use the assessment to evaluate the process.

4 Content of the Modules

The following chapter gives a brief description of the content and scientific basis of each of the modules. A more detailed overview of the format and teaching strategy of each module is presented in the Appendix.

4.1 Programme introduction

The aim of the introduction course is to make the participant familiar with the important learning tools used in the programme. These include writing a portfolio and publishing it online as a weblog - more commonly known as a blog. Starting to use a blog as documentation of the learning processes is a way to introduce the participant to online learning activities as described in Chapter 2.

A portfolio is a collection of student work that shows the student's efforts, progress and achievements in one or several areas. It shows the student's self reflections and attitudes to the practical and theoretical areas [24].

During the eHAP programme, the blog will serve as a working portfolio which is used to train the participant to reflect on the learning content, on her/his individual learning process and on her/his progress during the course. The portfolio is a pedagogical tool as well as a tool for documentation - in other words a sort of professional diary for the participants in which they can express personal aims and strategies for their study. When completing all the modules of the eHAP programme, the portfolio must be used actively throughout all the modules.

The blog will also be the online site where the participant can upload e-learning objects that she/he produces during the programme. As the completion of the modules progresses, the blog will be a dynamic place of learning items displaying creative ways to improve the health situations of the participant's target groups.

The online portfolio can contain a variety of the following topics:

- Each of the modules in which you have participated.
- The theory addressed in each module and the learning outcomes.
- The e-learning objects created.
- The relevance for the professional area.
- How did the participant profit from the module and what was the most important experience?

4.2 Module 1: Dietary and physical activity guidelines and assessment of the situation

The focus in Module 1 is on national and European food-based dietary guidelines, physical activity and dietary recommendations, including different food labelling schemes. The practical part of the module aims at using simple assessment methods integrating scientific knowledge with know-how.

This first module will start with an introduction to the National and European food-based dietary guidelines, as well as relevant dietary and physical activity recommendations over the life course. The eHAP participants will specifically study the recommendations most relevant to the user group in their daily practice. Some of the food labelling schemes in use will be presented and discussed.

In Europe, as in many other places of the world, there is a growing public interest in the health aspects of food and physical activity. As a result, more and more foods come with a health claim. Also, different ideas of what constitutes healthy diets and lifestyles have been spread through books, magazines and other media. For a professional who is responsible for, or in a position of, influencing other peoples' health, it is important to be able to distinguish health claims that can be documented from claims that cannot. Thus, during this module the participants will learn how to identify scientifically based information about diet and physical activity and discuss in more detail why this is important.

In order to be able to consider important aspects of their users' situation, decide whether it is appropriate to develop some actions and establish priorities about what to do first, the *Health Agents* should be able to assess the situation. How to develop a small intervention is discussed further in Module 5, but in this module the eHAP participants will learn how to assess their user's situation with regard to dietary intake, nutritional status and physical activity level. The participants will practice their new skills by making a small assessment of their current users. They will also practice how to discuss their findings relative to relevant guidelines and recommendations at the National and European level.

4.3 Module 2: Health communication and behaviour change

In Module 2 the perspective is changing health behaviour. This will involve assessment of the mindset when changing health, hence working with theories and practical assignments for analysis. Furthermore, filming during counselling is presented as a way of using ICT in health communication.

In this module the focus is on enhancing the ability to assess the mindset of the users while taking culture and habits into consideration. In health communication, this is a crucial competence. Not only is it important to be able to address the users of the *Health Agents* in an adequate way,

but it is even more important to be able to understand the situation of the users and then be able to communicate in a way so that it makes a difference to the individual.

Changing behaviour is one of the most difficult aspects of life and one of the most challenging things to engage in. Everybody who has been through a change knows exactly how difficult it is. No matter whether the change is big or small, there are always the same issues at stake. When people are thinking about changes concerning their health, there are many things to be considered. Do I really want this change? What will my family and friends think? Can I manage to go through it? Will I fail and how can I keep up my new habits afterwards?

These thoughts are very common when people engage in change and it is in situations like these that it can be very beneficial to seek the guidance of a Health Agent. When the participant is being approached by a person who needs guidance, it is very important that the Health Agent is capable of assisting the individual seeking counselling. This not only refers to advice on diets and physical activity, but also the ability to use the right method at the right time so that the assistance needed meets the expectation of the person seeking help. A lot of decisions to make a change have been made in haste and can become difficult to carry out if the knowledge on which to base this change is insufficient. Then the situation becomes even more complicated when the individual seeks the advice of a Health Agent and the Health Agent is not able to communicate in a way which makes change a possible option. The thought that change can occur will then be abandoned and the belief that change is actually possible will be given up as well. To prevent such a situation from happening, the Health Agent needs to be able to communicate in the right manner, hence being able to give guidance to the ones seeking help.

There are many methods than can be chosen to rely upon when the aim is to develop the communicative skills of the professional. In the eHAP programme the focus is on motivational interviewing (MI). MI has been chosen because it is easily adaptable into health care and has shown great results in recent years. The belief of the eHAP programme is to update the competencies of the front line professionals working in the labour market in close contact with the people who need the counselling. The aim is that this will have a great impact on health in general. MI is a certain technique that relies on the *Health Agent* to act with the client's best interest at heart and to sincerely believe that change is possible. In this way it is culture-sensitive as well since it always takes its beginning in the single individual and the aspects that influence this individual's life. It does so by taking its beginning where it is most crucial – in the individual's current life situation. It is a client-centred approach that gives the *Health Agent* an opportunity to support the client in finding the right answers to his or her specific situation by applying the knowledge needed through using the technique of MI. MI is a skill that can be mastered at any level and with the correct training it can be most beneficial for the *Health Agents* and their users.

Whether new to MI or a bit experienced, this module will give the participants the possibility to acquire new skills concerning communication.

4.4 Module 3: Creating healthy menus

Module 3 deals with the practical consequences of food guidelines. The participant will learn how to create adequate menus. This includes making recipes healthier by changing ingredients or choosing the best production method. Also, the module introduces tools to calculate menus. Attention is given to the needs of specific target groups based on age, athletic performance or disease, depending on a self-selected topic of each participant chosen according to his/her needs and interests.

More than two millennia ago Hippocrates realized that the key to good health is based on healthy lifestyles. In Europe today, six out of seven risk factors for premature death are related to the way we eat, drink and move. This module is designed to add to the basic knowledge of the associations between health, nutrition and physical activity. The main emphasis is on a practical approach to increase awareness of the importance of food choice and preparation while utilizing scientifically based knowledge and information technology.

The combination of foods, portion sizes and proper cooking methods together makes a healthy menu. In today's society with an overload of news and information about nutrition and health, which may be of very different quality, it is not always easy to make the right choice. Nutrition information is often built on popular myths or even fraud, and may simply be misinformation. Therefore, it is important to be able to distinguish between reliable scientific knowledge and other resources and to know when the scientific basis gives reason to change into practice, based on the strength of the evidence.

Although general dietary guidelines apply for school-age children as well as adults, some special considerations should be kept in mind when designing menus for different age groups. Similarly, there may be considerable differences in the dietary needs, including amounts, time planning and the composition of meals of athletes of different disciplines. Furthermore, every chronic disease calls for a special and evidence-based approach towards making healthy, appetizing and enjoyable menus. In this module, participants learn to gather scientific and useful information about special needs through self-learning by searching for relevant literature. The information gathered is then transformed into practice by creating menus according to these needs.

Last but not least, it has to be kept in mind that food preferences may vary much between individuals and food choice is not simply a matter of getting nutrients, but rather a complex combination of external and internal cues. To be able to create realistic menus that will be eaten and enjoyed, a *Health Agent* has to gain insight into the diverse factors that may influence food choices, such as marketing, manufacturing, cultural norms, family, friends and taste preferences. Food can only be healthy if it is eaten.

4.5 Module 4: Food safety and food quality

Module 4 addresses competencies in the area of food safety and food quality, but sound knowledge of these topics were commonly found to be lacking according to the Delphi analysis. The main topics here are food labelling, quality and safety when planning and preparing meals, as well as risk communication.

The participant will acquire comprehensive knowledge, skills and competencies in the area of food assessment, management and communication in the area of food safety by applying different methods that are generally accepted. In order to influence the way meals are prepared or served, it is imperative that key persons are given sufficient information to take informed decisions. This module will give the participant an overview and some useful tools to assess, manage and communicate important messages, both to colleagues and the consumers of food. Key words are food contamination and risk communication, on the one hand, and different alternatives in food production on the other.

The prevention of food-borne diseases and the response to food safety challenges requires holistic, risk-based and timely food safety policies and strategies. Food safety is best ensured by the shared responsibility of everybody involved with food, from the professional to the consumer. All along the food chain, various procedures and good practices are implemented to ensure that the food which reaches the consumer's table is fit for consumption, that the risks of contamination are minimised so that the population as a whole is healthier from the benefits of safe quality food. But responsibility for food safety should not only be the priority of professionals in the food industry. There are rules and procedures to guide the professionals, but the consumer is equally responsible for ensuring the safety of food in the home. The best way to practice food safety is to be well-informed about the basics of food: natural processes and, especially, the hazards to food from chemicals - both those occurring naturally and those coming from the environment.

Communicating accurate and reliable information is an essential competence in the field of health promotion. It is the food manufacturer's responsibility to uphold good manufacturing practices and apply quality standards and it is the health promoter's task to be able to identify good manufacturing standards and relaying them to colleagues and customers. Food-borne diseases are a growing public health problem worldwide, particularly for infants, children and the elderly. Food safety is everyone's business: from the food producers, distributors and retailers, and restaurateurs to consumers. Food producers must adhere to food safety regulations and apply strict hygiene measures to ensure that products are as safe as possible. To make food safer, all who handle food can play their part. Food safety remains a constant challenge.

By integrating assessment, management and communication methods in order to promote food safety and quality procedures, a quality circle is created. Different approaches are available; however, we have chosen a model that the European Food Information Council recommends. The SAFE FOODS model promotes different approaches to decision-making on food safety. The model takes in to consideration risks, benefits and costs with regard to food production and consumption as well as considering the social aspect of decision making when purchasing, preparing and delivering food.

4.6 Module 5: Community projects

Module 5 focuses on building competencies of *Health Agents* to develop projects within their communities. From working through the module, participants will gain an overview of the major important stages to develop their own projects in their communities or workplaces and will be able to improve their evidence-based knowledge and skills.

As a health promoter, the *Health Agent* has to keep in mind the importance of the development strategies needed when planning projects or interventions to promote health within the community or workplace. This is a task that involves leadership and management skills in order to create successful programmes.

The process of creating and developing a health promotion project starts with the planning. This involves both strategic, programme and operational planning which is guided by the needs assessment of the community. This needs assessment is crucial to the comprehensive planning of the project from the decision-making stage for defining problems to the evaluation process. This first step is then followed by a theoretical approach to the development stages of a project in the second step. The third and fourth steps then focus on the practical competencies and skills of the participants who will apply the project in their communities or workplaces.

Planning the project is a continuous part of the management process. The overall mission has to be clear by setting objectives in order to define what, where, when, and how the mission can be accomplished and at the same time provide answers to the problems identified. The participant should define what kinds of activities are most suitable to reach the goals and objectives of the projects, define procedures and protocols to put those activities into practice, and determine the requirements to implement it. In the fourth step the participants carry out the management and evaluation of the projects they have developed.

It is known that a well-managed health promotion projects can lead to a measurable impact on the health and well-being of the community, but for that to happen the *Health Agent* needs to have knowledge and skills relating to management processes as well as the confidence to apply them.

The evaluation process is important in order to find out the extent to which the goals and objectives of a project have been accomplished and to take corrective action if needed. It is a tool to monitor the progress and the resources of a project, as well as its outcomes.

To finalize the module, in the fifth step the participants are evaluated by the results of their intervention in the community or workplace and tools developed during the module.

4.7 Final evaluation

The purpose of the final evaluation is to demonstrate that the skills, competencies and knowledge described by the learning outcomes have been achieved. In order to show that these have been reached, participants should select five competencies from the list in Table 1. These will be used further in writing a report. The participants should describe, for each of the selected competencies, to which extent the competence is relevant to their profession. Further, they should discuss how these competencies have been developed during the course. For this task, the participant can refer to e-tivities that were created during previous modules, as well as to their own portfolio.

The report should contain the following items for each of the selected competencies:

- Title of the competency.
- Description of the relevance of this competency to the profession.
- Description of the skills and knowledge necessary, from the participant's point of view, for achieving the competency.
- Details of how the participant worked on these skills and knowledge to reach the competency during the modules. E-tivities and the portfolio can be used to provide examples of how the competency has been reached.
- Details of the way in which the participant will use the newly acquired competency in his/her own daily work. This can be described by using a practical example of how the participant worked before the course and how he/she is now able to handle the same task in a different way.

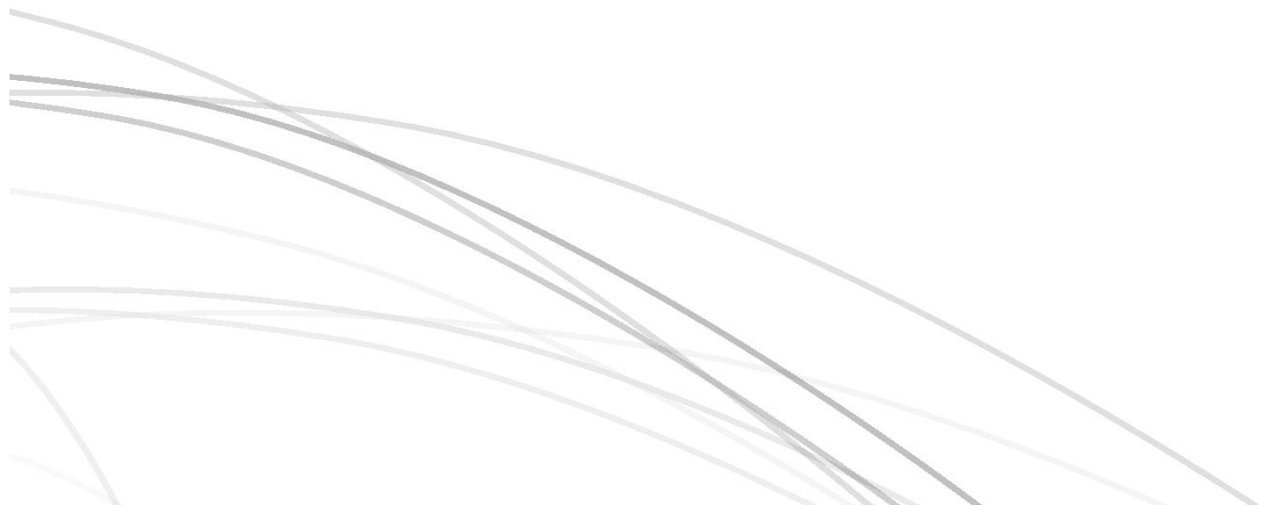
The result of the evaluation is the completed portfolio and the personal evaluation report. It is up to the organiser to define the specifics of the report according to the reporting guidelines of the organisation. In order to deliver a report which is based on evidence-based principles, references to scientific literature are an important element.

5 Final remarks

This publication aims to provide guidelines for institutions that want to develop e-learning courses for *Health Agents*. The basic insights concerning health promotion are common for all member states, while guidelines for diets and health are country-specific and may be culturally determined. The document therefore leaves space for interpretation and translation into specific contexts.

Our journey through the process of developing and implementing a guideline for different user groups on the labour market interested in working on health promotion was interesting, instructive, at times difficult, but most of all fun. It is our hope that the final product will be useful for institutions that want to develop e-learning courses for *Health Agents*. Based on the guidelines given here, and in more detail explained in short-text in the appendix, it is up to the moderators delivering the modules to choose relevant literature. Our findings, based on the results from the Delphi study (which will be published elsewhere), show that it is of great importance to take into consideration the different needs of the labour market in every country and to nationalise the product despite a common ground in choice of relevant topics across the European countries.

Finally we would like to thank all participants in the Delphi study, which were both stakeholders and possible future users of this programme, for their time and effort. The modules are based on that work.



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The background is a solid orange color. On the left side, there are several thin, white, curved lines that sweep upwards and outwards, creating a sense of movement and design.

Creating a **successful portfolio** is easier than you think. Focus on simplicity, ease of use, hitting your objectives, professionally managing the project, and you'll end up with a successful portfolio.¹

1. <http://www.smashingmagazine.com/2008/03/04/creating-a-successful-online-portfolio/>

7 Appendix: Overview of the Format and Teaching Strategy of Each Module

Programme introduction

This statement by Smashing Magazine, a very popular online magazine and blog, captures the important features of an interesting blog. The participants of the eHAP programme have engaged in the programme not only to update their professional knowledge but, more importantly, to gain new skills and competencies within ICT. The eHAP programme is also designed to enhance communicative skills alongside the professional skills of the individual participants. The engagement in eHAP should give the participants a better insight into the use of ICT within their professional fields and enable Health Agents to interact more dynamically with their users online.

Because the main didactic strategy of eHAP is based on blended learning, as explained in Chapter 2, the participant needs to get started by doing online activities before the first module takes place in order to become familiar with ICT work already from the beginning. Monitoring the learning processes in motion is also of great importance, as are the participant's reflections at the beginning of the programme. A portfolio is a great tool for this and because the eHAP programme is focused around online learning activities, the participant might as well get started on integrating ICT in the learning processes by creating a blog. Furthermore, the participants need to enter the Learning Management System (LMS) chosen for the programme and become familiar with the online learning platform. The participants should leave the link of their blogs on the LMS so that all the participants can start to become acquainted with each other and the areas of professional interest before they start working through the modules.

Timeline

Steps	Face-to-face	e-learning
Step 1		x
Step 2		x
Step 3		x

Step 1 - Creating a blog

Learning outcomes

- Understanding the concept of a portfolio
- Creating a blog
- Becoming familiar with blogging

Tasks for the participants

- Each participant creates a blog
- The participant has to write a description of his/her professional area of interest, also adding a more personal profile to the description for the other participants to get to know the participant.
- Post a recent picture of themselves on the blog

Tasks for the moderator

- Choose blog system
- Provide a short photo story for the participant on how to make a blog
- Technical support on making a blog providing the opportunity to get individual tutoring using Skype

Step 2 - Entering the LMS

Learning outcomes

- Understanding the dynamics of Web 2.0
- Understanding the concept of blended learning
- Being able to use the chosen LMS

Tasks for the participants

- The participants enter the LMS and leave links for their blogs
- Participants choose one of the other participants' blogs and post a comment on the presentation there.

Tasks for the moderator

- Provide logins and password for the LMS
- Write a welcome letter on the LMS
- Post a photo story on the LMS for the participants to understand how to use the LMS
- Technical support on entering the LMS providing the opportunity to get individual tutoring using Skype

Step 3 - Getting ready for the eHAP programme

Learning outcomes

How to ensure privacy and protect the content of your blog

Secure use of the LMS system

Tasks for the participants

Write an essay on expectations of the learning outcomes for the eHAP programme, post on blog

Post a note on one of the other participants' blog, commenting on the essay written

Tasks for the moderator

Provide guidelines for the essay to be written on the LMS

Provide guidelines for the comment the participants have to make

Comment on the essays posted on the blogs

Provide the opportunity to get technical support and tutoring using Skype

ICT learning outcome

Knowledge about Web 2.0, LMS systems and e-tivities

Creating a blog

Using blogging as a portfolio



Module 1: Dietary and physical activity guidelines and assessment of the situation

Food-based dietary guidelines constitute science-based policy recommendations in the form of guidelines for healthy eating. They are primarily intended for consumer information and education, and as such, they should be appropriate for the region or country, culturally acceptable and practical to implement. Moreover, they should be consistent, easily understood and easily memorable. The development of food-based dietary guidelines consists of the integration of scientific knowledge about nutrients, foods and health in order to identify dietary patterns that facilitate the achievement of desirable food and nutrient intakes.¹

Timeline

Steps	Face-to-face	e-learning
Step 1		x
Step 2	x	x
Step 3		x
Step 4		x
Step 5	x	x
Step 6		x

Step 1 - Guidelines on nutrition and physical activity - National and European perspectives

Learning outcomes

Discuss why National and European diet and physical activity guidelines are important sources of information and the knowledge they are based on.

Present the diet and physical activity guidelines and recommendations for different age groups and for different life stages.

Identify the national diet and physical activity guidelines most relevant to user group and participant's workplace.

Tasks for the participants

Write some reflections regarding your expectations about this module on your blog (see details in the programme introduction for standard questions to use).

Watch online lecture.

Read/study the suggested reading material while having in mind the specific perspective of your workplace/user group.

¹ EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA). Scientific Opinion on establishing Food-Based Dietary Guidelines. EFSA Journal 2010; 8(3):1460.

Post a summary comment on the learning platform of the most important sources of information relevant to your workplace/user group.

Engage in the online discussion on the learning platform.

Comment on at least one of the other participants' summary comments.

Blog about your reflections related to this step.

Tasks for the moderator

Present an online lecture on national and European dietary and physical activity guidelines and recommendations.

Monitor the discussions on the learning platform.

Post comments on the learning platform if relevant.

Step 2 – Scientifically-based knowledge

Learning outcomes

Reflect on the social responsibility of your daily practice concerning your users' health.

Reflect on what scientifically-based information is, how you can separate it from other "health" information and how you can find it, for example by using tools as the Internet.

Tasks for the participants

Present yourself with a short introduction on your background and the social responsibility of your daily practice concerning your users' health. Participate in a lecture on the importance of scientifically-based guidelines and recommendations.

Discuss the social responsibility of your daily practice concerning your users' health, reflecting on the need for scientifically-based guidelines.

Attend an IT-session focusing on searching for online resources relevant to your users' health, followed by discussions regarding the scientific base/credibility of the different sources.

Blog about your reflections related to this step.

Tasks for the moderator

Lecture about the importance of scientifically-based guidelines for health, nutrition and physical activity.

Divide participants into groups if needed.

Lead discussions and IT-session.

Give concluding remarks based on the discussions.

Step 3 - Food labelling

Learning outcomes

Understand the different “front of pack” labelling schemes, official and other, and discuss the credibility of these.

Interpret the nutrition information given on food packages, and use these to calculate nutrient intake based on different portion sizes.

Tasks for the participants

Watch online lecture.

Study the suggested reading material, keeping in mind the specific perspective of your workplace and user group.

Reflect on what would be the most important food and nutrition messages to your user groups and post it on your blog.

Produce a photo story informing your users about nutrition and health labelling on food and post it on the learning platform.

Engage in the online discussion on the learning platform.

Blog about your reflections related to this step.

Tasks for the moderator

Present an online lecture on different forms of food labelling and how to interpret them.

Monitor the discussions on the learning platform.

Post comments on the learning platform if relevant.

Step 4 - Assessments

Learning outcomes

Perform a simple nutrition and physical activity assessment of the user group relevant to your workplace.

Interpret the results from the assessments. Present the assessment results to your users.

Tasks for the participants

Watch online lecture.

Study the suggested reading material, having in mind the specific perspective of your user group and work place.

Present and post the results of your assessment in a PowerPoint presentation and give a short comment summing up your main findings.

Engage in the online discussion on the learning platform.

Blog about your reflections related to this step.

Tasks for the moderator

- Present an online lecture on how to assess your users' situation.
- Monitor the discussions on the learning platform.
- Post comments on the learning platform if relevant.

Step 5 - Creating action plans**Learning outcomes**

- Create action plans based on the assessment of your user group/workplace.

Tasks for the participants

- Present results from step 4 in groups.
- Participate in the lecture about national action plans for health/nutrition/physical activity.
- Discuss how your results can be used for developing action plans.
- Blog about your reflections related to this step.

Tasks for the moderator

- Lecture about national and/or European dietary and physical activity action plans, relevant policy documents, activities of NGOs and relevant online resources.
- Divide participants into groups if needed (or keep groups the same as earlier).
- Lead and advice during group work.

Step 6 - Summing up**Learning outcomes**

- Writing an assignment.
- Apply tools and findings of this module.
- Transform knowledge into action.

Tasks for the participants

- Study the suggested reading material for the module as a whole, having in mind the specific perspective of your user group and work place.
- Write and post a small assignment about your users' situation relevant to health, diet and physical activity and refer to the curriculum used in this module.
- Engage in the online discussion on the learning platform.
- Blog about your reflections related to this step and the module as a whole.

Tasks for the moderator

- Comment on the individual assignments.
- Comment on the blog.
- Give individual feedback and concluding comments on the module.

ICT learning outcome

Finding and using electronic material on the Internet in communication with the *Health Agents'* users.

Use blog as a portfolio.

Creating a photo story.

Module 2: Health communication and behaviour change

Behavioural risk factors are the leading causes of the occurrence of, and morbidity and mortality due to chronic health conditions and injuries in the world – and indeed within the WHO European Region. There is convincing evidence that healthy behaviours including smoking abstinence, weight management, blood pressure control and regular exercise are associated with longer life span and better quality of life. However, health promotion activities – and mass public health campaigns in particular – have often failed to have the desired effect in terms of reducing disease incidence and burden, simply because compliance with the message, in the form of the intended behaviour change, is harder to achieve than its precursors of raising awareness, providing knowledge and altering attitudes.²

Timeline

Steps	Face-to-face	e-learning
Step 1	x	
Step 2		x
Step 3	x	
Step 4		x
Step 5	x	

Step 1 - Influence of behaviour change and emotions on conduct in a cognitive perspective

Learning outcomes

Understanding the process of change.

Being able to assess a person's state of mind using a cognitive approach.

Understanding the influence of the environment on behavioural change.

² World Health Organization. Behaviour change strategies in health: the role of health systems. World Health Organization, Regional committee for Europe. 58th session, 2008. http://www.ephpa.org/IMG/pdf/RC58_edoc10.pdf

Tasks for the participants

Write on your blog the expectations you have for this module.

Post a description online about your previous experience with assessing the mindset of your users related to your work life. Also describe your professional experience with behavioural change.

Study the suggested reading.

Prepare a case which is inspired by a work situation.

Describe it and bring it to the face-to-face meeting.

Blog about your reflections related to this step.

Tasks for the moderator

Introduction to the “stages of change” – model by Prochaska, DiClemente and Norcross.

Lecture on behavioural change, addressing the importance of the emotions involved inspired by a cognitive approach.

Group work on behavioural change.

Evaluate participants of the module during the face-to-face session.

Step 2 - e-tivity on Motivational Interviewing

Learning outcomes

Understanding the basic principle of motivational interviewing.

Understanding the importance of the counsellor's behaviour influence on change.

Tasks for the participants

Study the suggested reading.

View the on-line lecture.

Post answers online to the work questions provided by the moderator on motivational interviewing.

Blog on reflections about using motivational interviewing in daily practice.

Tasks for the moderator

Online lecture on motivational interviewing.

Work questions for the suggested reading.

Post comments on the learning platform if relevant.

Provide quiz on motivational interviewing.

Step 3 - Motivational interviewing in practice including ICT – using filming as a part of counselling

Learning outcomes

Having gained practical experience with the techniques of motivational interviewing.

Gaining practical experience in using a video camera in counselling.

Tasks for the participants

Study the suggested reading.

Bring a case from everyday work life to the face-to-face meeting.

Blog about your reflections related to this step.

Take part in peer assessment used for the evaluation in this step.

Tasks for the moderator

Introducing practical tasks to be performed in class with the other participants.

Facilitate the use of video camera in the counselling session.

Assist in peer assessment.

Step 4 - e-tivity: Case study on motivational interviewing in health care

Learning outcomes

Altering the knowledge on motivational interviewing to include the use of the technique in health care.

Applying motivational interviewing and Stages of Change in practice using the relevant technique for the individual situation.

Knowing how to use the video camera as a part of counselling.

Tasks for the participants

Study the suggested reading.

Apply theory on the case provided and post online.

Comments on two of the other participants' work.

Blog on reflections on using ICT in health care.

Tasks for the moderator

Provide a standard case for all participants to engage in.

Follow up on discussions online.

Provide case with theory applied.

Step 5 - ICT and motivational interviewing

Learning outcomes

- Understanding a more advanced use of motivational interviewing.
- Being able to use ICT as a part of everyday practice.
- Assessing the mindset of the user, applying the technique of motivational interviewing on the basis of an analysis using the stages of change.
- Choosing an adequate strategy concerning change in health behaviour.

Tasks for the participants

- Study the suggested reading.
- Bring a case from everyday work life as an object for analysis.
- Produce a video clip of a counselling session and bring to the face-to-face meeting.
- Blog about your reflections related to this step.
- Comment on two of the other participants' papers posted online.

Tasks for the moderator

- Give a lecture on more advanced techniques of motivational interviewing.
- Support the use of ICT in everyday work life.
- Give feedback on the motivational interviewing used in the film clips produced by the participants.
- Give tutorial support on case analysis face-to-face.
- Comment on theory applied and techniques used in the paper.

ICT learning outcomes

- Using a video camera for counselling.
- Uploading film clips on blog.

Module 3: Creating healthy menus

Mostly, mothers are concerned about food. Mothers tell you what to eat and what not to eat, how much of it to eat or not eat, when to eat it, and why you should or should not eat it. Mothers seem to know. The question is, who knows more about good nutrition, mothers or nutritional epidemiologists?

Knowledge and common wisdom about the importance of diet have been handed down from generation to generation for millennia. While the formal study of diet and health is only a few decades old, the importance of diet to maintain health was already known to the ancient Greeks. As Hippocrates (460–377 BC), the

father of Western medicine, put it: ‘If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health.’³

Timeline

Steps	Face-to-face	e-learning
Step 1		x
Step 2	x	x
Step 3		x
Step 4		x
Step 5	x	x
Step 6		x

Step 1 - Healthy recipes and food preparation methods

Learning outcomes

- Developing healthy recipes.
- Distinguishing between more healthy and less healthy choices.
- Distinguishing between scientifically-based knowledge and food quackery/myths/fraud.
- Making a video clip and post it on the learning platform.

Tasks for the participants

- Present your favourite recipe with a video and post a comment explaining your choice.
- Post at least one comment on other participants’ recipes.
- Discuss popular myths and fraud related to the topic on your blog.
- Post a comment on how to make your recipe healthier, based on knowledge gained during the lecture.

³ Michels, KB. Nutritional epidemiology—past, present, future. *Int. J. Epidemiol.* (2003) 32:486-488. doi: 10.1093/ije/dyg216.

Tasks for the moderator

Online lecture on what is considered healthy food and how to change ingredients in a meal based on literature and scientifically-based knowledge. Here the focus should be on the nutritive value of certain foods, the combination of foods and proper cooking methods as the constituents of a healthy recipe and/or menu.

Give directions on homework. Lead and moderate discussion on popular myths and fraud related to the topic.

Step 2 - Nutritional needs of various groups

Learning outcomes

Identifying the nutritional needs of different groups of people.

Choosing and reading relevant literature and scientifically-based knowledge.

Using self-learning for given subjects .

Tasks for the participants

Study the suggested literature.

Attend lecture on nutrition for different groups with special needs and the overall role of nutrition.

Discuss and choose topic according to the needs of their users and workplace or own interest.

Write a short report on how to improve the users' performance or health condition by changing their food choice, based on literature.

Participate in lecture on searching and choosing relevant literature and scientifically-based knowledge.

Attend an IT-session focusing on searching for information by using different search engines and databases relevant to your users' health.

Discuss the scientific base/credibility of the different sources.

Blog about your reflections related to this step.

Tasks for the moderator

Lecture about nutrition for different groups with special needs and the overall role of nutrition – what we have to keep in mind when counselling these groups.

Divide participants into groups if needed.

Assist participants in choosing a topic and/or create an imaginary scenario to work on.

Short lecture on searching and choosing relevant literature and scientifically-based knowledge.

Lead discussions and IT-session and distribute some study materials to get the participants started with their topic.

Give concluding remarks based on the discussions.

If necessary, small online lectures or advice for the chosen topics should be given.

Step 3 - Calculating menus

Learning outcomes

Identifying which parts of the dietary guidelines are relevant for one's workplace/ user group, what is the same and what is different between groups.

Planning and calculating nutritionally adequate menus for different groups, using specific software programmes based on scientifically-based knowledge.

Tasks for the participants

Listen to online lecture on nutritional needs.

Plan and calculate a menu for a special group based on information gathered in step 2, fulfilling energy needs and nutrient requirements.

Post menu on platform and respond to participants' comments.

Comment on other participants' menus.

Revise menu after suggestions, both from participants and moderator.

Post a summary of most important sources of information relevant to the work area.

Comment on other people's summaries.

Tasks for the moderator

Online lecture on nutritional needs and how to plan menus that are appropriate for different needs.

Introduce participants to different software for calculating menus.

Give feedback on menus on the platform.

Step 4 - Food choices

Learning Outcomes

Understanding how food choices are influenced by environmental factors, for example by marketing, manufacturing, culture, family, friends and more.

Creating realistic menus by taking food choices into consideration when creating menus.

Making a photo story and posting it on the platform.

Tasks for the participants

Blog on what you think influences your food choices.

Listen to online lecture on food choices.

Study the suggested reading material on the topic.

Create a photo story on a chosen topic related to food choice.

Comment on other participants' photo stories.

Tasks for the moderator

Online lecture: How is food produced and what influences the consumers' food choices, e.g. marketing

Make students aware of the pros and cons of food processing and the marketing of products.

Step 5 - Scientifically-based knowledge and statistics

Learning outcomes

Creating power point presentations.

Presenting scientific knowledge for peers.

Discussing and commenting on chosen scientific topics.

Tasks for the participants

Give an oral presentation on a chosen topic related to creating healthy menus. All topics should include the following discussion points: divergence in dietary needs for normal sedentary individuals (at a similar age), calculated menu suggestions, suggested cooking methods, foods likely to be misinterpreted as necessary or especially valuable for this person/group based on lay knowledge/attitudes gained from media, marketing and common myths.

Giving knowledge-based comments on other participants' presentations.

Tasks for the moderator

Divide participants into groups if necessary. Depending on the number of participants, the presentations can be done in the whole group or in smaller groups divided by topic or profession (whichever seems to fit better).

At the end of the day, a summary of the presentations, feedback and concluding remarks should be given.

Evaluate the presentations based on their content, the quality of information given, scientific knowledge, use of proper language (reflecting an understanding of scientific information and the topic presented), presentation skills and quality of slides/hand-outs.

Step 6 - Portfolio

Learning outcome

Combining the knowledge gained in former steps into the "big picture" by gathering it into the portfolio.

Tasks for the participants

Write a summary related to the special topic chosen for work within this module and put it in the portfolio.

Make use of the feedback from the presentation during the face-to-face session when writing the summary.

Tasks for the moderator

Reply with individual comments.

ICT learning outcomes

Searching for information with different search machines and databases relevant to the health of the *Health Agents*' users.

Advanced use in creating a photo story.

Advanced use of blogging as a portfolio.

Module 4: Food safety and food quality

Foodborne diseases cause significant illness and death worldwide through the ingestion of food contaminated by bacteria, viruses, parasites, chemicals and biotoxins. Food contamination is very common throughout the WHO European Region, even in the most developed countries. Foodborne diseases have reached epidemic proportions in several European Member States.

WHO wants food safety to receive more attention: Dr Margaret Chan, WHO Director-General said: "Governments need to give food safety just as much attention as they devote to the quality and safety of pharmaceutical products. Not everyone needs to take medicine every day but all people need food each and every day."

WHO/Europe supports countries in building capacity to manage food safety challenges in accordance with the WHO European Action Plan for Food and Nutrition Policy 2007–2012 and the WHO global strategy for food safety. The Action Plan is an important guide for policy-makers and health professionals that include a wide range of actions in the area of food safety. ⁴

Timeline

Steps	Face-to-face	e-learning
Step 1	X	x
Step 2	x	X
Step 3		x
Step 4		x
Step 5	x	x

⁴ World Health Organization: Polic. <http://www.euro.who.int/en/what-we-do/health-topics/disease-prevention/food-safety/policy> (accessed 4 July 2011).

Step 1 - National and European policies and global strategy

Learning outcomes

Identifying which parts of the national and European guidelines and policies are relevant for each participant's workplace.

Being familiar with national and international policy plans and understanding the impact on practitioners.

Tasks for the participants

Post on blog who is who when it comes to food safety policies, reflect on who they are and why we have food safety policies.

Comment on others' blogs on the topic.

Post a second blog describing three different action areas related to food and safety of the WHO European action plan for food and nutrition and how it affects your working environment.

Comment on one action area from one of your fellow participants.

Tasks for the moderator

Lecture on national and European policies and global strategies for quality and food safety.

Post comments on the learning platform if relevant.

Step 2 - From farm to fork - Assessment

Learning outcomes

Being familiar with the methodology behind the term "From Farm to Fork".

Tracing the stages of the food chain system and identifying the procedures (HACCP) that ensure food safety.

Implementing strategies that influence the way food is purchased by consumers.

Understanding and rationalising food labelling in regard to the production, distribution and marketing of foods.

Tasks for the participants

Read the suggested study material and watch online videos related to the topic.

Pick a food item within your organisation and describe the food labelling, processing and distribution. Does it fit the description on the existing tender and how? Would you prefer a different producer? Why? Blog.

Interview a producer on the issues of traditional and organic food production.

Post a summary on the blog using two different e-tivity methods.

Engage in online conversation with fellow students on the topic.

Tasks for the moderator

Lead discussions on the selected topics.

Post comments on the learning platform if relevant.

Step 3 - Food contamination and risk communication

Learning outcomes

Analysing, discussing and applying recognised methods that ensure the quality and safety of food, such as the HACCP method.

Knowing how to communicate the fundamentals of the HACCP method to others.

Analysing and discussing areas concerning risk communication, emphasising food-borne diseases and especially those of zoonotic origin.

Analysing and discussing how food safety and quality affect the consumers, with an emphasis on food contamination.

Communicating the meaning of risk in regard to food consumption within the working environment.

Tasks for the participants

Read the study material and watch relevant podcasts.

Draw up a plan on how to communicate and relay information within your work area. Pick a topic and elaborate.

Post the plan and the topic you wish to emphasise on the website.

Use at least three different ways to communicate your message.

Comment on other projects. Post on blog.

Interview a colleague/user in regard to your work.

Tasks for the moderator

Follow up on discussions and comment where needed.

Step 4 - Towards safe meals – Management

Learning outcomes

Planning meals in one's specialised work field, ensuring the quality and safety of food by analysing and mediating comprehensive specialised material that ensures the safety of food.

Expressing important aspects related to the serving of food.

Discussing how food production, distribution, and marketing of food influence our food choice.

Tasks for the participants

Read the suggested study material.

Listen to the relevant podcast on myths about food-borne diseases.

Pick a myth! Investigate within your surroundings what understanding people have on the topic and how it affects their work.

Share and comment on other postings on the blog.

Certain animal diseases may affect food safety. Read about it to get started.

Pick a bacterial disease and relate it to common foodstuffs in your working environment.

Describe risk factors and how particular food should be handled from the moment it enters your environment until it reaches the consumer.

Tasks for the moderator

Managing and presenting study materials online in the right order for the participants' workload.

Follow up on discussions and comment where needed.

Step 5 - Food safety through integration

Learning outcomes

Interpreting different approaches to food safety by applying a set method built on the SAFEFOODS model.

Tasks for the participants

Integration assignment: Where does the food originate from that we are responsible for preparing and recommending?

Pick two food items from a producer that supplies your organisation - fish: cod, haddock, salmon, etc.; meat: pork, beef, chicken etc.; vegetables, starch or milk products.

Describe what system is being used in your company to ensure food safety. What is the rationale behind the system that is being used? What improvements need to be made?

Draw up a strategy on how you would implement changes to your current system. Present it to your manager. Describe the response you got. Take into account influencing factors such as social and economic values.

Tasks for the moderator

Supply participants with study materials based on recognised project management methods.

Give feedback on participants' work.

ICT learning outcomes

Podcasting interviews on blog.

Advanced use of blogging as a portfolio.

Module 5: Community projects

Imagine that you have been asked to take a photograph of your city that will be used for the cover of a tourist brochure. In thinking about a photograph that best represents your city, you are immediately beset by choices. Should you photograph your city during a particular season and, if so, which one? Should you photograph your city's downtown area, showing its architectural and business diversity, or should you choose a particular city park? Should you capture a historical landmark such as a statue or fountain, or should it focus on the people who live in your city and show a family picnicking at the fairgrounds or a baseball team at play? Your choice will probably be influenced by the expectations of the brochure sponsor, the time available to your photographing various aspects of city life, and the budget for producing the brochure.

It many aspects, conducting a community needs assessment is much like producing the “best” photograph of your city. It involves making choices to capture a picture of a nutritional problem or need within your community. Like photographing your city, it is a process influenced by the expectations of the people and organizations involved in the assessment, the time available for collecting and analysing data, and the budget allocated for the assessment. ⁵

Timeline

Steps	Face-to-face	e-learning
Step 1		x
Step 2	x	
Step 3		x
Step 4		x
Step 5	x	

Step 1 - From needs assessment to analysis

Learning outcomes

- Understanding the concept of the assessment of needs.
- Identifying what is relevant for a *Health Agent* to assess the needs of a community.
- Discussing the priorities when assessing the needs of a community.
- Analysing and assessing the needs of a community.

Tasks for the participants

Spark challenge

Visualize the video presentation with the spark.

⁵ Boyle, M.A, and D.H. Holben DH, Community Nutrition in Action – an entrepreneurial approach 2010, Belmont: Cengage/Wadsworth/Thomson Learning

Comment on the spark based on the knowledge gained throughout the course in the forum of the LMS.

Read the comments of the others.

Analyse the comment of one colleague and indicate three topics that should be improved in the comment.

Answer the comment of the colleague by reformulating their initial comment.

Projects' background challenge

Write a Word document (2 pages maximum) with an example of a project or small intervention in health promotion and nutrition education carried out in the workplace.

Upload the document on the LMS.

Read and analyse the documents of the colleagues and list three strong aspects and three fragile aspects of their projects in a Word document.

Upload the document on the LMS.

Diagnostic evaluation

Answer the online quiz under the relevant theme.

For every incorrect answer, study the topic by referring to the suggested reading.

General reading

Download the documents of the suggested reading.

Read the documents of the suggested reading.

Tasks for the moderator

Spark challenge

Upload the video presentation with the spark for the participants.

Give to the participants the discussion topics for their comment on the spark.

Manage the comments of the participants to the spark and their analysis on the comments of other participants and ensure they participate in the task.

Projects' background challenge

Manage the documents of the participants, their analyses of the other documents and ensure they participate in the task.

Diagnostic evaluation

Upload on the LMS the online quiz under the relevant theme.

Manage the answers of the participants to the quiz.

General reading

Upload on the LMS the suggested reading.

Manage the participants' access to the documents.

Step 2 - An overview of community projects

Learning outcomes

Identifying strategies and methodologies of interventions for promoting health in the community.

Reflecting and discussing the important steps for project development.

Discussing the concept of evidence-based knowledge in relation to planning, implementing, managing and evaluating projects/interventions of health promotion.

Applying the concepts of designing projects in different scenarios.

Knowing how to work in team groups to develop projects.

Tasks for the participants

Theoretical session

Participate on the dynamics of group cohesion and on the theoretical session.

Steps in project's development challenge

In groups, discuss the steps for the project's development.

Write the steps in a *Word* document and present it to the other participants.

Discuss with the other participants the steps the other groups have mentioned.

Scenario challenge

In groups, create a scenario of a project based in the theoretical aspects and in the steps for project's development.

Present the scenario of the group and discuss the scenarios with the other participants.

Tasks for the moderator

Theoretical session

Lead the dynamics of group cohesion.

Present the theoretical session.

Steps in project's development challenge

Manage the participation of the participants in the task.

Scenario challenge

Manage the participation of the participants in the task.

Step 3 - Planning and implementation of community projects

Learning outcomes

Applying the theoretical aspects of planning and implementing projects into an intervention or project in the workplace/community.

Building a logical framework for a project/intervention of health promotion.

Knowing how to write a report about the implementation of a project or intervention to promote health in the community or workplace.

Knowing how to use ICT tools and applying them in the design and implementation of a project or intervention to promote health in the community or workplace.

Tasks for the participants

Specific reading

Download the videocast under the subject of planning and implementing projects.

Read the suggested reading material.

Project planning

Assess the needs of a target population in the workplace.

Plan a project of health promotion and nutrition education to be applied in the workplace, with the application of ICT tools.

Write a *Word* document showing the planning of the project.

Upload the *Word* document on the LMS to be analyzed by the e-moderator.

Wait for the feedback from the e-moderator to start the project implementation.

Project implementation

Begin the implementation of the project in the workplace.

Register the implementation of the project with audiovisual support.

Prepare a report about the implementation of the project.

Upload the report on the LMS for the e-moderator.

Tasks for the moderator

Specific reading

Upload the videocast for each professional group.

Upload the suggested reading material.

Manage the participants' access to the documents.

Project planning

Download the *Word* documents with the project's planning.

Analyse the documents and give a feedback to the participants about it.

Manage uploads of the participants.

Give feedback to the participants about the documents of project's planning.

Project implementation

Manage the participants' uploads.

Step 4 - Management and evaluation of community projects

Learning outcomes

Describing and discussing theoretical aspects related to the management and evaluation of health promotion interventions/projects.

Knowing how to develop a plan to manage and evaluate a project/ intervention of health promotion and applying it.

Knowing how to evaluate the impact of the project/ intervention of health promotion developed.

Tasks for the participants

Specific Reading

Download the videocast under the subject of management and evaluation of projects.

Read the suggested reading material.

Project management

Oversee the management of the project implemented in the workplace.

Write a *Word* document about the management of the project.

Upload the *Word* document on the LMS to be analyzed by the e-moderator.

Wait for the feedback from the e-moderator before starting the project evaluation.

Project evaluation

Begin the evaluation of the project in the workplace.

Prepare a report about the evaluation of the project.

Upload the report on the LMS for the e-moderator.

Diagnostic evaluation (comparison)

Do the online quiz under the relevant theme.

Tasks for the moderator

Specific Reading

Upload the videocast for each professional group.

Manage the participants' access to the documents.

Project management

Download the *Word* documents about the project management.

Analyse the documents and give feedback to the participants about their reports.

Manage uploads of the participants.

Give feedback to the participants about the project management documents.

Project evaluation

Manage uploads of the participants.

Diagnostic evaluation (comparison)

Upload the online quiz on the LMS.

Manage the answers of the participants to the quiz.

Step 5 - Final evaluation of Module 5

Learning outcomes

Knowing how to present a project/intervention of health promotion, using ICT tools.

Describing and discussing all the steps in the development of the project/intervention of health promotion.

Tasks for the participants

The participants should prepare a presentation of the project developed in the workplace.

For the presentation, the participants should use ICT tools.

The participants will be asked about the steps in the project development and discuss the work done.

The end results developed by the participants during this module (presentations, reports, etc.) will be part of the portfolio for the final evaluation of the course.

Tasks for the moderator

Assist the participants with their presentations.

Evaluate the presentations and the project reports and then discuss the work with the participants.

ICT learning outcome

Advanced use of any of the tools suggested in the previous modules.