

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Foundations of Health Education
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Key words	health educational management, health educational methods, health educational principles, health educational techniques
Learning objectives	The aim of this module is to acquaint students with and to broaden their knowledge and understanding about: <ul style="list-style-type: none"> • role of health education in promotion of health and prevention of diseases; • tools and methods of health education; • recognizing facts and needs for health education; • planning and team approach in implementation of health education activities; • placing into proper context (understanding) the role of health services, formal and informal educational systems; • recognizing the role of all players (participants) in health education activities in a network of multisectoral cooperation and integrated interventions; • importance of didactics for non-professional health educators; • implementing these standards and successfully use acquired knowledge in practice.

Synopsis (Abstract)	<p>The module covers principles and concepts of health education, different approaches to health education, assessing population health needs, health education methods and tools, as well as how to work with individuals (counselling methods), with small groups (including self-help groups), and with population.</p> <p>Health education is an important tool in overall promotion of health. Health education principles are directed to healthy life style and strengthening defense mechanisms by efficient contribution of individuals in the social life. Health education is important for entire population regardless of age, educational level, gender, health and other determinants. Health education should be adjusted to the local culture needs and possibilities.</p> <p>Health promotion program of the World Health Organization from 1984 and Declaration from Ottawa from 1986 represent a basis for an innovative approach toward health education based on the social concept of health and healthy life styles. The new broader approach "Education for Health" beside relevant and precise information includes all spontaneous and organized actions directed toward health. An essential precondition for those actions is to provide such healthy environment where a healthy choice would be the easiest choice. In this way the control and responsibility for someone's health are becoming an integrative part of everyday life of the individual, family, community and society through adopting healthy life styles, and creating supportive environments for health.</p>
Teaching methods	<p>The following teaching methods are recommended: lectures, focus group discussion, case studies, individual work, consulting literature, written reports, preparation of project, preparation of poster, and school visits.</p>
Specific recommendations for the teacher	<p>Case Studies – collect data on "environment" for urban/rural groups with health conditions and including data about health status.</p> <p>Students should conduct at least one lesson in the formal schools to obtain data on their organization and problems, as well as to get an overview of main educational steps.</p> <p>They should prepare and deliver a plan and a lecture on health education as well as to present their achievements.</p> <p>Active participation of students in discussions.</p>
Assessment of the students	<p>Multiple-choice questions test exam.</p> <p>Defending written reports on case study how to write meaningful standards of health education.</p> <p>Knowledge will be estimated by examination.</p> <p>Presentation of papers on selected issues.</p>

FOUNDATIONS OF HEALTH EDUCATION

Ilija Gligorov, Doncho Donev

When people face a new situation or system of different obligations,
they adopt their behaviour, they become different...

****Jean Monnet****

Preface

Programme “Health Education” provides people in the community with knowledge about good health. It teaches them how to prevent and promote health, how to protect and help themselves and the living and working environment. Health education has roots in the ancient cultures. It is cited in the Bible and in many traditions through centuries. Certainly, it is very much needed in the contemporary society. The aim of the programme is everyone’s life to be personally and socially useful, desired and positively fulfilled. It has been confirmed that the traditional way of learning and teaching alone is not enough. Each person should take active lifelong participation in the process of health education and even more important should practice a healthy life style.

The small number of educators (1) whose primary or additional work engagement is formal health education obviously cannot satisfy all requirements for goal accomplishment. Thus, participation of many other organized forms of action is necessary. Recently the non-governmental organizations (NGOs) and certain interdisciplinary/ inter-sectional public health programmes have given their great contribution in this direction. Health services and health workers, especially public health workers are most competent to convey this programme. New educational curricula enable experts from many scientific disciplines, medical and non-medical, to be entitled as health education managers. The title of this programme itself reflects the obvious intersection of health and pedagogic sciences, which complement each other through application of natural, social and technical sciences achievements. Nowadays there are methods, techniques and projects for fast acquiring a certain quantum of knowledge and skills for managing and carrying out strategic programmes. We know that the fundamental principles of the subject must be integrated in both, the traditional and the instant curricula. The following text will focus on the basis of health education as an interdisciplinary and integrated discipline. Starting point is the assumption that similar health problems in different environments could be solved by means of same, similar or adjusted existing and/or already proved programmes and experiences in the health education.

The article contains a compilation of up-to-date available papers presenting experiences in order to adjust them for different professions on different levels of the educational scale.

Programme “Health Education in the Community”

The aim of the programme “Health Education” is people to accept the “good” habits, based on the positive attitudes and “healthy” behaviour, resulting from the actively acquired knowledge, and to avoid the “bad” habits. In the modern society we measure health of the individuals as well as health of the community. All public sectors, each individual, share the responsibility for health prevention and promotion. Each link in this chain is of great importance. The knowledge based on evidence must be applied in every segment of life. Systematic approach to this Programme requires effort, time and resources. It is proven that the good health is a repeatedly worthwhile category.

This module provides knowledge in the area of health promotion and its everyday application. Good practice results from the continual development of universal and/or specific knowledge, values and positions for “good health” prevention and promotion. The endeavours of the modern societies for intense programmes for health education and health promotion as a collection of pedagogical, medical, agricultural, industrial, administrative and political activities are evident.

The modern man should also have a modern approach towards learning. For this reason the health education process must apply modern methods and techniques, too.

The New “Programme”

The new world brings very fast changes and information expansion. People should develop skills for problem solving and making justified decisions. Photographic memory must result in practical application. The formal education, which is still basic, cannot cover and encompass all new knowledge. Socio-economic development is not based only on accumulation of knowledge but also on its application through skills, positions and actions. During the process of social maturation of an individual, in sense of identification of the personal feelings, respect of personality and the individuality and differences of the others, experiences exchange and learning from other people’s experiences are of great importance. Social responsibility develops in the course of life. The sense for empathy with other people’s experiences and ideas is important quality for cooperation. The sense for efficiency is also important as well as awareness of the personal contribution to the community values and the sense for compatibility of the personal beliefs and actions within the community.

The new programme does not neglect positive tradition. Nevertheless, it imposes many new approaches and new knowledge. It completely follows health promotion and expert health programmes of the leading global health institutions (WHO, World Bank, Global Fond etc.). In addition to health challenges over the centuries (mainly expressed through a number of standards for personal and social life and work hygiene) the treatment of the new challenges (new severe contagious diseases, massive non-contagious diseases and conditions, ecological challenges, terrorism with heavy casualties etc.) is urgent too.

The new programme has several fundamental bases: application of modern scientific and technical achievements, participation of many institutions from different action areas, significant expert responsibility of the health system, inclusion of all groups and communities and active participation of each individual.

The Health Education Programme is a practical application of medical and other “positive” knowledge in the everyday life of the society. It starts from the fact that the “healthy” habits are not inherited, and the learning process of the daily routines is often strenuous and lengthy. The approach includes interactive and cooperative methods for developing a critical way of thinking. The educators’ efforts are supported by experts, authorities, experienced individuals (“first-hand”) and peer teachers. The acquired knowledge should transform into practical skills, activities and participation. The concept emphasizes the pragmatism in sense of health protection and promotion and disease prevention before the need for secondary intervention arises.

From organizational aspect (different levels of health education in the community management) the fundamental inputs on which this new programme is based are the following: organizational management and culture, time and resource management, human resource management, personnel recruitment, personnel development, personnel performance and

motivation's monitoring, project cycle management as capacity for development, conveying the project and its coordination by establishing a complete project portfolio or programme using instruments such as: indicators identification, logic frame, planning, monitoring and evaluation. The programme consists of projects adjusted to the needs and capacity of the community.

General goal of the Health Education in the community: to acquire adequate knowledge, skills, capacities and positions for all and all age groups in accordance with local, regional and global needs and challenges.

General missions of the Health Education in the community:

- practice on at least the basic health and ecological minimum conforming to the cultural level of community;
- stimulation of the interest for self-prevention, self-help, help and prevention in and from the community;
- providing basis for lifelong learning and practising healthy life style.

Modes of Health Education in the community: the Health Education Programme encompasses the following modes: formal education, knowledge upgrading, constant self-education, acquiring knowledge and advanced studying, skills and general family education, learning through media, associations, and internet and in public non formal educational facilities. The organized education and training are carried out through regular teaching classes and non formal modes of education, such as: consultative-instructional teaching, correspondence-instructional teaching, open teaching, distant teaching etc.

This basic module is primarily intended for post-graduate careers in community health promotion management and for continuous education. It is necessary for the direct conveyors of the health education and prevention programmes to complete this (or similar) module and to go through a more detailed practical training. They will comprehend the importance of the health education as a lifelong learning and practice and will be capable to apply the health-educational approaches in their work. Further continuing education and specialization will entitle them as experts in this area.

Teaching profession

The formal education for teachers, as profession for knowledge and skills (in certain *medical* teaching subjects) transmission, differs in different countries' medical education institutions and in some has a non formal character. When medical professionals (as well as experts from different fields that are not formally educated for teachers) enter the formal educational process they must acquire basic and advanced knowledge in the field of pedagogy and other educative disciplines.

The cases of non formal professional qualification for many professions including trainers, teachers and educators in the field of health ("Training the Trainers", "Peer Education" and similar) are usual (2). Also in this case the standards for the educational process should be always and everywhere satisfied.

Health education for the community teachers should be acquired, through formal and non formal training, knowledge and skills in the following areas of pedagogical psychology: attitudes and attitude forming, behaviour, customs and habits, norms and social standards, tradition, health culture, communication, needs, motives and motivation, personalities, emotions and feelings, attention, perception, studying, memorizing (and forgetting), thinking, interest, intelligence, temperament etc.

Studying recommendations for broadening the knowledge encompass the following topics/issues that should be learned by individual studying:

- constructivism in the studying process (for example according to Jean Piaget), (3,4,5); theory of meta-cognitive learning (for example according to Ann Brown and Isabel Beck), (6,7);
- learning through writing (8,9);
- critical thinking (10,11,12,13);
- mode of learning in adults (14,15);
- education for social responsibility (through: sense for empathy, efficiency and compatibility of the personal believes and actions), (16,17).

Study plan and programme, curriculum, project plan and programme:

Education programme portfolios are time framed as well as defined for certain age groups of students, contents and study schedules. They link the goal of the training and learning to the behavioural principles for shaping the individual's behaviour.

The curricular movement analysis anticipates the following central elements: the aim of the learning, the hierarchy of the curricular goals and the control of the study goals achievement. Möller (18), in 1980, gave the characteristics of the curriculum directed towards the aim of the learning:

- the authors of the curriculum develop its goals;
- the process of goals setting should be practical;
- the goals must be clearly described (to be precise, but not limited on methods choice);
- the success of the learning and training based on the set goals could be tested efficiently (evaluation).
- Models and strategies for planning the curriculum are based on its goals (19,20).

Medical Education (for professionals in the medical professions)

The period of medical education for health professions: medical school, undergraduate – graduate, postgraduate, continuing education (21).

The cooperation in the field of medical and health education on international level is intensive. There are a number of internationally, regionally and nationally adjusted projects that contribute to the health problem solving and health education of the population and health workers. International institutions and associations, governmental and non-governmental organizations, foundations and universities participate in the activities of the above tasks. For illustration, here are some of these institutions:

- *World Federation for Medical Education (WFME)*(22);
- *Association for Medical Education in Europe (AMEE)*(23);
- *European Network of Health Promoting Schools (ENHPS)*(24);
- *Association of Schools of Public Health in the European Region (ASPHER)*;
- *International Union for Health Promotion and Education (IUHPE)*;
- *Institute for International Medical Education (established in 1999)*;
- *Collaborative On-line Learning (a new distance education method)*;
- *Development and Demonstration Centre in Continuing Education for Health Professionals, University of Southern California, School of Medicine.*

Health education of the population

By definition “The Health Education is not just an information about health dissemination but it is an active process of learning through the experience” (25).

Historically, the health education as a concept is determined as a system of subsystems, and has developed through several phases: health propaganda, health literacy and health education.

Health promotion

Health promotion is a broader concept that enables people to undertake a conscious control over their health (and to promote it).

In order to achieve a complete physical, mental and social health each individual or group must be able to identify and convey his/its aspirations, to satisfy his/its needs and to change or control the environment.

Hence, health as an everyday life element is not a life goal. The health is a positive determination and direction that emphasizes the importance of the social and personal capacities as well as physical fitness. The health service and the wider social community are not the only responsible factors/instruments for health promotion. Each individual has the responsibility for healthy life style and general prosperity.

Due to complexity and international universality further in the text the term “health education” in terms of pedagogical and educational categories depending on the context will be used.

Goals of the Health Education in the community:

- attaining knowledge about health and its upgrading;
- acquiring positive positions that strengthen the health;
- changing the erroneously acquired knowledge and habits;
- conveying skills for healthy life style (health promotion);

Global goals of the Health Education are:

- the individuals and the community to grasp health as something priceless;
- to prepare each individual to be able to take care about his health, to take partial responsibility for his health and to give priority to measures for high quality life style;
- to inform and educate each individual to have positive attitude towards health care services and the benefits for people if appeal to it on time.

Basic principles of the Health Education are:

- to be scientifically reliable and educational;
- to be planned in details, based on strategy and action plan;
- to be up-to-date, systematic, consecutive and flexible;
- to be voluntary and conscious;
- to be directed towards the individual and the group; locally and regionally;
- to be connected and supported by visual means.

Methods and tools in the health education process

About the education and training methods

Many scientists in the field of pedagogy justifiably classify the educational methods by different criteria. There are differences even in the definitions and names of methods. The modern educational methods and techniques enable people to study independently, actively

and interactively, and to acquire knowledge that can apply in practice. Being knowledgeable in various learning techniques promotes the creativity and combining, which makes the learning efficient and interesting. Thus, we should teach the programme participants to think with criticism, to actively seek for accurate information, to link the old knowledge to the new one, to share knowledge and to explore the cause-result relations. The participants are responsible for their own behaviour and communications in the social environment. Instructors should also have a new approach with interactive atmosphere, adequate communication techniques and opinion sharing inside the group. They teach, but they do not dominate. They act as mediators in the training, they demonstrate, give directions, support discussions, encourage questions, advise debates, explain. Many theories about the learning modes are implemented in the basis of the health education methods and teaching techniques. The learning theories actualize themselves through the teaching methods and techniques for efficient learning where participants undertake a series of initiatives.

The modern teaching model introduces techniques for stimulation of the audience's capacity and readiness to apply what has been learnt. The critical thinking is a higher level model on the scale of the knowledge acquiring capacity.

Many different well planned and applied methods, used in other disciplines, give good results in the health education, too.

Teaching methods include (cited in alphabetical order): brainstorming, case study, debates, demonstration, directed private/ individual study, discovery methods, discussions, games, individual practice, lectures, lessons, programmed learning, projects, role play, simulations, and tutorials.

Training methodology: frontal, individual, group work, team work, team training, distance learning, participants' needs analysis, exercises, questions and answers.

The standardized/ prepared in advance education may be formal (as a national educational system) or non formal. It may include several methods/techniques in the course of the education/ training in one subject, theme or lesson.

Forms of (primarily) non formal education: seminars, conferences, congresses, symposia, festivals, workshops, supervision, open space methodology, training at work, coaching, custom based, train the trainers, peer education.

Definitions and methods grouping: the *methods* are planned procedures and actions that approach the participants systematically, scientifically, pedagogically and sociologically in order to achieve the educational goals. The general methods can be used in health education with or without any adjustments. One of the many classifications divides them in individual methods and methods for work in and with a group.

Individual methods – examples:

- directed private study (for example individual reading of recommended texts);
- planned conversation with an expert (for example arranged conversation, interactive interview, formal interview with already prepared directed questions, etc.);
- a man-billboard carrying health information message.

Group methods – examples:

- *method of group talking “a life word” - that has several variations:*
 - future educators and activities organizer meeting;
 - educational work or training in small group (for example 4, 6, 9, 12, up to 15 participants);
 - frontal expert teaching method to small, medium or large group;

- transmission and/or evoking “participant’s” experiences as a life demonstration by a guest speaker;
- peer teacher (trained for this purpose);
- education through questions and answers in a group;
- panel discussion (participants: a moderator, experts, interested audience, ordinary audience, with a possibility for “life phone” or visual participation of the audience during the panel);
- playing (acting) certain role (monodrama, drama, a short play piece and similar).
- *complex group methods:*
 - drama pieces – theatre;
 - health educational excursions (method and source of information);
 - organized tours to special expositions, museums and collections;
 - health-bus as mobile collection of methods and means that will bring the health education closer to the beneficiaries on the field;
 - multimedia application in a computer lab, joined connection to internet or usage of specially equipped media-club (medioteka)
 - health-educational courses, workshops, festivals, seminars, symposia, congresses, campaigns, conferences, exhibitions etc.;
 - combined methods for health education by means of different printed (textual) materials (books, pamphlets, picture books, posters, flyers, slogans, billboards, comics, magazine articles, stories and circular letters).

Applied methods overview:

“Case analysis” method enables an active critical thinking where participants draw an instructive conclusion at the end;

“Brainstorming” method was recommended in the introduction of this session as tool for stimulating the fantasy and creativity. There are tutorials and rules for its application.

“Discussion” method has several variants. It is used in situations where there are more different opinions about some emerged problem.

“Playing role” method is used to make participant feel, think and act as someone else who has certain features important for the subject.

“Guest in the community” method has several variants and purposes. It could be an introduction with an “interesting” experience, author testimony, or interactive discussion, questions and answers.

“Work in group” method is good because engages all the participants. It has its variants and rules can be set (for example: how to get the right to talk, who is in charge, who writes the minutes, who give reports and similar). There should not be many groups and subgroups and they should not be too big.

“Determine your position” method is a useful approach for controversial subjects. The participants have one attitude/opinion upon a certain issue and after the discussion they may change it. It could be applied at the end of the subject taught and could evaluate the acquired knowledge.

“Teaching” method enables intense transfer of knowledge. Absorbing all the transferred knowledge without an interactive participation of the listeners is not possible. Teaching skill should be practised. It involves techniques of changing the talking rhythm, diction and intonation, mimics and gesticulations in an atmosphere that animates the listeners. Lectures are important segment of the learning process. Traditional teaching *ex cathedra* is the most

common form of teaching. Disadvantages of the traditional teaching are: it is difficult to maintain the concentration and the concentration is maintained only in the first 15 minutes, small percentage of what is heard is memorized; it only stimulates a lower level of thinking in the listeners and mainly initiate the processes of recognition and remembrance. The advantage of the traditional teaching is the quantity of the transferred new information (knowledge) and it is more convenient in situations when there is a shortage of the study material (27).

Debating techniques enable exchange of opposite opinions, positions and arguments, mostly in cases of opposite attitude of two groups or two individuals.

Cooperative learning method, as a directed cooperation and positive interdependence of the participants (divided in pairs or groups), directed towards concrete problem (issue), develops mutual understanding and is used for creating new ideas. Elements of the cooperative learning are: positive interdependence, interactive support, individual responsibility, shared leaderships, developing social skills, supervising and effective team work (28).

Reading is a model through which people acquire new knowledge during their whole life. Reading is a mode of thinking and learning. Many initiators could stimulate the reading (for example, the teacher, peers, public media and similar). From this point of view health propaganda, environmental influence, experience sharing, lobbying, discussing and validating are very used. The reading technique could be applied to a group work with combined methods or completely independently in a different surrounding. Additional reading and expressing by writing contribute a lot to the critical thinking, advanced learning and positions shaping (29).

The multimedia educational model as a process uses picture +sound +motion +virtual linking to other spaces and contents.

Educational tools: the health education, as the general education, uses various material and technical tools or instruments in order to increase the education efficiency and effect. These instruments bring the teaching content closer to the students stimulating their senses with effect on senses association, thus facilitating the activity of the teacher. Several examples of instruments, intentionally prepared and/or adjusted to be also useful for the health education, are:

- Health, general and specialized, exhibition (thematic collection) along with an oral descriptions by a custodian or a medical expert;
- Static pictures demonstration devices:
 - slides and slides shows with a slide projector;
 - merry-go-round as separate device – slide projector with its own screen;
 - transparencies with applications (graph foils with graph projector);
 - teaching album/atlas (thematic collection of pictures and/or drawings);
 - epi-projector (epidiaskop) for projecting pages with images and text from the book;
 - paintings and drawings (they could be, for example, prepared in “ISOTYPE”, acronym of “International System of Typographic Pictures Education”) as a simplified painting and drawing mode of figurative international alphabet. A drawing shown in this way is understandable for all cultures.
- Motion pictures demonstration devices:
 - motion-picture projector and film tape with health education content;
 - flannel-set (flannellograph);
 - magnetic board with prepared thematic figures made from paper or other light material with a bottom or peace of iron to be attached on the board;

- PVC set (plastigraph) with models for health education;
- Flip Chart;
- TV-video systems and video tapes with thematic contents;
- computer applications with health-educational contents on a diskette or CD, plus a computer and LCD projector.
- Audio devices:
 - a record player with thematic records;
 - a tape recorder with thematic tapes;
 - a radio and a thematic radio show;
 - combined audio system that may contain a record player, a tape player, a radio and other sound carriers or collectors with health-educational contents;
- Modern (digital, magnetic) memory carriers and recorders are also used as tools for health education. Floppy disks, CD and DVD players, flash memories, MP3 players, PALM and other newer sophisticated devices replace the older teaching tools. They have high quality recording, longevity and are spread throughout the world.
- Mass media may also be used as health-educational content transmitters (uni-directionally or bi-directionally). Mass media (as well as channels) are: radio, public-address system, and the press, specialized magazines, giving information by telephone, specialized cinema and TV shows and internet.

The planner and the teacher should not give up of any tool beforehand. Depending on the situation the tool that is most suitable for achieving the goal and meets all the material and other prerequisites in accordance with the problem, the environment and the educated group, should be used.

Elements of the communication process

The educational process includes a *source*, transmission *path* and *receiver* of the information. The transmission *path* is different and variable. The receivers are the sense organs of the learner. The space, the air (with its different physical and chemical characteristics) is the simplest and most common mediator. There are many different forms of communication between the information source and the receiver. Combination of the modern communication techniques result in higher efficiency of the educational methods and tools. The fundamental studies reveal all the elements of the message's "receiver" and "source", the transmission paths, the feedback and the other factors of influence.

The oldest communication form, right after the gesticulation and drawing pictures, is the verbal one. Elements of the verbal communication are: language - understanding, confusion, clarity, adequacy, rejection and acceptance, listening - rules for good listening, positions, literature, etc. Face to face communication is aided by the non-verbal communication, that includes: expression of the face, physical distance between the individuals, the body language (touching, appearance, gesticulations, etc.). During the communication the elements of psycho-dynamics (interactive, emotional and transactional relation) are established.

There are several known communicational obstacles that should be neutralized/overcome during the planning and the health education conveying. These kinds of obstacles are: social and cultural differences, limited possibilities, contraindications, not paying enough attention to the conversation, identifying oneself with the other in order to understand (what would I do if I were he/she?). Analysis of a video tape of "five minutes of the teacher" method, used during the teachers' training, helps the educator overcome the personal obstacles.

The technical devices use different paths to transmit the information to our senses. The modern technology strives to neutralize the obstacles (which are sometimes deliberately provoked and destructive, for example, the fear of electronic communication by the means of the computer technology comes from the “hackers” and the computer “viruses”).

Application of the health education methods and tools

During the project cycle adequate methods (and techniques as direct activities) for achieving the goals are planned as well. Conveying adequate methods, as acts and activities for systematic approach to the students, will meet the scientific, pedagogical and sociological efficient principles of the educational theory in accordance with the goals. Thus, methods that are really going to be highly beneficial for a concrete planned education are being chosen.

The health education project’s tools and methods, as instruments for conducting the teaching process and training, are planned, chosen, adjusted and used in accordance with the characteristics of the group of listeners (age, culture etc.). The teacher must be sufficiently prepared in terms of technical skills and very well trained in applying teaching methods and tools. In the course of activity, depending on the situation, the teacher explains and gives instructions about certain teaching tools usage or he/she uses them by himself properly.

The manager, during the project’s health activities cycle, should study the existing didactic guidelines and recommendations in order to make the best combination of different teaching tools, techniques and methods.

The teaching facilities, for formal as well as non-formal education and training, should be very well didactically adjusted. The ambient (working environment, furniture and equipment) should be optimized in accordance with the activity.

The safety of the whole process should be at maximal level.

Health Education Management

Health education begins in the earliest childhood. It is a lifelong learning and it takes place in the family and home, in the educational institutions, at work, in the health institutions, in the narrower and broader social community. The health education subjects related to the general and specific health needs and problems could be informal or incorporated in thematic modules, projects or health education programmes.

Basic steps in the health education management are: planning (for example a project cycle), consultation (with experts for example), capacity building and organizing, research, education-training, monitoring, evaluation, re-planning).

The planned health education can be formal or non formal. The formal is under governmental/public specialized educational and other institutions’ jurisdiction and is linked to strategic documents, such as the National Strategy, and planned, organized and conveyed health education.

The non-formal health education planned health-educational activities and projects carried out by individuals, groups and organisations, which are not under state education system’s jurisdiction.

The dominant local and regional health problems and needs for health education are place specific and must be well studied from different aspects. The teaching content is determined after their identification. Each programme/project for health education elaborates activities according to the teaching contents, population’s groups, participants, time, place and mode of convey. In communities where certain conservative traditional positions, influenced by

superstitions, dominate, additional efforts for education and righteous positions about healthy life style are needed. In order to influence the young generations promptly and efficiently it is important to work continuously with the parents, especially with the mothers.

Health education contents grouping areas: general dominating priority subjects for the whole population, vulnerable or highly threatened population groups oriented subjects, most common (for the environment) subject areas.

The techniques used for health education are not isolated and inter-independent, they intertwine and complement each other and with many other factors.

There are many individual and group differences in terms of intensity and the subject of interest imposing the need for more specific approach. The information sources regarding the populations' broad interests are: well planned questionnaires, analysis of the FAQ (frequently asked questions) in the magazines and newspapers or on the radio and TV interactive shows and on internet. This approach gives insight into the most common problems the population face and cannot solve. After the priority problems are determined the mode and techniques for their clarification and education of the population are chosen.

Elements of a good lesson

A lesson's (teaching unit for acquiring new knowledge) planning, moderator's preparation before the class and activities during the class: evoking the already learned, understanding the meaning of the lesson and feedback (30).

Extra intense activities after the class could also be planned: further training regarding the lesson, independent researches, knowledge sharing, applying "good practice" (31).

Health education programs and projects' management and association with special occasions

The manager must be familiar with special occasions and established calendar of events of the community for which the health education programs and projects are intended to. This information enables him/her to plan independent or joint activities with health-educational contents.

The health education on issues related to respiratory diseases (for example decreasing the flu incidence) is primarily planned and carried out during local seasons, autumn and winter. The spring, summer and autumn's activities are mainly focused on issues referring to the intestinal infections and food poisoning. The messages for women's health prevention are most intense in March and on the Women's Day. Nevertheless, these messages must be sent in continuity. The global problems are associated with the World Health Day (on April 7th). Certain health problems are matter of daily, weekly, monthly, yearly or over a decade (even over a period of a century) intense campaigns for prevention and control of the global and priority problems. Such global example is the Millennium Development Goals (MDGs), (32).

The health education programs are integrated in the social life (especially in the formal education). They are planned, coordinated and conveyed in an inter-sectors multidisciplinary fashion. These programs are within the expert competence of the health sector that unites and includes non-governmental organizations (NGOs), educational and many other governmental and non-governmental institutions.

Many programmes and projects' activities should necessarily include trained volunteers that can, in coordination with the health sector, extensively and intensively convey them in a disperse space.

Expert competence for health education management and health education in health institutions

The health institution manager plans, organizes and controls a health education *programme* within and outside the health education intended for the community population.

The health workers in line with the law and job's assignments are obliged to carry out an integral health education. Health education contents should be applied during the appointments with the patients in the health institution. Combined techniques and adequate methods and teaching tools are planned and applied continually.

Health education tasks are assigned to each health worker based on the beneficiaries. The methods of individual training, giving instructions and explanation or planned conversation and interview are mainly used for primary health care patients. More complex and group methods for health education are used on secondary and tertiary level.

The health-educational ambient in the health institution must be also well planned and must make sense. The accompanying equipment, pictures, schemes and messages in the institution's facilities are important for this purpose. The ambient should first of all, be associated with good health instead with disease. In order to stimulate the beneficiaries to assume a positive position towards health hallways, waiting rooms, ordinations, interventions rooms, the sanitary facilities within the health institution etc., should be thoughtfully planned. For example, the contents applied and devices placed in the intervention rooms inform the patients about the intervention performed facilitating their communication and collaboration with the health worker. When the patients are children the ambient is decorated in a manner that occupies children's attention as much as possible and relax them since they can be easily traumatized, resulting in bad experiences with the medical interventions. It is important that sanitary facilities of the health institutions are clean and neat. The supplies, appearance and neatness of the sanitary facilities contribute to the positive habits of the beneficiaries. The functionality of the sanitary equipment, soap, toilet and hand paper supplies, are very important factors. The present situation, even though in some places is excellent (in others good and in third bad), can be improved. This is why we especially underline the significance of the health education in the example settings. The manager in charge should control the employee whose assignment involves hygiene, supply and maintenance of the sanitary facilities. He plans and introduces new equipment and new cleaning products and disinfectants, as well as further education of the assigned employees.

Health Education in a counselling office within a health institution

The managers of the primary and secondary health care should establish a counselling office for work with specific population groups. The counselling office is often a separate equipped room within the health institution. The personnel and the tools of the counselling office are directed towards health promotion and prevention in specific healthy groups or towards rehabilitation, adaptation and re-socialization of chronic ill persons for whom a work therapy could also be organized. The personnel could be a full time or part time engaged. In the counselling office messages or teaching tools for visual training and education are exposed. Educational methods and tools adjusted for the programme/project's lesson are used. The education is conveyed on individuals or small groups like young mothers, children, or people affected by certain health problem. It is important to update and adjust the contents and to convey a planned, organized health education and training.

Health education in the dentistry: the managers that plan and organize local, regional or national health education in health institutions, schools and community, include health of the oral cavity in their programmes. From expert's point of view this is generally done in the dentistry. The population must be familiar with the rules for oral cavity's hygiene and disease prevention, the anatomy and growth and developmental time-line of the teeth, as well as with the factors that influence these processes. Nowadays, the manufacturers for households find their interest in the personal hygiene products. Through their excellent advertisings they not only advertise their products but they carry out health propaganda, education and even training. Nevertheless, the correct information like which type of toothbrush is good, how to use it properly, how does the food affect the teeth, the significance of the regular dental control, is very important for the children and their parents.

The dentists carry out health education during individual appointments or group systematic check-ups of pupils, certain type of professionals and others. They organize and convey lectures, tribunes, discussions etc. They use appropriate teaching tools, for example posters, multimedia techniques, models, live demonstration of teeth brushing and oral cavity hygiene maintaining etc., by different methods and techniques.

The other personnel (the dental nurse-technician, for example) participate in the health-educational program as well. They take part in the educational programmes with activities before and after the dental check-up or intervention demonstrating the procedures for dental cleansing or distributing health-propaganda materials e.g. flyers, toothpastes, mouth cleansers, etc.

Health education within the public-health nursing/visiting-nurse service: public-health nursing/ visiting-nurse service is a public health branch. It is a fieldwork that conveys prevention oriented health education. The multivalent visiting-nurse service has a wider diapason of activities. It carries out all-inclusive health education and training as well as preventive medical check-ups within small or bigger communities (one family, one club and similar) or works with individuals with specific needs or conditions. The field work gives insight and controls the acquired knowledge application and valuable information for the planners so they analyse and re-plan the programmes.

The visiting-nurse service manager cooperates with the other health services' (curative and preventive) managers. They plan the health education programmes, projects and activities together. Public-health nursing, as independent service or within another health institution, should be wide spread and used in all conditions and environments as private and collective households (homes for singles and/or the aged and similar), companies, humanitarian associations, sports clubs, clubs for retired persons, etc.

The managers prepare yearly, mid-termed and strategic programmes for the visiting-nurse service according to the field and community characteristics. They use indicators and analyse and estimate the community's conditions and needs.

The following standards for the service should be fulfilled: appropriate training for performing standardized procedures, appropriate functional equipment and tools for field work and personnel's motivation and continual education. The management should also provide working conditions in the health institution: work space for preparation and analyses, furniture, card file, database etc.

Health education in specialized services within the preventive activity: the preventive medicine activities, in all their capacities (services and institutions), as part of the national

health system, have legal, professional, moral and exclusive right and obligation for conducting the widest scope of health education. The managers provide general social, inter-sectoral, legislative and administrative support through these services. They also obtain indicators and useful analysis for planning, programming, conveying and evaluation of the health education programmes for the population. A great commitment is put in the population health education process in order to achieve the goals at all levels of the prevention. Establishing, equipping, maintaining and use of a media-club for modern health education in the medical schools and prevention health institutions is very important. For the purpose a specialized expositions and museums are also organized. Lectures on actual and long-lasting health problems with higher social medical significance as maintaining good health or chronic diseases, injures and infectious diseases, are also prepared and carried out. The economic sector, the education and the governmental administration join the health sector in its activities. They are involved in the health education and training methods and tools development and adjustment.

Health education in the hospitals: hospitals are primarily intended for ill people treatment. It is ever-lasting effort, hospital stays to be as short as possible. The hospitals' management, among other tasks and planning, includes organization and conveyance of health education of patients during their hospitalization. The health and other personnel inform the patient and his/her family about some characteristics of his/her illness: its prevention, causes, its early and late diagnosis, treatment and rehabilitation. If the hospitalization is longer, (in hostels for example) in addition to the partial education, other projects, as habits and attitude changing, work therapy and similar, could be planned.

The hospital personnel inform the patient about the hospital roles and habits, diet, personal hygiene and bed tidiness, therapy rules, if the illness characteristics and condition allow it, at the first contact of the patient with hospital at his/her admission and discharge or during his/her hospitalization and treatment. It is very important to plan health education for parents (mainly mothers) hospitalized with their ill small children. They should be educated to maintain properly hygiene of the child, how to care for the ill and on skills for totally healthy life style.

Activities for the visitors (family, relatives, friends etc.) are also planned. They include information about the visiting rules, visiting hours, hospital's life, and hygiene maintenance, in order to contribute to faster convalescence of the ill and to avoid contact diseases transmission.

The in-patients health education plan encompasses general and specific health topics. Depending on the patient's level of knowledge adjustments for individual approach are made. Activities for small groups motivated to participate in the health education are organized as well. The level and the intensity of the training fit to the illness phase. The hospital has many places where health-educational material could be exposed. An internal radio or TV show could also be used.

Health education within the pharmacy and pharmaceuticals industry: the health education management's plans should include the pharmacies on local and regional level and the pharmaceutical and cosmetic manufacturers on national level.

Pharmacy is a very convenient environment for health education. In the pharmacies people supply themselves with medicaments, sanitary, accessory and cosmetic products and similar depending on the sale licence. The health education within the pharmacies is

performed by informative and educative posters, brochures and flyers. The themes on these advertisings are general hygiene and health contents that apply to some of the products in the pharmacy. Information about some disease, or healthy life style practising, or medicaments and food supplements' mode of use could be more detailed. The pharmacists could advise and give usage instructions to individual customers on the products or could organize personal hygiene and cosmetic products promotion. The pharmacies should be subject of regulations observation control regarding the advertisement restriction of certain products.

Nowadays the pharmaceutical industry invests a lot in the medical professionals' continuing education and education of the population. Manufacturer's management body plans and organizes the methods and means for these activities. The public health manager responsible for health education on a national level and these manufacturers should cooperate. They should bring the plans and the activities into accord for mutual benefit satisfying both, the population needs and the manufacturer's profit.

The internet through creating informative and/or educative web pages with possibility for interactive communication takes its place as a mode of approaching and acting on the target groups.

Health education management in different institutions and professions

Health education in the preschool children's institutions

The national level health education planning includes the preschool institutions (children's nurseries, kindergartens, playhouses, preschool clubs etc.) as well. The personnel and other invited teachers convey specific activities for health education of the children:

- understand the importance of health and promptly undertake proper actions;
- on a local level, in accordance with their age, take part in organized health-related activities and environment promotion and protection;
- acquire positive habits for hygienic healthy life style, skills for detecting bad habits and factors and abandoning them;
- intercede attitude and measures in favour of healthy life style and request the same from the others.

It is very important for these institutions to be arranged according to high hygienic standards and have health-educational contents.

The personnel directly carry out the health education projects and activities in cooperation with health workers, humanitarian organisations and parents volunteers. The plan involves the most appropriate methods for the group. Teaching tools should also be strictly selected and adequate to the age. When children are involved, the individual, group or combined methods and training through live demonstration, role playing, puppet theatre on health-educational contents etc. are more efficient. The children actively participate, form positions together, make decisions and undertake responsibilities for health and environment protection (33).

Health education in the primary and secondary schools

Planned systematic, compulsory health education of the school population is highly necessary in the formal compulsory education.

The management responsible for health education of the population should enable to achieve the health promotion goals through national programmes, projects and activities stratified by the specific biological growth and developmental phases, starting with the school children as a specific population in the phase of intense learning. The expert consulting in the

planning process is in competence of the doctors, specialists in school medicine, pedagogues, sociologists and defectologists (special education teachers).

The school environment highly influences on the habits developed in this specific period of the human life. It is the influence that lacks in the individual and distance learning. Everything related to the teaching and non-teaching school activities should be according to the standards set by the school medicine for this kind of environment. The technical requirements for the classrooms, cabinets, furniture, heating, light, ventilation, sanitary facilities, water-supply, organized school kitchen etc. should be satisfied.

The plans will not achieve the goal completely without continuing advanced education of the professional school teachers. For consistent transfer of knowledge needed for creating positive health habits in pupils the up-building of the teachers' expertise and skills as well as their motivation is a must. The health professionals along with the school teachers take part in many activities. They help in operative plans' making, their conveyance as well as in the continuing education.

The programmes for this population are also based on prior situation analysis (needs, requests, priorities and specifics) and the wide international community's experiences implementation.

Pupils need multidisciplinary information in many spheres of the social life such as traffic culture, public places' bon-ton, etc. If there is no health education subject in the curricula it is necessary to include health education contents and messages in the programmes of the other subjects teaching contents. The desired level of mental and physical health and social behaviour in accordance with the health promotion and healthy life style standards is achieved through special health education actions. The knowledge transfer has bigger effect if the environment influences on pupils positively, e.g. clean environment, well organized collective diet in the schools, etc. (34).

Health education within companies (at work)

Employees' health has a concrete economic dimension. Managers responsible for health education of the population prepare strategic, regional and local programmes to educate workers on their health's prevention, manufacture standards meeting and environment protection. The managers and their advisers incorporate this knowledge in appropriate projects and activities for health education of the personnel. The programmes always include health areas. Health, psycho-social, pedagogical and economic approach for continuing education of all employees is applied. For certain professions consulting teams that determine the health education's priorities, models and contents are formed. Consultants are medical professionals (industrial medicine practitioners and others), pedagogues, sociologists, occupational health engineers, economists, lawyers etc.

The aim of the health education at workplace is the workers' awareness and influence rising on the workplace conditions and risk factors in order to improve the unfavorable situation.

Poverty and health: poverty is the most important bad health determinant. The poverty and the social exclusion are key factors that directly influence the health. The World Bank regularly monitors the situation with the poverty rate by household monetary measurements. Absolute poverty is when a family cannot satisfy the essential food and other, non-food, needs. Extreme poverty is when the family does not satisfy the essential food needs (35,36).

Health Education at informal places and events

The local, regional or national level health education planner must be familiar with the date and time of certain social events in order to organize and convey health education activities at the same time and place. Health promotion is an integral part of the sport and cultural manifestations, summer camps etc. However, in the leading activity's background propagandas, health and educational methods and tool that contribute to the goal are organized and carried out. Health-educational contents are incorporated on the billboards, posters and flyers. At some other mass- events an intentional billboards could be exposed or brochures and flyers could be distributed. Verbal advises at public places, in buses, supermarkets etc. could be organized as well.

Case study of Macedonia

About the situation

The Republic of Macedonia is one of the signatory countries of the United Nations Millennium Declaration. The report of the Millennium Developmental Goals in the area of health is available at www.un.org.mk/MGD/MGDnew.htm. Information about the completed and current health care projects (some of them are sponsored by World Bank, Global Found to Fight AIDS, Tuberculosis and Malaria, UNICEF, Early Childhood Programme and World Health Organization) could be found at www.zdravstvo.gov.mk (e.g. Jeffery HE, et al. The impact of evidence-based education on a perinatal capacity building initiative in Macedonia. Medical education; 2004.).

Every philosophical answer to the question "Are people educated in health?" is justified. Statistics shows that conveyance of the known (older and newer ones as well) prevention activities against diseases and preventable conditions (for example non-smoking, healthy diet, sport, immunization) (37) require greater knowledge, awareness and action. The morbidity analysis has shown that most frequent are precisely this type of diseases (e.g. cardiovascular diseases and injuries) in R. Macedonia.

Health education incorporation in the *formal* education teaching contents in R. Macedonia starting from the second half of the XX century up to date has a variable proportion, intensity and contents. The R. Macedonia's case study after the World War II started with massive local courses in all communities (cities, villages, women's groups etc.). Realizing the economic, educational and health situation, the health education programme of that time began a phase of general health *enlightening*. The health *education* phase followed soon after. The analyses of the healthy behaviour nowadays shows that majority of the population is familiar with the basic standards for health prevention. The harmful side-effects of many technological processes are known. Nevertheless, the manufacturers must be obliged to invest in prevention and protection. Even though many people are aware of the consequences of their bad habits, efforts should be made to change them.

At the beginning of the XXI century we cannot register a specific health education subject in the elementary and general high schools. The situation is similar in other countries too (for example in Croatia the procedure for introducing a health education subject in the school has already taken several years). At the same time we register a number of *non-formal* health education projects primarily conveyed by civic associations (often sponsored by foreign and international institutions' donations), and lately also in cooperation with governmental institutions. The education curriculum reforms until year 2007 do not include introduction of health education teaching subject in the compulsory (elementary and secondary) education

in R. Macedonia unlike the informatics subject (whose application becomes more and more intense) and religious instructions. Still, we have confirmed that health-educational topics are integrated in many other teaching content subjects (e.g. biology) or the home-room teacher discusses them within the class.

The *medical* high and advanced schools and the *medical* faculties (obviously intended for health professionals) in R. Macedonia *have* developed curricula with health education teaching subjects or contents. The goal to transfer the basis for this teaching subject in as much as possible, occupations is achieved within the “Course for the social and behavioural sciences for health”. This course is part of the postgraduate studies curriculum of the Centre for Public Health within the Medical Faculty in Skopje in which topics, seminars and workshops on “Management of health education in the community” are incorporated. We hope that new generations of public-health managers will repeatedly multiply their knowledge, skills and influence on the community for continuing general health education practising. It is noted that this area’s topics are incorporated in the curricula of some other professions (for example at the Faculty of Social Work and Social Politics, Interdisciplinary Studies in Public Administration, Faculty of Pedagogy and others).

Introduction of compulsory health education in the elementary and high schools teaching programmes is a recommendation and conclusion related to the case study example. Concerning the compulsory education situation, the need of systematic and planned health education in the schools is emphasized. Lifelong learning and healthy habits should be incorporated in the daily life.

In 2007 the Government of R. Macedonia has undertaken intense activities for reparation of the worsened technical conditions in almost all primary and secondary level educational facilities. It has allocated the needed financial resources. Switzerland Government’s donations for this purpose will increase the budget for health education in schools. The schools besides the educational curriculum have facilities for health-educational contents exposures (for example, sport facilities, neat sanitary facilities, kitchen etc.).

The formal education in R. Macedonia is a subject of reforms. In accordance with the law, primary and secondary level education (of 13 year duration) is compulsory (for the citizens known as “free of charge education”) and it is a Government’s responsibility.

We present the R. Macedonia professional teachers’ data regarding educations for easier comparison with the EU countries. They have been educated in accordance with the pre-school, primary, secondary and tertiary educational level institutions’ needs. All teachers have at least a university degree. The job position classification is as follows:

- educator in pre-school institution;
- elementary-school lower classes teacher (all subjects teacher);
- elementary-school upper classes teacher (one subject teachers);
- secondary-school teacher (has a diploma and teaches only one subject);
- assistant (master of science or art, specialists);
- invited professors (academics, visiting professors, experts);
- academic titles: lecturer and senior lecturer;
- elected academic titles: assistant professor, associate professor, full-time/ regular professor and research fellow.

Institutional jurisdiction for health education management in The Republic of Macedonia

The specialized public-health in R. Macedonia is organized on the secondary and tertiary health care level. Leading specialities are social medicine, hygiene and medical ecology and epidemiology. Locally and regionally, public health institutions as health care institutes (some of them have a dispersed units) are active. On national level, active state institutes for public health are the National Institute of Public Health and the Institute for Preventive Medicine within the Ministry of Defence. Other health institutions' managers, governmental administration and other institutions cooperate with them on the health education issue.

The main objectives of the tertiary level highly specialized preventive public health institution: National Institute of Public Health, i.e. the organizational unit Sector for Social Medicine – Department for Health Education, History of Medicine and Journalism (available from: www.rzzz.org.mk/soc_medicina.asp#3) (Accessed: 07. 07. 2007) are presented as a case study from R. Macedonia.

This institution:

- conveys health-educational activity through global and specific national *programmes* for health education;
- participates in certain programme's activities conveyance on field;
- monitors the conveyance and result evaluation;
- plans and coordinates health promotion activities;
- cooperates with WHO on implementation activities for health promotion;
- offers expert-methodological help;
- participates in the health education of different health professionals profiles;
- has direct cooperation with the national and foreign media, humanitarian organisations and associations;
- publishes different health-educational papers, articles, brochures, placards, flyers, etc.;
- conveys research in the area of history of medicine.

Exercises

Seminar work, individual (distance) learning and briefings

Exercises in several modern methods and techniques (e.g. interactive teaching, cooperative learning and similar) are planned for the participants in this module. Helped by the teacher, students prepare and present individual seminar papers, presentations, lectures, or organize debates.

By research and individual (distance) learning and learning through reading and writing, students should comprehend the concepts of: positions and position forming, behaviour, customs and habits, norms and social standards, tradition, health culture, communication, needs, motives and motivation, individual's personality, emotions and feelings, attention, perception, studying, memorizing (and forgetting), thinking, interest (being interested), intelligence, temperament. They should prepare a briefing about the characteristics of these concepts, which can be generalized for the local community, and presented in front of the whole group.

Group of 5 students prepares the steps in the health education program management. Each and everyone briefs about one of the phases.

Group of 3 students prepares the main parts of a lesson (class, teaching unit) on a given health-educational topic and each one briefs for 3 minutes to the whole group. The task

for other 3 students is to present a text (as a part of a teaching unit) with the most intense motivation effect on the listeners to learn, shortly elaborating why the text is motivating, and presenting important conclusions at the end, in exactly 1 minute.

Preparations: students should make operation plan for one lesson as part of a health education programme.

Teaching accessories: projecting screen, computer, LCD-projector, blackboard, flip chart, equipment for simultaneous/consecutive translation, loudspeaker system, graph projector and graph-foils, copy machine, printer, etc.

Combined method for community health education application

First of all, has to be identified the problem (for example: tuberculosis).

Approach: programme management (multi-directional): planning, advising, organizing, research. Central activities: education, evaluation and report.

Procedures: estimation of the problem's dimension and severity by several indicators (for example: the morbidity trend, incidence, prevalence); analysis of the target group social position, the specificities in its positions towards health, vaccination rates (e.g. BCG vaccine) etc.; general plan creation, consultations and preparations. After the priorities of a certain health education programme are determined, planning and determination of the most suitable modes and techniques for achieving the goal, follow. The activities that will be conveyed are planned in details in every organizational aspect (their dimension, time, place, participants, logistic, etc.).

The activities (for example: education of the population in protection against TB) are conveyed in accordance with the action plan:

- *health propaganda activities:* printing and mass distribution of adequate message materials (for example badges, posters, balloons, key pendants, etc.) in order to animate and invite different population groups (e.g. parents, pupils, etc.) to take part in the programme activities;
- *health informing activities:* the approach is through mass media (for example radio and TV shows in effective periods of the day, adequate articles in general and specialized newspapers and magazines). Feedback, questions and answers, from the listeners, watchers and readers should be provided. Within these activities the actual problem in the environment (TB for example) is completely intensely and extensively presented, emphasizing the disease prevention measures;
- *health education activities:* organizing seminars, courses, workshops, etc. in schools, companies, local community, etc. The activities intended for the general population are performed by selective groups (for example teachers, health workers, non-governmental organizations, etc.);
- It is very important to plan and carry out continued monitoring, periodical analyses and final analysis of the programme or project.

Glossary of some essential terms

(Full glossary is available from: www.euro.who.int/observatory/Glossary/Toppage)

- **Course**

A course for this purpose is taken to be a planned series of learning experiences in a particular range of subject-matters or skills offered by a sponsoring agency and undertaken by one or more students.

- **Formal education** (or initial education or regular school and university education)

Education provided in the system of schools, colleges, universities and other formal educational institutions that normally constitutes a continuous 'ladder' of fulltime education for children and young people, generally beginning at age five to seven and continuing up to 20 or 25 years old. In some countries, the upper parts of this 'ladder' are constituted by organized programmes of joint part-time employment and part-time participation in the regular school and university system: such programmes have come to be known as the 'dual system' or equivalent terms in these countries.

- **Non-formal education**

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

- **Special needs education**

Educational intervention and support designed to address *special education needs*. The term 'special needs education' has come into use as a replacement for the term 'special education'. The older term was mainly understood to refer to the education of children with disabilities that takes place in special schools or institutions distinct from, and outside of, the institutions of the regular school and university system. In many countries today a large proportion of disabled children are in fact educated in institutions of the regular system. Moreover, the concept of 'children with special educational needs' extends beyond those who may be included in handicapped categories to cover those who are failing in school for a wide variety of other reasons that are known to be likely to impede a child's optimal progress. Whether or not this more broadly defined group of children are in need of additional support depends on the extent to which schools need to adapt their curriculum, teaching and organization and/or to provide additional human or material resources so as to stimulate efficient and effective learning for these pupils.

- **Adult education** (or continuing or recurrent education)

The entire body of organized educational processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adults by the society to which they belong, improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose:

- to complete a level of formal education;
- to acquire knowledge and skills in a new field;
- to refresh or update their knowledge in a particular field.

References & Recommended readings

1. European Commission, Eurydice, Eurostat. Key Data on Education in Europe 2005/ European Commission, Luxembourg: Office for Official Publications of the European Communities, 2005:201-49 Available from: <http://www.eurydice.org/portal/page/portal/Eurydice/showPresentation?pubid=052EN> (Accessed: April 12, 2007)
2. Topping KJ. Thinking, reading, writing: a practical guide to paired learning with peers, parents & volunteers. New York, London, Continuum International; 2001.
3. Pijaže Ž. Pijaže about his theory. In: Keramičieva R, Ed. Intelligence development: studying and development – theory of cognitive development stadiums. [In Macedonian]. Prosvetno Delo, Skopje, 1998:13-32.
4. Piaget J. Le point de vue de Piaget, International Journal of Psychology – Journal International de Psychologie, 1968;3(4):281-99
5. Piaget J. The language and thoughts of the child. New York: Meridian; 1955.
6. Brown A. Knowing when, where and how to remember: A problem of metakognition. In: Glaser R. (Ed.), Advanced in Instructional Psychology. Hillsdale, NJ: Lawrence Erlbaum Associates; 1978.
7. Beck I. Questioning the author: An approach for enhancing student engagement with text. Network DE International Reading Association; 1997.
8. Temple C, Meredith K, Steele JL. Reading, writing, and discussion in every discipline. (Guide Book III). Geneva, NJ: Reading & Writing for Critical Thinking Project; 1998.
9. Temple C, Meredith K, Steele JL. Writing workshop: From self-expression to written arguments. (Guide Book VII). Geneva, NJ: Reading & Writing for Critical Thinking Project; 1998.
10. Bloom B. (Ed.). Taxonomy of educational objectives: Handbook I. The cognitive domain. New York: David McKay; 1956.
11. Paul R, Nosich G, Elder L. Critical thinking: How to prepare students for a rapidly changing world. Cotati, CA: Foundation for critical thinking; 1995.
12. Temple C, Meredith K, Steele JL. Methods for promoting critical thinking. (Guide Book II). Geneva, NJ: Reading & Writing for Critical Thinking Project; 1998.
13. Temple C, Meredith K, Steele JL. Further strategies for promoting critical thinking. (Guide Book IV). Geneva, NJ: Reading & Writing for Critical Thinking Project; 1998.
14. Non-vocational adult education in Europe. Executive summary of national information in Eurybase. Available from: http://www.eurydice.org/ressources/eurydice/pdf/0_integral/083EN.pdf (Accessed: May 4, 2007).
15. European Association for the Education of Adults – EAEA. Available from: www.eaea.org (Accessed: May 4, 2007).
16. Mijatović M. Didactic 2 – didactic theories and theory of learning. [In Serbian]. Naučna Knjiga and Faculty of Pedagogy, Belgrade, 1999.
17. Dan Landis, Janet Bennett, Milton Bennett. Ed. Handbook of Intercultural Training. Third edition. Available from: www.sagepub.co.uk (Accessed: May 6, 2007).
18. Möller Ch. Die Curriculare Didaktik (Didaktische Theorien), Braunschweig, Westerman; 1981.
19. Vilotijević M. Didactic 3 – teaching organization. [In Serbian]. Institute for textbooks and teaching tools and Faculty of Pedagogy, Belgrade, 1999:47-60.
20. Temple C, Meredith K, Steele JL. A framework for critical thinking across the curriculum. (Guide Book I). International Reading Association; 1998.
21. International Standard Classification of Education (ISCED). Available from: www.uis.unesco.org (Accessed: July 7, 2007).
22. World Federation for Medical Education (WFME). Available from: [www.ifmsa.org/scome/wiki/index.php?title=World_Federation_for_Medical_Education_\(WFME\)](http://www.ifmsa.org/scome/wiki/index.php?title=World_Federation_for_Medical_Education_(WFME)) (Accessed: July 12, 2007).
23. Association for Medical Education in Europe (AMEE). Available from: <http://www.amee.org/index.asp> (Accessed: July 12, 2007).
24. European Network of Health Promoting Schools (ENHPS) Available from: www.euro.who.int/ENHPS/ (Accessed: July 7, 2007).
25. Health education. Available from: http://en.wikipedia.org/wiki/Health_education (Accessed: July 7, 2007).
26. Health promotion. Available from:
 - www.who.int/healthpromotion/en/ (Accessed: July 7, 2007).
 - http://www.euro.who.int/ENHPS/Publications/20020704_2 (Accessed: July 7, 2007).
 - http://en.wikipedia.org/wiki/Health_promotion (Accessed: July 7, 2007).
 - www.euro.who.int/AboutWHO/Policy/20010827_2 (Accessed: July 7, 2007).
 - <http://www.healthpromotion.act.gov.au/c/hp?a=da&did=1000550&pid=1154583005>
 - Healthy Cities – WHO EURO Office -- <http://www.euro.who.int/healthy-cities>
 - International Union of Health Promotion and Education -- <http://www.iuhpe.org/>

- International Society for Equity in Health -- http://www.iseqh.org/index_en.htm
 - People's Health Movement -- <http://www.phmovement.org/>
 - Politics of Health Group -- <http://www.pohg.org.uk/>
 - Q.O.A.C.H (Question Oriented Approach for Common Health): multilanguage health promotion -- <http://www.qoach.org>
27. Costin F. Lecturing versus other methods of teaching: A review of research. *British Journal of Educational Technology* 1972;(3):4-30.
 28. Temple C, Meredith K, Steele JL. Cooperative learning. (Guide Book V). Geneva, NJ: Reading & Writing for Critical Thinking Project; 1998.
 29. Temple C, Meredith K, Steele JL. Creating thoughtful readers. (Guide Book VIII). Geneva, NJ: Reading & Writing for Critical Thinking Project; 1998.
 30. Temple C, Meredith K, Steele JL. Lesson Planning & Assessment. (Guide Book VI). Geneva, NJ: Reading & Writing for Critical Thinking Project; 1998.
 31. Resnick LB. Learning in school and out. *Educational researcher* 1987;16(6).
 32. UNDP. Millennium Development Goals. Available from: <http://www.undp.org.mk/default.asp?where=weblink&link=91> (Accessed: April 21, 2007).
 33. Temple C, Meredith K, Steele JL. How children learn: A statement of first principles. Geneva, NJ: Reading & Writing for Critical Thinking Project; 1997.
 34. UNESCO – United Nations Educational, Scientific and Cultural Organization. Available from: <http://portal.unesco.org/> and www.ibe.unesco.org (Accessed: April 21, 2007).
 35. The World Bank. World Development Report 1993: Investing in Health. The World Bank, Washington, D.C. 1993.
 36. The World Bank. Public Management and the Essential Public Health Functions. Policy Research Working Papers. Available from: <http://econ.worldbank.org> (Accessed: April 21, 2007).
 37. Preventing leading causes of premature death, disease and disability. Available from: http://www.who.int/school_youth_health/en/ (Accessed: July 7, 2007).