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Contents

CURRENT LITERATURE REVIEW IN EDUCATION

You are reading a literature review compiled by members of Veille & Analyses, a department of the French Institute of Education within the higher education institution ENS Lyon. We analyse research literature and activities throughout scientific and institutional productions in education in order to map out key research trends on current topics and produce states of the art in the educational research field.

HEALTH EDUCATION (PART 1): TOWARD A HEALTH DEMOCRACY

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As a center of social life and learning, school is the most important environment for promoting 'healthy' behaviors, developing well-rounded personalities and physical abilities, and fostering health-enhancing behaviors. These are the key principles of the priority objectives and intervention strategies developed as part of the five-year prevention and education program implemented by the French Ministry of National Education in 2003 to promote health in schools. The program was designed to take into account the multifactorial nature of health and health education. The first part of this study examines various aspects of the links between health and education: is school the right place to promote health education? What strategies will help to change behaviors and practices? What training should be provided to teachers, and in what context? Part two (to be published subsequently) will examine the question of 'Schools as Promoters of Health' and the global approaches to health promotion in education.

EDUCATION AND HEALTH: AN OBVIOUS LINK?

From the health approach to international health promotion, health education is based on a range of concepts shaped by specific political, historical and international contexts. Since its emergence in the early twentieth century, the concept of public health has always placed schools at the center of effective prevention policies by promoting civic education. Key themes in this area have included public health propaganda, the fight against alcoholism, venereal diseases, and tuberculosis, and the promotion of healthy behaviors (Nourrisson, 2002). The French education system began to explore the links between individual and public health at the beginning of the twentieth century. Today, we need a global approach to the definition of health in order to legitimize the actions of schools and teachers.

'There is rarely a consensus on the definition of health and education, two inherently human concepts, since they are primarily common (rather than scientific) concepts. The relationships between the two concepts are highly complex, and the links between them often resemble a giant ideologically, theoretically or normatively informed puzzle' (Klein, 2010)

Approaches to health education vary in different countries. For example, in Finland, health education is a recognized subject explicitly included in the curriculum. In France and Portugal, health education is taught from a cross- or interdisciplinary perspective, as part of citizenship education or personal development. In Quebec, health education is a distinct discipline, but is also approached from a cross- or interdisciplinary perspective (generally as part of physical education). English-speaking countries generally prefer an approach based on health promotion and the development of individual skills. The aim of the French approach to health education is to foster independence and community living ('*bien-vivre ensemble à l'école*'). Health education in France includes a physiological component and an emphasis on self-respect and respect for others. It is important to note that this is still a far cry from transmitting normative rules of behavior and reshaping health-related behaviors (Bizzoni-Prévieux *et al.*, 2010).

According to Descarpentries (2008), the social role of health education extends beyond the precautionary principle. In fostering the values of contemporary society, the role of schools is to educate students to become independent, responsible citizens with the ability to make decisions that promote long-term health. In this sense, the social role of education is similar to the role of public health and aims to develop lifelong health education (Descarpentries, 2008).

Online resources on public health: BDSP, Cité de la santé, Pédagothèque

According to Eymard, the nature of these links raises many research questions, including debates surrounding the names and labels given to health education ('for health', 'in health', etc.) and the definition of the field to which health education belongs (health care, social policy, education, etc.). Eymard distinguished between three models of health in seeking to draw parallels between conceptions of health and conceptions of education.

Health:
- The linear or organic model of negative health (focused on the absence of disease or infirmity)
- The global model of positive health based on individual adaptation and social adjustment (focused on the individual)
- A model of health conceived as the promotion of a responsible subject open to the world (focused on an autonomous subject).

Education:
- The instruction model (transmitting academic knowledge)
- The model of the development of the subject (focused on the subject)
- The social interaction model (social skills, relationship between the self and the world).

Theoretical relationships can be developed and models of health education designed by combining these models. For example, a model combining linear and social interaction theories would produce a model aimed at encouraging '*the subject to engage in a process of self-questioning as part of an attempt to control non-illness, for the good of the individual and society*', by '*developing an individual awareness of the difficulties of the fight against illness*'. While it may not necessarily encourage the receptor to act in a certain way, modeling the relationship between health and education will enable educators to develop

personal action plans tailored to the needs and expectations of a target audience (Eymard, 2004).

According to Eide and Showalter (2011), the empirical relationship between health and education (i.e. a high level of education increases the likelihood of good health) has been clearly demonstrated, unlike the causal impact of health on education, where the available evidence is less conclusive. The purpose of their study was to examine these links, and in particular to show how the level of health, the physical circumstances of pregnancy and childbirth, and the physical characteristics of teenagers determine educational success (size and weight, physical and psychological traumas, parents' health, etc.). Their study also examined the links between human capital, health and the labor market.

THE IMPACT OF EDUCATION ON HEALTH

In OECD countries, educated individuals are on average more likely than others to be healthy, even when various individual characteristics are taken into account (Cutler and Lleras-Muney, 2010).

By contrast, a study by the OECD (2010) showed that health has an impact on education, and vice versa. The key question addressed by the study was: how can education contribute to reducing health risks and inequalities? Reducing public health problems and the related inequalities is now one of the key priorities of public policies (based on the assumption that health is costly). The study examined the effects of education (and their mechanisms) in order to identify the most effective approaches for promoting health. Currently, the available data are not sufficient to determine the level of education with the greatest impact on health. Recent studies and surveys (Meara, Richards, and Cutler, 2008 ; Brønnum-Hansen and Baadsgaard, 2008; Ferrie *et al.*, 2009; Denney *et al.*, 2010) have found a strong correlation between the level of education and three health indicators (smoking, alcoholism, and obesity), **associated with a gain in life expectancy of [à revoir: explicitation requise]** 3 to 7 years on average among individuals aged 25 to 30 years and with some form of education (in the United States and Denmark). The gap has increased over the last 20 years by 30% on average.

Another important finding of recent research is that cognitive skills, which are generally developed in a formal educational context (particularly in the areas of literacy and numeracy), appear to reduce the health risks associated with an unhealthy lifestyle. Individuals with limited basic skills and knowledge are more likely, and more likely at an earlier age, to suffer from chronic, respiratory and cardiovascular diseases (Ferrie *et al.*, 2009). These findings were confirmed by a Canadian study, which found that the level of education has a significant impact on health, particularly when seeking to identify and use sources of information on public health. The study found that three in five Canadians (60%) do not have the level of health literacy required to effectively manage their health and meet their healthcare needs (Canadian Council on Learning, 2008).

These findings were confirmed in a study by Cutler and Lleras-Muney (2010) aimed at examining the relationship between 'healthy' behaviors and level of education based on North American and British data. The results showed how the level of income, the family environment and the type of mutual insurance policy impact on health behaviors, **with a gradient of 30%.** The study found that the higher the level of education, the less likely it is that an individual will become an alcoholic, drive dangerously, become obese, or smoke. The results showed that individuals with a higher level of education are more likely to use effective means of prevention and to live in a healthy environment. A higher level of education also improves cognitive skills, leading in turn to a greater ability to understand the impact of health behaviors. For example, while everyone knows that smoking is unhealthy, some people understand it better than others.

A recent report by the World Health Organization (Suhrcke and de Paz Nieves, 2011) provided a literature review of studies (conducted between 1995 and 2008) examining the opposite relationship and aimed at assessing the links between poor health in the prenatal period and infancy and educational performance or the link between unhealthy behaviors during adolescence and the level of education (in developed countries).

WHAT DOES IT MEAN TO BE 'HEALTHY'?

As a fundamental basis of public health promotion, the Ottawa Charter (1986) recommends several methods for promoting effective public health policies. The charter defines the 'fundamental conditions and resources for health: peace, shelter, education, food, income, a stable eco-system, sustainable resources, social justice and equity'. Improving health requires maintaining these basic conditions. Although it is based on an outdated and sometimes ill-suited approach, Deschamps (2003) noted that the Ottawa Charter highlights the importance of combining preventive and curative care based on the concept of health promotion.

> *'Health promotion is the process of enabling people to increase control over, and improve, their health. To reach a state of complete physical, mental and social well-being, 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 life-styles to well-being'* (Charte d'Ottawa, 1986).

In the same spirit, the OECD report on child well-being (2009) identified six factors that must be taken into account to determine the indicators of well-being: housing, environment, education, health, risk behaviors and quality of school life. Based largely on Maslow's pyramid, health promotion (in the broader sense of the term) aims to enable every individual to fulfill their basic needs throughout their life. In Maslow's pyramid, the basic needs of the individual are classified in a hierarchy, with five levels forming the basis of human actions and motivations:

- Level 1: physiological needs (breathing, food, water, shelter, clothing, sleep);
- Level 2: safety and security (health, employment, property, family and social stability);
- Level 3: love and belonging (friendship, family, intimacy, sense of connection);
- Level 4: self-esteem (confidence, achievement, respect of others, the need to be a unique individual);
- Level 5: self-actualization (morality, creativity, spontaneity, acceptance, experience purpose, meaning and inner potential).'

In decreasing order, the pyramid represents the different needs of people (in an educated western society) and encourages individuals to act on the determinants of health related to these needs, as noted in a guide promoting health education in schools published by the French Ministry of National Education (2011). Promoting health means acting on the determinants of health in every individual, including lifestyle, skills, family background, the educational and socio-economic environment, and social, cultural, and political values. A number of programs for the prevention of addictions in schools have been developed from studies based on models focusing on the social factors shaping everyday life (for experiments, see part 2).

'Over the last 25 years, nearly 30% of drug addiction prevention programs targeting young people have produced iatrogenic effects. In other words, they resulted in an increase of several, if not the majority, of the behaviors they were designed to prevent or reduce' (Ministry of National Education, 2011)

Citizen empowerment

The **notion of 'empowerment'** (i.e. the power to take initiatives, to make decisions, and to act on the determinants of health and living conditions, and the power to act on the conditions of collective social well-being and the living conditions of every individual) is one of the most important concepts in health promotion (Deschamps, 2003). However, the French health care system is based on a curative approach (as opposed to a preventive approach). Focusing on emergency health measures rather than preventive medicine and health promotion, the French system invests even less in collective prevention, such as health education in schools (Fayard, Marchand, 2008).

According to Bandura (2004), a system based on health promotion, changing behaviors and prevention should prevail in a system still largely focused on illness and medical treatments. Health promotion aims to give people greater control over their health and their environment and to empower them to make healthy decisions, to learn throughout life and to cope with chronic illnesses and accidents. Learning must be part and parcel of health interventions in educational, family, professional and community settings. Today, health-related practices focus on the provision of care and drugs. However, with shrinking budgets and ageing populations, demand currently exceeds supply (Bandura, 2004). ●

See also Gori, Roland, Del Volgo, Marie-José (2005). « La Santé totalitaire »: La médicalisation infinie au service de l'idéologie et des industries néolibérales. Paris: Denoël

See also Jourdan Didier & Berger Dominique (2005). 'De l'utilité de clarifier les référents théoriques de l'éducation pour la santé'. La santé de l'homme, n° 377, mai.

Lack of provision in France

Regional Health Programs (PRS) were introduced in France in the 1990s and 2000s in order to identify priority issues and address them locally or to set up Ateliers Santé Ville (ASV, urban health workshops). Unfortunately, research and training in the area of health promotion and education remain limited. Currently, there are concerns about the weak links between research and training. The limited amount of research on the modalities of intervention and the lack of critical perspective on the effectiveness of prevention measures are major obstacles to the development of good practice standards.

In order to create a synergy of efforts and to issue calls for tenders focused on health prevention, the French National Institute for Health Prevention and Education (INPES), the French National Institute of Health and Medical Research (INSERM), the French Health Authority (Haute Autorité de Santé), the French Directorate of Research, Evaluation and Statistics (DREES) of the Ministry of Health, and the French National Cancer Institute (l'Institut National du Cancer) joined forces in 2007 to create the French Institute for Public Health Research (IRESP).

According to Tubiana (2010), the current state of health education in French schools is a major concern since there is no coherent system or policy monitoring program. Despite the recommendations of the Ottawa Charter (which introduced the concept of health promotion), health policies based on the Charter are still in their infancy, particularly in the area of infant health (Tubiana, 2010).

> *'Health promotion aimed at planned interventions targeting the socio-political environment and individual behaviors with an impact on health in order to facilitate the adoption of health-enhancing behaviors is included neither in the public health code nor in the budget nomenclature'* (Fayard, Marchand, 2008)

However, there appears to be a consensus among many researchers that one of the keys for improving health promotion is to increase the ability of people to change their behavior according to public health information and innovations. Health behaviors remain a major focus of research in this area, particularly with the rise of Health Behavior Theories (HBT). ●

THE DETERMINANTS OF BEHAVIOR: THEORETICAL APPROACHES

Since the main theoretical approaches in this area were developed in English-speaking countries, there are obstacles to a comparison of theory and practice in this area. Nevertheless, this section will review the different approaches developed in psychosocial research. A distinction is commonly made between three levels of interaction and influence: the intrapersonal level (the individual's behavior, knowledge, and personality), the interpersonal level (family, friends, peers), and the collective level (social networks, public policies, institutional structures).

THEORIES BASED ON AN INTRA-PERSONAL MODEL

The 'health belief model' (HBM) (Rosenstock *et al.*, 1988)

Developed in the 1950s by three psychologists (Hochbaum, Rosenstock, and Kegels), the health belief model was the first model from the behavioral sciences to be applied to health problems. The HMB is the most widely used model in studies aimed at examining and explaining health behaviors. The model was originally developed to explain why people use or do not use prevention services such as x-rays and vaccinations. Scientists using the HMB work on the assumption that the health behaviors of individuals are based on their feelings and level of fear about certain symptoms or diseases. The HMB uses four types of perception of health risks and benefits for a given individual:

- The probability of suffering from a given condition;
- The seriousness of the condition;
- The effectiveness of a behavior or action in reducing risks;
- The seriousness of the condition and the psychological or real 'costs' used to overcome or improve the condition.

In 1988, the concept of self-efficacy (defined as a person's capacity to assess their ability to perform an action) developed by Albert Bandura as part of his causal social was incorporated into the HMB. Designed to account for health-related behaviors, the model is also used to explain why behaviors exist and how potentially changeable behaviors are identified. The HBM is also used to show individuals that some types of behavior are dangerous for their health and to enable them to make the right decision, thus serving as an educational tool. However, the HBM is an imperfect model since studies in behavioral science have never been able to prove that health beliefs lead to a change in behavior (there is even evidence to suggest that the very reverse is sometimes true).

See also Gordon Joye C. (2002). 'Beyond Knowledge: Guidelines for Effective Health Promotion Messages'. Journal of Extension, vol. 40, n° 6.

The transtheoretical model of change (TTM) (Prochaska and DiClemente, 1982)

Developed in the 1980s, the TTM focuses on the stages of behavior change, particularly in the area of health (especially drug addictions). A change in attitude toward risk behaviors is viewed as a process (rather than a single event) characterized by different degrees of individual motivation and will. There are six stages in this model:

- Precontemplation: the person is not aware of the problem or has not seriously considered changing his/her behavior;
- Contemplation: the person has seriously contemplated changing his/her behavior (in the near future);
- Preparation: the person intends to take action and makes the final adjustments before changing his/her behavior;
- Action: the person takes various measures to change his/her behavior;
- Maintenance: the person repeats the recommended stages while fighting to prevent relapse;
- Termination: the person is able to resist relapse.

It is important to note that the TTM does not exclude the possibility of a regress to an earlier stage of the process.

Consumer information processing model (Bettman, 1971)

The *consumer information processing model* shows how to develop communication strategies that enable individuals to change their behavior based on the information they receive. The search for information is at the center of the process around which assessment, motivation, the capacity for appropriation and decision-making skills gravitate (information must be available, useful and user-friendly).

Theory of 'reasoned action' (Fishbein and Ajzen, 2009)

The theory of reasoned action was developed to explain behavioral intention and to understand the links between beliefs, attitudes, norms, intentions and behaviors. According to this model, the behavior of a person is determined by subjective intentions related to a given behavior. Since attitudes are linked to beliefs about a behavior, an individual will adopt a positive attitude if s/he believes that the behavior is effective. The theory of reasoned action is based on the concept of 'behavioral beliefs'. It also emphasizes the impact of social pressure and of belonging to a group with which the individual identifies, thereby causing them to adopt the 'normal' behaviors defined by the group. The concept of 'normative beliefs' is key. In addition to personal attitude, normative beliefs also shape the decision to change (or not change) and the behavior to adopt (or not adopt).

THEORIES BASED ON AN INTER-PERSONAL MODEL

The 'social learning' or social cognitive theory (Bandura, 1977, Rotter, 1945)

The 'social learning' or social cognitive theory is based on a multifaceted framework in which the sense of personal efficacy interacts with the goals, motivations, expectations, environment and well-being of individuals. The theory is based on the notions of interaction and bi-directionality: individuals shape their environment, which shapes their behavior, which shapes individuals, etc. In our society, health promotion aims to empower individuals to exert greater control over (and to improve) their health. In this sense, health matters are no longer an individual issue, but a collective matter requiring social systems to meet the health requirements of individuals. According to the 'social learning' theory, in order to change psychosocial behaviors, functional programs need to be developed that extend beyond the level of the individual. The first task is to define a theoretical model specifying the psychosocial determinants of behavior change and the mechanisms involved. The next task is to choose a translational strategy (commonly used in medicine) to convert theoretical principles into practical models by defining their content, the strategies of change, and their mode of application. The final task is to promote these practices in society in order to encourage the relevant sociocultural groups to adopt new practices.

Theories of social or support networks

A distinction is usually drawn between four types of support influencing behaviors and changes in attitude: emotional or affective support (listening, trust, etc.), logistical support (a more practical form of support involving money, work, and time), information support (advice, suggestions, references, etc.), and assessment support (expertise, validation). The social environment may help or hinder a person in coping with health issues.

THEORIES BASED ON A COMMUNITY MODEL

These theories are based on the assumption that a person involved in the organization of the community (municipality or council, neighborhood, associations, etc.) receives more social support than an isolated person. Social support promotes a sense of control, which has a positive effect on health since 'social stability, the recognition of diversity, security, good work relations and tightly-knit societies produce a unified society that reduces or prevents many potential health risks' (Public Health Agency of Canada, 2003). The level of competence in the area of community health is the equivalent of personal efficacy at a collective (social) level.

The theory of diffusion of innovations (Rogers, 2003)

Based on the assumption that there is a gap between health knowledge (particularly evidence-based knowledge) and practice, the theory of diffusion of innovations, originally developed by Rogers, is based on diffusion models and active dissemination (i.e. planned, formalized, centralized). The theory involves various stages, including innovation, diffusion, adoption, implementation, maintenance, durability, and institutionalization. A study by Wiecha *et al.* (2004) explored the obstacles to the implementation of an obesity prevention program in an American school through the curriculum based on an interdisciplinary approach (Planet Health). The results showed the applicability of a participatory model beyond the experiment. Diffusion requires detailed and adaptive planning aimed at convincing the target group to adopt new behaviors that will improve their health and prevent risks. The decision to adopt the new behavior mainly depends on three types of knowledge: an awareness of the existence of a 'better' behavior, understanding how to adopt the new behavior, and understanding how it 'works' (Rogers, 2003). The key stage is the diffusion process (i.e. how and by whom) and the way the benefits are presented to the target audience (benefits, compatibility, possible trials, observability). To ensure an effective diffusion among school students, all of these conditions need to be met and supported by adequate financial and human resources. Taken in isolation, each condition is not sufficient to ensure the adoption of a behavior, although studies have shown that a combination of the conditions increases the chances of adopting the new behavior.

Many theories but little consensus

Which theory is best adapted to explaining health behaviors? This was the question raised by Noar and Zimmerman (2005) in a study examining these theories and their proliferation in recent research. The assumption is that the best way '[to move] in the right direction' is to compare the different theories based on empirical and comparative meta-studies and to test the results.
Despite these differences, all theories of change share three key assumptions:

- Behavior is determined by cognition: what an individual knows and thinks shapes their behavior;
- Knowledge is necessary but not sufficient to bring about change;
- The individual's perception, motivation, skills and social environment are key determinants of behavior change (Theory at a glance, 2005).

Therapeutic education: information, prevention or promotion strategy?

At the crossroads of medicine and education, health education is closely linked to the concepts of lifelong learning and empowerment.

Information alone is not sufficient to enable individuals to deal with health problems or to prevent ill health. Access to the provision of health education is a key issue. Outside traditional educational settings, associations play a strategic role, as do prevention and promotion programs. The 'sciences of action' (as defined by Potevin, 2007, a professor of preventive medicine) promote closer links between research on a specific health issue and effective

intervention strategies and people's perceptions of the issue, its causes, its effects, and its consequences, in a specific context (Potevin, 2007).

'Therapeutic patient education (TPE) is a young, dynamic practice and field rooted in medicine, health education and the social and human sciences (health psychology, sociology, anthropology, etc.). Based fundamentally on the physician-patient relationship and a structured approach, this long-term educational initiative puts patients in control of their own health'. Definition given by the French Health Authority (HAS) which provides good practice guidelines on its website.

'When two worlds become ever closer and begin to mix (in this case, health and education), the questions relating to professional training begin to multiply' (Dominicé, Jacquemet, 2009).

We saw above that schools are key settings for preparing students for their lives as adults and citizens, suggesting 'that three priority objectives need to be taken into account: promoting health-enhancing behaviors among students, identifying and monitoring health problems, and developing an environment that enables students to fulfill their potential' (Fayard, Neulat, 2005). Based on the assumption that poor health can cause learning difficulties and lead to educational failure, the active involvement of educational institutions in general and of teachers in particular in health promotion is essential.

TEACHER TRAINING: AN EXAMPLE OF A COMMON STRATEGY INVOLVING SCHOOLS AND PUBLIC HEALTH AUTHORITIES

Studies in health education are based on educational research and the theoretical principles of public health, with a particular emphasis on individual and social perceptions among teachers and their interactions with students. An effective collaboration between the political and educational spheres in the area of health promotion requires a specifically dedicated curriculum subject, but also a reassessment of current training practices. ● There are a number of obstacles to the introduction of frameworks governing professional and curriculum practices, not least because of the absence of any disciplinary matrix and the current lack of targeted training for teachers.

'Progress on the question of health education in schools will only be made when we become aware, on the one hand, of the complexity of an educational approach that avoids any shortcuts or miracle solutions and, on the other, of the fact that the primary role of schools is not to fight against any form of social scourge, but to educate future citizens and to ensure the success of all students'. (Jourdan, 2010)

THE INCREASING ROLE OF INSTITUTIONAL RULES AND GUIDELINES

Health education is a perfect example of the expanding educational responsibilities of schools and teachers. The range of topics that need to be covered in health education and the set of individual and social skills that need to be developed require a reassessment of current practices and knowledge transmission strategies. Based on interviews with approximately thirty primary school teachers, Pizon *et al.* (2010) showed that the reassessment of educational activities is part of a broader 'context of excessive target-setting', which can sometimes cause teachers to feel incompetent and inefficient. Teachers tend to see non-traditional applied subjects ('training in', or '*éducations à*', in French) as being at the margins of their activities and practices. The study identified three positions adopted by teachers in which health education:

- is included in professional practices;
- is based on local interventions with specific educational objectives;
- is both incorporated in practices and based on specific projects requiring the personal involvement of the teacher (observed in classes taught by experienced primary school teachers) (Pizon *et al.*, 2010).

According to Cardot (2010), one of the main obstacles is the lack of training among teacher training providers, who are mostly influenced by their personal conceptions and by their professional identity, in addition to bring governed by specific institutional requirements. Based on the theoretical framework underlying the psychological concepts developed by Fortin (2004), Cardot (2010) proposed various models of health education aimed at developing tools for guiding trainers in providing support to teachers:

- A rational model focused on a knowledge of diseases and risks, based on a reasoned approach governed by health professionals and aimed at promoting the adoption of a new behavior, but not taking into account the motivation and empowerment of individuals (behaviorist approach);
- A humanist model centered on the individual and his/her conception of risks and psychosocial skills and aimed at improving the physical, mental and social well-being of the individual and at promoting empowerment and free choice based on the desires and feelings of individuals (complete well-being approach);
- An ecological model centered on the individual and his/her interactions with the physical and social environment and aimed at fostering the general development of the individual and of his/her ability to adopt a health-enhancing behavior based on his/her personal knowledge and cognitive skills, and focusing on systemic analysis (socio-constructivist approach). ●

Jourdan (2010) considered a fourth model – a social model that extends beyond personal development to focus on the links between human beings and their control over their environment, while taking into account the level of individual freedom within a group. This model is based on the notion of empowerment, enabling the individual to control his/her existence and environment.

The concept of 'schools as promoters of health' is derived from this model.

> Health education *'involves educational practices invoking a corpus of interventions, positions, and even values that destabilize the traditional structure of education. Teachers are faced with multifaceted tasks in an ever-changing environment of social practices of reference'* (Pizon, *et al.*, 2010)

The point of view of teachers – personal engagement and the limits of intimacy

In describing the professional attitudes of teachers, Berger *et al.* (2010) emphasized the 'proximity between the intimate and the social' shaping perceptions of teaching and learning. This new approach requires the development of training courses that take these factors into account. A number of experiments (expériences) in France have shown that training courses (even at an experimental stage) can serve to validate and legitimize the transmission of knowledge in the area of health while developing the skills required to implement effective education policies. However, one condition must be met: accompaniment in the field by professionals and local partners, associations (Codes, Anpaa, Usep, Ades, Ares) and institutional partners (school health, IUFM training providers and academic advisors and counselors) and the provision of adequate resources (Pizon *et al.* , 2010).

NEW EDUCATIONAL APPROACHES?

Health behaviors should not been seen as academic, practical or social skills on which education can act directly. However, one area where education can have an impact is health behavior decision-making among students (Perrenoud, 2011). According to Jourdan, enabling students to make free and responsible decisions by teaching them to act on their health is the main challenge of health education (Jourdan, 2007). The aim is to act on behaviors and the environment by introducing educational activities based on three objectives:

- Developing individual skills that will enable students to manage their stress, to take action, to manage conflicts and to become independent (particularly in making decisions);
- Transmitting knowledge about health behaviors, diseases and products to ensure that students are able to make informed health decisions;
- Taking into account the social environment (medical assistance, support, influence of the media) and developing students' critical skills.

Teacher training extends beyond pedagogy since it also includes a political and technical dimension (Jourdan, 2010). Schools will need to adapt educational programs, teaching methods and student support strategies to respond better to educational needs and to play a mediating role in health promotion.

> Being responsible for one's health implies a departure from traditional educational methods and a reorganization of the educational approach, requiring an appropriate methodology and didactic approach: the program is not based on a subject but around objectives (Avanzini,2010).

Conceptualizing educational interventions

Theoretical models are key for health education. However, while practitioners must have an understanding of learning theories, they must also be able to reflect critically on their own practices (Jourdan, 2005).

Goigoux (2010) examined the purpose of health education in schools and showed how educational research can contribute to the development of a support tool for training providers: PROFEDUS. PROFEDUS ● '*aims to play a major role in socialization and subjectification (in the sense of the development of critical skills, autonomy, personal development, etc.*)'. Teachers must base their work on three key objectives:

- Transmitting knowledge about health;
- Developing individual, social and

Profedus, (Promoting Teacher Training in Health Education): a support tool for health education trainers, under the supervision of Didier Jourdan and developed by the network of IUFMs and the INPES.

civic skills;
- Developing a critical perspective on the social environment.

Personal development

While current subjects focus on a particular field of knowledge and are part of compulsory education in most countries, non-traditional applied subjects focus on personal development and values and the ability to adapt behavior to the family, social and professional environment. Their purpose is to provide students with the tools to conduct their life, to make decisions and to develop the social skills needed to live in a democratic society. For example, in Quebec, personal development is included in the curriculum as part of physical education, with concepts such as 'self-esteem' and 'raising awareness of the values of community life' playing a key role. Turcotte (2007) examined these questions from the perspective of well-being in schools, alongside the development of independence and empowerment for health, by taking into account the four dimensions of learning: cognitive (theoretical knowledge), affective, social, and practical (know-how or practical knowledge). Turcotte (2007) examined two types of intervention: prescriptive interventions aimed at improving physiological health and information interventions aimed at promoting individual autonomy after a transmission of information. The cognitive dimension involves the acquisition of skills. The social dimension involves identifying the value of behavior change in a given environment (social pressure). The affective dimension is related to self-efficacy and motivation. The practical dimension involves developing values that promote health through the development of motor skills. The combination of these dimensions contributes to developing and implementing effective practices.

Should health education standards be set?

For over sixty years, the CDC (Centers for Disease Control and Prevention) in the United States has promoted a health prevention policy and devoted part of its efforts to developing and implementing curricula from preschool level to the end of compulsory education. The NHES (National Health Education Standards ●) were designed to regulate health education in schools and to provide guidance to teachers. Published for the first time in 1995, the NHES have continued to be developed jointly with the American Cancer Society.

SOME CONCLUDING REMARKS

The Ottawa Charter emphasizes the importance of promoting health in schools and developing the skills needed to empower individuals in the area of health. In 1995, the World Health Organization published guidelines outlining the concepts of health and 'community life' that need to be addressed at school. Since then, a number of networks have emerged, including the Schools for Health in Europe (SHE) and the Australian Health Promoting Schools Association (AHPSA). Studies on patient education have demonstrated the importance for health professionals of communicating with patients about diseases and health risk prevention. However, although strong links between health and education have yet to be developed in many countries, a wide range of initiatives, models and practices have been developed in recent years. These experiments will be examined in part 2. We will see why '*the position of a so-called educational end – in this case health promotion – is only relevant insofar as education can also be an effective means. However, this hypothesis cannot be taken for granted and requires justification*' (Avanzini, 2010).

- Standard 1: Students will comprehend concepts related to health promotion and disease prevention to enhance health.

- Standard 2: Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

- Standard 3: Students will demonstrate the ability to access valid information, products, and services to enhance health.

- Standard 4: Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

- Standard 5: Students will demonstrate the ability to use decision-making skills to enhance health.

- Standard 6: Students will demonstrate the ability to use goal-setting skills to enhance health.

- Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

- Standard 8: Students will demonstrate the ability to advocate for personal, family, and community health.

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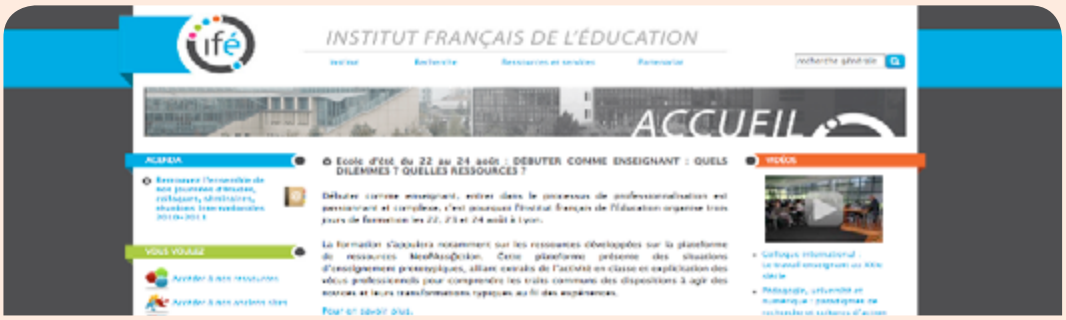

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