

THE IMPORTANCE OF SIMULATION RESEARCH METHOD FOR IMPLEMENTING HEALTH EDUCATION INTO SCHOOL EDUCATIONAL PROGRAMMES

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Abstract: *The present curricular research shows that the implementation of the national projected curriculum form into projected curriculum forms at school level is possible only when simulation method is applied. The outcome of this process is a constitutive school curriculum which needs to be subsequently implemented into the implemented school curriculum model, securing a full compliance with all curricular requirements. The implementation of health education into school educational programmes currently involves many problem questions. This paper discusses how these questions can be categorised and solved by means of simulation method.*

Key words: *simulation research method, constitutive curriculum model, implemented curriculum model, health education, health education curriculum, school educational programmes*

Introduction

Various forms and types of curriculum are researched especially in connection to the implementation of curricular reforms. In the US, these reforms were implemented in the 1960s as part of educational reforms; in Germany and Austria approximately ten years later (comp. Walterová, 1994; Janík, 2009).

The Czech Republic is currently undergoing a similar process and we may observe a renewed interest in research into curricular problems due to the implementation of framework educational programmes. Research into curriculum for different educational areas, fields or subjects has emerged. The focus is especially on the process of implementation of curricula into practice and if these curricula appear to succeed or not. Health education is no exception to this trend.

Methodological starting points for effective implementation of health education into school educational programmes

The research into projected curriculum deals in particular with educational programmes, educational plans, and educational standards. Curriculum in its projected form is relatively easily accessible because it usually exists as a concrete *curricular document* (e.g. an educational programme, educational plan, syllabus, or textbook).

Dvořák (2007) and Janík (2009) argue that *content analysis of curricular documents* is the most common research method into projected curriculum. This analysis is usually based on a certain category system suitable for researching curricular structure as well as other characteristics.

Analysing school educational programmes seems to be a promising area of research into projected curriculum; however, only a few analyses of this type have been conducted in the Czech Republic so far.

Other research of projected curriculum consists in researching textbooks, but proper health education textbooks are being designed only now. Some health education topics may be found in textbooks of biology, civics, family education and others. Even though research into textbooks seems to have evolved into a representative area of curricular research (e.g. Průcha, 1998; Maňák, Klapko et al., 2006; Maňák, Knecht et al., 2007; Knecht, Janík et al., 2008), specific research into health education and handling the subject in textbooks has been neglected.

Research into projected curriculum is carried out either as part of a broader inter-subject approach (e.g. Pühse, Gerber, 2005), or specifically within a selected educational area, field or subject. An extensive research based on content analysis of representative population of educational plans from different countries in the world (Kamens, Meyer, Benavot, 1996) may serve as an example.

It needs to be admitted that there has been only little interdisciplinary research with the aim of clarifying the position of health education in relation to other subjects of school education in the Czech Republic so far. Since the 1990s, the connection between health education and physical education (e.g. Mužík, Krejčí, 1995; Mužík, Mužíková, 2007) and health education and family education (Marádová, 2005) has been defined and studied. At the level of educational content projections, the current debate rather considers what topics should occupy health education curriculum and to what extent, for example: the issues of lifestyle and quality of life (Csémy et al., 2005; Havelková, Kachlík, Raus, 2006; Lukášová, 2006; Pokorná, 2006 etc.), nutrition (e.g. Rouhová, Pillerová, Havelková, 2001; Procházková, 2006), experience (Krejčí, 2004), physical self (e.g. Fialová, 2005), social behaviour (e.g. Prokopová, 2006), prevention of social-pathological phenomena (e.g. Kachlík, 2005; Čech, Hanáková, 2008), health risks and primary prevention (Žaloudíková, 2004, 2009) etc. The focus of other thematic research in the Czech Republic as well as abroad is presented in the collection of papers from the international conference *Health Education and the Quality of Life II* (2009). Publications by Havelková, Reismannová et al. (2009), Machová, Kubátová et al. (2009), or Liba (2010) draw upon specific research findings.

Curriculum simulation method

Simulation method is an important means of research and curriculum projecting (see Maňák, 2007). Maňák (2007) claims: “Simulation is a procedure leading to designing a model. It enables us to examine complex features such as systems.” (43) The function of a model is “to express important links and connections leading to understanding the expected conception” (43).

Maňák distinguishes among the *fundamental*, *constitutive* and *implemented model of curriculum*, and combines these sub-systems into a *synthesizing model*. As for the simulation of curriculum Maňák states: “Taking into account all circumstances, teachers project in their mind and in the preparation (of a model) a procedure plan leading to implementation of educational aims, which they consider from a methodological perspective. This means that they transform the educational content into adequate portions (quanta of subject matter) in their subject, and facilitate their mastering by pupils by means of appropriate methods. Then they reassure about mastering the subject matter by effective forms of feedback. Often, teachers are not aware of all relationships and links which determine the implementation of given educational aims. They perceive them in general, as they are presented in curriculum. These relations, which are hidden even in curriculum and their sources are considered in the fundamental model of education, are nowadays emphasised as the so called inter-subject relations (inter-disciplinary links), or also within the so called cross-sectional topics. Teachers seem to be helpless. They do not know how these cross-sectional topics should be implemented because sufficient methodology input is absent even in the Framework Educational Programme. The above example demonstrates the limited knowledge of curricular problems and that investigation into their genesis (e.g. by means of simulation) would help their understanding” (49).

As for this paper, the constitutive curriculum model and the implemented curriculum model are of crucial importance.

The *constitutive curriculum model* is defined by Maňák as follows: “The subject of a constitutive model is the designer of the curriculum (typically a national, professional or specialist authority/council) who considers all circumstances, conditions, influences and social interests, and sets clear postulates, focusing on a particular type, kind, specialization, and level of educational institution. The outcome is a curriculum manifested in textbooks, syllabi, methodological regulations and other documents... The constitutive model is generated as a result of social demand for a concrete type, kind, and level of educational institutions” (48).

Maňák further describes the *implemented curriculum model*: “The subject in this model is the teacher who designs plans, procedures and strategies, selects information, considers skills instruction and training, strives for mastering desirable competences etc., and is particular in achieving such educational outcomes that are in compliance with the proposed aims. The objects of the model are both previous models, however, the overall social culture and especially educational situation where the educational process takes place operates as an additional influencing factor. The crucial element in this model is the pupil’s individuality and the studied subject. As a synthesis of all these factors, it manifests itself as a preparation for educational activity, which on the basis

of all the influences and stimuli stated above becomes a model of educational process” (49).

At the end of his study, Maňák emphasises: “The initial stimulus for the simulation of curriculum was the fact that curriculum is not a stable static construction as it sometimes appears to be in its definite user form, but that it undergoes evolution, not only in connection with up-to-date views and scientific theories, but also in its genesis because it originates as an ideal construction, then it is specified for particular types of schools and embedded in school documents that in the forms of norms and standards regulate educational process. This gradual maturation and implementation of curriculum (especially its content) culminates as an educational process (concrete instruction), i.e. an educational interaction between the teacher and pupils” (51).

Simulation of health education curriculum

If we are to apply Maňák’s thoughts on the educational field of health education, the school reality in the Czech Republic is reinforced by a disputable status of the respective educational field both, at the level of projected curriculum form in the Framework Educational Programme for Basic Education as well as at the level of implemented curricula in schools.

In the projected curriculum form (i.e. in the Framework Educational Programme for Basic Education), health education is on the one hand embedded as an individual educational field, on the other hand, it does not have sufficiently defined implementation support. The Framework Educational Programme for Basic Education does not set a minimum week time allocation, as it is e.g. in case of physical education. Next, there is no recommended educational form or organization of subject matter for implementing the educational content of health education (e.g. subjects and years the educational content should be integrated in). Finally, the document does not facilitate the expertise and qualification of health education teachers. Therefore, the definition of health education as an educational field in the Framework Educational Programme for Basic Education rather resembles a cross-sectional topic.

At the level of school practice, the implementation of health education usually appears to be underestimated not only by primary school managements and teachers, but also by pupils and their parents. As proved by research findings (see Mužíková 2008, 2009), a majority of Czech population is not aware of the existence of health education in basic (i.e. primary and lower secondary) education. Schools have not developed sufficient support conditions for this educational field. Contrary to traditional educational fields and subjects, the problem of health education is further complicated by the need to define completely new educational plans as well as curricula within the existing school educational plans. However, for this type of projecting, as already mentioned, schools lack a sufficient number of qualified teachers as well as enough experience.

A possible solution might be to provide schools with research-based, systematically organised stimuli for implementation of the projected form of health education curriculum into school educational programmes (SEP). These stimuli should help to confront the requirements for the educational content as stated in the Framework Educational Programme for Basic Education and implementation possibilities of concrete

schools, and thus serve as a starting point for the constitutive model of health education curriculum within SEP¹.

In this respect we draw back upon the above quoted Maňák's study (2007). We assume that *the process of implementation of the projected curriculum form at national level (Framework Educational Programme for Basic Education) into the projected curriculum form of school level (SEP) is possible only with the application of simulation method producing a constitutive model of school curriculum (i.e. SEP). The subject (author) of such a model is the teaching staff. The object is the educational content given by the educational conditions in schools. Subsequently, the teachers' task is to implement this constitutive curriculum model into the implemented curriculum model, meeting all curricular requirements. This process can also be reasonable and effective only when applying the curriculum simulation method.*

*The simulation of health education curriculum within SEP is inevitably associated with many problem questions that are currently being dealt with by the authors of SEP, respectively authors of the constitutive model of health education. The **problem questions** can be organised in the following system:*

a) How will the educational content of health education be implemented and who will be in charge of implementation (instruction)?

- *Will health education be taught as a separate subject?*
- *Will the required topics be integrated into one or more other subjects?*
- *Will the required topics be taught in a form of projects or block instruction?*
- *Will the instruction be realized as a combination of the above mentioned forms?*
- *How are the teachers concerned qualified? How will they obtain necessary qualification?*

b) How will the compulsory educational content of health education be completed?

- *Will health education penetrate the entire school process?*
- *What will the offer of optional subjects, non-compulsory subjects, and hobby forms look like?*
- *What will be the focus of physical education?*
- *What criteria will be important for the evaluation of subjects containing the subject matter of health education?*
- *What criteria will be important for the evaluation of physical education?*
- *How will pupils be assessed in these subjects?*
- *What other educational forms will be organized (courses, excursions, meetings, programmes, projects etc.)?*
- *How will cooperation among teachers, teachers and pupils, and pupils themselves be facilitated?*

c) How will the educational process of health education be supported in schools?

- *Will teachers and other school staff serve as good examples to pupils?*
- *Will an adequate social atmosphere and school climate develop?*
- *How will personality education and social education of pupils look like?*
- *How will health education address environmental issues?*

¹ We assume that the existing limited methodology support for health education was published either before the emendation of the Framework Educational Programme for Basic Education (Marádová, 2006), or does not respect the curriculum simulation method sufficiently (Pernicová, 2008).

- *What forms of cooperation with parents, municipality, institutions etc. there will be?*
 - *How will pupils' diet be regulated (meals at school canteens/cafeterias and outside school, drinking and eating regimen)?*
 - *How will pupils' leisure time be influenced?*
- d) *What other problems related to the implementation of health education in schools are there?*
- e) *What changes may occur during the implementation of health education model within SEP?*

The answers to the problem questions may include:

a) *Defining main educational forms of health education*

- If health education is to be studied as a *separate subject* (especially in upper primary school), it should be taught by a qualified teacher².
- If health education is to be implemented by means of *subject integration*, it will be necessary to incorporate the given topics into relevant subjects. Participating teachers should be sufficiently educated in the field.
- If *block project instruction* is to be preferred (especially in lower primary school), it will be purposeful to define and take advantage of inter-subject relations.
- If a compulsory instruction is to be extended by an optional subject, it will be necessary to specify compulsory and optional topics.
- If health education is to be integrated *with physical education* (our research confirmed this intention of primary school heads), a change in the orientation of physical education from movement performance to “health promotion” will be of crucial importance.

b) *Defining additional forms of health education*

- Health education should involve excellent preparation and implementation of preventive programmes – especially in case of social-pathological behaviour (e.g. the compulsory Minimum Prevention Programme required by a methodological regulation of the Ministry of Education, Youth and Sports).
- Implementation of projects promoting health, e.g. Health Promoting School, Healthy Weeks, Healthy Days, and Healthy Teeth is appropriate.
- Introduction of *other forms of physical education* with health and compensation content (optional subject of healthy physical education, regular PE moments, movement-relaxation breaks, PE groups, courses, outdoor stays etc.) can be recommended.
- Health education can be further extended by one time educational forms, e.g. *external educational programmes* organized by specialized institutions (leisure time centres, ecological education houses, K-centres etc.), or meetings with specialists (doctors, medical staff, psychologists, policemen, social workers etc.).
- *Project or thematic days* (e.g. the issue of preservation of human life in extreme situations) and *training for emergency cases* can be also recommended.
- Pupils' participation in various ecological activities is also needed.

² Note: Graduates in health education are not available in the Czech Republic yet, and the number of graduates in family education is very low.

- Schools might offer more *school leisure time activities* (e.g. school clubs or hobby groups promoting health, concretely healthy diet, first aid, healthy lifestyle, health science etc.)
- c) *Defining forms of health education going beyond the school environment*
 - School instruction can be enriched by an offer of *leisure time outside school activities* (trips, outdoor stays etc.)
 - Tight cooperation with parents will be essential (promoting and valuing healthy lifestyle within family, restricting smoking and alcohol consumption, offering joint leisure time activities for parents and children: e.g. joint adventure activities or exercising, organizing talks and courses for parents with the aim to promote health education both, in school as well as in family etc.)
 - Establishing a *counselling centre* for parents and children would be beneficial.
 - *Cooperation with the public*: local municipality authorities, specialized departments of other institution and paediatricians should be specified.
- d) *Focus on psychosocial area*
 - Cooperation among individual teachers and other school staff is crucial since health education should penetrate the school educational process as a whole.
 - Increased attention should be paid to communication between the teacher and pupils in order to create a favorable psychosocial school climate. Pupils often do not trust their teachers enough and are not willing to share their problems with them.)
 - Special care is needed for *children with specific learning difficulties* and *integration of children with disabilities*.
- e) *Specifying material requirements*
 - It is necessary to provide *specialist and methodology materials* for teachers.
 - It is necessary to provide *study materials and aids* for pupils.
 - It seems to be useful to set up *specialized rooms*, or *adjust school facilities/premises*, e.g. for movement-relaxation breaks.
 - The above stated material requirements need allocation of *sufficient funds*.
- f) *Influencing pupils' nutrition and movement activity*
 - Adequate attention should be paid to pupils' *meals, drinking regimen and movement activity* during classes.
 - There is a need for systematic *instruction on healthy eating habits and movement activity* in a daily routine (including effective cooperation with parents).
 - It is appropriate to alter menu in school cafeterias (they should serve meals for overweight children or children with health problems).
 - It is reasonable to consider organising optional *courses on healthy diet and movement activity promoting health* in collaboration with external lecturers.

Conditions limiting the simulation of health education curriculum

Meeting educational aims and developing pupils' key competences required by the Framework Educational Programme for Basic Education should be supported by providing adequate *conditions for education*. Undoubtedly, the educational field of heal-

th education is no exception here. Pupils' educational needs, conditions for teaching, general regulations and norms and other requirements can be regarded as *factors limiting simulation of health education at the level of SEP* (see Fig. 2). These factors furthermore reflect the above stated problem questions and suggestions of possible solutions.

When simulating health education, the authors of a health education model within a SEP (i.e. teaching staff, subject committee, and health education teachers) should confront concrete school conditions with both, required as well as optimal conditions defined by legislative and educational documents. These required and optimal conditions will be characterized below as we assume them to be essential starting points for simulation of health education within SEP.

Fig. 1 shows *general* and *specific conditions* for implementing the educational content of health education. We will attempt to elaborate on these conditions with the help of the Framework Educational Programme for Basic Education (2007).

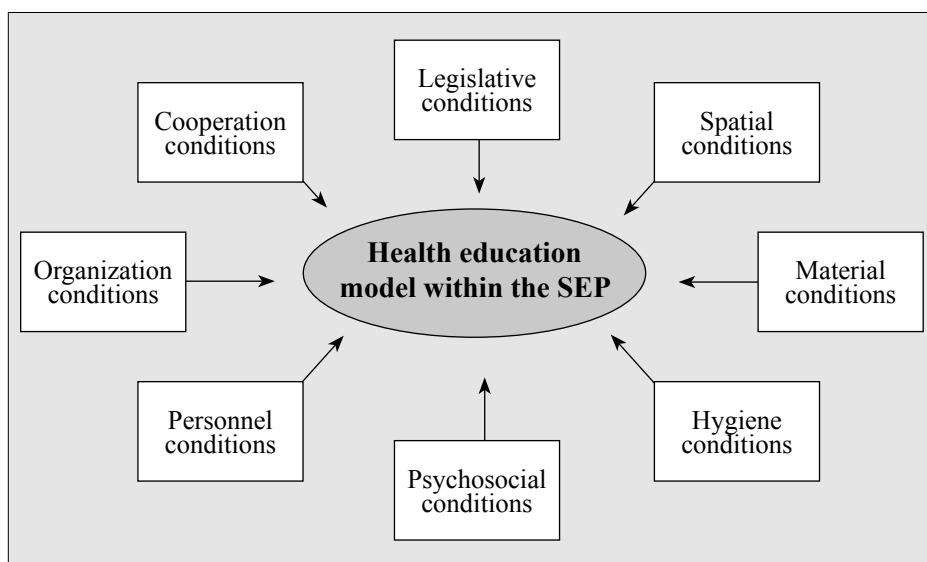


Fig. 1: Starting points for simulation of health education within the SEP

An effective and complex concept of health education cannot address only the educational content defined for this educational field. As already mentioned, health education is rather a cross-sectional topic penetrating the entire school life, including general conditions for instruction. The designers of school models of health education should be aware of these aspects and take them into consideration when simulating health education.

The **general conditions** for the complex concept of health education are those that concern the entire educational process as well as other aspects of everyday school life of such nature that they fall into the complex concept of health education.

a) Legislative conditions are defined by educational and legal documents, the fundamental being those below:

- National Programme for the Development of Education in the Czech Republic – White Paper (2001);
- Framework Educational Programme for Basic Education (amended version from 1 September 2007);
- Long-term Programme for Improving the Health of the Population in the Czech Republic – Health for All in the 21st century (2002);
- the so called School Act and its amendments;
- The Act on Educational Staff and its amendments;
- Methodological Directive Ensuring Safety and Health Prevention in Children, Pupils and Students in Schools and School Facilities;
- Methodological Directive on Primary Prevention of Social-Pathological Phenomena in Children, Pupils and Students in Schools and School Facilities;
- Regulation on Providing Counselling Services in Schools and School Counselling Facilities;
- Regulation on School Catering;
- Regulation on Hygiene Requirements for Premises and Operation of Educational Facilities for Children and Youth;
- Regulation on Hobby Education;
- Regulation on School Educational and Boarding Facilities, and School Purpose Facilities;
- Regulation on Further Education of Educational Staff, Accreditation Council, and Career System of Educational Staff;

b) *Spatial conditions*, despite being of more general nature, can be considered fundamental for implementing the complex concept of health education. They include:

- particular (universal) classrooms for each class with multifunctional and working equipment;
- premises for physical education (including outdoor or rented) equipped with safe track/surface and sports apparatus;
- space for lesson planning and keeping teaching aids (teachers' offices), equipped with appropriate furniture and teaching aids for health education;
- study zones for active ways of spending leisure time (libraries, study rooms, and information and communication centres);
- space for leaving clothes and shoes (changing rooms), including rooms for changing clothes before and after physical education, in number adequate to the number of exercising grounds, alternating pupils, and separate activities for boys and girls;
- space for pupils and teachers' personal hygiene – lavatories equipped with a sufficient number of hygienic equipment meeting the physiological needs of given age and relevant norms;
- room suitable for treating minor injuries and a short-term stay of the injured, or for dealing with health problems;
- other supporting facilities ensuring school operation (stores, space for waste sorting etc.)

c) *Material conditions* involve especially study materials and aids. When met, they serve as preconditions for the so called “healthy learning”:

- textbooks and study materials for all pupils;

- methodology materials for teachers;
- appropriate didactic aids for pupils;
- information and communication technology;
- other apparatus, tools, and aids for effective education.

d) *Hygiene conditions* besides general hygiene requirements include also conditions for safe education and school life:

- adequate structure of work and relaxation regimens for pupils and teachers with enough relaxation and active movement;
- adequate regimen of classes respecting “learning hygiene” and pupils’ age;
- adequate eating and drinking regimen (for pupils’ age and individual needs);
- healthy environment in the classrooms and school premises (i.e. adequate light conditions, heating, noiselessness, cleanness, ventilation, size of seating and working furniture, and hygienic equipment in compliance with current norms, as defined by legislative conditions)
- observing the prohibition of smoking, alcohol consumption and other harmful substances from school and its surroundings;
- injury prevention;
- clear marking of dangerous objects and parts of school premises;
- regular safety checkups of facilities;
- availability of first aid, medical care or other specialist services;
- teachers’ skills to give first aid.

e) *Psychosocial conditions* are also rather general; however, they are among key preconditions for complex health education:

- creating pleasant environment, healthy learning and open partnership among pupils and teachers as well as between teachers and school management;
- education connected with real life; learning things that can be used in practice and enable hands-on experience;
- age adequacy and motivating assessment – respecting pupils’ individualities, assessment in compliance with pupil’s individual potential, sufficient feedback, tolerating mistakes and failures;
- meeting pupils’ needs (the overall benefit to pupils is a main criterion in the preparatory stage and realization of education);
- favourable social climate (openness and partnership in communication, respect, tolerance, recognition, empathy, cooperating with and helping the others, and solidarity with the class/school);
- protection for pupils against violence, bullying, and other social-pathological phenomena;
- participation of pupils in education and school life;
- early informing of pupils about school and outside-school affairs;
- respect for needs of an individual and their personal problems;

f) *Personnel conditions* limit the overall quality of education and healthy studying environment in the entire school regimen. Those of crucial importance are the following:

- pedagogical staff meeting the requirements stated in the Act No. 563/2004 Collection of Law, able to participate in other school activities too;
- pedagogical staff with sufficient professional skills (i.e. communicative towards

pupils as well as their parents and other teachers and specialists facilitating special services for the school; able to diagnose pupils and motivate them, maintain informal discipline, continuously educate themselves, or critically assess and modify own professional performance);

- school can offer specialist assistance to pupils and their parents (e.g. assistance of special teachers, school psychologists, or teaching assistants);
- pedagogical staff are able to work in a team and succeed in mutual communication and collaboration;
- staff in managerial positions respect the educational content of health education, have excellent managerial, organization and teaching skills, are able to create motivating as well as professionally demanding atmosphere, strive for own continuous specialist and professional development as that of the other employees, have conceptual thinking and working style, are willing to give advice, and can protect teachers from negative outside influences.

g) *Organization conditions* determine educational possibilities of the school. General conditions for complex health education include:

- participation of all teachers in the implementation of the SEP, including health education;
- optimal regimen of instruction adequate to pupils' age and needs in compliance with the content of education and appropriate ways of learning, offering follow-up compulsory and optional education;
- optimal regimen of school life addressing pupils' needs given by their age and safety requirements (relaxation, movement regimen, eating and drinking regimen, hygiene, hobbies, and emergency situations).

h) *Conditions for cooperation* between the school and parents, other institutions and the public create a precondition for expansion of health education outside school and into pupils' lifestyle. They are especially:

- functional and up-to-date flow of information aimed at pupils, teachers, school management, parents, and school partners as well as among the individual participants in education;
- meeting with pupils' parents and other public (e.g. school council) – presenting school plans and aims, ways of instruction, assessing pupils, school regulations, and encouraging cooperation in problem solving;
- educational strategies open to parents;
- opportunity for setting up and operating an independent parents' authority;
- opportunity for meeting teachers and parents;
- counselling parents in educational/up-bringing issues;
- information on individual pupils necessary for individual educational forms;
- opportunity for parents to participate in lessons and educational activities organized by the school;
- building social relations between the school and the public.

The **specific conditions** limiting the implementation of the educational content of health education are as follows:

a) *Spatial conditions*:

- specialized classroom for health education equipped with portable furniture, laboratory equipment (microscope), visual and didactic materials and aids, and audiovisual technology;
 - working zone (e.g. kitchen and first aid room) equipped with appropriate devices, teaching aids etc.
 - relaxation zone and zones for non-demanding movement activities – for group and individual activities and for shared as well as individual relaxation of pupils and teachers;
 - zones for afterschool activities (hobby groups, clubs), furnished with working and relaxation furniture; aids or tools for active/passive relaxation and learning;
 - providing meals in adequately equipped cafeterias and canteens, adjusted to pupils' age and meeting hygienic norms.
- b) *Material conditions* concerning study materials and aids for health education.
- textbooks for health education (that are not available at present) or textbooks with integrated content and elaborated health education for both lower and upper primary school;
 - methodology materials and support for teachers (e.g. health education web portal within the Framework Educational Programme for Basic education);
 - didactic aids for pupils (e.g. resusci anne torso, human skeleton model, tonometer, bandage and other medical material);
 - information and communication technology including multimedia programs with health education issues;
 - apparatus, tools and aids for physical education and recreational movement activity.
- c) *Hygiene and psychosocial conditions* are identical with the general conditions.
- d) *Personnel conditions* significantly determine the quality of health education. They are influenced by teachers' interest in health education itself, and their concern over their own as well as their pupils' lifestyle. Consequently, personnel conditions influence designing study plans and curricula. (For more details see organization conditions below.)
- At present, there may be following teachers working in schools:
 - lower primary teachers without adequate qualification in health education (teachers without university degree, graduates in lower primary school teaching study programme without relevant subjects etc.);
 - lower primary teachers qualified for teaching health education;
 - upper primary teachers without adequate qualification in health education;
 - upper primary teachers qualified for teaching health education (graduates in family education, respectively family education and health education, in future health education);
 - teachers who successfully completed courses (seminars) on health education;
 - qualified or non-qualified school prevention methodologists;
 - external teachers facilitating health education (e.g. with medical, healthcare or pedagogical qualification).
- e) *Organization conditions* reflect themselves especially in *school study plans, curricula* (by means of SEP), *school assessment* of pupils, and *school self-evaluation*:

The *study plan* is to contain:

- a clear-cut division of the plan in lower and upper primary school and a clear decision whether health education in upper primary school will be implemented as a compulsory subject, including time allocations for particular years, or will be integrated into other subjects;
- specifying possible optional subjects with the educational content of health education and their time allocations for individual years;

The *study plan notes* are to include:

- definition of the content, organization conditions and other specifics of the implementation of a compulsory and optional subject/optional subjects (i.e. when the title of the subject and its educational content are not identical with the educational field of health education; furthermore, what field/fields or cross-sectional topics this subject is based on);
- deploying other organization educational forms of health education than lessons.
- The *curriculum* is to state:
- subject title and its characteristics (i.e. content, time and organization definition of the subject);
- in case of integration of the educational content of health education into one or more other subjects, the curriculum should state the educational fields or their parts and cross-sectional topics that provide the educational content for this subject/these subjects;
- educational strategies, i.e. procedures pursued at the level of the taught subject(s) targeted at creating and enhancing pupils' key competences;
- the educational content of the subject, i.e. dissemination and developing expected outcomes to individual years or longer periods; selection and designing the subject matter for individual years or longer periods in respect to the expected outcomes; cross-sectional topics – selection of thematic areas and specifying topics and activities for individual years;
- other recommended information, i.e. inter-subject relations and additional notes specifying the implementation of the educational content;

Assessment of pupils and school self-evaluation is to include:

- rules for assessing pupils;
- ways of assessing pupils (marks, oral assessment, combination of both);
- criteria for assessing pupils within health education;
- areas of self-evaluation, aims and criteria of self-evaluation, and tools for self-evaluation within health education;

Suggestions for organization educational forms in health education

As results from *school study plans*, the educational content of individual fields is implemented by means of various organization forms of education. Their selection depends on concrete conditions in particular school. The following forms are appropriate for health education:

- a) *Fundamental organization forms of education for compulsory educational content:*
- separate compulsory subject named health education (or with a similar title)
 - integration of the educational content into another compulsory subject
 - integration of the educational content into more compulsory subjects
 - block instruction, respectively project education exceeding the framework of one subject (especially in lower primary school)
- b) *Additional organization forms of education:*
- voluntary subject
 - optional subject
 - projects (school, class, peer, national, regional)
 - outside-school instruction programmes (K-centres etc.)
 - talks and meetings with specialists
 - excursions to non-school facilities and institutions
 - courses and seminars
 - outdoor exercising
 - “school in the countryside”, curative stays in the countryside
 - school trips
 - other school educational activities (competitions, sports activities and performances)
 - other forms (demonstrations, video programs, computer programs, literature, the Internet)
- c) *Leisure time forms of education and other activities:*
- hobby groups and school clubs
 - competitions
 - children-parent activities
 - curative stays and summer camps
 - trips
 - after-school clubs
- d) *Complex programmes and projects:*
- Minimum Prevention Programme
 - Health Promoting School project
 - programme specified by the school

Conclusion

We have drawn attention to the importance of a system approach for designing the projected curriculum form within the SEP with application of simulation method. The outcome is a *constitutive model of school curriculum*, which is limited by educational conditions of individual schools.

The above suggestions may serve as the *starting points for simulation of health education within SEP*. We believe that suggestions for organizing the subject matter and other ideas are an open system that should be completed and adjusted according to real simulation of health education in particular schools. This brings opportunities for creativity on the side of teachers who become the *school curriculum authors*.

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VÝZNAM METODY MODELOVÁNÍ PRO IMPLEMENTACI VÝCHOVY KE ZDRAVÍ DO ŠKOLNÍCH VZDĚLÁVACÍCH PROGRAMŮ

Abstrakt: Současné výzkumy kurikula ukazují, že proces implementace projektové formy kurikula státní úrovně do projektové formy kurikula školní úrovně je systémově možný jen při uplatnění vědecké metody modelování. Výsledkem tohoto procesu je konstitutivní model kurikula školní úrovně, který je třeba následně implementovat do realizovaného modelu kurikula školní úrovně, a to při uplatnění všech kurikulárních požadavků. Implementace výchovy ke zdraví do školních vzdělávacích programů je v současné době spojena s mnohými problémovými otázkami. Příspěvek ukazuje, jak je možné problémové otázky systémově uspořádat a řešit s využitím výzkumné metody modelování.

Klíčová slova: výzkumná metoda modelování, konstitutivní model kurikula, realizovaný model kurikula, výchova ke zdraví, kurikulum výchovy ke zdraví, školní vzdělávací programy