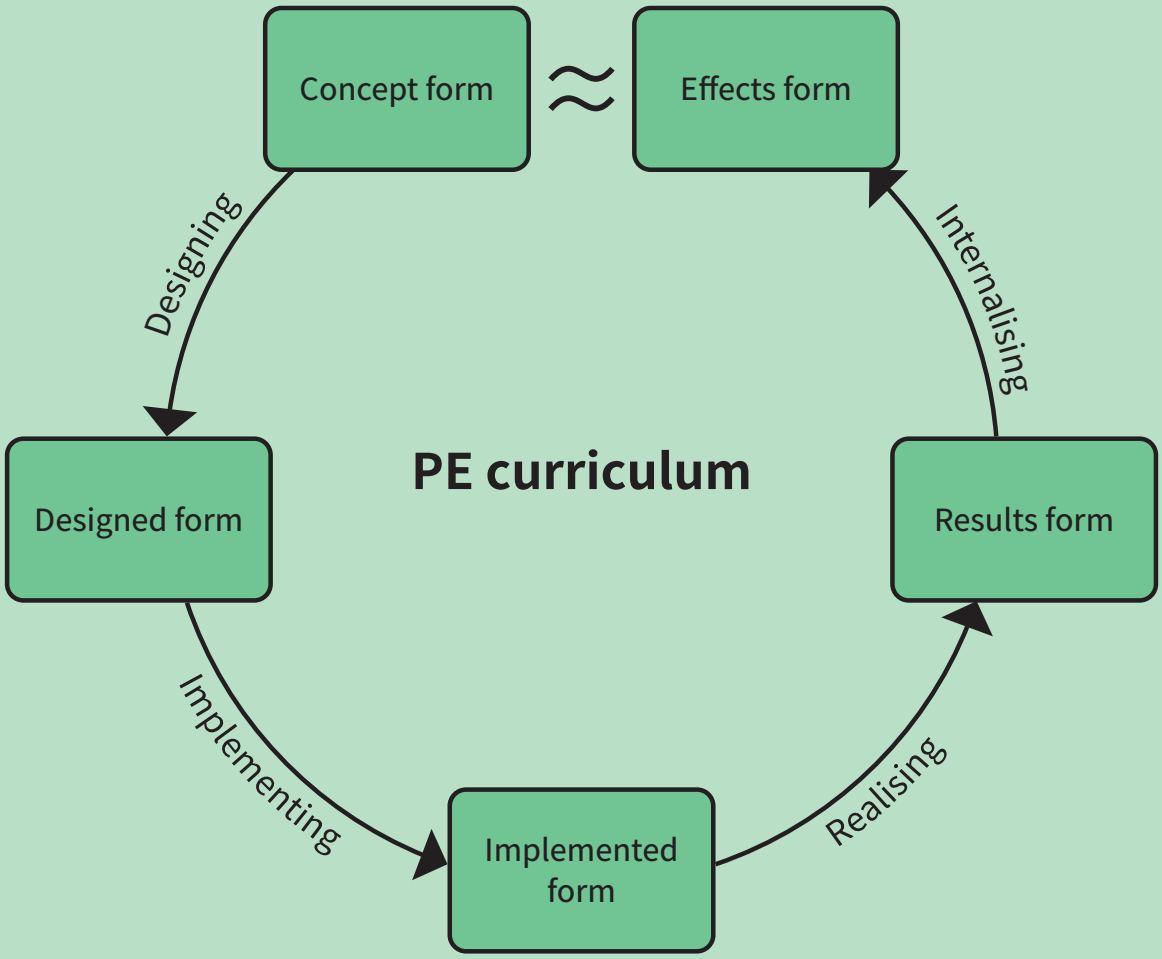
A critical analysis of the Physical Education curriculum in the Czech Republic

Petr Vlček



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Content

Preface

This book is about the Physical Education (PE) curriculum in the Czech Republic – and it is also about dichotomies. It summarises the findings from the author's research over the past ten years into the PE curriculum in the Czech Republic and internationally, predominantly in Europe but also in the USA. Its primary purpose is to present this research into the quality of the Czech PE curriculum and to make recommendations regarding its redesign.

The body of work presented here reflects the fact that much of the author's research has been realised within team collaborations, in the early years though the contribution of specialist PE expertise to broader research teams, and subsequently as lead researcher. Such collaboration between experts is strongly supported by the author; hence, the views and opinions presented are usually expressed in the plural.

This publication targets the scientific community and experts in the field of curriculum studies and/or didactics. It presents various methods of curriculum research, including the comparative research method, describes recent research results and seeks to enrich the knowledge base of the field of study. It is intended that the text should be of general value as well as being relevant to the current revision of the PE curriculum in the Czech Republic.

The educational systems of post-communist countries have transitioned over the last 30 years from a system where central control was absolute and politically directed. This transition has been affected by the structural reform of the entire governance of the country, political instability, confusion between stakeholders as to the direction of educational reform and a lack of resources; nevertheless, a relatively stable educational system has emerged, particularly in the Czech Republic.

Many of the scientific texts dealing with PE curriculum research are written by authors from English speaking or German speaking countries. However, the author brings a different perspective. This monograph is written by someone who grew up during the Communist Era, remembers the Velvet Revolution as a teenager, and who studied at University at a time when the Czech Republic was discovering democracy; who remembers when traveling to the West was banned, but who eventually studied in Germany and England and brought this foreign experience and international perspective back to the Czech Republic;

who was a classroom teacher through the curriculum reforms of the last decades. The author is now an academic focusing on PE curriculum research and closely involved, at a national policy level, in Czech PE curriculum development. These experiences have given the author a unique perspective in describing, explaining and searching for meaning in the international experiences of PE curriculum development, not from a western paradigm, but from the perspective of a post-communist country in Central Europe.

It is now 20 years since the Czech PE curriculum last underwent major reform and the author has been a researcher dealing with the PE curriculum for half that time. This enables an assessment of the merits of the reform and challenges the author to consider the shortcomings of the current curriculum.

A number of individuals have been of assistance during the lengthy process of planning, writing and editing. I wish to thank – my English editor for helping me write readily understandable text that flows logically and is well structured, and the following professors and colleagues for their assistance. First of all, I would like to thank prof. Vladislav Mužík and all the colleagues from Physical Education and Health Education Department at the Faculty of Education, Masaryk University, for their fellowship and assistance; and also the management of our Faculty who strongly supported me and I thank them for that. I would also like to thank some Czechs and non-Czechs, who in some way contributed to the fact I wrote this book. Therefore, I thank my colleagues from the Associations and networks I have the honour to cooperate with, namely CSPET, EUPEA, CEREPS, FIEP, BMC-EU and CALMAZ. Finally, I would like to thank my family who have supported me throughout this process.

In addition, I would like to thank all of you who will read this book and give me feedback.

Petr Vlček

1 Introduction

Various PE concepts were introduced into the Czech lands in the 19th century and relevant educational content developed. As described in a later chapter, PE was first introduced as a compulsory subject more than 150 years ago in basic schools.[1] This provided the foundation of PE and its curriculum in the Czech Republic. The changing socio-political values since then have seen the concepts and educational content of PE change over time, as well as different interpretations and realizations of that content.

The current form of the Czech PE curriculum reflects the three decades of change and reform that have taken place since the political upheaval of 1989 and it is now twenty years since the last conceptual reform in PE. In the opinion of many authors referred to in this monograph, the quality of the PE curriculum and the processes affecting quality have not been sufficiently examined scientifically. Thus, the aim of this monograph is to present a rigorous and informed review of curriculum quality[2] in the PE context and to provide fresh insights into how the problematic areas of the Czech curriculum should be addressed. This is a well-timed discussion as a revision of Czech basic school curriculum is currently being proposed.

Chapter 2 introduces the theoretical aspects of the curriculum. What is meant by the term 'curriculum' is discussed and its structure described, some basic terminology on curriculum change is explained (school reforms, curriculum reform, innovation etc.), some aspects of a quality curriculum are presented, and the various PE curriculum concepts identified. Then the scene is set in Chapter 3 with the history of PE in the Czech Republic, an outline of the current PE curriculum policy and a definition of the problem addressed in this monograph.

In Chapter 4 and 5 our collaborative research into various aspects of the Czech curriculum is presented. The research in Chapter 4 is primarily based on empirical data collected using different research tools and methods (such as text analyses, expert interviews, and questionnaire surveys) to assess curriculum quality.

1 Mandatory education in the Czech Republic is referred to as basic education. Currently this includes pupils aged 6 to 15 years. It has two stages (ISCED 1 and 2). The first stage is called primary education and the second stage is called lower secondary education.

2 In this monograph, quality is considered as balance between what is expected and what is achieved.

In Chapter 5 our research into the PE curricula from a comparative, international perspective is presented using the methodology of problem-oriented comparative analysis. In Chapters 6 and 7, an overview is provided of the current issues regarding the Czech PE curriculum and recommendations are made for PE curriculum change.

In the preface, it was noted that this monograph is also about dichotomies.[3] Chapter 8 completes this monograph with a discussion of these dichotomies.

3 A dichotomy exists when two features of a phenomenon are contrasting opposites; for example, war and peace, what politicians say and what they do, bottom-up change of curriculum vs. top-down, etc.

2 Curriculum theory

The *curriculum* is a complicated concept, conceived differently at different times, by different scholars, working in different countries and regions, in different institutional settings with differing demands. It is not surprising, therefore, that there are many definitions (cf. Wyse, Hayward, & Pandya, 2016). Some of these reflect the different cultural and scientific traditions of the Anglosphere compared to continental Europe, with its pronounced influence from the German tradition (cf. Hopmann & Riquarts, 1995; Hopmann & Gundem, 1998; Horlacher, 2018).

2.1 What is the 'curriculum'?

There are two main paradigms in curriculum research depending on what we understand by the term; a narrow approach that defines it as research into specific curriculum documents (syllabi, textbooks, etc.), or a broader approach, as a search for answers to questions such as why, who, in what, how, when, under what circumstances to educate, and with what desirable outcomes in mind (Kridel, 2010, pp. 229–264; Thijs & Van den Akker, 2009, p. 12; Walterová et al., 1994, p. 53; 2006, p. 224).

Some of the many definitions of curriculum which appear in the literature are listed in Table 1.

Tab. 1: *Some definitions of 'curriculum'.*

• The curriculum is a 'plan for learning' **(Thijs & Van den Akker, 2009, p. 9)**.
• The curriculum describes 'the subjects taught and the intended learning outcomes for a course of study at an educational institution' **(TESE, 2006, p. 112)**.
• 'In a narrower definition, a curriculum means a teaching programme. In a broader sense, curriculum means all the learning that takes place at school or in other institutions, both planned and unscheduled' **(Lawton & Gordon, 1993, p. 66)**.
• 'Curricula are syllabi, which are based on scientific procedures, which determine clear time periods for teaching, and which are adapted to evolutionary control and potential innovation' **(Roth, 1991, p. 659)**.
• 'The curriculum is the content of all the experience pupils receive at school and in activities related to the school, its planning and evaluation' **(Průcha, Walterová, & Mareš, 2009, p. 136)**.

The curriculum in its broadest sense is a complex phenomenon but from the table above it can be seen that its narrower interpretation also varies significantly – from the content and details of a course or study programme to the totality of the learning opportunities in an educational institution, as in the *school curriculum.* In its widest sense, it can be the *national curriculum*, that is, the programme of learning applying to all pupils in the nation (Wallace, 2015, p. 197; Thijs & Van den Akker, 2009, p. 9). The Czech pedagogical dictionary defines the national curriculum as follows: 'It is a state-guaranteed curriculum, a common framework defining learning objectives and educational content. It includes general objectives of school education, fundamental components of educational content, sets out learning objectives to be achieved by pupils at certain ages and educational standards corresponding to the learning objectives, and contains directives for implementation in schools' (Průcha, Walterová, & Mareš, 2009, p. 166). It is the national curriculum that is the focus of this monograph.

The national curriculum is usually in the form of a *curriculum framework*, which determines the educational requirements for various stages of education, particularly in terms of learning objectives and educational content. It is an important overarching document, usually developed by a high-level group of curriculum and education policy experts and reflecting a social and political consensus around the society's educational vision. A Curriculum Framework would normally include statements about underlying values, conceptions of learning, the major aims, purposes and tasks of education, about the development of school culture, etc. It is a core policy document that describes a range of requirements, regulations and advice which should be respected by all stakeholders in the education system, and which should guide the work of schools, teachers and the developers of other curriculum documents, such as textbooks and teacher guides (Stabback, 2016, p. 26).

While it is not easy to agree on a consistent definition of the term (cf. Kridel, 2010, pp. 179–189; Kirk, 1988, pp. 7–17) it is necessary to describe the curriculum in ways that help researchers deal with this complexity.

Two key approaches to curriculum research can be distinguished (cf. Posner, 1992; Thijs & Van den Akker, 2009). The first, the *structural* (static) approach, focuses on the specific elements or the *forms* of the curriculum and tends to describe the curriculum objectively as a product (for example in its written form). The second, the *functional* (dynamic) approach, deals with the *processes* that occurred 'before' the curriculum was designed and what happened 'after'. It includes the processes of conceptualising, designing and implementing the curriculum. The functional approach allows for interpretative questions such as, 'what did the curricula makers mean' and more importantly 'how is the curriculum interpreted by those concerned'.

Tab. 2: *Curriculum operational levels and curriculum products (Thijs & Van den Akker, 2009, p. 9).*

LEVEL	Description	Examples
SUPRA	International	• Common European Framework of References for Languages
MACRO	System, national	• Core objectives, attainment levels • Examination programmes
MESO	School, institute	• School programme • Educational programme
MICRO	Classroom, teacher	• Teaching plan, instructional materials • Module, course • Textbooks
NANO	Pupil, individual	• Personal plan for learning • Individual course of learning

A useful structural approach is to describe the curriculum in terms of the operational levels that are characteristic of any system (Fend, 2008). The following division into five levels (Table 2) has proved to be a useful categorisation although many further subdivisions are possible (Thijs & Van den Akker, 2009). The 'higher' curriculum levels affect the 'lower' ones, especially if they have a mandatory status, for example the national curriculum, that limits the room to manoeuvre for stakeholders in the lower levels (cf. Fend, 2008).

A key structural approach distinguishes three sequential levels of the curriculum existence, namely the *intended curriculum*, *implemented curriculum*, and *achieved curriculum* (cf. Keeves & Adams, 1997; Straková, Tomášek, & Palečková, 1996). This is the approach used in research by the IEA (International Association for the Evaluation of Educational Achievement).

Tab. 3: *Levels of the curriculum existence (cf. Keeves, 1997).*

- The **intended** educational content is usually specified by the policy-makers responsible for developing the education system. In some countries, however, responsibility for what is taught and instructed is transferred to schools and teachers themselves. The intended curriculum is the policy-intent, that is, what is planned for a country's school system in terms of learning objectives and content.
- The **implemented** curriculum is the second form of the sequence. Every teacher's task is to interpret the intended curriculum and translate it into practice appropriate for a specific group of pupils. It can be defined as the material actually delivered to pupils by individual teachers in particular schools and classes.
- The **achieved** curriculum is the level of information acquired by the pupil or student during the course. It is, above all, pupils' knowledge in relevant subjects.

While many researchers use a structural approach, others have focussed more on a functional approach, or a combination of both. For example, the three-level structural model can be expanded to include the functional content transformations that the curriculum undergoes as shown in Figure 1.

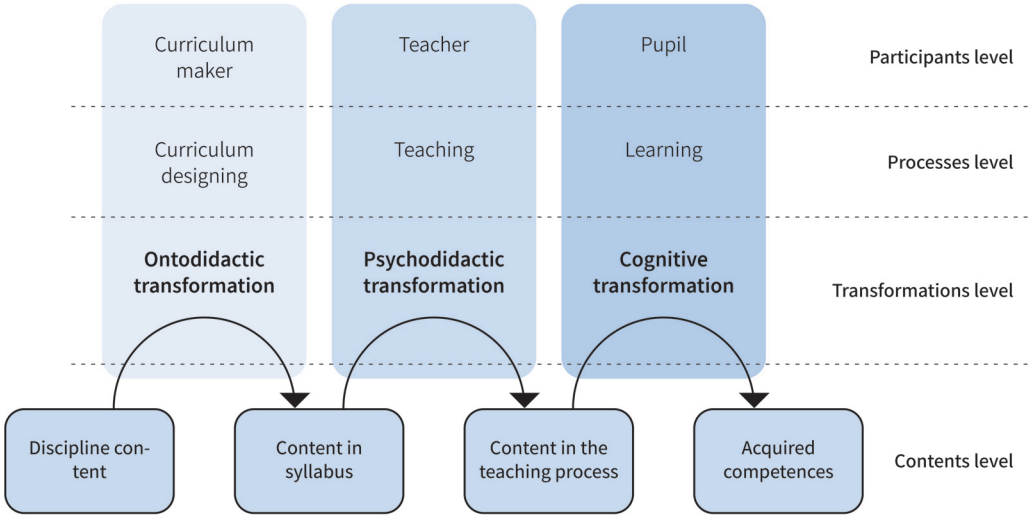

Fig. 1: *Levels of educational content existence and educational content transformation (cf. Janík, Maňák, & Knecht, 2009, p. 38).*

The first step requires *content processing*, that is, a thoughtful and reasoned selection of content from a pool of knowledge in a particular discipline and its formulation into a legitimate set of knowledge requirements and activities in the designed curriculum (cf. Wilson, Shulman, & Richert, 1987). This is known as *ontodidactic transformation* (cf. Janík & Slavík, 2007; Píšová et al., 2011). The designed curriculum is then transformed by teachers into the educational content delivered in the class. This process is defined as *psychodidactic transformation*. The third stop, *cognitive transformation*, is the transformation through the learning process in the classroom to the results form.

Průcha (2002) expanded the three-level curriculum model into five different structural forms of the curriculum existence (Table 4).

Tab. 4: *Forms of the curriculum existence (cf. Průcha, 2002).*

Concept form	Vision, rationale or 'basic philosophy' underlying a curriculum
Designed form	Official documents (syllabi) usually prescribed at both the government level (the educational framework) and at the school level
Implemented form	Curriculum as interpreted and used (especially by teachers)
Results form	Outcomes of the actual process of teaching and learning
Effects form	The impact of the acquired and attained learning outcomes on learners

This model has been developed further by Janík et al. (2010a) to incorporate a functional approach. The functional processes linking the different forms are: *conceptualising*, *designing*, *implementing*, *realising*, and *internalising* (Janík, 2010a, p. 34; Vlček & Janík, 2010, p. 32). The individual processes can be explained as follows (Table 5).

Tab. 5: *The functional processes linking the different curriculum forms (cf. Vlček & Janík, 2010).*

Conceptualising is a process of formalising values and ideas into a basic concept.
Designing is the process of developing the curriculum documents and consists of defining learning objectives and educational content.
Implementing is the process of introducing the curriculum to teachers in schools.
Realizing is the process in which teachers interpret the curriculum and teach it to their pupils to achieve results.
Internalising is the process of incorporating the curriculum into everyday life.

The relationship between the three curriculum levels and the five forms and processes is shown in Figure 2. This framework provides the basis for the research presented in Chapters 4 and 5 and the discussion of quality issues in the chapters that follow. In our view, any research or discussion of curriculum quality must take place within this comprehensive framework. When the focus is only on one form or process, such as the designed form of the curriculum and its implementation, which is frequently the case both internationally and in the Czech Republic, then any conclusions or recommendations will be inherently flawed.

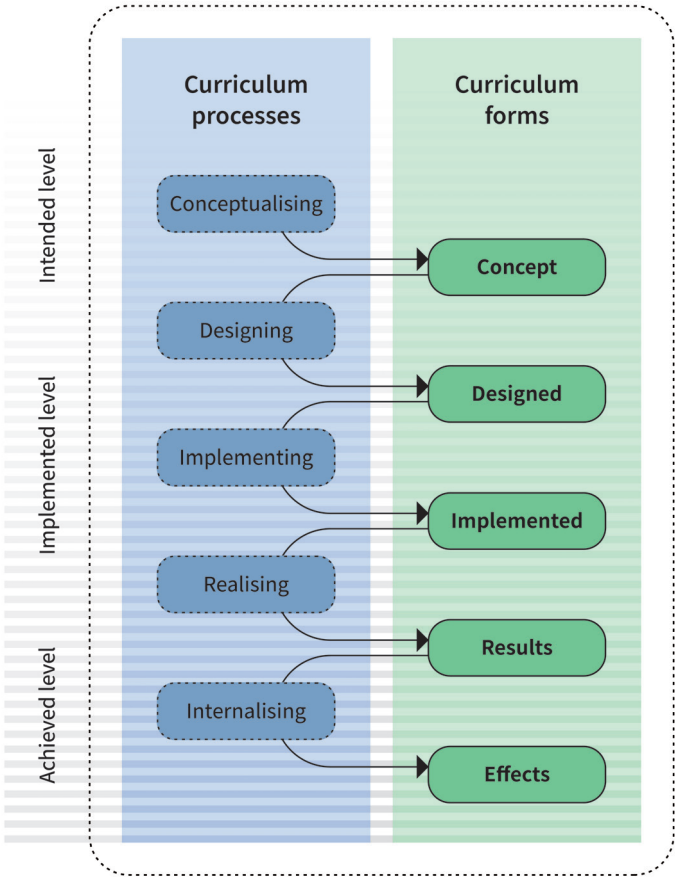

Fig. 2: *The curriculum levels, forms and processes (cf. Janík et al., 2010a, p. 34).*

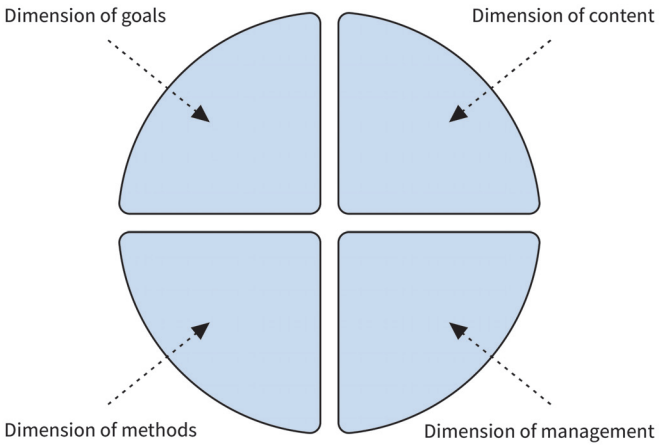

Fig. 3: *Dimensions of a curriculum (cf. Maňák, Janík, & Švec, 2008, p. 23).*

Maňák, Janík and Švec (2008, pp. 23–26) proposed an alternative model to describe the complexity and intricacies of the curriculum, by dividing the curriculum into individual spheres. They distinguished four *dimensions*:

- Dimension of goals,
- Dimension of content,
- Dimension of management,
- Dimension of methods.

The dimension of goals is primarily about values, aims, concepts, goals and learning objectives, and the dimension of content is about the selection and organisation of the subject matter, expected outcomes, standards etc. The dimension of methods refers to the process and approaches how the curriculum is delivered. The dimension of management is about the organisation of the environment in which the curriculum is delivered; for example, the physical conditions of teaching facilities or adequacy of teaching resources.

While this curriculum model was developed by Maňák, Janík and Švec (2008, pp. 23–26) in relation to the teaching and learning process, it can be used more broadly and applied to each form and process of the curriculum. The division of the curriculum into the different dimensions reveals the complexity of the curriculum and facilitates curriculum analysis (cf. Píšová, Kostková, & Vlček, 2011). In the later research and discussion chapters of this monograph (Chapters 4, 5, 6) all four dimensions are considered.

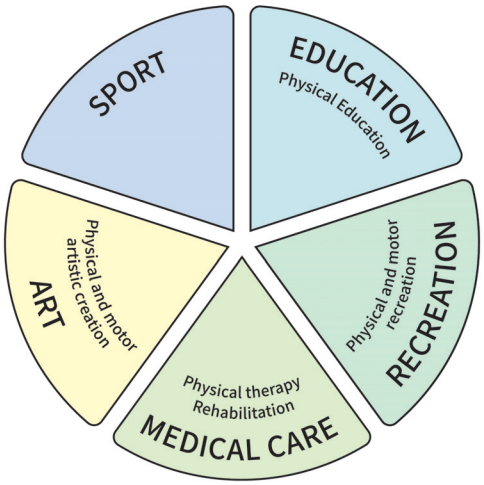

Fig. 4: *Research framework of Kinanthropology (cf. Jirásek, 2005; Mužík & Vlček, 2020).*

Before concluding this section on the definition and approaches to curriculum research, it is worth noting that, in the Czech Republic, the study of the PE curriculum falls within the framework of *Kinanthropology* (Figure 4). This deals with people's intentional physical activity and its structure and function with respect to the development of man as a bio-psycho-social individual (Hodaň, 2006; Jůva, 2009; Mužík & Vlček, 2020).

Internationally there are diverse disciplinary relations that result in a multitude of different approaches and terminologies. For example, in some countries, particularly in English-speaking countries (Jůva, 2009; Jirásek, 2005), the terms *kinesiology* or *PE and Sport Sciences* or *Human Kinetics* are frequently used to describe the research framework.

In Europe, curriculum issues are understood comparatively narrowly mainly as issues of learning objectives and educational content designed in educational programmes or educational standards. However, in the Anglosphere, the curriculum is usually more broadly defined and '*curriculum studies*' is a distinctive area of research founded by J. F. Bobbitt and W. W. Charters (Bobbitt, 1918, 1924; Charters, 1923). Historical comparative analysis indicates that since 1990s the two traditions are becoming closer (Hopmann & Riquarts, 1995; Hopmann & Gundem, 1998; cf. Horlacher, 2018). Nevertheless, in Europe the narrow meaning of curriculum is still commonly used (cf. Horlacher, 2018) as, for example, in the UNESCO report on 'current and critical issues in curriculum and learning' (Stabback, 2016).

Our PE curriculum research follows an approach that is broader than the usual continental European model as it deals with all five forms of the curriculum and in some instances from an international perspective (cf. Habrdlová & Vlček, 2015; Habrdlová, Lupač, & Vlček, 2017; Vlček & Masaryková, 2014; Vlček & Janík, 2010; Vlček, 2011c; Vlček, Kouřilová, & Šeráková, 2018). This research will be discussed in detail in the Chapters 4 and 5.

2.2 Curriculum change and reform

Educational systems are constantly being developed, reviewed and changed in order to achieve solutions to problematic issues areas and improvement. Fundamental changes to the system are referred to as *reform* and this word is now a key part of the terminology.

Educational reform is 'comprehensive content and structural change at all levels of the education system' (Průcha, Walterová, & Mareš, 2009, p. 298). Some authors use the term *educational transformation* rather than educational reform because 'currently, no one-off reforms are implemented in Europe, but it is a long-term process of educational change accompanied by partial reforms and innovations aiming to improve the quality of school education. The ongoing change is characterised by interdependent periods of deconstruction, partial stabilization, and system reconstruction, the aim of which is not only post-communist transformation in former Socialist countries, but also a process induced by globalization' (Průcha, Walterová, & Mareš, 2009, p. 305).

Posch (1999, p. 326) described four trends in educational policy reform:

- *autonomy* – schools require more space for self-decision;
- *economisation* – limiting expenses force schools to view themselves in economic terms;
- *heterogenisation* – on the one hand, there is a demand for high achieving schools, on the other hand, there is an emphasis on integration of children with special needs;
- *innovation* – the end to the information monopoly of teachers has forced changes to the methods of teaching and learning and an emphasis on general competences.

However, countervailing trends have evolved in recent years (Künzli, 2010), particularly in the Czech Republic, to improve the quality of schools and teaching – towards centralization rather than autonomy, and standardization rather than heterogenisation (Janík, 2013; Dvořák, Holec, & Dvořáková, 2018).

School reform can be defined as an officially implemented change in the school system (cf. Prokop, 2009, p. 564), designed to achieve positive outcomes. Průcha, Walterová and Mareš (2009, p. 305) claim that school reforms have been variously implemented in western countries in recent decades, focusing particularly on changes to the curriculum, on accessibility of education, on ensuring equality of educational opportunities, etc. The authors also draw attention to the fact that internationally a wider concept of reform is gaining ground – *educational reform*.

Curriculum reform is a key element of educational reform and has been an on-going issue in recent decades for all educational policy makers across all school systems in Europe (cf. Mužík & Janík, 2009). It involves 'a fundamental change in the concept of the curriculum and curricular politics' (cf. Průcha, Walterová, & Mareš, 2009; Gundem, Karseth, & Sivesind, 2003; Macdonald, 2003; Altrichter & Wiesinger, 2005). According to these authors, the main feature of current reform in democratic countries is the on-going effort to create a curriculum that prepares pupils for life in the 21st century and the formation of relevant values, attitudes and competences. However, as Kridel et al. (2010, p. 196) state, if schools and curricula are to be responsive to changing student needs and societal changes, the nature of these changes needs to be understood, as well as how those changes impact and shape the curriculum. This is a key question for curriculum research.

Maňák, Janík and Švec (2008, p. 30) differentiate curriculum reform from *curriculum innovation* (cf. Altrichter & Wiesinger, 2005; Rýdl, 2003; Zhu, Ennis, & Chen, 2011). In the pedagogical context, innovation is a 'global designation for new pedagogical concepts and practical arrangements' (Průcha, Walterová, & Mareš, 2009, p. 105). While curriculum reform is a top-down approach, innovation is a bottom-up process (Rýdl, 2003, p. 14). It takes place on a small scale at the grass roots, responding to local conditions, and initially has no relationship to official bodies. But later as the innovations expand and negotiations and discussion with policy makers occurs, it moves towards being implemented at a higher level (regional or national); and so bottom-up innovation can fruitfully meet the top-down reform (cf. Brooker & Macdonald, 1999; McCarthy, 2009).

An umbrella term for a wide range of issues related to transformation, reform, innovation, modernization, etc., is found in the concept of *educational change* (cf. Harding, Kelly, & Nicodemus 1976; Greger & Walterová, 2007; Hoyle, 1969; Janík, 2013; Janík, Maňák, Knecht, & Němec, 2010; Kridel, 2010; Macdonald, 2003; Rudduck, 1986). This term is useful especially when the other terms defined above are misunderstood, either intentionally or unintentionally, and used inaccurately.

According to some authors, the iterative processes of re-examination, revision, renewal, modernization etc. may better describe recent developments in school systems, both in the Czech Republic and internationally (cf. Anderson, 2002; Aravopoulou, Stone, & Weinzierl, 2017; Chisholm, 2005; Cooper, 2017; Maňák, Janík, & Švec, 2008). However, it needs to be emphasized that any changes that result from these processes should be based on rigorous and informed research to define the curriculum goals, content, methods and management. This must be the starting point for any re-examination of the existing curriculum; for example, Robinsohn (1967) is one of many authors who have emphasized that curriculum research should serve to underpin reform. Hence, curriculum research can be viewed as a critical and sceptical friend of curricular reform (cf. Maňák, Janík, & Švec, 2008, p. 43).

As stated earlier, change is associated with quality since the aim of the change process is to raise the quality. Unfortunately, curriculum changes, whether they are reforms, innovations, revisions etc., are often made without an understanding of what makes a quality curriculum. This will be discussed in the following section.

2.3 About curriculum quality

Any assessment of the quality of the curriculum will depend on a consistent and accepted understanding of the definition of quality. This, however, is not straightforward and like the curriculum there are several different approaches.

In a general sense, Schädler (1999) differentiates four approaches to quality:

1) quality as a subjective category, seen from different points of view, depending on our interests ('what' we are concerned about),
2) quality as a dynamic category with the potential for ongoing quality improvement,
3) quality as a category related to the values (for example those underpinning concepts and goals),
4) quality as a balance between what is expected and what is being achieved.

For the purpose of this monograph, we view quality as a complex entity, which is derived from educational goals that are based on the values that society believes are important. In PE, quality as a values-related concept is particularly important. We will discuss this in detail in the Section 2.4. In assessing PE curriculum quality, we compare what is expected with what is achieved. We believe that the ultimate quality PE curriculum is the one in which is a balance between these two.

Janík et al. (2013, p. 20; cf. Průcha, 1996, pp. 26–27; Helmke, 2007, p. 40) distinguish two different meanings of the term '*quality*' (cf. the Oxford definition of quality[4]).

1) a descriptive meaning which identifies a desirable characteristic or attribute of a pedagogical phenomenon, for example the practicality of a designed curriculum.

2) an evaluative meaning which describes a desirable standard or optimal level of achievement. This involves setting targets using normative approach as defined by Terhart, (2000, pp. 815–816) and their evaluation and measurement using an empirical approach – (Terhart, 2000, p. 817) as for example used in PISA and TIMSS.

This means that quality can be viewed as a complex entity that can be broken down into specific attributes. Through monitoring and evaluation of these attributes, the problematic aspects of a curriculum are identified (Janík et al., 2013, p. 21).

When discussing the curriculum in its broadest sense, that is, all the experiences pupils receive at school, in activities related to school, and in its planning and evaluation, the quality of the curriculum approaches the quality of education itself. Educational quality has been extensively studied in recent decades and will be used in this monograph to introduce the discussion of curriculum quality.

The research confirms that the assessment of quality in education is extremely complex with many factors being involved (Hopmann & Riquarts, 1995; Hopmann & Gundem, 1998; McLennan & Thompson, 2015; Thijs & Van den Akker, 2009). These have been categorized by Fend (1998, 2008), under the headings *input*, *process*, *outcomes* and *context*. A similar categorization has been used for PE (Cheng, 1996; Egger, Kühnis, Nussbaum, & von Däniken, 2002; Buhren, 2004; Dubs, 1998, 2004; for Czech context cf. Vlček & Mužík, 2012).

4 See www.lexico.com/en/definition/quality.

Tab. 6: *Factors influencing the quality in education (cf. Fend, 2008).*

Input	This category includes all the factors that are present at the beginning of the educational system. These include, for example, teacher qualifications, school equipment, curriculum documents and other materials (for example textbooks), funds, policies and legislation. Buhren (2004, pp. 10–11) points out that the inputs will not necessarily raise the quality of outcomes if the processes between the input and output are not con-trolled.
Process	According to Buhren (2004), this category is related to the activities of school life and culture. This includes, for example, learner-teacher interactions, learner–learner interactions, teacher–teacher interactions, etc. Process is influenced by the learner's activity during instruction. Other factors are school management, teaching methods, the use of teaching aids, media and technologies, classroom environment (for example discipline, or whether the learners can take an active part in deciding on aims and activities) etc.
Outcomes	Outcomes result from efforts in the areas of input and process. This category includes school reputation, teacher evaluation, progress in a learner's performance, a learner's success in tests and the final examination, intellectual development in learners, their physical and mental satisfaction, health, etc. According to Dubs (1998), the outcomes are crucial for the identifying and evaluating school quality. On the other hand, Buhren (2004) points out that some outcome factors can be overestimated, which can lead to the narrow view that school quality is only about meeting certain performance criteria.
Context	According to Buhren (2004), contextual factors have an indirect effect on the processes that take place in schools. These are not expected to be controlled through schools. For example, physical school environment is one of these factors, and in turn, school culture influences the development of schools. However, these must be taken into consideration when the results of evaluation studies are extrapolated. Contextual factors include, for example, migration, social and educational requirements, changes in employment and unemployment structures etc.

While these categories have been developed in terms of the assessment of educational quality, they provide a useful framework for considering the quality of the curriculum. For example, Van den Akker (2003) took many of these factors into consideration and categorised them into a number of interrelated components using the so-called curricular spider web. At the core of this model is the *rationale for learning* (the concept). All the other components are connected to the rationale.

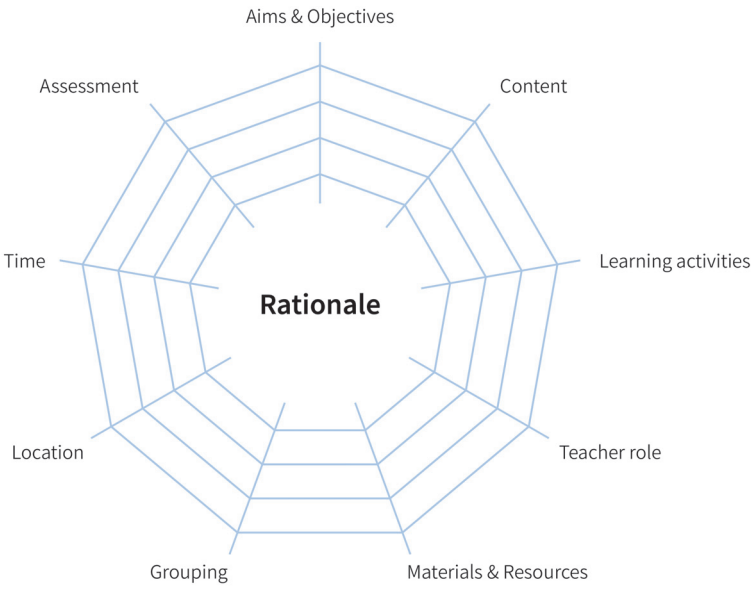

Fig. 5: *Curricular spider web (Van den Akker, 2003, p. 6).*

Thijs and Van den Akker (2009) explain the core and the nine threads of the spider web in terms of key questions (Table 7).

Tab. 7: *Curriculum components (cf. Thijs & Van den Akker, 2009, p. 12).*

Component	Core question
Rationale	Why are the learning?
Aims and objectives	Towards which goals are they learning?
Content	What are they learning?
Learning activities	How are they learning?
Teacher role	How is the teacher facilitating their learning?
Materials and resources	With what are they learning?
Grouping	With whom are they learning?
Location	Where are they learning?
Time	When are they learning?
Assessment	How is their learning assessed?

Thijs & Van den Akker (2009, p. 39) point out that the quality of these components can be assessed in different ways. Does it teach relevant things? Does it lead to adequate results in national assessments and examinations? Does it allow pupils to achieve to their full potential? Does it enable a smooth transition to subsequent educational levels? Does it prepare pupils effectively for the job market?

A key input component influencing the quality of education is the designed curriculum (Buhren, 2004; Dubs, 1998; Egger et al., 2002; Mužík & Vlček, 2016; Stabback, 2016; Vlček & Mužík, 2012) and this is the primary focus of this monograph. However, it must be emphasised again that if the inputs are not properly influenced by the processes standing between inputs and outcomes, inputs do not by themselves lead to an increase in the quality of outcomes (Buhren, 2004, pp. 10–11).

The designed curriculum may contain a number of different components (Figure 6) including the curriculum framework (Section 2.1), subject syllabi (learning objectives and educational content for a particular subject), teacher guides, textbooks and other support material.

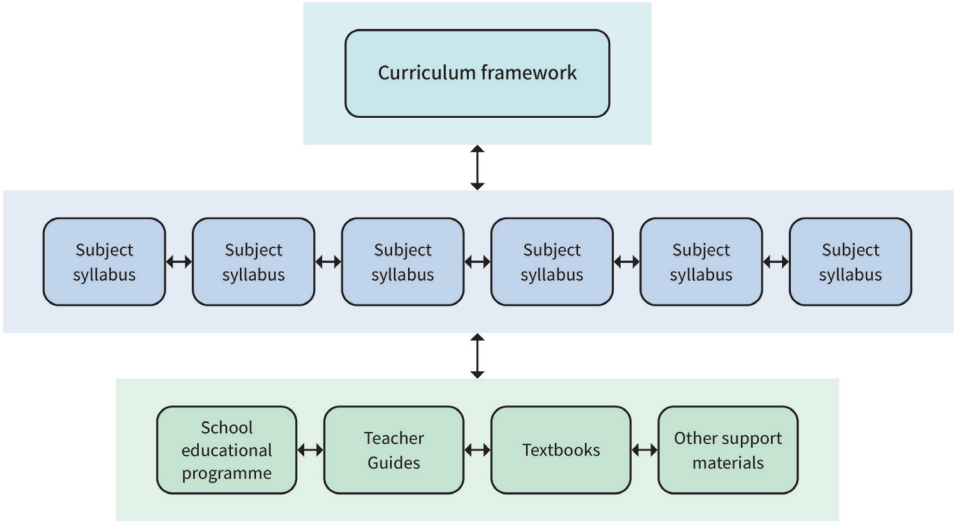

Fig. 6: *Designed curriculum components (cf. Thijs & Van den Akker, 2009, p. 9).*

There are two types of the designed curriculum – *content oriented* and *outcome oriented*. Two types of documents are associated with these, *educational programmes*, which are entry-level documents that regulate in terms of learning objectives and subject matter, and *educational standards* which are exit-level documents that regulate in terms of outputs or outcomes (cf. Janík, Knecht, Kubiatko, Pavlas, Slavík, Solnička, & Vlček, 2011a).[5]

In the past, curricula were designed with a strong input orientation and described precise age-specific content in different disciplines. However, the new generation of designed curricula follow the idea of output and competence orientation. They describe the outcome of the teaching-learning process in terms of learning targets. In practice, most curricula are not entirely content-oriented or outcome-oriented but contain both kinds of educational content with an emphasis towards one or the other.

Content-oriented curriculum

Only a few expert studies are available on what constitutes the quality of entry-level documents (cf. McLennan & Thompson, 2015, p. 76).

Thijs and Van den Akker (2009, p. 39) identify four quality criteria when considering proposed curriculum changes to educational programmes – relevance, consistency, practicality and effectiveness, see Table 8.

Tab. 8: *Curriculum quality criteria (Thijs & Van den Akker, 2009, p. 39).*

Criterion	
Relevance	There is a need for the intervention and its design is based on state-of-the art (scientific) knowledge
Consistency	The structure of the curriculum is logical and cohesive
Practicality	**Expected practicality** – It is expected that the intervention is usable in the settings for which it has been designed
	Actual practicality – The intervention is usable in the settings for which it has been designed
Effectiveness	**Expected effectiveness** – Using the intervention is expected to result in desired outcomes
	Actual effectiveness – The implementation of the intervention leads to the desired outcomes

5 The use of the word 'content' can be confusing because educational programmes comprises learning objectives and educational content (subject matter and expected outcomes) but content-oriented curricula emphasises learning objectives and subject matter. Therefore, there has been a deliberate attempt to be specific when using the term.

Thijs and van der Akker (2009, p. 12) emphasise that *relevance* is particularly important at the macro (national) level where a key issue is to determine what specific educational content will contribute to the development of competences and knowledge that are deemed a priority by policy makers. The relevance of educational content is also a sensitive criterion for the wider public, who judge the quality of education based on what is taught at school.

The second quality criteria emphasized by Thijs and Van den Akker (2009) is consistency. The term *congruence* is also used (Egger et al., 2002; Stake, 1967, 1972) and some authors (cf. Dane & Schneider, 1998; Dusenbury et al., 2003; Zhu, Ennis, & Chen, 2011) use the terms 'fidelity' or 'alignment'. Stake (1967, 1972) was the first to identify congruence as a quality factor. Egger et al. (2002) maintain that the quality of education depends, among other things, on the planned assumptions, objectives, and processes of the intended curriculum (designed curriculum in our terminology) corresponding as much as possible to the realized curriculum (the results form of curriculum). Congruence is critical because it has been shown that pupils achieve better learning outcomes when there is congruence or alignment (cf. Squires, 2012).

The term 'external coherence' is used (Schmidt, Wang, & McKnight, 2005; Schmidt & Prawat, 2006; Stabback, 2016) or 'external congruence' (Janík, Vlček, & Mužík, 2016) to describe the relationship among various types of curricular documents – standards, textbooks, standardized tests or between different forms of the curriculum (Dvořák, 2012, p. 31; Schmidt, Wang, & McKnight, 2005, p. 527). 'Internal congruence' (coherence) is the interconnectedness within a single document, that is, the consistency between learning objectives, subject matter, expected outcomes etc., in the designed curriculum.

Thijs and Van den Akker (2009, p. 14) point out that some authors use terms 'horizontal coherence' (coherence of different types of curricular documents among themselves) and 'vertical coherence', (among different parts of one document, for example between the first / second level standards / objectives) (cf. The Centre form Comprehensive School Reform and Improvement, 2009).

The third and fourth quality criteria that Thijs and Van den Akker (2009, p. 14) identify are *practicality* and *effectiveness*. In the list of quality criteria, a distinction has been made between the expected and actual; for example, the expected practicality and effectiveness of teaching materials can be assessed through screening of the materials by teachers. Details about the actual practicality and effectiveness can only be gathered when teachers and pupils have used the new materials in the actual educational practice (Thijs & Van den Akker, 2009, p. 39).

Dvořák (2012) identifies other curriculum quality factors, namely the *breadth and depth* of the curriculum. According to Murdock (2008; cf. Smidt & Prawat, 2006) breadth is usually defined in terms of the number of topics. Alternatively, the depth of the curriculum can be viewed as more knowledge being provided within individual topics (Dvořák (2012, p. 33), that is, there is deeper penetration into the structure of the field of study in any given year (Smidt & Prawat, 2006).

All these individual quality criteria are interdependent. For example, whether the curriculum is effective depends on its practicability (applicability) and relevance as well as on the consistency of the intended goals and educational content. Hence, one of the features of a quality curriculum is that all the components are balanced.

Outcome-oriented curriculum

There have been many more studies on the quality of exit-level documents, that is, the educational outcomes or standards (cf. Böttcher, 2006; Feingold & Fiorentino, 2005; Fialová, Flemr, Marádová, & Mužík, 2014; Gehrmann, Hericks & Lüders, 2010; Halbheer & Reusser, 2008; Havel, 2016; Gandal & Vranek, 2001; Kurz, 2005; Rychtecký & Fialová, 2004; etc.).

Gandal & Vranek (2001, p. 9) maintain that the basic quality criteria regarding standards is *teachability*: 'If standards should have an impact on what happens in the classroom, they must be teachable.' They also argue that teachability is shaped by other factors, clarity and parsimony. Clarity means that the standards are sufficiently detailed and precise for teachers, parents and pupils to know what pupils should learn. Parsimony refers to the need to select and define standards in such a way that it is not a 'wish list' not reflecting pupils' actual potential.

Böttcher (2006, p. 77; cf. Böttcher & Kalb 2002, pp. 16–30) points out that another quality criterion is *manageability*, and that standards should be formulated in such a way that they would serve to organise or 'thematise' the core curriculum. In the author's view, standards should be more than mere lists or enumerations of the learning objectives and educational content.

Standards also need to be *demanding*; that is, they should be challenging (Böttcher, 2006). If standards are set too low, prompted by, for example, an effort to ensure that all pupils reach the standard, the standards will place minimal demands on pupils. Au & Raphael (2011) use the concept of reasonable difficulty while describing the coordination of the curriculum between school grades, which is continuity, or inner coherence. An internally coherent curriculum is referred to as step-by-step

(stepped) curriculum (Klieme et al., 2003 uses the term cumulativeness). Its feature is continuity of individual grades or degrees of education. The opposite of the step--by-step (systematic) curriculum is a fragmented, incoherent curriculum.

A holistic approach to the quality assessment of standards is applied by Klieme et al. (2003, pp. 24–30) who proposes the following criteria:

- *Relatability* (relation to the field of study) – standards relate to a particular area of study and elaborate basic principles of the discipline, or more precisely the school subject.
- *Focus* – standards do not cover the entire range of the learning area, or more precisely, the entire complexity of the discipline, but they focus on the core area.
- *Cumulativeness* – standards relate to competences, which shall be developed by a certain time during the learning process. This leads to cumulative, systematically interconnected learning.
- *Bindingness* – standards shall prescribe binding minimum requirements (for successful participation in a society); in reality, standards tend to formulate average expectations rather than minimum requirements, which should be met by all pupils.
- *Differentiation* – standards are to be formulated in a differentiated way so that besides ordinary standards there are also minimal standards and optimal standards; realistic differentiation of standards can only be realized on the basis of empirical research and its findings.
- *Intelligibility* – standards must be understandable for the target field and its participants, they must be formulated as precisely and concisely as possible. Individual disciplines differ in this respect – it is probably related to how long they have been measuring performance. Even within the competence areas within a field of study, some requirements are more difficult to formulate than others (for example, it is relatively easier to formulate standards for listening comprehension than for intercultural competence).
- *Implementability* – if standards are formulated regardless of their implementability, it may paralyze the education system. Standards would lose their focus-based efficiency if they were not workable in schools – it would lead to frustration. The way standards should be set must be predefined on the target population in advance.

Many of these quality criteria were described in a previous publication for both the content-oriented and outcome-oriented designed curricula (cf. Janík et al., 2011a). In this publication we developed a general quality framework independent of the curriculum type. This quality framework is described in detail in Section 4.1 and applied in Chapter 7.

The four approaches to the discussion of educational quality identified by Schädler (1999) were described in Section 2.3 (subjective, dynamic, values--related and balance between expected and achieved). In PE curriculum, quality as a category related to values is particularly important and underpins the concept form of the curriculum, defined as the vision, the rationale or the philosophy underlying a curriculum. In the following section the various values-related PE concepts are described.

2.4 PE Curriculum concepts

Quality as a values-related concept in education is addressed in detail by Seebauer et al. (2002). These authors point out that society's perception of quality is affected by their underlying values, especially if there is a miss-match of values. Furthermore, values are not static. Societies change over time, for ideological, economic or political reasons and community values change. In response to changing values, new educational concepts emerge and are variously interpreted and implemented in pedagogical practice. This is particularly the situation regarding PE.

Authors from the Anglosphere and continental Europe have described different conceptual approaches to the PE curriculum (cf. Crum, 1992, 1994; Jewett, Bain, & Ennis, 1995; Krüger, 2012; Kulinna, 2008 and also by the Czech authors Frömel, Novosad, & Svozil, 1999; Rychtecký & Fialová, 2004; etc.). A German author, Naul (2003, 2011a), described the historical trends in the development of PE concepts in Europe. This closely reflects the situation in the Czech Republic and is the model that is followed throughout this monograph.

Naul describes the concept of traditional PE in the 1960s and traces the subsequent development of the sports concept in the 1970s, and the transition and assimilation of the concepts in the 1980s into what he considers to be the predominant PE concepts today (Figure 7). He related these trends to four 'ideal' concepts of PE (sport, movement, physical and health) which had influenced the approaches to PE in various countries as far back as the 19th century. These approaches had spread across the world (cf. Laporte, 1998) and are still more or less characteristic of the current PE curriculum in different countries today (cf. Naul, 2003, 2011a).

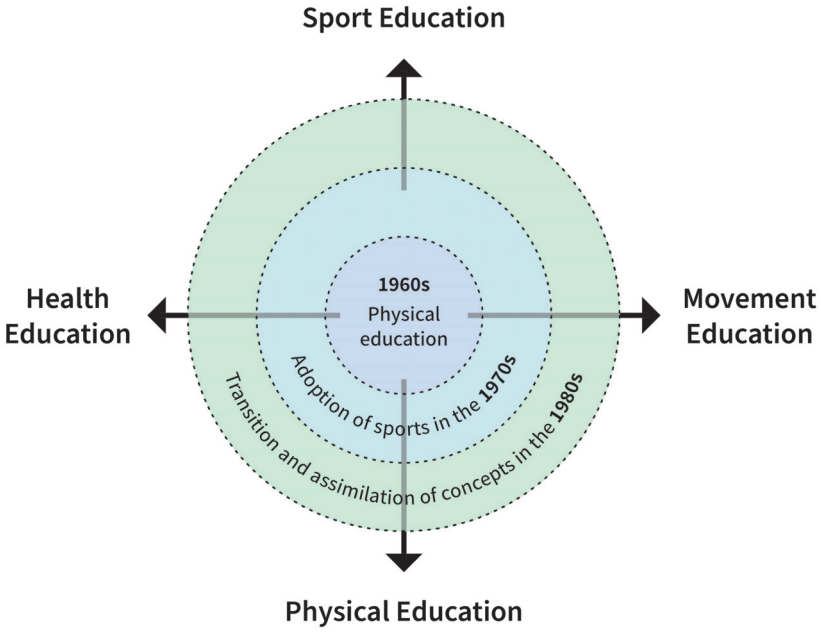

Fig. 7: *Major concepts of PE (cf. Naul, 2003, 2011a).*

The values underlying Naul's four concepts are discussed in Mužík & Vlček, (2016) and described in Table 9.

Tab. 9: *PE concepts and their values (cf. Mužík & Vlček, 2016).*

Sports concept	The related value is sports performance, that is, success in sport, the experience, self-realization, the search for sporting talent etc.
Movement concept	The related value is physical literacy, that is, the purposefulness and 'beauty' of body motion, the skill of performing sophisticated and cultivated motion, understanding the benefits of movement, to employ movement skills in everyday life, etc.
Physical concept	The related value is so called performance-oriented fitness, that is, the fitness underlying work-, military- or sport-related fitness; the ability to work physically, to defend oneself, to fight etc.
Health concept	The related value is the health promotion, that is, so called health-oriented fitness, psychosocial balance, employing movement skills and related knowledge to maintain a physically active lifestyle etc.

The following example illustrates how these conceptual approaches influence the teaching of PE: in a ball game, a teacher when following the *Sports Concept* will mainly observe the pupil's ball control technique in connection with the tactic of co-operation; a teacher following the *Physical Concept* will observe the pupil's physical (fitness) load during the game; a teacher applying the *Movement Concept* will focus on an individual's physical performance and equal involvement of pupils in the game; however, a teacher consistently following the *Health Concept* may not use this game at all unless they identify a means of preventing or compensating for muscle imbalances or other health impairments for pupils (cf. Mužík & Vlček, 2016, pp. 139–140).

Unfortunately, different stakeholders (the politicians, the public, curriculum makers, teachers, parents, etc.) will not necessarily share the same values, traditions or attitudes to PE. This may lead to contradictory views about what the concept of the curriculum should be, both in relation to its holistic concept and in its different forms (cf. Ennis & Chen, 1993, 1995; Jewett, Bain, & Ennis, 1995). When this happens, it leads to critical incongruities within and between the curriculum forms. This is a key quality issue for the PE curriculum in the Czech Republic as described in later chapters (cf. Habrdlová, Lupač, & Vlček, 2017; Lupač, 2016; Habrdlová & Vlček, 2015; Mužík & Vlček, 2016; Vlček & Mužík, 2012).

The conceptual approach that is adopted, together with the underlying values, must be considered when undertaking comparative research in different countries or in different historical periods. This is because the conceptual approach being taken by a particular country will necessarily determine the research questions being asked regarding quality of PE curriculum. Currently, the concept of designed PE curriculum in the Czech Republic is health oriented. However, the situation with respect to all the components of the curriculum is more complicated. This issue will be discussed in detail in subsequent chapters.

In this chapter we have presented some aspects of curriculum theory: the definition and structure of a curriculum; curriculum change and reform; some aspects of curriculum quality; and the various curriculum concepts that underpin the PE curriculum. The history of the development of the PE curriculum in the Czech lands, and the designed curriculum in the Czech Republic today is described in the next chapter and sets the scene for the subsequent research chapters of this monograph.

3 Setting the scene – PE in the Czech Republic

3.1 On the history of PE in the Czech lands

We have described the historical development of PE in the Czech lands in several texts (cf. Štěrbová & Vlček, 2015; Vlček & Janík, 2010; Vlček, 2011a). Its beginnings were associated with the period of Renaissance humanism from the late 15th century to the first half of the 17th century in Western Europe. At this time, the value of human beings was recognized not only in intellectual but also in physical terms, and humanists referred back in time to the system of physical culture of ancient Greece and Rome. Some theoretical works in the field of PE were available during this period and PE was implemented as a non-compulsory subject in several schools. The value of physical exercise was explained in the so called 'regiments of health' and school ordinances, often translated from Latin and German, and fresh air, healthy diet, hygiene and natural PE were recommended.

Some of the works of John Amos Comenius (1592–1670), a prominent representative of late humanism, addressed PE directly or indirectly: for example, he mentioned the importance of games and physical exercise for the healthy development of a child; he gave advice on ways of prolonging life, such as physical exercise, healthy diet, alternating work and rest; he mentioned swimming, fencing and other physical activities. These ideas can be found, for example, in *Didactica magna*, *Orbis sensualium pictus*, and *Leges scholae bene ordinatae*. In his work *Panorthosie,* he even suggested restoring the tradition of the Olympic Games. The works of Johanus Amos Comenius had a significant impact on European Enlightenment teachers, philanthropists and their followers in the 19th century and his ideas are still relevant these days for example life-long learning or his didactical efforts to manage excessive educational demands on pupils (overload).

The era of enlightened absolutism in the Czech lands (1774–1805)

The ideas of the Enlightenment and the related political, economic and cultural changes gradually spread from Western Europe to the Czech lands and created the preconditions for the development a new stage of education and schooling. In 1774, on the initiative of the Enlightenment Empress, Maria Theresa, who reigned between 1740–1780, compulsory schooling for all children aged 6–12 was implemented in those parts of the Czech Lands within the Austrian Empire. Until then, education for girls was generally neglected (Kádner, 1912).

The author of basic school reform was Johann Ignaz von Felbiger (1724–1788), the Abbot of the Monastery of Sagan. According to the General School Ordinance (*Allgemeine Schulordnung*), the education of young people was crucial for the development of nations (Kádner, 1929). In 1777, a similar reform was implemented based on the organization order *Ratio Educationis* in Hungary which then included part of the present-day Slovakia (Krátký, 1974). In 1775, education in grammar schools was also reformed, resulting in a move away from the Church to State control of grammar schools (Kovaříček & Kovaříčková, 1989).

The Thereisan School Reform encouraged physical exercise (games, natural exercise, etc.) in schools and recommended that playgrounds and playing areas should be built, one near a school and another close to the town or village. Some teachers, such as Jan Jakub Ryba (1765–1815) or Josef Miloslav Rautenkranc (1776–1817) supported this initiative. However, compulsory PE was not included in the curriculum, mainly because of the influence of the Catholic Church, which generally did not support physical activity (Novotný, 2006).

From 'Schulkodex' to 'Concordat' (1805–1855)

After the death of the Enlightenment Emperor, Joseph II (the son of Maria Theresa), the Church regained its influence and in 1805 control of education shifted back to the Church with the passing '*Schulkodex*' (cf. Štumbauer, 2017). The efforts to implement PE as a compulsory school subject were again opposed (Kössl, Štumbauer, & Waic, 1998; Nováček, Mužík, & Kopřivová, 2001). In 1848 the Exner-Bonitz Reform was introduced. This resulted in the re-organization of the system of secondary education; for example, eight-year grammar schools emerged. Although PE was recommended for inclusion in the curriculum as a non-compulsory subject, the actual decision was left up to school principals and professors.

After the revolutionary year 1848, Baron Alexander von Bach introduced what became known as 'Bach's absolutism' (1851–1859) into the Austro-Hungarian Empire. This period was marked by increased centralization, censorship of the press, numerous political trials, a crackdown on all national movements, and Germanization. There was even further weakening of the efforts to introduce PE as a compulsory school subject, and a restriction on the circulation of PE-related ideas in the society. This was confirmed by the *Concordat* (an agreement between the Catholic Church and the State) from 1855, which assigned the total control over education to the Church (Kádner, 1912; Kádner, 1929; Štumbauer, 2017).

From the Hasner reform to the formation of Czechoslovakia (1855–1918)

After the fall of the Baron Alexander von Bach in 1859, tensions in the society eased somewhat. However, Austria's losses to Italy (1859) and Prussia (1866) highlighted the fact that the physical condition of the general population, especially men, was poor. This may have contributed to the introduction of PE as a compulsory subject in basic schools from 1869. It also became apparent that the general level of education in the Empire was low and this resulted in the Hasner reform in the years 1867–1869.

The Ministry of Education (*Kultus Ministerium*) was established, weakening the influence of the Church, and the Imperial Basic Schools Act no. 62 was legislated on 14th May 1869. Compulsory schooling was extended to 8 years (from the age of 6 to 14 years, Štumbauer, 2017) for both girls and boys, and a new system of basic schooling was established to replace the Felbiger system. The new system introduced 'national schools', which were divided into a lower (five-year) stage and a higher (three-year) stage. After finishing the lower stage, boys could transfer to grammar schools, which were attended mostly by children of the wealthy. Girls could attend state secondary schools, but mostly they attended private schools. This situation did not change until 1918 (Štekr, 1999).

As previously stated, PE was implemented as a compulsory school subject in basic schools from 1869, for both boys and girls, with a specific curriculum and an allocation of two lessons per week (Grexa & Strachová, 2011). The 1870 school ordinance defined the learning objectives of PE as follows: 'the goal of PE is for school children to gain skilfulness, confidence and courage, to enjoy order, to have self-confidence and to be alive both in body and soul' (Reitmayer, 1972, p. 34). Since the health aspects of PE were not expressed directly, we cannot consider it as PE in the broad sense that we understand it today. The curriculum issued between 1874 and 1877 was based on the Spiess-Maul system[6] (Štumbauer, 2017) and included floor exercises, marching drill (for all grades), and gymnastics apparatus (from the third grade). Discipline was emphasised and games were only marginally included, without a detailed plan and usually with a local flavour from folk dances and simple games. The aim of PE was to improve the fitness of prospective Army recruits and the curriculum soon ceased to be appealing to pupils who ended up disliking PE (Štumbauer, 2017, p. 14).

6 The first PE curriculum used in this country was named after its authors, A. Spiesse (1810–1858) and A. Maul (1828–1907). It was based on a formal analysis of movements and was characterized by an excess of somewhat ineffective 'methodical series' (Krátký, 1974). The learning objectives of school PE focused on developing power, dexterity, assurance, courage and self-confidence.

In secondary schools, PE became a compulsory subject for boys in Bohemia in 1874 and in Moravia five years earlier. The first secondary school PE curriculum was issued around 1875 for Bohemia and then, four years later, for all lands belonging to the Austrian part of the Habsburg Monarchy. This curriculum was also based on the Spiess-Maul system (Kössl, Štumbauer, & Waic, 1998; Reitmayer, 1972; Rychtecký & Fialová, 2004).

In 1890 the *Spielerlass* ordinance was introduced by Minister Paul Gautsch[7]. It recommended implementing non-compulsory games (mainly ball games) and swimming and skating (Grexa & Strachová, 2011). All state secondary schools were encouraged to build sports facilities (playgrounds, pitches, gyms etc.). In the 1890s, PE finally became a compulsory school subject at grammar schools.

In 1911, a new PE curriculum for secondary schools was issued (Grexa & Strachová, 2011). This curriculum was for boys and two years later a curriculum for girls appeared. The curriculum included floor exercise, marching, apparatus gymnastics, and natural athletic exercise and games (performance-oriented). The curriculum was inspired by some elements of the Swedish concept of medically oriented gymnastics – P. H. Ling (Štumbauer, 2017), but, for the most part, by the French 'Natural Method' of PE – Hébert, Demény, Racine, rhythmical PE and the Sokol physical training system.[8] Furthermore, the popularity of sport was increasing, both nationally and internationally, as Czech (Bohemian) sportsmen and sportswomen had taken part in the Olympic Games earlier.

The new curriculum was progressive compared to the former Spiess-Maul curriculum. There were some significant changes for girls: the healthy and beautiful body was encouraged (including proper posture), outside exercise was emphasized and smooth and elegant movement was developed. Other aspects that were encouraged were physical strength, courage, the ability to react quickly, and enthusiasm for physical exercise (Rychtecký & Fialová, 2004).

Education in general, and PE specifically, were negatively affected by the World War I. The quality of teaching decreased and absences from school were tolerated. Military drill was integrated into PE, especially for boys. Some school buildings were taken over for military purposes such as for troop quarters or hospitals and teachers were frequently deployed in the war. Many of them were Sokol members

7 Paul Gautsch was a member of the Taaffe Government. Eduard Taaffe was the Prime Minister in the years of the Austrian Empire 1868–1870 and 1879–1893.

8 The Sokol movement is an all-age gymnastics organization first founded in 1862 by Miroslav Tyrš and Jindřich Fügner. Sokol is based on the philosophy that a physically fit, mentally alert and culturally developed people can make a nation strong. The word 'sokol' translates to falcon and is symbolic of the Sokol ideals: Courage, Strength, Endurance, Fraternalism, Love of democratic principles, and Pride in country.

or scouts who were later at the birth of the First Czechoslovak Republic and subsequently held influential positions in the new Government (Novotný, 2006). As a result, the concept of school PE adopted by the new State was strongly influenced by the Sokol system.

From the First Republic to the Protectorate (1918–1939)

After the independent Czechoslovak Republic was established at the end of the World War I (1918), a national Ministry of Education was established. The first Minister was Gustav Habrmann. Although the existing laws were still in place, the emphasis changed towards the national and democratic aspects of education (for example, access to education, continuity between the different school stages, compulsory PE for girls in primary school). The influence of the Catholic Church was significantly reduced. Two years later, the first Conference of Czechoslovak Teachers and Friends of Education took place. This was an important stimulus for the development of education in Czechoslovakia (Reitmayer, 1972; Štekr, 1999) with teachers calling for modernization of education and for the teaching of PE as a compulsory subject at all schools and with proper time allocation.

The following decade saw many changes in PE. The Journal of PE was first published in 1920, edited by Josef Klenka, and became a key methodological tool for PE teachers. The Small School Act (1922) confirmed through legislation that PE was compulsory for girls in primary education, with two hours per week allocated. The Act also stated that the official Czech term for PE was *tělesná výchova* (that is Physical Education). This change reflected the educational value of PE.

Two years later, a new curriculum for PE in basic schools was issued. The basis of the curriculum was the Tyrš's Sokol system but it went beyond the narrow Sokol practice and included floor exercise, marching, apparatus gymnastics, athletics, games, hiking and winter sports. Young women were encouraged to train as PE teachers and could take an examination in PE at teacher training institutes. In 1925, the Ministry of Education approved medical practice in schools and the appointment of school doctors who were responsible for regular physical check-ups for pupils and for remedial PE.

The Ministry also supported the development of sports in secondary education. In 1921 the first Secondary School Games were held in Pardubice (for more information cf. Perútka, 1973; Perútka & Grexa, 1978) with students from both Slovak and German-speaking secondary schools also participating. Due to their popularity, the Games were included in the Sokol festivals (*slets*) five years later. In 1928, after-school sports clubs emerged in secondary schools and various competitions and races were organized among schools. These activities had

a positive impact on relationships among Czechoslovak students, whose ethnic origins were different (Kovaříček & Kovaříčková, 1989; Kössl, Štumbauer, & Waic, 1998; Štekr, 1999).

A second wave of reform began in the early 1930s. New curricula were issued for both primary and secondary schools that were no longer based on the Tyrš's Sokol system but were influenced by modern trends such as the French natural system of teaching (for example G. Demény) and the new Austrian school (K. Gaulhofer, M. Streicher). These systems emphasised natural exercise as well as the educational and health aspects of PE. PE was now oriented mainly to the pupils' health, athletic exercise and its effects on the individual's health, and the development of the pupil's physical skills. Apart from that, 'fair play' was considered appropriate, related to the moral and educational aspects of PE. In PE classes, natural exercises were preferred as well as games, and girls also did rhythmical gymnastics. As far as assessment was concerned, effort was valued as well as the actual performance.

In the late 1930s, the growing power of the Nazis in Germany raised security fears in Czechoslovakia. This resulted in the Defence Act of 1937 and the implementation of civil defence education (including PE) in all schools in August 1938. However, it was cancelled the following year, two weeks after the Nazis invaded Czechoslovakia and Hitler proclaimed Bohemia and Moravia the Protectorate of Bohemia and Moravia on the 15th March 1939 (Kössl, Krátký, & Marek, 1986; Novotný, 2006; Štekr, 1999).

The Protectorate of Bohemia and Moravia and the War (1939–1945)

From the beginning of the 1939/1940 school year, greater emphasis was given to PE sports and athletics and the number of lessons allocated increased to 3 or 4 lessons per week. Czech PE was now based on the German model (Štumbauer, 2017), characterized by discipline and health-orientation, but also to preparing pupils for fighting and war. They also reduced the number of secondary schools, modified the curricula (Czech, History etc.), and introduced the German language as a compulsory subject from the first school year.

In 1942, the *Kuratorium* for the education of the youth in Bohemia and Moravia was established (Štumbauer, 2017, 2019). This was a compulsory after-school organization aimed at re-educating the Czech youth (aged 10–18). The programme included PE and sports as well as civil defence education (for more information cf. Špringl, 2004). During the war, not only were the Sokol, Orel and Skaut (Scout) organizations banned, but also the professional teacher organizations

including those related to PE. Some teachers, many of whom belonged to these organizations, joined the resistance movement. By the end of the war, teaching standards had declined and access to schooling reduced (Grexa & Strachová, 2011; Novotný, 2006; Perútka, 1973; Štekr, 1999).

Czechoslovakia in the Communist Era (1945–1989)

Significant educational changes followed the end of the World War II. In 1945, the Research Pedagogical Institute in Prague took responsibility for the development of a new curriculum including PE. This period was characterized by the effort to streamline the school system and for the first time the need for the integration of personal development and education was stressed. At the same time, gender inequality was removed and the current foundation of the Czech school system was laid. PE became one of the key elements for bringing the real world into education and the subject became more important than ever (cf. Štumbauer, 2019). After 1946, PE was treated equally in the school curriculum and in the following period, different PE curricula were designed for each individual school type.

The events of February 1948, when the Communists seized power in Czechoslovakia, led to the nationalization and dissolution of competitive institutions. The Education Act, 1948, provided for the codification of the PE curriculum for basic education by regulation. The curriculum was influenced by the concept of Soviet physical culture (cf. Štumbauer, 2019), in which physical fitness was aimed at ensuring military strength, productivity, and nationalism (Havel et al., 2016; Nováček, Mužík, & Kopřivová, 2001). Sports were viewed as a way of achieving international fame and sport became the most common activity in the PE curriculum (referred to as 'sportification' by Naul, 2003, 2011a).

The 1954 curriculum documents introduced a normative approach, 'command and control' teaching methods and assessment standards. Unfortunately, the methodology of the normative approach was not accepted by pupils, parents and some PE teachers because they did not understand that other factors influencing performance should be taken into account when assessing pupils, for example, the specific PE discipline, the pupil's effort, conditions etc. Even today some of these misunderstandings persist (Rychtecký & Fialová, 2004, p. 19).

Because of this the response to the introduction of performance standard was so negative that they were removed from the designed curriculum in 1957. At the same time some of the more challenging subject matter of the curriculum were also removed.

In 1955, the first worldwide Spartakiad took place. This was a mass gymnastics display based on the tradition of Sokol festivals (*slets*) and held every five years at the Strahov Stadium in Prague. From that time on, Spartakiads rehearsals became a part of school PE, especially during the year when the Spartakiad took place.

In 1960 a new PE curriculum was introduced. The aim of the so-called 'Uniform PE Curriculum' for boys and girls from 6–19 years old was 'to link compulsory school physical education with leisure physical activity' (Rychtecký & Fialová, 2004, p. 19). Subsequently, in the 1970s and 1980s, a process referred to as 'the de-construction of sport in Physical Education' emerged. This involved a focus on achieving enjoyable experiences through PE, self-awareness, socialisation, and a positive attitude toward physical activity in general. In Chapter 5 this process will be referred to as 'desportification'.

The Czech Republic since 1989

The 1989 'Velvet Revolution' brought radical changes in the political, economic and school life of Czechoslovak citizens. In the Czech Republic, after the separation from Slovakia in 1993, reforms were introduced that changed attitudes towards education for children and adults, including in PE. These changes are discussed in more detail below and in Section 5.2 with respect to the development of the PE concept in Germany, the Czech lands and the USA.

3.2 Current PE curriculum policy

Mandatory education in the Czech Republic is basic education (ISCED 1, 2). The first stage of basic education is *primary education* and the second stage is *lower secondary education*.

The *Basic Education Standard* which came into force in 1995 provided the legislative beginnings of the current designed curriculum (cf. Havel et al., 2016). This government document was divided into seven educational areas, including Healthy Lifestyle with the education fields PE and Sports, and Health Education. The health-oriented concept of PE was introduced at all school levels, with the aim of promoting health through adequate physical activity. This concept was presented internationally in 2005 (Mužík, Stojaníková, & Sedláčková, 2005).

In 2001 the White Paper, *The National Programme for the Development of Education in the Czech Republic*, was approved. The policy introduced the two-tier system of educational programmes, the *Framework Educational Programmes*

(FEPs) which are designed at the central (state) level and the *School Educational Programmes* (SEPs) developed at the local (school) level. The aim of this two-tier structure was to enhance the autonomy of schools and provide flexibility at the local level for the school community. It also introduced the concept of 'key competences' as the overall learning objectives of education. These competences are a general set of knowledge, skills, abilities, attitudes and values, which are important for the personal development of an individual and for the individual's participation in society. Their selection and conception are based on values generally accepted in society, as well as commonly held assumptions on which competences contribute to an individual's education (cf. Maňák, 2006, p. 96), to a contented and successful life and to strengthening the functions of civil society.

The *Framework Educational Programme for Preschool Education* was issued in 2004 and defined the learning objectives and educational content of pre-school education as a compact, interconnected whole. The programme was organized into five educational areas: biological, psychological, interpersonal, socio-cultural and environmental with PE being primarily part of the biological education area called 'Child and its Body'. The aim of the area was: to stimulate and support the right growth of a child and their nervous and muscular development; promote their physical well-being; improve their physical fitness as well as their physical and health culture; develop their physical and manipulative motor skills; teach the child self-service activities; and guide the child to healthy living habits and attitudes.

The *Framework Educational Programme for Basic Education* (FEP BE) was issued in 2005 for Grades 1–9 of basic education (ISCED 1, 2). Although the programme has been subject to ongoing reviews approved by the MEYS, the PE concept has not changed significantly. The educational fields of PE and Health Education are integrated into the educational area 'Man and Health'. The concept is clearly health-oriented (Section 2.4) and PE, as part of a comprehensive health education, is aimed at: the student's identification of their own physical possibilities and interests; at recognizing the impact of specific physical activities on physical fitness and mental and social well-being; and to integrate physical activity into their daily routine to satisfy their own physical needs and interests.

The designed PE curriculum requires two teaching lessons per week at both stages of basic school. Although schools can use other available hours for PE and increase the number of weekly hours to three or more, few schools take that option. It envisages that PE moves across the years from spontaneous physical activity to selective and controlled activities. A well-acquired skill is supposed

to retrospectively enhance the quality of the experience. An important function is the motivational assessment of pupils based on the pupil's body type and on assessing individual performance and improvement.

The designed PE curriculum is focused on meeting the individual needs of pupils. While PE necessarily requires the recognition and development of individual physical abilities and skills, and an assessment of performance, the curriculum emphasizes that activities should be tailored to meet individual needs. Performance is assessed according to *performance standards* that were introduced in 2013 (cf. below) and that consider a pupil's growth and genetic condition and their current health status. Equally important is to identify pupils' health impairments and their corrections in both normal and specific forms of physical learning, in compulsory PE lessons and in optional health PE. Special compensatory exercises are an integral part of the curriculum. These were to be used preventively in PE lessons if necessary and assigned to pupils with health impairment in place of activities, which are a contra-indication to their impairment.

Tab. 10: *The learning objectives for the educational area 'Man and Health' (FEP BE, 2017, p. 93).*

Recognizing health as an important value in the context of other life values
Understanding health as a balanced state of physical, mental and social well-being, and perceiving joyful experiences from activities supported by movement, a pleasant environment and an atmosphere of favourable relationships
Cognition of a person as an individual dependent, in individual stages of life, on their own behaviour and decision-making, on the level of interpersonal relationships and on the quality of their environment
Gaining basic orientation in terms of what is healthy and what is beneficial to health, and what threatens and damages health
Use of adopted preventive procedures to influence health in a daily regime, to consolidate decision-making and behaviour in accordance with active health promotion in every life situation, and to identify and use places related to preventive health protection
Linking activities and behaviours related to health and healthy interpersonal relationships with basic ethical and moral attitudes, with volitional effort, etc.
Understanding fitness, good physical appearance and well-being as an important prerequisite for choosing a career path, partners, social activities, etc.
Protecting health and lives in everyday risky situations and emergencies, using adopted procedures related to solving individual extraordinary events
Active involvement in health promotion activities and in promotion of health-beneficial activities at school and in the community

The designed curriculum includes *learning objectives*, *subject matter* and *expected outcomes*. The curriculum can be described as a 'new generation' model in that, although it contains subject matter, it is also output-oriented with detailed expected outcomes (Section 2.3). The learning objectives for the educational area 'Man and Health' highlights the Table 10 (FEP BE, 2017, p. 93)[9].

Unfortunately, the organizational structure of PE in the FEP BE differs for Grades 1–5 and for Grades 6–9. At the first stage (ISCED 1) the document describes (1) overall expected outcomes followed by (2) the organisation of subject matter into three areas:

1) Activities Affecting Health,

2) Activities Influencing the Level of Physical Skills,

3) Activities Supporting Physical Learning.

At the second stage of basic school (ISCED 2), the order of educational content is reversed – the organisation of the subject matter comes first, followed by the expected outcomes for each activity area (cf. FEP BE, 2017, pp. 97–103).

As Tupý (2018b) summarizes, PE standards were developed in 2013 (Tupý et al., 2015; cf. Fialová, 2017; Havel, Fialová, & Jasanská, 2018) for the lower (primary) stage of basic education and included 40 indicators and 33 illustrative tasks for 10 expected outputs. There were also 7 indicators and 6 illustrative tasks for 3 expected outcomes of remedial PE. At the higher (lower secondary school – ISCED 2) stage, the PE standards had 46 indicators and 42 illustrative tasks for 17 expected outputs. For remedial PE, there were 10 indicators and 9 illustrative tasks for 3 expected outcomes. Illustrative tasks were set at the minimum level (80% of the pupils should be able to handle them). Tasks were not defined for all the indicators because the assumption was that more illustrative tasks would be developed.

The standards and tasks were assessed by two experts from different faculties of education and by primary school teachers. The teachers commented on the terminology, clarity and complexity of the indicators, the clarity of the assignment of tasks, their complexity and their compliance with the indicators. These comments were accepted and incorporated into a revised version of the standards in 2015 (Tupý, 2018b, p. 23).

9 English translation taken from the English version of FEP BE (2007).

The following year, a different team developed another document *Methodological Comments and Tasks for Standards for Primary Education – Physical Education of 2016* (Polívka, 2016) to further streamline and simplify the standards. At the first stage of primary school (ISCED 1) methodological comments were prepared for 12 illustrative tasks related to 5 expected outputs. For the second period, methodological comments were prepared for 24 illustrative tasks related to 7 expected outputs.

As can be seen from Table 10, the educational goals of 'Man and Health' in the current Czech PE curriculum are significantly oriented towards promoting health in the bio-psycho-social context. The importance of health is also stressed in the early overarching chapter 'The Conception and Learning Objectives of Basic Education' (FEP BE, 2017, p. 8) which states 'to teach the pupils to develop their physical, mental and social health, actively protect it and be responsible for it'. Clearly the PE concept is aligned with the health concept as specified by Naul (2003, 2011a, cf. Krüger, 2012). However, as our research presented in later chapters shows the situation is more complex, as the educational content of the Czech PE curriculum focuses more on physical skills and abilities than on health.

This is an example of the lack of congruence in the designed curriculum and is one of the key problematic issues of the Czech PE curriculum and is a central theme of the later chapters of this monograph.

3.1 Problem definition

Despite the educational reforms since 1989, there is a large body of research, which indicates that the designed PE curriculum in the Czech Republic described in the previous section is not working as it should (Habrdlová, Lupač, & Vlček, 2017; Lupač, 2016; Habrdlová & Vlček, 2015; Mužík & Vlček, 2016; Tupý, 2018b; Vlček & Mužík, 2012). The implementation form has also had problems; for example, the research presented in Chapter 4 shows that the health-oriented concept is not accepted by the public and is not being implemented by teachers (cf. Fialová et al., 2014; Vašíčková, 2016; Janík, Vlček, & Mužík, 2016; Vlček, 2011b). Furthermore, the results and effects forms are problematic; for example, the levels of physical activity and the health status of the Czech population are unsatisfactory (cf. Antošová & Kodl, 2014; Bunc, 2010; Bláha & Cihlář, 2010; OECD / European Observatory on Health Systems and Policies, 2017; Mitáš & Frömel, 2013; Mužík, Kuchařová, & Vodáková, 2010; Mužík & Vlček, 2010; Vašíčková & Frömel, 2009).

In 2018 the Government initiated a project, described in Chapter 6, to revise the designed curriculum for Czech basic schools. The revision project is now referred to as the *Revision of the FEP and preparation of the Education Policy Strategy of the Czech Republic* (Strategy 2030+). It should be noted that the Ministry project is referred to as a *revision*. In this monograph the term *review* is used (cf. Chisholm, 2005) to distinguish it from the Ministry project.

In this monograph we have emphasized that the curriculum has five forms (Chapter 2). While the designed curriculum might be the most visible, it is only one of five. The curriculum is an interactive whole and, in our view, it is imperative that the designed curriculum is not revised in isolation of the other forms. However, the Ministry project does provide an entry point. It is an opportunity for curriculum makers to consider all five forms and processes and design a curriculum that addresses the problems that have been identified.

As highlighted in Chapter 2, issues of curriculum quality are extensive, complex, and often multifactorial. This requires a systematic, methodical approach to find solutions and a rigorous 'interpretive framework' to establish:

1) whether and to what extent the problems really exist;
2) what are the relevant system variables and interactions;
3) what measures can be taken to correct it.

This is the approach taken in this monograph to answer the question:
What are the problem areas of the PE designed curriculum in the Czech Republic and what changes should be recommended?

To be more specific, the aim of this monograph is to:

- comprehensively analyse the Czech PE curriculum based on national and international research;
- identify the current issues regarding the PE curriculum; and
- make recommendations for PE curriculum change.

This monograph presents our studies and conclusions regarding the PE curriculum in the Czech Republic, within the framework of the five-form model (Chapter 2). The following chapters (Chapters 4 and 5) describe research into the various forms of the Czech PE curriculum as well as learnings from international comparisons. In Chapter 6 each of the five-forms and processes of the curriculum are critically reviewed, based on our studies and other research. Finally, in Chapter 7 we summarize the quality issues that have been identified and make recommendations for the current PE curriculum revision project.

4 Research into curriculum quality in the Czech Republic

Post-communist curriculum reform was launched in the Czech Republic three decades ago[10] at a time when Czechoslovakia was undergoing complete economic, political and social transformation (cf. Greger, 2011; Greger & Walterová, 2007). However, the educational changes paralleled in many ways the reforms carried out abroad (cf. Kaščák & Pupala, 2011; Janík, Porubský, Chrappán, & Kuszak, 2020). This chapter describes research undertaken by the author and by other Czech researchers on quality issues regarding the Czech curriculum.

Curriculum reform in the Czech Republic was implemented through the two--tier system of educational programmes – FEP/SEP (Section 3.2). The various problems associated with this reform have been widely canvassed. Numerous discussions have taken place, most of them in thematic silos rather than holistically assessing curriculum reform. Research has identified gaps in the understanding of key reform ideas and concepts (cf. Janík et al., 2011b; 2018; Janík et al., 2018; Janík, Vlček, & Mužík, 2016; Pešková, Spurná, & Knecht, 2019).

Implementation is viewed as the key problematic area in curriculum reform. Other issues include: congruence of curriculum; the varying attitude towards curriculum reform by teachers and resistance to the reforms; the issue of the two-level curriculum (the FEP and the development of a SEP) as a key element of the reform; the lack of involvement of teachers as authors of the curriculum, which stems from their criticism of the 'formalism'[11] of the reform. In the following sections, we present our research findings to illustrate these problem areas.

4.1 Curriculum quality – the view of Czech experts

In 2011, an interdisciplinary team conducted an expert survey of experienced directors (head-teachers) and teachers in grammar schools[12], to hear directly from experts in the field regarding what makes a quality curriculum (Janík et al., 2011a). The general aim of the research was to evaluate the success of the two-tier system

10 As emphasized previously (Janík, Vlček, & Mužík, 2016) it is not easy to determine exactly when curriculum reform began in the Czech Republic (Janík, 2011).

11 Formalism in this context means that, for a variety of reasons, the curriculum has been formally adopted but not implemented in practice.

12 A grammar school is a selective high school at the stage of upper secondary education typically beginning at age 15 or 16 years (ISCED 3).

of curricular reform; that is, to describe, explain and evaluate the processes of introducing the FEP and the development of SEPs and identify the factors that influence the quality of the designed curriculum.

Methodology

An expert survey is considered a suitable method for examining problems associated with the implementation of political and pedagogical programs in practice (cf. Meuser & Nagel, 2003, p. 481). The fact that the persons surveyed are experts allows the capture and use of their specific knowledge, which is important for a deeper understanding of the situation. The research potential of an expert survey lies in the possibility of identifying the implicit rules, which govern the way social systems function – in this case, schools that are developing their curriculum.

A total of 57 respondents were selected, all expert-practitioners in developing and implementing a school curriculum. The survey was conducted in the form of a written online inquiry. The survey primarily focused on the overall FEP/SEP documents (the designed curriculum) and the processes of its development and implementation. The assumption was that certain value orientations and ideas regarding quality are always somehow involved in the development of curriculum documents.

Selected results

The survey asked the experts for their view on the essential components of a curriculum document. A qualitative analysis of responses to open ended questions showed:

- That respondents largely focused on defining the concepts and goals of education at a given level (stage) or type of school, learning objectives of educational fields, and the subject matter and expected outcomes.
- Some respondents recommended including the allocation of lessons in each subject/educational field for each school year, including the so-called disposable hours, or, at the very least, the minimum time allowance in the subject/educational field across all years for a given type of school. The respondents often associated the direction of allocated time with the aim of policy makers of ensuring uniformity of teaching. To a certain extent, the direction of allocated time limits the teacher's autonomy, and this was also widely discussed in the responses.

- Other responses mentioned the document's role in strategically guiding and motivating teachers as well as clear instructions on how to use the document. Answers to the open question of whether respondents could see ways to use the SEP as a means of developing (improving) schools showed that the SEP could: support creative teachers; contribute to professional communication at school; strengthen cooperation among different disciplines; and promote a new concept of teaching.

A follow-up quantitative analysis showed:

- Respondents considered the following features as essential: identification of the concept and goals at a given level or type of school; definition of learning objectives of educational fields; definition of core subject matter and of expected oucomes.

- The lowest mean values in the quantitative analysis were recorded for the following items: prescription of the curriculum within the thematic units over time; examples of (typological) learning tasks; characterization of specific teaching methods and concrete examples of teaching practices.

The survey also asked experts for their view on the features of a quality curriculum document:

- The most frequent responses to the qualitative analysis showed that the characteristics of a quality curriculum document are that it should be well-arranged and comprehensible, clear and professionally correct, and that it should have a long-term, sustainable vision. Furthermore, it should be achievable, based on educational practice and with clear educational goals. Freedom of choice was often emphasised; on the other hand, there was also an opposing view that uniformity of teaching across different schools was needed.

- In a follow-up quantitative analysis dealing with the importance of individual characteristics of the curriculum document, three characteristics reached the highest values of the arithmetic mean: practicability, professional accuracy in individual fields, and comprehensibility.

As was to be expected, contradictory opinions were expressed. For example, some respondents were of the view that curriculum documents should be long-term, all-purpose documents allowing professional autonomy and flexibility while others maintained that the documents should be constantly updated to adapt to changing educational needs and hence always current. A common requirement

was for brevity. However, this is very difficult to achieve, especially if, at the same time, there is a requirement for the curriculum documents to be instructive and to include methodological support, etc. For example, some respondents wanted material to be included of typological learning tasks, characterisation of specific teaching methods and concrete examples of teaching practice.

Consistency (congruence) was highlighted by some respondents, both within and between curriculum documents as well as to those that preceded and followed the main documents.

It should be noted that the quantitative analysis generally agreed with the qualitative analysis and showed that respondents considered the same components to be necessary, while others were optional. Furthermore, there was a relatively high level of consensus with respect to these results between directors and teachers.

Conclusion

The expert survey confirmed and provided specific evidence for the features outlined in Chapter 2. In summary, it is evident that the quality of a designed curriculum, or more precisely the curriculum documents, is not only defined by what it is like (the characteristics of the designed curriculum), but also by what it contains (the curriculum components). As a result of the survey a curriculum quality standard can be formulated as:

A high-quality curriculum document, at either the state or school level (FEP/SEP), has the following basic components:

- a description of the concept and goals of education at a given stage or type of school;
- a definition of learning objectives of educational fields;
- a definition of (core) educational content, which means subject matter and expected outcomes.

Other components may be desirable but are not considered essential. However, in SEPs it may be valuable to include part of the vision/school development strategy for each school. This could increase the relevance of the SEP for teachers working in that school and lead to greater acceptance of the document.

These results, from this Czech study of the Czech designed curriculum, were combined with similar studies conducted in the Czech Republic and abroad (cf. Section 2.3) and a general quality framework comprising four key areas

developed (Janík et al., 2011a). The framework is shown in Table 11 and has been used in the discussion of the quality of the Czech PE curriculum in Chapter 7. The terminology has been modified in translation to better explain the framework.

Tab. 11: *Key areas and curriculum quality criteria (cf. Janík et al., 2011a, pp. 98–99).*

Area 1: feasibility and practicality Criteria/characteristic
1.1 respects reality and is manageable
1.2 respects teaching/learning practice and is practical
1.3 Is instructive, inspirational and motivating for teachers
1.4 is usable in the school environment by managers and teachers
1.5 encourages communication and cooperation in school
Area 2: professional accuracy and congruence Criteria/characteristic
2.1 is consistent with similar documents such as assessments and inspection criteria
2.2 is logical and interconnects goals and educational content,
2.3 accurately reflects the relevant discipline and the current state of disciplinary knowledge
Area 3: clarity and comprehensibility Criteria/characteristic
3.1 is thoughtfully structured and well-arranged
3.2 is written so that it is accessible, understandable and accepted
3.3 it is structurally interconnected
3.4 it is concise, but includes the essentials
Area 4: flexibility within bindingness Criteria/characteristic
4.1 provides a reasonable space for free decision-making
4.2 is timeless but provides flexibility for updating educational practice
4.3 provides a desirable degree of uniformity between schools
4.4 it defines what is important for pupils to acquire (the core curriculum) and is binding

4.2 Curriculum quality – Czech case studies

In 2011, a wider research team focused on curriculum reform at grammar schools (ISCED 3 stage of education) using case studies to examine different subjects (educational fields) in more detail (Píšová et al., 2011; Píšová, Kostková, & Vlček, 2011). The research questions concerned the implementation of the FEP through the creation of SEPs, with the aim being to capture the quality of this process. This interdisciplinary research focused on the functions of the designed curriculum in the dimension of goals and learning objectives and the dimension of educational content, implementation processes including curriculum planning and the management of learning-teaching processes, and the factors influencing SEP design – dimension of methods and management (cf. Figure 3). Case studies provided the opportunity to capture the process at subject-specific level.

Methodology

The case study (Yin, 2009) is an empirical research method in which an individual case is examined (for example a pupil, a small group of pupils, teachers, a class, a school, etc.) and is described and explained in detail, ensuing 'a type of clarification (that) could not be achieved when examining the same objects in a mass file' (Průcha, Walterová, & Mareš, 2009, p. 231). This allows researchers to gain a deeper insight into an issue and its processes at a sector-specific level. Here the case studies complement research using interviews and questionnaires described in the previous section (cf. Janík et al., 2010a, b).

A series of ten case studies were conducted in 8 fields of grammar school education: Czech, English (2 studies), Mathematics, Chemistry, Geography, PE, Art education (2 studies), Ethical education. A team of 16 researchers – predominantly from teacher-education faculties – were involved in the research. The respondents were all experienced teachers who had actively participated in the development of an SEP. The selection of schools, and a respondent in those schools, was premeditated and designed 'to capture the circumstances and conditions of everyday or routine situations' (cf. Yin, 2009, p. 48).

The research focused on how an SEP is written and used. The main research questions were:

- How do teachers describe the processes of ontodidactic content transformation (Figure 1, Chapter 2), that is, the definition of the set of knowledge and activities for the curriculum?

- How do teachers understand the relationship between processes of content transformation and setting educational goals?

Secondary questions were:

- What functions do teachers of different subjects, attribute to curriculum documents?
- What institutional factors support or limit the development and implementation of a SEP?

Central to the research was the hypothesis that a discipline may exist at least in three levels: (a) theory level, (b) curriculum document level, (c) level of the teacher's thought (and action) and this has to be taken into account when undertaking case studies (Figure 8).

The assumption underpinning the research methodology was that the way a teacher understands the disciplinary concept influences their way of speaking and acting. That means we could infer the concept in the teacher's mind based on how the teacher speaks about the discipline. Therefore, we carried out a semantic analysis of what teachers said about the curriculum (the language of practice) to determine the teacher's disciplinary concept. We also analysed the text of the curriculum documents (the language of theory) to determine the intended concept and then compared the two.

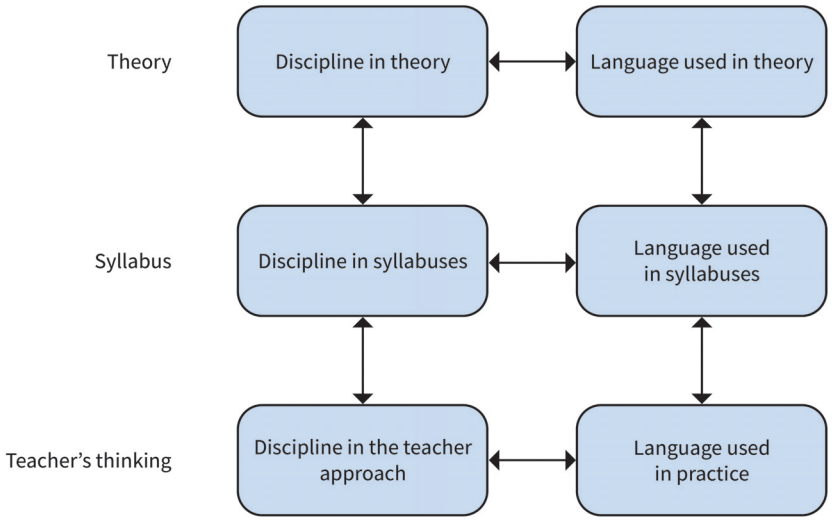

Fig. 8: *Three levels of research in the case studies (cf. Píšová et al., 2011).*

The research plan was as follows:

- Phase 1: an interview and semantic analysis: the aim was to understand the language of practice (semantic analysis focused on pre--selected concepts).
- Phase 2: a content analysis of SEPs (or other artefacts): the focus was on the elaboration of learning objectives and educational content structure of the designed curriculum.
- Phase 3: a semi-structured interview and its analysis: the focus was on using the outcomes of the analysis to understand how the teacher works with the SEP, if the teacher reflects the goals and educational content from SEP, if the teacher uses it for planning purposes, and what factors influence the SEP implementation.

Collective results and discussion

The outcomes of this research identified certain common, transdisciplinary issues. The complete research report can be found in Píšová et al. (2011) and Píšová, Kostková, & Vlček, 2011. Some key findings from the report include the following:

- The observations confirmed previous research results (Janík et al., 2010a, b) that teachers have a clear focus on the needs of the individual pupil when working with goals and content.
- The study confirmed the hypothesis that, in case studies, the discipline exists at three different levels (level of theory, level of the curriculum document (FEP or SEP), and the level of a teacher's thinking and behaviour).
- A key finding was that the discourse at each of the levels (the conceptual language of theory, the normative language of curriculum documents, and the practice language of the teacher) are substantially different.
- The research showed that while the designed curriculum content obviously moves vertically between learning objectives at different levels of specificity and respective educational content, there is also horizontal movement between educational areas and different educational fields. This was problematic because in areas of disciplinary overlap the disciplinary background of the curriculum maker appeared to be so influential that it complicated the clarity and understanding of the message from other disciplines (horizontal coherence). It is clear that a common language is needed for curriculum makers because the FEPs are interdisciplinary integrated curriculum documents.

- There is a need to integrate specific goals and educational contents in different educational fields when moving towards more general learning objectives (for example towards key competences) and this also requires a shared communication code. Hence, it is necessary for curriculum makers and those who implement it to develop a trans-didactic language (cf. Píšová et al., 2011; Píšová, Kostková, & Vlček, 2011).
- When planning classes, it appeared that the SEP served 'as a compass rather than an instruction manual' and more detailed lesson planning tended to be associated with lower level curricular artefacts (for example, textbooks, etc.).
- In the classroom, the SEP's role appeared to be marginal (cf. Pokorná & Jansa, 2015), which is undoubtedly related to teachers' the focus on individual pupils.

Results – A case study of a PE teacher

A PE case study was one of the interdisciplinary case studies described above. The teacher was not selected at random but on the basis that she had designed a SEP for PE and was a very experienced teacher in this regard.

The aim was to document the views of one PE teacher concerning the processes of curriculum reform (Vlček, 2011b) with respect to two functional dimensions, namely the goals (learning objectives) and educational contents of the SEP. A secondary aim was to gain insight into the way SEPs were used for curriculum planning and management. In order to achieve these aims it was necessary to understand the language of practice (the language used in interviews with respondents) and to understand the importance that the key concepts of curricular reform have for the respondent.

The main observations from the PE case study were as follows:

- The dimension of goals is particularly problematic. The analysis of both the interview and the SEP showed that the designed form and the implemented form are not aligned (congruent). While the overarching goals of PE in the FEP and the analysed SEP are both clearly health oriented, the respondent emphasized general movement skills and inclined to the physically oriented concept of PE.
- In the dimension of goals, the respondent's understanding of the key concepts was influenced by factors unrelated to the curriculum, for instance, teacher training, personal values, life experiences etc.

- In the dimension of content, the respondent had a predominantly practical and skill-oriented concept of PE. However, the respondent did take account of the needs of the pupil and the significant role of the material equipment of the school.

- In interviews, the teacher often used the normative language of curriculum documents loosely and often referred to material that was not included in the educational programmes. This indicates that the designed curriculum is not being implemented properly and teachers teach what they want to teach and what they know how to teach, rather than what they should teach according to the designed curriculum. In this respect, the results were consistent with those from the other case studies that highlighted the low level of acceptance of the curriculum reform by teachers (Janík et al., 2010b, p. 52).

- The Czech concept of the visionary key competences as the overall aim of training and education was understood by the respondent as a very general concept with no relationship to PE content. The concept of key competences is not sufficiently defined in the Czech scientific literature or in the curriculum documents (cf. Knecht, 2014, p. 25), and was, therefore, difficult to operationalize for the respondent (cf. Píšová, Kostková, & Vlček, 2011, p. 27).

- With respect to PE content transformation, the case study indicated that the teacher's expertise was more in their daily work with the PE content in the classroom (so-called psychodidactic transformation) than in the development of the designed curriculum (ontodidactic transformation).[13]

- The respondent considered the learning objectives defined for 'Man and Health' in the FEP to be too abstract. While the respondent officially adopted the learning objectives in her SEP, she had no intention of incorporating them into her lesson plans. These observations highlight the general criticism of formalism regarding the implementation of the Czech curriculum reforms (Janík, 2013, p. 636; cf. Janík, Maňák, & Knecht, 2009, p. 53; Pokorná & Jansa, 2015, p. 51), and deficiencies in the way the learning objectives of the FEPs are designed.

13 For more theory and details about the use of curricula documents by Czech teachers cf. Section 6.3; and Spurná & Knecht (2018).

In these sections (Section 4.1 and 4.2) our research into the Czech curriculum, based on the views of experts and on case studies of teachers from Czech grammar schools, has been presented. While these studies are not focused on the basic school curriculum, and in most instances on educational areas other than PE, the results are still relevant. The expert survey provided the basis for the development of a quality framework which has been used in Chapter 7 to assess the quality of the Czech PE curriculum. The case study of the PE teacher (Section 4.2 and other research presented in Section 4.3) showed that one of the critical problematic issues was a lack of congruence between the designed curriculum and other forms. This issue will be discussed in further detail in the next section.

4.3 Congruence in the Czech PE curriculum

Many Czech and international research studies have focused on the issue of congruence in the curriculum (Annerstedt, 2008; Fialová et al., 2014; Habrdlová, Lupač, & Vlček, 2017; Jin, 2013; Kougioumtzis, 2014; Lupač, 2016; Mužík & Trávníček, 2006; Mužík et al., 2008, 2011; Rossi et al., 2009; Trávníček, 2008). In this section research around the issue of congruence, or more specifically the lack of it, is discussed in relation to the Czech curriculum, particularly with regard to the PE curriculum (Janík, Vlček, & Mužík, 2016; Mužík & Vlček, 2010; Mužík & Vlček, 2016; Vlček & Janík, 2010; Vlček & Mužík, 2012).

4.3.1 On the issue of internal congruence of the designed curriculum

Internal incongruence of the designed curriculum in the Czech Republic occurs predominantly in two of its four dimensions (Figure 3, Chapter 2): (a) the dimension of goals and (b) the dimension of content. In the pedagogical literature (cf. Hartig & Klieme, 2006; Maňák, 2006; Weinert, 2001) the discussion of competences and educational content frequently occurs at the same time and the dimensions influence each other.

Skalková (2007) observed that the Czech curriculum makers did not develop the concept of competence at the level of individual educational areas. She found it problematic that there was no deeper understanding of the relationship between the key competences, learning objectives and educational content (cf. Maňák, 2006, p. 94; Píšová, Kostková, & Vlček, 2011, p. 27); in other words, that there is no sign of 'an attempt at a didactic analysis that would, for example, interlink the described competences and expected outcomes, or try to emphasize the leading ideas, the core curriculum, etc. in an encyclopaedic, linear enumeration of knowledge' (Skalková, 2007, p. 17; cf. Knecht, 2014, p. 25).

Similar discussion and criticism are made in relation to the PE curriculum. Our international research, presented in detail in the next chapter, focused on the designed PE curriculum (Habrdlová & Vlček, 2015; Habrdlová, Lupač, & Vlček, 2017; Vlček & Masaryková, 2014; Vlček & Janík, 2010; Vlček, 2011c; Vlček, Kouřilová, & Šeráková, 2018). It revealed obvious problems in the internal congruence of the PE documents in the Czech Republic. To summarize, in the FEP for basic education (FEP BE, 2017) PE and Health Education are integrated into broader, health-oriented educational area, 'Man and Health'. There are no specific learning objectives for PE, only for the integrated educational area, which defines clear health promotion learning objectives. However, a substantial amount of subject matter related to the PE movement concept is found in the designed educational content (Vlček & Mužík, 2012, Section 3.2). This means that there is a significant incongruence between the exclusively health-oriented learning objectives and the health-movement oriented educational content.

Another problem with the FEP BE is the lack of internal congruence in the overall structure between the first and second stage of basic education. At stage 1 (ISCED 1), general outcomes for 'Man and Health' are described followed by the subject matter contained within specific activities, that is 'Activities influencing health', 'Activities influencing the level of physical skills', and 'Activities supporting the learning of movement skills'. However, for the stage 2 of basic education (ISCED 2) the organization of FEP BE is reversed; subject matter comes first, followed by the expected outcomes for each activity, which means that both expected outcomes and subject matter are designed within the individual activities (Activities influencing health, Activities influencing the level of physical skills, Activities supporting the learning of movement skills).

4.3.2 On the issue of external congruence

There are many research studies that demonstrate incongruence between the different forms of the Czech PE curriculum (Habrdlová & Vlček, 2015; Habrdlová, Lupač, & Vlček, 2017; Vlček & Masaryková, 2014; Lupač, 2016; Vlček & Janík, 2010; Vlček, 2011c; Vlček, Kouřilová, & Šeráková, 2018). For example, our grammar school PE case study (Section 4.2) identified a lack of congruence between the curriculum forms, specifically the teacher's focus on movement concepts (concept form) and in pedagogical practice (the implemented form) which was not consistent with the health-oriented learning objectives of the designed PE curriculum (the designed form).

This external incongruence is a key observation and is fundamental to the discussion in this monograph. Our interpretation is that this incongruence is a consequence of, not only the respondent's personal orientation to the movement concept of PE, but also from a lack of clarity in the FEP. As previously stated, the FEP[14] does not address PE specifically, but as an integrated educational area with Health Education in 'Man and Health'. The FEP does not indicate whether the learning objectives of 'Man and Health' should be achieved in classes of both subjects, which would deny the reason for existence of separate disciplines, or whether certain learning objectives are defined only for PE and some only for Health Education. Thus, in the designed curriculum in the Czech Republic (the FEP) there is no clear answer to the question – 'What are specific learning objectives of PE?'

A similar lack of external congruence between different forms of the PE curriculum was found in a 2007 survey designed to document the PE experiences of upper secondary school pupils (ISCED 3) when they were in lower secondary school (ISCED 2) (Mužík & Janík, 2007, 2009). A total of 225 pupils were surveyed using a 27 question structured questionnaire and the quantitative data analysed statistically. Some of the closed questions were complemented with the opportunity to provide more open responses.

The pupils viewed their basic school experiences of PE as having been focused mostly on skills of sports and games, athletics or gymnastics. The responses suggested that little attention had been paid to the fitness training skills that are the basis of health-related fitness (that is, the promotion of good health). According to the pupils, PE did not particularly stress knowledge acquisition; if any knowledge had been communicated to pupils, it concerned mainly the rules of sports and games, less frequently the effects of physical activity on fitness and health, including hygiene and safety in physical activities.

The findings of this survey indicated that:

- There was considerable incongruity between the requirements of the designed curriculum and pedagogical practice (implemented curriculum).
- While the pupils had a positive attitude towards various physical activities, they were less positive about PE itself.
- While pupils were assessed for sports performances, according to the majority their leisure time activities were neither monitored nor evaluated by teachers. This is in marked contrast to the expected outcomes in the FEP BE, for example that pupils 'participate actively in organising his/her personal movement regimen' (FEP BE, 2017, pp. 96–98).

14 In all stages of primary and secondary education (ISCED 1–3).

A follow-up questionnaire surveyed primary school pupils (n = 1170) to find out what they thought of PE (Mužík & Hošková, 2010). A standardised questionnaire was used containing seven items, four of which dealt with their experiences of how the curriculum was realised and an additional item related to their current level of physical activity. The closed questions were complemented with the opportunity to provide more open responses.

The data were analysed statistically, and the results largely confirmed the views of the secondary school pupils. According to basic school pupils, PE mostly focused on activities and skills of sports and games, athletics and gymnastics, with the least focus on dance and rhythmic exercises or martial arts (cf. Pokorná & Jansa, 2015, p. 51). There were lessons that dealt with safety in physical activity but PE generally emphasised knowledge of the rules of sports and games. Teachers neither followed nor systematically evaluated physical activity outside the school; nor were they, in the opinion of the pupils surveyed, particularly interested.

If a health-oriented concept is to be realised, pupils must know what influences fitness and be able to evaluate their own performance. Although the pupils perceived the primary goals of PE to be developing fitness (and improving sports performance), they were without the corresponding knowledge on how to achieve this. While sections of the FEP BE required pupils to gain adequate knowledge, of the muscular system of the human body, compensatory exercises, fitness, hygienic habits, and proper posture, these topics were rarely introduced into PE lessons; or if they did the pupils were not aware of it (cf. Fialová, 2015; Mužík & Vlček, 2016; Tupý et al., 2015).

This research shows that basic school PE teachers implement the designed curriculum in a range of ways (cf. Fialová et al., 2014, pp. 82–83), depending on the PE concept favoured by the teacher or by the school, but with the emphasis being put primarily on physical and sport activities and respective skills. In practice, various PE concepts can be found, even the anti-didactic concept, which is characterized by minimal intervention and management on the teacher's part (Frömel, Novosad, & Svozil, 1999).

There is also external incongruence between the designed curriculum and the views of Czech citizens regarding what aspects of PE they thought important, as shown by Mužík & Vlček, 2010; Vlček & Mužík, 2012; Mužík & Vlček, 2016). In 2008, a field survey of the public's views on the focus of PE was conducted, using a standardized controlled interview with the respondents. The data collection was carried out through interviews conducted by sociological agency INRES. A total of 1792 respondents were selected by random quota selection. The set was a representative sample of the population of the Czech Republic aged over 15 years in terms of gender, age and region (Mužík, 2010; Mužík

& Vlček, 2010). Respondents were asked to select a maximum of three options from a range of possibilities, or to indicate in their own words which thematic area of PE they considered important.

The findings of the survey showed that more than two-thirds of respondents (68.9%) preferred sports and sports games in PE. Compensatory exercises to prevent weakening of the locomotor system was the next most frequent selection (58.6% of the respondents) followed by keep-fit exercises for optimal fitness development (48.4% of the respondents). The options least preferred were recreational activities (36.4% of the respondents) and only 19.6% of respondents thought theory (knowledge) of PE and sport was important. No other topics were selected by respondents.

A similar survey using the same methodology was carried out in 2014 (cf. Mužík & Vlček, 2016), in cooperation with NIE and company SPIROX. This study found that public opinion had changed. The sample comprised 1810 citizens of the Czech Republic. Again, the set was a representative sample of the Czech population aged over 15 years in terms of age, gender and regions of the Czech Republic. Respondents were asked to mark only one thematic area of PE they considered to be the most important. The results are shown below in Table 12.

Tab. 12: *Views of the Czech public on the focus of PE in schools (cf. Mužík & Vlček, 2016).*

Question: In your opinion, what should physical education in schools primarily focus on?	Relative frequency of responses (%)
1. On fitness – in PE lessons, pupils should, in particular, work out and strengthen the body in various ways.	**15,6**
2. On sports preparation – in PE lessons, pupils should primarily learn basic sports skills.	**13,9**
3. On versatility – in PE lessons, pupils should get acquainted with all kinds of physical skills and knowledge of how to use physical activity in the daily regimen.	**51,6**
4. On experience and physical recreation – in PE lessons, pupils should relax and take their mind off studying thanks to entertaining activities.	**14,3**
5. On health prevention and compensation – PE lessons should focus primarily on prevention and compensation of various health impairments.	**4,5**
6. Different focus.	**0,1**

Note: For this question, respondents should choose one of the options provided in the table.

The findings showed that 51.6% of the population selected the ability to confidently move and interact with their daily physical environment (motor versatility). Selection of other thematic areas were relatively low: Only 15.6% of respondents selected fitness; only 13.9% of respondents selected sports preparation; 14.3% of the respondents selected experience and recreation. Prevention and compensation for various health impairments was selected by only 4.5% of the wide public.

Based on these and other research findings (cf. Fialová et al., 2014; Vašíčková, 2016), it is apparent that public opinion changes relatively quickly over time and is influenced by circumstances that are sometimes difficult to identify.

If these results, admittedly from differently designed surveys, are an accurate reflection of changes in public opinion over a relatively short time, it may be difficult to consider the public's views when developing or revising the PE curriculum. However, it is apparent that there is an inconsistency between the concept underpinning the designed PE curriculum and the views of the public – the designed curriculum of PE in the Czech Republic is mainly focused on health promotion, but the Czech public prefer a different focus (motor versatility).

This section has described structural (static) issues of congruence in the Czech PE curriculum. However, process issues are also important, and implementation is viewed as a key problematic area. The following section reviews the implementation of the reform, primarily in relation to the implementation of the two-tier curriculum model.

4.4 Reform implementation issues

Some authors use the terms 'fidelity', especially when considering 'fidelity of implementation' which Carroll et al. (2007) define as the extent to which the educational programme is implemented in accordance with the original intent or plan; that is, the consistency of the original intent (designed curriculum) with the reality of implementation (implemented curriculum). The reform of the Czech curriculum, particularly the 'fidelity of implementation' of the two-tier model, has at times been problematic.

Although some of the research in this section is our own and therefore PE related, it is presented in the context of a large body of research by other authors into the implementation of curriculum reform in the Czech Republic. These implementation issues are critical; however, most of the studies are interdisciplinary, and relate to the reform process in general. Hence it has been included in this chapter rather than in Chapter 6 which specifically reviews the five forms of the PE curriculum in the Czech Republic.

The process of reform implementation requires strategic planning and the development of a resourced implementation plan. This includes a description of the roles of individual stakeholders. However, a variety of institutions and stakeholders were involved in the implementation process, some of whom were uncertain about their roles and responsibilities (Janík et al., 2011a; Janík, Vlček, & Mužík, 2016; Tupý, 2018a). Furthermore, the State did not support the reform sufficiently (Straková, 2013; Janík et al., 2018).

A recent historical analysis of Czech curriculum reform since 1989 by Tupý (2018a) identify recurring problems, particularly regarding the speed of curriculum development. This was apparent in the very short timelines set for processing and evaluating documents in the previous reform initiatives. This meant that the proposed designs were often not discussed sufficiently, substantiated or assessed by the wider pedagogical community including teachers. Frequently, the educational programmes and other materials were submitted for consideration and finalized (or almost finalized) at an early stage of the project, which made it difficult to incorporate any subsequent proposals to change the concept or content.

According to Tupý (2018a, p. 50), the MEYS intentionally accelerated discussions to prevent further debate and the numerous comments from prolonging the approval process. However, what was more important was that critical comments were not consistently addressed, subsequent approval of the documents rendered the comments out-of-date – or comments 'silently disappeared'. The current revision plan for the curriculum initially gave a three-year time-frame but this appears to have been extended. Hopefully, the issues raised by Tupý will not be a problem this time around.

Other implementation issues related to how the overall reform was coordinated, and the problematic communication between the curriculum development institutes (National Institute of Education, Research institute for Education) and assessment units (the Czech School Inspectorate and Centre for Learning Outcomes in the Czech Republic). This led to a variety of interpretations of what was important in the reform.

A major issue was that the aim and purpose of the reform was not communicated clearly and sufficiently to the stakeholders who would implement the reform (Janík, 2010a, p. 52–57; Janík, Vlček, & Mužík, 2016, p. 139). Many teachers, including PE teachers, spent considerable time and effort developing SEPs and implementing the reform. However, they saw this as taking them away from their main role as teachers, which meant that they did not understand the purpose (cf. Janík et al., 2010b; Straková, 2013; Spurná & Knecht, 2018).

Poor communication also meant there were various interpretations on how the reform should be implemented. For example, the reform was intended to provide overall control at the beginning of the educational process and then enable flexibility and diversity through decentralization and school specialisation. However, many control mechanisms were established at the level of curriculum outputs that led to standardization rather than diversity. An example of this was that the Czech School Inspectorate insisted on congruence between the FEPs and SEPs to a greater degree than the authors of the curriculum intended, especially regarding their formal features. This raises the question as to what extent the development of the SEP stimulated pedagogical reasoning, to what extent it was creative collective writing, or to what extent it was mere rewriting or copying FEPs (Janík, Vlček, & Mužík, 2016, p. 139; cf. Pokorná & Jansa, 2015, p. 51).

The question of why teachers did not accept the reforms has been extensively researched (Bantwini, 2010; Beran, Mareš, & Ježek, 2007; Berkovich, 2011; Charalambous & Philippou, 2010; Christou, Eliophotou-Menon, & Philippou, 2004; Ha, Wong, Sum, & Chan, 2008; Liou, Moolenaar, & Daly, 2016; Píšová et al., 2011; Noyes, Wake, & Drake, 2013; Pešková, Spurná, & Knecht, 2019; Park & Sung, 2013; Píšová, Kostková, & Vlček, 2011; Porubský, Trnka, Poliach, & Cachovanová, 2015; Tůmová, 2012; Vanderlinde & van Braak, 2011; Vollstädt, Tillmann, Rauin, Höhmann, & Tebrügge, 1999; Walterová, Černý, Greger, & Chvál, 2010, etc.).

Why didn't teachers accept and implement the reform as designed in the Czech Republic? In clarifying this question research has focused on how teachers and school principals viewed the reform (Janík et al., 2010a, b; Janík et al., 2018) and the barriers to accepting reform ideas or to using the curriculum documents. The way that curriculum documents are used is revealing. In one study Spurná and Knecht (2018) applied Johnson's types of utilization (Johnson, 1998) to the statements of 18 Czech lower secondary teachers obtained through semi-structured interviews. They found that teachers did not accept the reform because the concept of the two-tier model was difficult to operationalise. The authors identified three ways in which teachers use the FEP and SEP curriculum documents. Most teachers used them instrumentally; that is, they acted like a clerk and ensured that their practice included all features listed in curricular documents, without innovation. As the authors point out, this approach inhibits any attempt to perceive the SEP as a dynamic document. This corresponds to our research into the use of the designed PE curriculum (cf. Sections 4.2 and 4.3, Vlček, 2011b). Other teachers used the curricular documents symbolically in that they doubted their usefulness and were reluctant to use them. Some teachers used

the curricular documents conceptually; they thought about them, felt the need to innovate and change them, and wanted to use them to further improve the quality of teaching at their schools.

Subsequent research confirmed that the reform took place largely on paper, at the documentation level, to a much lesser extent in teachers' mind-set, at the cognitive-emotional level) and in their teaching, at the implementation level (cf. Pešková, Spurná, & Knecht, 2019).

Tupý (2018a) points out that this problem occurred in previous reform cycles in the Czech Republic, and experience from other countries also shows that reform expectations are frequently not met (Berkovich, 2011; Handal & Herrington, 2003; Noyes, Wake, & Drake, 2013; Park & Sung, 2013; Van Driel, Beijaard, & Verloop, 2001).

Therefore, the critical research question for the future is a process issue – what actions are necessary to encourage teachers to use curriculum documents in a conceptual way and think about the curriculum documents or develop and adapt them so that they could improve the quality of their teaching. According to Spurná & Knecht (2018), teachers who work in this way may identify more strongly with the reform goals, which in turn may result in greater competence-oriented teaching. Spurná & Knecht (2018) did find some respondents who were using the curriculum documents conceptually and making efforts to innovate. These instances can be built upon – as Tupý (2018a) states it would be unfortunate if this enthusiasm was suppressed by another round of non-conceptual and non-systematic curriculum reform.

When discussing the process of implementation and how to encourage teachers to understand and accept reform, it is important to consider the relationship between innovation and reform (Chapter 2). Bottom-up innovation can fruitfully meet top-down reform (Rýdl, 2003; Connelly, He, & Phillion, 2008). As Rýdl (2003, p. 33) emphasizes 'governments need to add a pro-innovation policy to their own need to reform and their tendency to deepen the reform when it does not work'. This is also stressed by the authorities responsible for the Czech curricula revisions (National institute for Education – NIE). In our opinion this is the correct approach, and the only way to give teachers confidence in the curriculum changes, and lead to their adoption (cf. Connelly, He, & Phillion, 2008, p. 422). In other words, top-down reform (cf. Kirk, 1988) without the innovative bottom-up feedback is not the voice of the real world and without a collaborative relationship between participants (cf. Dvořák, Holec, & Dvořáková, 2018; Macdonald, 2003) positive change is difficult to implement.

Given the historically centralized Czech educational system, adding curriculum development to the teacher's role as is expected in the two-tier model may seem incongruous (cf. Píšová et al., 2011). However, if a bottom-up approach is seen as desirable, teachers must not be left out of the process of curriculum development. Furthermore, teachers make up an expert group with extensive knowledge and experience and, as noted above, some teachers already use the curriculum documents conceptually in developing SEP curricula documents.

The issue of bottom-up innovation and whether it encourages teachers to accept reform is often discussed in the specialized literature (Priestley & Philippou, 2018), in terms of School Based Curriculum Development – SBCD (cf. Marsh, Day, Hannay, & McCutcheon, 1990; Píšová et al., 2011). Advocates of this approach (cf. Bailey, 1991) assume that teachers involved in school curriculum development are more likely to accept it and are better able to adapt it to the needs of both parents and pupils. However, opponents of the SBCD concept argue that a centralized curriculum guarantees better content coordination and enables comparable conditions and learning outcomes to be achieved across schools (cf. Glatthorn, 2004, p. 66). These opposing arguments reflect the tension in the two-tier curriculum reform in the Czech Republic.

Teachers can also be involved in curriculum development at the national level. Tupý (2018a, p. 106) comments on teachers' participation in the design of the FEP saying that it is appropriate for practitioners to get involved as much as possible, but that it is unrealistic to believe that they would all perform well, without at least some professional guidance or support, and to expect them to devote sufficient time, in addition to their jobs, to developing and editing a state document. It is a question of degree – to what extent can curriculum development be delegated to teachers, using their accumulated expertise and knowledge. It is a matter for discussion (cf. Dvořák, Holec, & Dvořáková, 2018, p. 16) whether, and to what extent this will be encouraged in the current curriculum revision process.

When the curriculum undergoes reform, the concepts underpinning the curriculum will necessarily be different to what went before. If the reform is successful it should disrupt the teacher's perception of what should be taught. This frequently did not happen, as teachers did not accept the reforms. Specifically, with respect to PE teachers are faced with having to deliver expected outcomes such as a 'positive attitude towards the development of health-oriented fitness', 'influencing the physical activity regime' or 'support of physical activity'. Teachers view these as consequential or secondary effects of PE not as an essential part of the designed curriculum to be implemented and assessed.

Other studies show that the learning objectives defined for the educational area 'Man and Health' are regarded by the teachers as too abstract (Vlček, 2011b; Vlček & Mužík, 2012). This appears to be the reason why they are only formally included in the SEPs (referred to as formalism) and, in practice, seldom operationalized (cf. Janík, Vlček, & Mužík, 2016, p. 133). As we have already pointed out in Section 4.2, some teachers choose what they want to teach and what they can teach, rather than what they should teach according to designed curriculum.

In this chapter the focus has been on quality issues regarding the Czech curriculum and curriculum reform. A quality framework has been described (Section 4.1) which is used in Chapter 7 when making recommendations regarding changes to the PE designed curriculum. The PE case study (Section 4.2) and the research on congruence between curriculum forms (Section 4.3) has revealed one of the key problematic areas of the Czech PE curriculum. Section 4.4 focused on more general implementation issues (process issues) of curriculum reform with some PE examples. In the following chapter, a comparative, international perspective of the PE designed curriculum is presented using the methodology of problem-oriented comparative analysis.

5 International comparisons of the PE curriculum

In the previous chapter, problematic issues primarily in the current Czech PE curriculum were presented through selected research studies. These results show that curriculum reform has not always been successful in meeting the expectations of policy makers, the educational sector and the public (Dvořák, Starý, & Urbánek, 2015; Janík, 2013; etc.). This also includes PE curriculum development (Vlček & Mužík, 2012; Mužík & Vlček, 2016; Janík, Vlček, & Mužík, 2016).

Unfortunately, Czech curriculum reform efforts tend to be carried out without their authors learning from the shortcomings or merits of previous reform efforts (cf. Kuřina, 2014; Tupý, 2018a). However, through comparative research it is possible to learn from curriculum development in other countries. This is important for the prognostic work in education (cf. Manzon, 2011) and curriculum problematics (cf. Miller, 2006).

Thus, the aim of this chapter is to describe our research (cf. Habrdlová, Lupač, & Vlček, 2017; Vlček & Masaryková, 2014; Vlček, 2011c; Vlček & Janík, 2010) comparing the designed PE curriculum in selected (mainly) European countries with a view to identifying learnings that might assist the revision of the Czech PE curriculum. The description and comparison of the designed PE curriculum in each country serves as a base for evaluation and discussion of PE curriculum quality.

5.1 Methodology

5.1.1 Paradigm of international comparative research

According to Brandl-Bredenbeck (2005, p. 27; cf. Boehne & Merkens, 1994; Holmes, 1984), there are two different approaches in international comparative research, where the 'difference lies in a different understanding and view of the culture of a state: cultural relativism and universalism'. Some Czech authors also write about this dualistic paradigm (cf. Hladík, 2009; Váňová, 1998).

At the heart of the concept of cultural relativism is the assumption that individual cultures are unique and unrepeatable entities. This relativistic concept aims to 'reveal the truths' that are limited to a particular culture or social group. That is why it is necessary to judge each culture only in its own context, in the context of its own values, ideas, norms and traditions.

The alternative universalist approach is a comparative way of looking at different cultures, which is based on the alternative proposition that there are certain features that are common to all cultures; that our understanding of the world is basically the same because there are general truths, or features, or *universalia*, pertaining to all cultures that are valid. In rhetoric, the first item being compared is called the *comparandum* and the item it is being compared to is the *comparatum*. These are the *comparatistics.* The element of similarity, the *tertia comparationis,* is the feature that the two things which are being compared have in common. This is the concept of higher universality (Vlček, 2015) which we used in the international comparisons described in this chapter.

Brettschneider & Brandl-Bredenbeck (1997) cite Pike (1967) who takes a similar but slightly different approach to the relativistic/universalist approach, and refers to *emic* and *etic* (Bray, Adamson, & Mason, 2007; Brandl-Bredenbeck, 2005; Bray, 1990; Morris, Leung, Ames, & Lickel, 1999; Richter, 2006; Vlček, Resnik Planinc, Svobodová, & Witzel Clausen, 2016; in the Czech Republic cf. Hendl, 2016; Švaříček & Šeďová et al., 2007; Vlček & Janík, 2010). The etic view is based on objective science from the perspective of an observer, which is an external view. It seeks common features (*universalia*) and disregards the cultural, social or linguistic differences. It examines external manifestations, which it describes through professional terminology in accordance with the principles of modern science. Hence, an etic observation or conclusion cannot be reversed by disagreement of members of the cultural community monitored, but only through logical or empirical evidence. The emic view, on the other hand, stems from the internal perceptions of members of the community, their own understanding and observations. This internal view is based on what members of the community perceive as meaningful, appropriate or real.

In summary, an universalistic or etic approach, provides a perspective 'from the outside' (Morris et al., 1999) and tends to seek and emphasize similarities, while the emic view 'from the inside' is culture-specific and highlights cultural differences (Richter, 2006). It is not enough to use only one of these approaches (Brettschneider & Brandl-Bredenbeck, 1997; Pühse & Gerber, 2005; Richter, 2006; Vlček, Svobodová, & Resnik Planinc, 2019). A balanced and critical interplay between etic and emic approaches is a very useful tool for contemporary comparative studies and this is how we have approached our research.

For example, the countries whose curriculum documents are analysed in the following chapters differ in size, political establishment, language, and many other aspects. We know that the concepts of PE in the different countries are diverse (Naul, 2003, 2011a; Richter, 2007; Hardman, 2008; Krüger, 2012).

Therefore, it is not surprising that, from an external (etic) point of view the curriculum documents are different in their terminology and educational content, processing and scope. This makes them difficult to compare without understanding the context from an internal (emic) perspective. For this reason, in addition to analyses of curriculum documents, other sources were used, for example, interviews with the local stakeholders, that provided more information on the terminology used, their historical development and the current state of PE and education systems.

5.1.2 The comparative approach in educational sciences

Comparison is a legitimate scientific method in which the relationship between two or more parameters of a phenomenon can be described in terms of correspondence (congruency), similarity (affinity) or difference (discrepancy). As some comparativists point out, for example Brettschneider & Brandl-Bredenbeck (1997) or Morlino (2018), comparative studies can be found in various disciplines, sub-disciplines and special fields of research such as politics, law, literature, education etc. (Vlček, 2015).

In PE, serious attempts have been made to develop a specific research topic of Comparative PE and Sport[15] (cf. Bennett, Howell, & Simri, 1975; Brandl-Bredenbeck, 2005; Hardman 2000, 2001; Howell, Howell, Toohey, & Toohey, 1979; Kudlorz, 1989) and in the Czech settings (Vlček, 2009).

While Comparative PE and Sport is a relatively recent area of formal study (compared to comparative law, for example) the quest for knowledge about practices and systems has been in evidence since 1789 when the Prussian Count Leopold Berchtold included PE and Sport in a questionnaire for travellers (Hardman, 2000). The pioneering work of Berchtold was developed by another Frenchman, Marc Antoine Jullien, when, in 1817, he published a series of questions on public education that included PE in European countries. Thus, as Hardman (2000, 2001) states, the field of comparative PE and Sport has travelled a similar road to that of comparative education from which it has adopted various methodological approaches.

15 Comparative PE and Sport is a term used in English speaking countries. In some countries in continental Europe where the term Sport Pedagogy is used to describe the discipline (cf. Crum, 1986; Haag, 1989, 2005; Jůva, 2002) the term Comparative Sport Pedagogy (*Vergleichende Sportpädagogik* – Kaulitz, 2001a, b) is used instead of Comparative PE and Sport.

According to comparativists such as Noah and Eckstein (1969, cf. Halls, 1990; Cowen, 2009; Walterová, 2006) the development of comparative education has been marked by five identifiable stages, each characterized by a different motive and each producing a different genre of work. The earliest stage, the period of traveller tales, was promoted by simple curiosity. Second came a period of educational borrowing, when the desire to learn useful lessons from foreign practices was the major motivation. In the third stage, cooperation was stressed in the interests of world harmony and mutual improvement among nations.

Two more stages have appeared since the beginning of the 20th century, both concerned with seeking explanations for the wide variety of educational and social phenomena observed around the globe. The first of these attempted to identify the forces and factors shaping national educational systems. The second, and the latest, may be termed the stage of social science explanation where the empirical methods of various social sciences are used, for example, economics, political science, and sociology, to clarify relationships between education and society.

Manzon (2011) defines current comparative education as 'an interdisciplinary subfield of education studies that systematically examines the similarities and differences between educational systems in two or more national or cultural contexts, and their interactions with intra- and extra-educational environments. Its specific object is to examine educational systems from a cross-cultural (or cross-national, cross-regional) perspective through the systematic use of the comparative method, for the advancement of theoretical understanding and theory building' (p. 215). This definition highlights that comparative research need not always be international (cf. Vlček, 2015; Bray & Thomas, 1995) although in this chapter it is.

The International Society for Comparative PE and Sport (ISCPES) defines current comparative study as a field in which two or more units (countries, cultures, ideologies, regions, states, systems, institutions and populations) are compared usually in different geographical settings. As Vlček (2015) points out, it is important to use the correct definition of space (cf. Federation, Country, State). Examples of the phenomena to be compared include school systems, or elements of PE and Sport models in a macro or micro context. Usually the phenomena associated with such units are universal although they may differ in focus and substance cross-culturally and cross-nationally. Comparativists study how and why they differ (Hardman, 2000).

Using these definitions, four fundamental principles of comparative research can be identified (Vlček, 2015, cf. Vlček, 2016).

Tab. 13: *Principles of comparative research (Vlček, 2016).*

Plurality	There must be more than one object to be studied
Comparability	They must be comparable
Contextuality	The context (cultural, national, regional etc.) must be examined
Scientific approach	They must be systematically and scientifically studied

Plurality is obvious; there needs to be more than one object if a comparison is to be made. Comparablity means that the object being compared must have some parameters in common (cf. Gerring & Thomas, 2011; Sandelowski, Voils, & Barroso, 2007) so that the analysis of their differences is meaningful (Holmes, 1984). Contextuality means that attention must also be paid to the underlying context of any similarities or differences observed (Noah & Eckstein, 1969, p. 97; Liu, 2008), as well as their causal relevance to the phenomenon being examined (Noah & Eckstein, 1969).

The fourth principle is critical but not always observed; a scientific approach is essential in comparative research, in PE as in all social sciences (Morlino, 2018). The research strategy must be systematic, controlled, empirical and critical (Almond & Verba, 1963). The key factor is the method by which the data are gathered; it should be systematic and reliable and it must be able to be replicated, so that some other researcher looking at the same body of material would come up with similar observations (Almond & Verba, 1963; cf. Sandelowski, Voils, & Barroso, 2007). All this implies that the method should be transparent and explicit. Not all people think of curriculum quality as a rigorous concept that can be analysed scientifically (cf. Stabback, 2016). That is one of the goals of this monograph, to demonstrate that curriculum quality can be scientifically studied and evaluated.

Bereday (1964) distinguished two approaches to comparative studies. The first approach, the total approach, exposes the whole phenomena to study. The second, the problem approach enables the researcher to gather comparative evidence in small segments. This is the approach followed in the studies presented in this chapter.

The selection of one theme or topic is fundamental to the problem approach. As Noah and Eckstein (1969, cf. Holmes, 1981; Manzon, 2007; Morlino, 2018; Veselý, 2011) stress, without a specific topic there is no way to decide what data are relevant in the early stages of the investigation, when data collection should cease, and what countries ought to be included in the sample. The topic of the research described here is the problematic areas of the designed PE curriculum that emerged from the curriculum research described previously (Chapter 4).

Identifying the problem within the topic is the next critical scientific act. The aim of the research was to compare the problematic areas with those from abroad to identify similarities and differences and provide learnings that might assist curriculum makers to enhance the quality of the Czech PE designed curriculum. Specifically, the development of the PE concepts was compared in Section 5.2 and the learning objectives and educational content of the designed curriculum in Section 5.3.

5.1.3 Methodology of the comparative analysis

As mentioned above, the curriculum research presented here builds on the comparative research methodology from educational sciences (Noah & Eckstein, 1969; Bray & Thomas, 1995; Manzon, 2011) and in PE and sport (Bennett, 1970; Bennett, Howell, & Simri, 1975; Brandl-Bredenbeck, 2005; Howell, Howell, Toohey, & Toohey, 1979). Importantly these studies employ both the time and space dimensions of comparative research (cf. Kaulitz, 2001a, b; Bray, Adamson, & Mason, 2007; Hagg, 1989; Morlino, 2018) as described below:

- Vertical (synchron) comparison, within different time periods to explain the contextual factors.
- Horizontal (diachron) comparison within different social settings at a given time.

The research concentrated on lower (primary) and upper (lower secondary) stages of basic education (ISCED 1 and 2) because PE is compulsory in each country during those years. The countries were selected because of their differences (different historical and cultural traditions, state systems, economic development, language, geographical indications, etc.) as well as their similarities; namely, the fact that all countries have introduced school reforms in recent years that included a modernization of the curriculum including PE.

In the Czech school system, there is a national curriculum prescribed by the State (through the MEYS; Czech School Inspectorate, etc.) and it has control over the approval and production of central documents and school education programmes. However, national control of the curriculum is not the situation in every country and in those instances, a curriculum from a specific State was selected for comparison (e.g. the German State of North Rhine-Westphalia).

The aim when selecting the countries for comparison was to include a curriculum based on each of the PE concepts described in Chapter 2 (sport education, movement education, PE and health education). However, as a result of transition

and assimilation, particularly in the 1980s (cf. Naul, 2003, 2011a) no country strictly follows a single concept today (cf. Crum, 1994). Hence, it is necessary to examine the different structures and specific educational content in the curriculum document to clearly identify the actual concepts that underpin it.

In addition to the PE concepts, the research also focused on the designed form of the PE curriculum; that is, on how PE should be done (Section 5.3). The curriculum was viewed objectively as a product in its written form (Posner, 1992) and the core of the study was a qualitative analysis of specific elements of the curriculum documents and a comparison of the results. A qualitative analysis aims at a systematic, non-numerical data organization whose goal is to reveal topics, patterns, characteristics and relations (Brink, 1993). Its purpose is not to identify the distribution of a phenomenon (quantitative), but to present convincing evidence for its existence and how it is structured (Denzin & Lincoln, 2011).

The studies were underpinned by a comprehensive literature review that drew from a wide range of primary and secondary sources.[16] The documents that constituted the set of primary sources are referenced in each section. Since the curriculum documents differed in number and length, only those sections in the documents that related directly to PE were compared. They were analysed individually before being compared. Various techniques were used, and these are described in more detail in the following paragraphs.

The research methodology builds on the classic comparative research methodology proposed by Bereday (1964) and comprises four discrete steps as shown in Table 14.

Tab. 14: *Steps of comparative method (cf. Bereday, 1964).*

Description	Collection of facts
Interpretation	The analysis of facts
Juxtaposition	The preliminary comparison of facts
Comparison	The final fusion of the facts with similarly assembled data from other countries for the purpose of comparison

16 An important source for the curriculum research is the grey literature produced by organizations outside of the traditional commercial or academic publishing and distribution channels. Common grey literature publication types include reports (annual, research, technical, project, etc.), working papers, government documents etc.

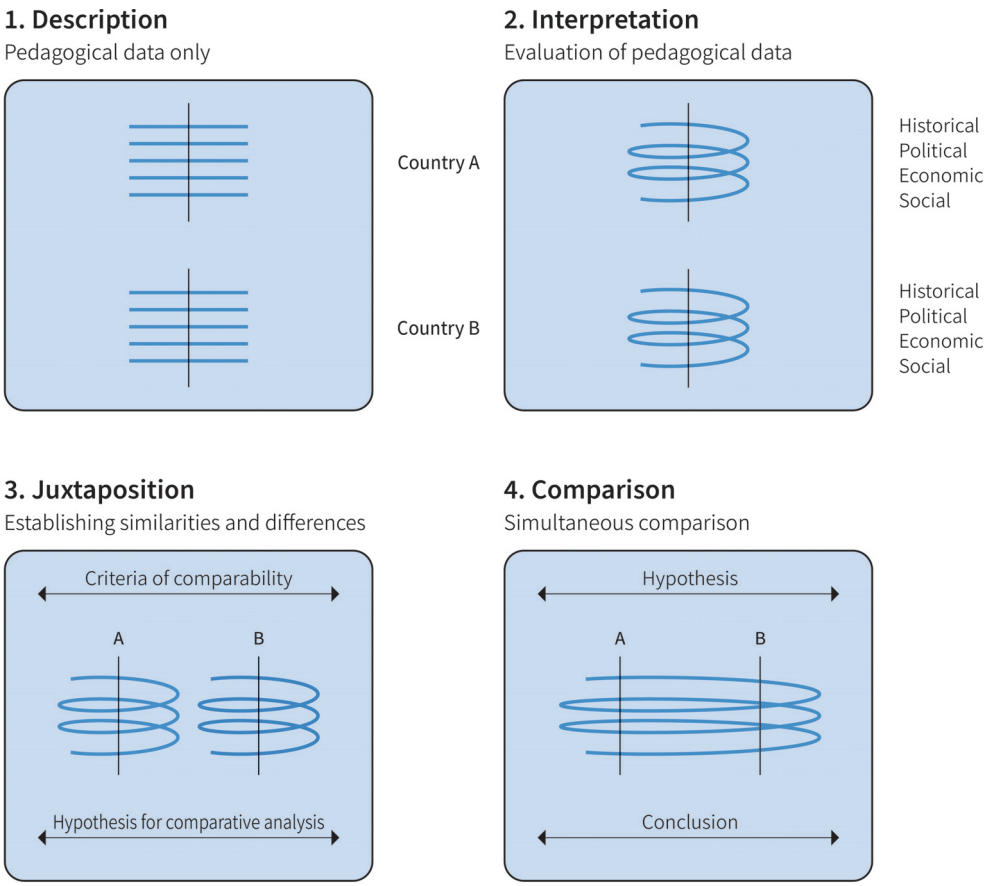

Fig. 9: *Model for undertaking comparative analysis (Bereday, 1964).*

1) Description – data collection

At this stage of our research, open coding was used (cf. Glaser, 2004; Glaser & Strauss, 1967; Corbin & Strauss, 2008). The texts were divided into fragments and the resulting text fragments assigned codes. Once a list of codes had been created, they were systematically categorized, using categories taken from other research (deductive) or new categories created from the remaining fragments in the collection (inductive) (cf. Glaser, 2004). The reliability of the method was confirmed in a pre-research exercise where the coding and categorization of a sample document was replicated by an independent researcher. The results were compared to establish that the methodology produced comparable categorizations.

2) Interpretation (understanding)

The goal of this phase is to thoroughly describe the material and understand the connections to the research problem (Holmes, 1981, p. 61; cf. Noah

& Eckstein, 1969). As Bereday (1964) shows, there is an infinite number of interrelationships between the observed phenomenon (in our case, the curricular documents) and society, so it is essential that contextual factors are considered at this stage (e.g. historical, political, economic or social). Our research focus at this stage was mainly on the interpretation of the analysed text.

3) Juxtaposition

Juxtaposition involves a side-by-side presentation of the characteristics of the objects being studied (Walter, 2006, p. 98; Vlček & Janík, 2010, p. 67). Careful attention was paid to determining the starting point of the comparison, which is the foundation for any meaningful interpretation of the findings (Manzon, 2007, p. 117). Holmes (1981, pp. 111–114) speaks of the need to determine typical patterns at this stage in order to carry out the subsequent comparison. In our curriculum analysis, these are in the form of categories of codes. The next step is to create a 'skeleton' by arranging all categories into a coherent line side by side. The purpose of the skeleton is to facilitate the development of key propositions by the researcher (for illustrative purposes cf. Figure 10).

4) Comparison – looking for causalities

At this stage, a parallel comparison is made of the characteristics of the objects compared. According to Bereday (1964), comparisons occur when we relate the phenomena compared to the superior concept or value. This value was *tertium comparationis* determined in the previous step. Comparison of phenomena eliminates everything that is irrelevant for the purposes of comparison (Holmes, 1981). Based on the code categories in which the data are aggregated and synthesized, key statements are formulated. This last step involves data interpretation, comparison and suggestions for the solution of the problem. These will be presented in the closing chapters.

5.2 A comparison of the historical PE concepts in Germany, the Czech lands, and the USA

Using the comparative methodology described in the previous section, it is possible to learn from the experiences of curriculum reform in other countries. However, as emphasized in Chapter 2 it is important that the context of these reform activities is considered. The concepts underpinning the PE curriculum vary between countries as a result of many factors, culture, history, geography etc. This section presents research that examines one of those factors, the historical development of the concepts underpinning the PE curriculum in Germany, the Czech lands and the USA (Vlček, 2011a).

The historical development of PE curriculum concepts is described in published texts for many countries and when closely examined can provide the necessary context for comparative studies. Brettschneider and Brandl–Bredenbeck (1997) together with many other authors (Cazers & Miller, 2000; Naul & Hardman, 2002; Kössel, Štumbauer, & Waic, 1998; Naul, 2003, 2011a; Siedentop, 2006; etc.) describe how, from the late 17th century to the mid-18th century, three systems (German, Swedish, and English) laid the foundations of PE and sport in many countries. Naul (2003, 2011a) describes the subsequent development, in the 19th century, of the four concepts of PE that prevail in most developed countries today, that is, sport, movement, physical and health (cf. Section 2.4).

The three countries studied in this section, Germany, the Czech lands and the USA, have different but inter-related cultural and scientific traditions, which is the Anglosphere vs. Central Europe with its pronounced influence from the German tradition (cf. Hopmann & Riquarts, 1995; Hopmann & Gundem, 1998; Horlacher, 2018). This dichotomy in the field of PE is the reason that Germany and the USA are included in the historical analysis. Germany was also selected because it was one of the three countries that laid the foundations of school PE. This section will also provide a perspective from an ex-Eastern bloc country.

5.2.1 The development of the PE concept in Germany

Johann Basedow (1723–1790) was the first person to conduct organised gymnastics as a part of education in Germany. He was the first modern writer and teacher in this area of education and is credited with founding the Dessau *Philanthropinum* and writing about the education of mind and body.

J. Ch. F. Guts Muths (1759–1839) was one of the originators of gymnastics (Naul & Hardman, 2002) and wrote many influential books including gymnastic exercises for girls. For example, he wrote *Gymnastics for Youth*, the first book on modern gymnastics, in which he describes the use of sloping beams, climbing poles, ladders and ropes along with the balancing beam and the swinging beam.

Friedrich Ludwig Jahn (1778–1852) was another important person in the history of German PE, who also influenced many gymnastic leaders in the Czech Republic (Rychtecký & Fialová, 2004) and the USA (Cazers & Miller, 2000). He was a member of a 19th century gymnastic movement called the '*Turner*' movement (Naul & Hardman, 2002; Naul, 2011b). He founded a gymnastics club, the '*Turnverein*', in the 19th century after France defeated German army in 1806 (Kössl, Krátký, & Marek, 1986) and established the first public '*Turnplatz*' (an outdoor area for gymnastics) in 1811. The Turnverein was nationalistic and political

and their popularity was useful in opposing the French domination of Germany. After Napoleon's defeat, it began to disband as the government thought the members of Turnverein were too political and liberal. In 1818, the organization was outlawed and Jahn was arrested. But the Turners remained loyal. Some emigrated and laid the foundations for PE in many countries including the USA (Fridrich Hecker, Charles Follen, Charles Beck, Francis Lieber). In the 1860s there was a revival of the organization in Germany but this time it did not engage in politics (Brettschneider & Brandl–Bredenbeck, 1997).

Adolph Spiess (1810–1858) is recognised as the founder of school gymnastics in Germany. He used the gymnastics of Gutts Muths and Jahn in schools in Switzerland and then further developed Jahn's system and wrote teacher-training materials. Speiss was instrumental in incorporating PE into the German school curriculum (Naul & Hardman, 2002).

For many years, German nationalism was a barrier to the inclusion of English-style sports and games into the very formal, gymnastics-oriented PE curriculum in Germany. The Government supported alternative gymnastic concepts from other countries (Naul & Hardman, 2002) rather than the English sports and games concept. Then, at the end of the 19th century, militarism emerged into German PE. The familiar ideas of Christian virtue were replaced with the ideology of the Aryan superman (Brettschneider & Brandl–Bredenbeck, 1997) and its emphasis on physical superiority. Naul (2003, p. 43) makes an interesting observation: 'It was only under fascist rule in the 1930s that stronger support than ever before was given to the sports and games concept.' After World War II, sports were strongly encouraged in East Germany and became the key aspect of PE in schools and the term *Sportunterricht* (Sport Education) was adopted in 1965 (Balz & Neumann, 2005). The role of sport in education under the Communist regime will be discussed in more detail with reference to the Czech system.

In West German schools there was initially a clear separation of PE and external sporting clubs. After 1966, the West German Sport Federation and some State Ministries of Education campaigned to bridge this gap. As a result, sporting objectives and a sports-oriented curriculum were progressively adopted in West Germany (Naul & Hardman, 2002) and in 1970, as happened in East Germany, the term 'sport' was incorporated into the subject name (Kurz, 1993).

The deconstruction of the sporting model of PE began initially in West Germany in the late 1970s and gained momentum in the 1980s when 'student-centred' teaching approaches were promoted. Two alternative concepts appeared at that time; Funke's 'body education' concept (Funke, 1980, 1983), and the critical

'Frankfurt Group' (Frankfurter Arbeitsgruppe, 1982; Landau, 1996) open PE concept. These alternative concepts to sports education became popular in the 1980s and early 1990s, particularly in primary schools. After German reunification in 1990 the replacement of the sports-oriented curriculum continued, although it remained in some states until the early 21st century (Brettschneider, 2003).

Naul (2003, 2011a) states that as a result of the educational reforms that took place after German reunification the new curriculum was based on the movement concept, and that is the categorization that has been adopted here. However, the concept underpinning the German curriculum is more complex than that, as it is multiperspective (Krüger, 2012) and the objective of the curriculum is overall operational ability – *Handlungsfähigkeit* (cf. Kurz, 2004; Gogoll, 2016).

5.2.2 The development of the PE concept in the Czech lands

The history of PE in the Czech lands was described in detail in Section 3.1. The Czech lands which date back to the territory ruled by the Kings of Bohemia in the 14th century, now comprising the Czech Republic and the Republic of Slovakia, formerly Czechoslovakia were part of the Austro-Hungarian Empire until 1918. Hence, the concepts of PE were consistent with developments in the rest of the Empire. PE was introduced as a compulsory subject from 1869 as part of the Hasner reform and, as in Germany, the curriculum was written by Adolph Spiess according to Jahn-Eiselen system.

In February 1862, Miroslav Tyrš founded the Prague Gymnastic Association, later renamed Prague Sokol, which was influenced by the German *Turner movement*. Eight other units were founded in Bohemia and Moravia in the same year and within a year, there were over 2,000 members. The Sokol training included a wide range of physical activities, including militarised training at various times. Many significant Czech patriots took part in this movement and, as a result, after the birth of Czechoslovakia in 1918, the concept of school PE adopted by the new State was strongly influenced by the Sokol system.

At this time Czech PE was further enriched by elements of the French Joinville Natural Method of PE, which maintained that it should be appropriate for children, both psychologically and physiologically, and should be joyful and lively. The Nordic gymnastic (health) system and the basics of sports disciplines were also gradually incorporated. In the 1930s, school PE was significantly influenced by the so-called Austrian school of gymnastics, represented by K. Gaulhofer and M. Streicher.

As was the case in East Germany, the new military-political context in Czechoslovakia after World War II resulted in a change of emphasis, with the aim of finding pupils talented in sport and providing sports training. As in many other European countries (eg. West Germany) sport and fitness became the objective of the PE curriculum during the 1970s, with a focus on performance and competitiveness. However, PE was also connected with military training, which meant the application of performance standards, military commands, and command and control management of learning activities in lessons. PE instruction was based on uniform curricula specific for each grade.

By the late 1970s, many experts in Czechoslovakia, together with those in France, the Netherlands and other countries, realised that the sports concept of school PE was not fulfilling its primary goal, namely, attracting pupils to ongoing physical activities (Rychtecký & Fialová, 2004, p. 19). The PE curriculum in Czech schools was adjusted to reflect the trend in Western countries to focus more on socialization and the experience of movement as well as the development of motor abilities and a positive attitude towards physical activity.

After the revolution of 1989, reforms were introduced that reflected changing national attitudes towards education for children and adults. The main PE curriculum change in the beginning was that teachers were allowed to choose subject matter taking into account the level of a pupil's physical skills, the school's teaching conditions, and the teacher's own assumptions and pedagogical approaches. That gave rise to various PE approaches across the country, reflecting the individual views of PE teachers as well as the requirements of school management. The different PE approaches resulted in a variety of teaching methods; for example, some teachers still insisted on the command and control management of learning activities and on the focus on sport or fitness, while other teachers adopted an entirely liberal approach and optional subject matter, which in some instances turned PE school lessons into merely a physical recreational activity offered to pupils while they were at school.

Finally, with the educational reforms that started at the beginning of the 21st century, the Czech Government selected a health-oriented concept form of PE, and the policy makers have held to this concept throughout the curriculum developments that have taken place in the years since then (Fialová et al., 2014; Tupý, 2018a).

5.2.3 The development of the PE concept in the USA

The beginnings of organised PE in the USA related to the German Turner *emigrés*, and gymnastics was first introduced by Charles Beck at the Round Hill School in 1826 (Lumpkin, 2004). His followers were Charles Follen and Francis Lieber (Siedentop, 2006). Gymnastic clubs were founded in big cities such as New York, Pittsburg, Baltimore, Milwaukee, Louisville and Chicago. After the end of the Civil War in 1865, the German Turners became even more popular in the USA (Jurkechová, Vlček, & Bartík, 2011). In 1886 there were 231 clubs with 24 thousand members across the whole country (Kössl, Krátký, & Marek, 1986).

The Czech Sokol should also be mentioned. Tracing it roots to Czechoslovakia in 1862, Sokol USA began in New York City in 1896. While Sokol remains popular to this day the movement did not have a significant effect on the PE curriculum in the USA.

Another approach to PE was introduced by Catharine Beecher. Her popular *Physiology and Calisthenics for Schools and Families* (1856) included chapters on the circulation and other systems of the body and provided a description of schoolroom exercises for girls and boys (Stillwell & Willgoose, 2006). There were other systems too, such as the Swedish, Lewis, Delsartian, Hitchcock and Sargent systems, and these also had their patrons. All of these programmes vied to become the prominent PE system in the United States in what became known as the '*Battle of the Systems*' (Siedentop, 2006).

None prevailed however, as these outdated systems based on gymnastics and calisthenics were challenged in the 1890s by progressive education proponents such as the philosopher, John Dewey, and his colleagues. Their *philosophy of pragmatism* and *progressive education* (Connelly, He, & Phillion, 2008, pp. 440–459) focused on the child and emphasised the importance of play and games in psychosocial as well as physical development (Flinders & Thornton, 2013; Singule, 1991).

The belief that sports and games build character also arose from the 19th century Protestant evangelism. Here, the Young Men's Christian Association (YMCA), which began in London in 1844, played a critical role. The Young Women's Christian Association or YWCA was founded in 1894. The YMCA and YWCA originally encouraged Bible studies rather than exercise. However, when the organizations started opening chapters in the United States and Canada, its leaders found that Bible study classes did not attract as many young men and women as the gymnasiums of the Swiss and German gymnastic clubs. Consequently, many YMCA and YWCA buildings built after 1880 included weight rooms, gymnasiums, and swimming pools.

By the beginning of the 20th century, the popularity of YMCA and YWCA, Dewey's focus on the child and the importance of play and games, and the influence of the modern Olympic movement, increasingly resulted in the replacement of formal gymnastic/callisthenic traditional systems with games, sports, and dance.

Surprisingly, many Americans were not physically fit for military service during World War I, and, post-war, there were many efforts to implement PE at all levels of schooling (Massengale & Swanson, 1997). During World War II, physical fitness was again required of soldiers, and of many others, particularly women, since the war effort required manual labour on all fronts. Soldiers once again came up short in physical fitness requirements, so after the war, schools instituted more rigorous PE requirements. Consequently, there was a surge of interest in PE teaching. By the 1950s, there were over 400 colleges and universities in the USA offering majors in PE, and there was increasing recognition of the scientific foundation of PE.

The post war era was significant in sport for people with disabilities particularly in America but also in Europe (Kudláček, 2006). World War II had a tremendous impact on the development of 'adapted' PE (Seaman & DePauw, 1982). Many war veterans claimed that their disabilities could not be corrected by normal PE methods, which led to the separation of corrective physical therapy and adapted PE in 1952 (Sherrill, 1993).

In the Korean War, again the fitness of the US army fell short of expectations (Kelly & Melograno, 2004). Hence, Congress established the President's Council on Physical Fitness in 1956, with the aim of raising fitness standards in schools across the country. However, by the end of the 1970s, the interest in the President's Council had waned and PE courses began to emphasise life-long sports activities (Zeigler, 2005).

One of the most significant shifts at this time was the Title IX amendment to the Federal Education Act in 1972 (Kelly & Melograno, 2004), which stipulated that no federally funded education programmes could discriminate based on gender. Enforcement of Title IX opened new opportunities for women in competitive sports, both at the high school and collegiate levels. In adition, at this time the American public developed an intense interest in fitness. School programmes were dominated by curricular innovations such as: movement education, adventure education, cooperative games, and activities for girls and persons with disabilities (Jurkechová, Vlček, & Bartík, 2011).

Unfortunately, a series of recessions in the 1970s and the 1980s brought cutbacks in many school programmes, including PE (Lumpkin, 2004). In a continuation of this trend, in the 1990s many school districts limited the amount of time pupils spent in PE classes or even dropped the programme in response to economic problems.

Since 1983, the USA education system has been in a state of continuous educational reform (Dvořák, Holec, & Dvořáková, 2018; Kelly & Melograno, 2004). In the 1990s three national reports[17] focused on the unsatisfactory physical condition of American citizens and advocated for daily physical activity. One promising step concerning the future of PE was the publication in 1995 of National Standards for PE (NASPE) which were subsequently amended in 2004 (NASPE, 2004; cf. Naul, 2003; Hendl & Vindušková, 2004). An updated version (SHAPE America, 2013) definitively establishes standards for the PE school programme that clearly focus on the concept of 'movement' education and emphasises life-long physical activity of the community.

5.2.4 Results – the comparison of historical PE concepts in the Czech lands, Germany and the USA

The comparative history of PE in the USA, Germany and the Czech Lands is shown in Figure 10. It is apparent that there are parallel changes due to the mutual influence of various historical developments. Of course there were external influences, such as English sports etc. but in this chapter the focus is on the comparison between these three countries and how they influenced each other.

In the 19th century, PE in the USA and the Czech lands, and in other European countries, was influenced by the German gymnastic tradition. Later, both the German system, which emphasised gymnastics on bulky apparatus, and the Swedish system, which focused on light, progressive calisthenics, had numerous advocates in each country. Additionally, elements of Jahn's programme and equipment (horizontal bar, parallel bars, balance beam etc.) can be seen in nearly every Czech, German and American PE instruction today.

The beginning of the 20th century in Europe is characterised by militarization of PE, whereas, in the USA, the English games and sport movement was introduced early, from the 1890s on. In the USA, 'pragmatism', together with the rise of the modern Olympics (Guttmann, 1992; Kössl & Hubička, 1983) and the popularity

17 The Surgeon General's Report on Physical Activity and Health (1996), Healthy People 2000 (1990), and the CDC's Guidelines for School and Community Programs (1997).

of YMCA and YWCA, brought sport and games into the PE curriculum. The 'sportification' process also influenced the PE curriculum in Europe, but it did not become evident until after the end of the World War II (Naul & Hardman, 2002; Kössl, Krátký, & Marek, 1986; Naul, 2003, 2011a).

In the second half of the 20th century PE developed very differently in the three countries. In the USA lifetime sports activities along with other approaches (human movement, humanistic, play education, sport education, experiential and adventure education, fitness renaissance and the wellness movement) played a significant role in the development of PE. In West Germany the importance of sport in PE curricula grew in the 1960s and 1970s but decreased in the 1980s. PE in the former Czechoslovakia and other East European countries was strongly influenced by the Soviet physical culture. The PE curriculum focused on sporting performance and competitiveness in the 1970s; then in the 1980s, as in West Germany, the importance of sport decreased in PE curricula.

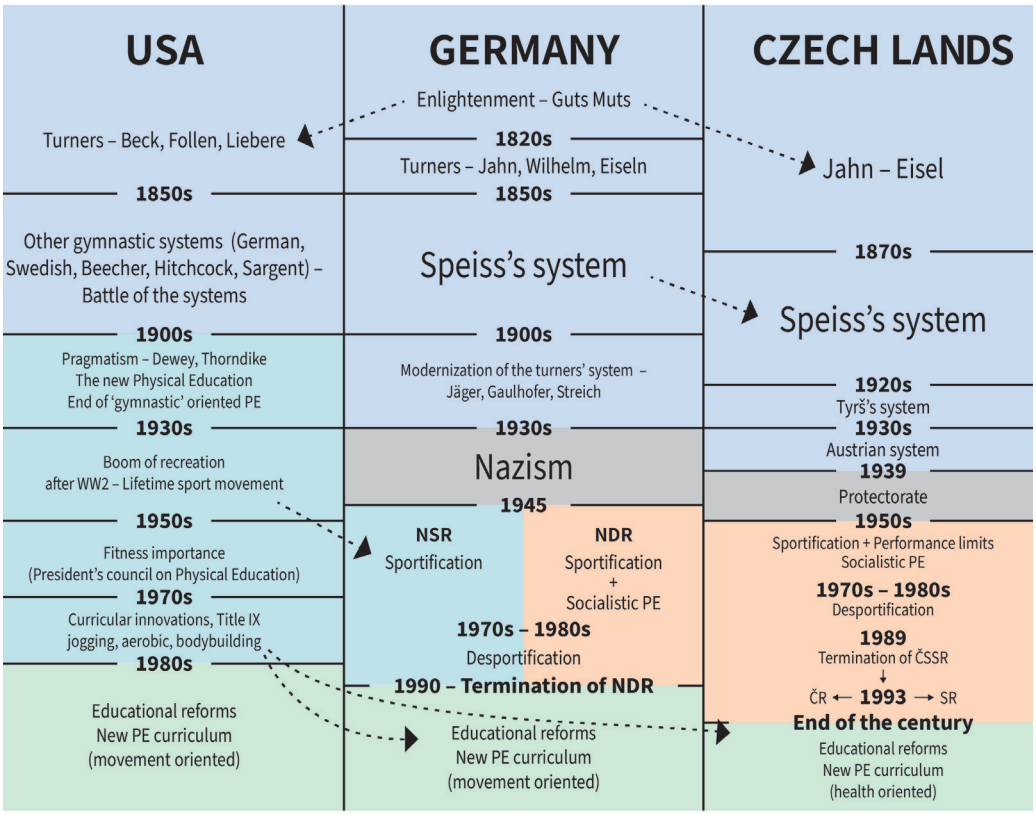

Fig. 10: *The Development of the PE in the USA, Germany and the Czech lands – arrows indicate the direction of influences from one area to another (cf. Vlček, 2011a).*

The USA influenced PE development in Germany when American troops and their families popularised sporting games such as basketball and volleyball (Bretschneider & Brandl–Bredenbeck, 1997). This slowed during the anti-American movement in the 1960s (Brettschneider, Brandl-Bredenbeck, & Rees, 1997) but returned in the 1970s, and came to the Czech Republic, especially after the political changes in 1989. New physical activities became popular such as jogging and aerobics, adrenalin and street sports, new approaches to body building etc.

Despite these changes, by the end of millennium all three countries were dealing with a number of important issues, in particular, the large numbers of children and adolescents who were not engaging in the regular physical activity (Brettschneider & Naul, 2007; Brunton et al., 2003; Dollman, Norton, & Norton, 2005; James et al., 2001; Frömel & Bauman, 2006; Naul & Brettschneider, 2005; Naul, Dreiskämper, & Hoffmann, 2014). This trend was occurring despite extensive warnings from health organisations and the educational and curriculum reforms taking place in all three countries (Ball, 2008).

It was also clear that, while policy makers in all three countries had a holistic vision for the PE curriculum which integrated physical, cognitive, social and emotional learning (Kirk, 2013), progress towards the new approaches was generally slow and existing curriculum models were 'resistant to change' (Penney, 2008; cf. Kridel et al., 2010, p. 747). While health and active lifestyles were clearly supported in the PE curriculum reforms across many countries (Feingold & Fiorentino; 2005; Richter, 2007; Mužík & Vlček, 2016), the sports concept frequently remained an important element of PE (Siedentop, 1994; Griffin, Mitchell, & Oslin, 1997). It was apparent that PE needed to find a way to re-orient its aspirations for the new century through reviewing the curriculum.

5.3 Comparison of the current designed PE curriculum

Reform of the PE curriculum in Germany and the USA commenced earlier than in Czechoslovakia. One of the reasons for the slow start in Czechoslovakia was the early political focus on the separation the Czech Republic and Republic of Slovakia. Before a detailed comparison of PE curriculum across the three counties is considered, the PE curriculum developments in the Czech Republic and Slovakia will be compared.

5.3.1 A Czech and Slovak comparison of the PE designed curriculum

The fall of communism in Czechoslovakia in 1989 brought a hiatus in the development of school PE in the Czech Republic and Slovakia (Vlček & Masaryková, 2014). After the divorce in 1992, both countries moved to reform their national curriculum, a decision that was intended to bring their education systems closer to those of western European countries. The reform naturally included PE. This section presents a comparison of these two countries, which have a common history but different approaches to designing the national curriculum (cf. Porubský et al., 2016). Hence, this section emphasizes the processes of curriculum development as well as the forms.

Designing the PE curriculum in the Czech Republic

As explained in detail in Section 3.2, after 1989 the Czech curriculum documents were reformed, and the two-tier model of the designed curriculum was introduced – the state-issued Framework Educational Programmes (FEPs), for each stage of education, and the School Educational Programmes (SEPs), designed by individual schools to meet their specific needs. This two-level model curriculum is still current. A health-oriented concept was agreed, and the designed PE curriculum was developed based on this concept. The designed curriculum was also output based in that expected outcomes were included.

As described in Section 4.4, the implementation of the reform was criticized for a lack of support from the MEYS for teachers, poor co-ordination, and excessive formalism (Janík et al., 2011b). These problems resulted in the reform being poorly accepted by teachers (Janík et al., 2018).

There was also a problem with the increasingly low achievement levels of Czech pupils in international surveys (TIMSS/PISA). As a result, MEYS decided that new educational standards would be developed and implemented by September 1, 2013. These standards were to be based on the FEP, and their development as well as how they would be assessed, became key issues in the Czech Republic at this time. For more on the development of Czech PE standards cf. Section 3.2.

Unfortunately, the FEP had not been formulated with the addition of future standards in mind. This was a problem, particularly for PE, since the FEP contained, not only skills and theoretical knowledge, but also attitude and behavioural outcomes for which it was difficult to develop measurable standards (Fialová, 2015, 2017). It is also important to note that the development of the standards was not based on any empirical evidence of what was required.

Designing the PE curriculum in Slovakia

Our research showed that the Slovak school system also went through significant reform in the first decade in 21st century (cf. Jurkechová, Vlček, & Bartík, 2011). A two-level designed curriculum was introduced, a national education programme (referred to as the NEP) although in Slovak it is Štátny vzdelávací program) and a school education programme, the SEP (in Slovak Školský vzdelávací program). In addition to learning objectives and competences, the NEP included standards. These comprised 'content standards' describing the minimal teaching content of the subject and the 'outcome standards' describing the minimal achievements for pupils. The inclusion of 'content standards', which are more detailed than the Czech subject matter means that the curriculum is more content based. A diverse PE concept was chosen, and the learning objectives aim at health-oriented fitness targets, general motoric development and sport activities.

As in the Czech Republic, schools in Slovakia were given the responsibility of creating their own SEP based on the NEP according to their individual school needs, possibilities and goals (cf. Luptáková & Smreková, 2019). The response varied: some schools welcomed the unfamiliar freedom, but others did not know what to do with it; the process of reform was not well coordinated; and there was a lack of information and materials for planning and creating quality SEPs. In most cases, the NEPs were copied into the SEPs and the aim of providing schools with new responsibilities was lost (cf. Vlček & Masaryková, 2014, p. 34). As in the Czech Republic, it was difficult for PE teachers to evaluate the performance of pupils because the standards were not straightforward and many of them could not be measured or tested.

By the end of the decade, there was an increasing number of dissatisfied teachers and in 2012 the new minister of education initiated a revision of the designed curriculum with all changes to be implemented by the beginning of the new school year in 2014. The curriculum changes related to pre-primary, primary and secondary stages of education (ISCED 0, ISCED 1, ISCED 2 and ISCED 3). The main goal was to simplify the content and outcome standards in order to develop a teacher-friendly curriculum with clear standards for pupil assessments (Masaryková, 2015).

The professional working groups responsible for the revisions were coordinated by the National Institute for Education, which was directly managed by the Ministry of Education, Science, Research and Sport (MESRS). The groups for PE included MESRS representative, a National institute for Education (NIE) representative, academic representatives (specialists for ISCED 1, ISCED 2 and ISCED 3) and representatives of schools (PE teachers). The National Institute

for Education also had advisory boards (Commissions) for individual subjects. These Commissions approved the materials prepared by professional groups or suggested changes.

Unfortunately, little research had been done prior to the revision to obtain empirical data about the shortcoming of the previous NEPs and there was limited data on the physical condition of pupils (Lednický & Doležajová, 2011). Therefore, the standards most likely reflected the ideas and beliefs of individuals and political influence and were not evidence based.

An important recommendation from the National Institute for Education concerned the allocated teaching hours for PE, which was 2 hours per week for all levels of education (an hour was actually 45 min). However, the *Concept of the State Policy in Sport – Slovak Sport 2020*, approved by the Government in December 2012, suggested that there should be at least 3 hours per week in primary schools by the end of 2013. This suggestion was not implemented and, according to the *Eurydice Report on Physical Education and Sport at School in Europe* (2013), Slovakia was the only country that reduced the PE teaching time at primary level between 2006/07 and 2011/12 (Masaryková, 2014).

Results of comparison

The results of the comparative study are summarized below. For more details of this research see Vlček and Masaryková (2014), and research conducted by other authors, see also Porubský et al. (2016) or Porubský and Pešková (2018).

- Both countries undertook curriculum reform at approximately the same time.
- Both countries had difficulty in having the newly designed curricula accepted by teachers.
- Both countries used the same two-level model for the designed curriculum – a national level curriculum and a school level curriculum.
- Both countries emphasize school autonomy on one hand, and standardization on the other.
- The Czech designed curriculum can be described as more outcome based than Slovakia, which concentrates more on content.
- A different approach to the development of standards was taken. The Slovakian standards were developed at the same time as the curriculum whereas the Czech standards were developed subsequently and introduced into a document that had not been developed with standards in mind.

- The Czech PE learning objectives concentrate more on health outcomes whereas Slovakian PE goals are more diverse.
- There is a better congruence between the designed PE learning objectives, subject matter, expected outcomes and standards in the Slovakian designed curriculum than in the Czech Republic.
- Insufficient research into the shortcoming of the designed curriculum had been undertaken in both countries prior to the newly implemented documents being revised and hence the revisions to the curriculum were not evidence-based.
- There was insufficient empirical evidence available for the development of standards in both countries.
- Both countries have difficulties in student assessment according to the standards.

5.3.2 A comparison of the PE designed curriculum (the Czech Republic, Germany, the USA)

This section is based on previously published texts (Vlček & Janík, 2010; Vlček, 2011c) and has been updated to take account of recent PE curriculum developments in each country. We concentrated mainly on the curriculum documents (the designed curriculum) of the basic school (ISCED 1, 2), as PE constitutes a compulsory part of the curriculum at this educational stage in all three countries. Contextual factors such as educational systems, the social and political conditions affecting the reforming processes of the educational system in the selected countries is summarised in Section 5.2.

The following educational documents constitute the set of primary sources that were analysed:

- Czech Republic: *Framework Educational Programme for Basic Education* (FEP BE, 2017).
- Germany (NRW)[18]: *Rahmenvorgaben für den Schulsport in Nordrhein-Westfalen* (2014).
- USA: *SHAPE America* (2013). *Grade-level outcomes for K-12 PE*.

18 Germany has never had a central government across the geographical region of the country. Today, 16 regional German states exist, all culturally independent. That means they rule different systems of schooling with different PE curricula (Brettschneider, 2003; Geßmann, 2008; Stibbe & Aschebrock, 2007). The guidelines of the State of North Rhine-Westphalia have been by default taken as a starting point when creating documents in the other States in Germany. Krick (2006) and Richter (2006, 2007) labelled these documents as ‘direction determining’ curricular documents (cf. Naul, Dreiskämper, & Hoffmann, 2014).

The aim of this section is to analyse the structure, learning objectives and the educational content (subject matter and outcomes) of the designed PE curriculum in the Czech Republic, Germany and the USA with the aim of comparing the educational content and identifying the concepts underpinning the designed curriculum. In interpreting the concept, the analysis must include not only the learning objectives, but also the educational content, in terms of the emphasis that is placed on different topics. This required a rigorous analysis to identify the differences by breaking the text into fragments and aggregating those fragments into different categories or topics as described in Section 5.1.3. The results of the analyses are described below using these categories. The analysis revealed differences in internal congruence that will be summarized at the conclusion of this section.

Structural differences

The curriculum documents differ in terms of their layout and arrangement as follows:

- Generally, curriculum documents can be classified as content-based (or content-oriented) or as outcome-based (or goal-oriented) (cf. Section 2.3). While the curricula in Germany and the Czech Republic were mainly content-oriented historically, they are now very similar in being both content and outcome-oriented. However, the US document is purely outcome based.
- The Czech document does not define educational learning objectives for PE specifically, but for the integrated educational area of 'Man and Health' which include Health Education as well. These learning objectives are to be achieved through instruction based on educational content that is divided into thematic units. In Germany (NRW), the designed curriculum is PE specific. The learning objectives are replaced by 'perspectives' from which the educational content is viewed. The American curriculum document is PE specific and arranged into individual thematic units called 'standards' (Standards 1–5). The learning objectives are contained within these standards as expected outcomes (competences).
- All three countries divide the educational content of PE into thematic units. However, the numbers of thematic units differ. The German, American and Czech documents have ten, five and three thematic units, respectively.
- The individual American standards and Czech thematic units are presented in a single dimension, whereas the German documents take a complex multidimensional view (*Mehrperspektivität*).

Differences in the PE learning objectives and educational content

If the concepts underpinning the designed curriculum are different, it would be expected that that the learning objectives would be different and that different topics would be emphasized. The analysis of the learning objectives and the educational content of the curriculum documents is presented below.

Sports

In all three countries there is a move away from an emphasis solely on sporting skills. Although sports are included, the analysis shows that physical activity is equally important. The types of physical activities in the three countries are very similar and include: running, jumping, throwing, apparatus gymnastics, aspects of combat practices, dancing, rhythmic gymnastics, games, winter sports. Specific culture-dependent activities are included plus innovative physical activities such as in-line skating, snowboarding and so on.

The issue of performance

In all the curriculum documents, the 20th century focus on normative performance is replaced by an emphasis on personal satisfaction, positive experience and self-realization.

It is very clearly articulated in the German documents as one of the six main perspectives in the section '*Das Leisten erfahren, verstehen und einschätzen*' (to experience, understand and evaluate the performance). This states that the aim of PE is not for pupils to surpass others but to develop their own experiences, that is, experiencing physical activity should be more important than an effort to be the best. However, this does not mean that performance is ignored. To the contrary, performance as a topic is included in every thematic unit so pupils learn to judge their performance relative to their inherent physical abilities and other factors that may affect performance.

The topic of competitive performance is not addressed directly in the Czech curriculum documents. However, in the US there has been an interesting shift from the traditional perception of PE programmes in which the outcome is central, to a new trend focusing on processes (Feingold & Fiorentino, 2005). For example, Standard 2 refers to outcomes that 'demonstrate self-responsibility by implementing specific corrective feedback to improve performance' and 'create a plan, train for and participate in a community event with a focus on physical activity'.

There is considerable debate about the role of games in the USA, particularly between state officials and professional associations. For example, the Presidential Council (cf. Section 5.2) supports the best performance and give pupils awards and badges for the best results, whereas the American Alliance for Health, PE, Recreation and Dance (AAHPERD) which develops the standards, supports a positive approach to all pupils in order to motivate them to be physically active for the rest of their lives, as a result of a positive attitude to physical activity and not with an award in mind.

Development of physical fitness

The curriculum documents from each of the three countries view fitness the same way – that fitness is not merely a goal in itself or a level of achievement (being fit or un-fit), but that pupils recognize fitness as an essential component of the development and maintenance of human health, that is, health-oriented fitness. This concept emphasizes that fitness is necessary for a healthy and active lifestyle and that the level of health-oriented fitness is not determined by performance norms, depending on a certain age, but by individual needs.

The differences regarding fitness are not great. The Czech document includes the development of health-oriented fitness among the specific learning objectives of PE in the thematic unit called 'Activities affecting health'. The German document does not include fitness among the six perspectives on PE, but it devotes a significant part of one of the six perspectives to this topic – '*Gesundheit fördern, Gesundheitsbewusstsein entwickeln*' (promoting health and developing health awareness). The American document allocates one thematic unit to health-oriented fitness in Standard 3. This unit is called 'The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness'. Of the three documents, the American standards articulate the development of health-oriented fitness most extensively and explicitly.

The issue of health

Health is an important topic in all three of the curriculum documents, but the emphasis is different.

In the German document, one of the perspectives, named '*Gesundheit fördern, Gesundheitsbewusstsein entwickeln*' (promoting health and developing health awareness), is dedicated to health (cf. Naul, Dreiskämper, & Hoffmann, 2014; Brandl-Bredenbeck & Sygusch, 2017); it is not primarily about producing direct

health outcomes (such as health oriented fitness), but at developing competences in the pupils to practice physical activity in a healthy way, to assess the health effects of one's own sport activities and, if necessary, to modify the activity in order to be more healthy. This new concept is also entitled sport-related health competence – SRHC (cf. Töpfer, 2017).

In the American document, the area of health is placed in two standards: Standard 3 ('The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.') and Standard 5 ('The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.'). While health is obviously considered as part of the standard, it is not the primary focus but one of many.

By contrast, the Czech curriculum document states, in the educational area 'Man and Health', that one of the priorities of basic education is the understanding and practical support of health. Almost all the learning objectives are related to achieving and maintaining health. PE is separately described as part of more complex educational area 'Man and Health', which aims 'on the one hand at learning about one's physical potential and interests, on the other hand, at learning about the effects of specific physical activities on physical fitness, mental and social well-being' (FEP BE, 2017, p. 91). The issue of health is also dealt with in another thematic unit called 'Health-affecting Activities'. This focuses primarily on hygiene and the correct methodology of performing physical activities as well as on the endeavour to develop lifelong physical activity. It also addresses first aid in PE conditions. In addition, the Czech documents include a part called 'Remedial PE', which is dedicated to special and compensatory exercise, proper body posture etc. This area is not present in either the German or the US documents.

Social aspects of PE

All three sets of curriculum documents are similar in that there is an emphasis on social acceptance and interaction, and the development of responsibility and cooperation among classmates. In the Czech document this issue is covered in a thematic unit called 'Activities promoting physical learning'; in the German document this area is discussed from two perspectives: '*Etwas wagen und verantworten*' (to venture and be responsible for something) and '*Kooperieren, wettkämpfen und sich verständigen*' (cooperation, competitiveness and communication). In the American standards, this issue is dealt with in Standard 5, which is named 'The physically literate individual exhibits responsible

personal and social behaviour that respects self and others'. All documents emphasize the Olympic ideals of friendship, respect and excellence, of fairness, and respect for less gifted and handicapped pupils are emphasized.

Development of emotional well-being

All the documents emphasise the development of emotional well-being. In the learning objectives of the Czech educational area 'Man and Health' it states that pupils should be guided towards (1) 'understanding health as a balanced state of physical, mental and social well-being and towards feeling a sense of joy from activities supported by movement, a pleasant environment and an atmosphere of positive relations' as well as (2) 'combining behaviour and activities related to health and healthy interpersonal relations with basic ethical and moral attitudes, willpower, and so on' (FEP BE, 2017, p. 93). However, the objectives are not supported by appropriate educational content in the thematic units.

The American Standard 5 states that 'The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction'. The standard emphasizes that physical activity offers a unique opportunity for self-expression, social interaction and surpassing oneself, and highlights that physical activity can contribute to increasing a young person's confidence in the process of acquiring physical skills. The standard requires that PE should be a place where every pupil can experience the enjoyment of physical activity and gain confidence, regardless of their actual level of physical skills or talent. It should guide pupils to a deeper understanding of the potential of physical activity, as it can influence more than just physical health. The standard emphasizes that, in order to achieve this, teachers should plan their teaching so that they can fully engage all pupils regardless of their inherent abilities.

The first two German perspectives, '*Sinneswahrnehmung verbessern, Bewegungserlebnis und Körpererfahrung erweitern*' (improvement of sensory perception, movement experience and enhancing body experience) and '*Sich körperlich ausdrücken, Bewegung gestalten*' (Bodily expression, formation of movement) address the development of emotional wellbeing. This includes, for example, classical or free dance or activities in the country. The perspectives emphasise that teachers should be aware that emotions play an important role in the life of a young person and that emotions often cannot be verbalized.

Development of volition

The modern curriculum is democratic in character. It promotes racial, gender and social equality, and teaching that enables pupils to cooperate in groups and to respect weaker or handicapped individuals. Therefore, it is complicated to introduce competitiveness in this context, to encourage pupils to improve their performance, to develop an ability of their own volition etc. The documents take this issue into consideration in quite different ways.

In the Czech documents the learning objectives of educational area 'Man and Health' mention the development of volition as one of the partial aims. However, the Czech document does not suggest ways of approaching this issue or for achieving this aim.

In the German documents, it is defined more precisely, as one of the perspectives, '*Das Leisten erfahren, verstehen und einschätzen*' (to experience, understand and evaluate the performance). Pupils should be taught to experience and understand their performance, to want to achieve of their own volition and to improve their performance. This is related to social acceptance and self-respect. The curriculum documents include examples that demonstrate how volition and effort to achieve can be evaluated, appreciated, experienced and compared. In the American National Standards special attention is also paid to this issue in Standard 5. This standard is discussed in more detail below.

The importance of games and play[19]

The American standards do not include an explicitly game and play-focused standard. Nevertheless, Standard 1 'The physically literate individual demonstrates competency in a variety of motor skills and movement patterns' uses the area of sports games as a mean for learning different physical and sport skills.

In the Czech Republic, games are similarly included in the thematic unit 'Activities affecting the level of physical skills'. Attention is paid both to sports games (respecting game rules, game combinations, and individual game activities) and to physical play, which includes non-traditional games.

The German document emphasises play as against formal games. It includes a thematic unit (one out of ten) called '*Das Spielen entdecken und Spielräume nutzen*' (discovering play and using game space), which explicitly focuses

19 In this context games refers to formal sporting team games for example basketball whereas play is an activity for enjoyment and recreation.

on playing games. This unit should, among other things, provide pupils with a repertoire of games and to develop the ability to organize, guide and initiate games with younger peers.

The role of theory

The PE learning objectives and educational content in all three countries requires the acquisition of theoretical knowledge. While the emphasis on tactical sports knowledge has been abandoned, pupils are expected to acquire the rules of games, rules of proper and safe conduct of physical activity and so on.

In the Czech FEP for basic education, theoretical knowledge is placed in the thematic unit 'Activities affecting health', in which pupils learn about healthy lifestyles, safety and so on. The American Standard 2 focuses on theoretical knowledge – 'The physically literate individual applies knowledge of concepts, principles, strategies and tactics related to movement and performance'. This stresses the importance of the practical use of the knowledge that has been acquired by means of demonstrations of a student's performance. Pupils are encouraged to think independently and to use their personal judgement and creativity. However, theoretical knowledge and its practical implications are included in the other standards, especially Standard 3 called 'The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness'.

Undoubtedly, theoretical knowledge is best dealt with in the German document, which includes a separate thematic unit called '*Wissen erwerben und Sport begreifen*' (acquiring knowledge, understanding physical activity). This thematic unit is placed separately and influences the other aspects of the PE curriculum. The document clearly communicates the idea that knowledge is essential for all areas of PE, not only, for example, health or the development of motor skills.

Results of the comparison

In the PE curriculum documents from the Czech Republic, Germany and the USA, we identified some significant differences and and many similarities. These are summarized below.

Structure

The Germany and the Czech Republic curriculum documents are both content-oriented and outcome-oriented. However, the US document is solely outcome-oriented.

The curriculum documents are structurally very different and adopt different approaches to how the learning objectives and educational content are defined and presented. The Czech documents prescribe learning objectives for the integrated educational area of 'Man and Health' which are achieved through instruction based on educational content contained in thematic units. In the German document the learning objectives were presented as perspectives that take a complex multidimensional view of the educational content. In the American documents, the learning objectives are not separately formulated as they are incorporated into the standards, which also function as the names of individual educational areas or thematic units.

Learning objectives and the educational content

The results of the content analysis show that the topics covered in the curriculum documents are generally similar, although the emphasis they are given varies:

- In all countries, there has been a shift away from a single-minded focus on performance to an emphasis on persona satisfaction, positive experience and self-realization.
- Skills in individual sport disciplines are now no longer seen as important as physical activity and the development of motor competences.
- Fitness is seen as an inherent part of the development and maintenance of health rather than a level of performance achieved.
- Play and/or games are emphasized in all the curriculum documents.
- Other common topics relate to social acceptance and interaction and the development of responsibility and cooperation among pupils and it is also evident that PE plays an important role in the personal development of pupils.
- The development of a lifelong positive attitude to physical activity is a common aim in all curriculum documents. This is explicitly supported in the American standards. However, in the Czech and German documents, supporting content is lacking and there is an implicit assumption that lifelong physical activity is achieved indirectly by pupils who, in developing a positive attitude to physical activity during their studies, are expected to continue this into their post-school lives.
- The Czech designed PE curriculum is explicitly aimed at developing and maintaining health and it is the only designed curriculum where the need for remedial exercises is stressed. The content however includes a much

broader range of topics, including topics that emphasize physical activity, games and play and so on. Because the Czech document assigns the highest priority to health, this focus overshadows, to a certain extent, other areas of PE. In the German and American documents, the concept of health is expressed less directly in the learning objectives and the educational content, in ways that involve physical activity, such as fitness, performance, the educational impact on pupils.

- Health is also implicit in other important topics, such as emotional development, the development of volition or learning games. These are not included in the Czech documents to the same extent or if so, less importance is attached to them.

The analysis shows that the educational content in the curriculum documents is generally similar and relates to both health and movement. However, the learning objectives clearly differ. Using the four main concepts of school PE (sport concept, movement concept, physical concept, health concept – Section 2.4), and if the Czech aims, German perspectives and American standards are compared, then it can be concluded that the aim of Czech PE is 'a healthy human', whereas in Germany and the USA it is 'a moving person'.

This, of course, is a simplification and none of the conceptions can be labelled as purely one or the other (cf. Crum, 1994). It is more realistic to consider the different topics in the educational content and this study has shown that the topics are more or less balanced in the analysed curriculum documents. This is an important finding. It must be emphasized that the designed PE curriculum in the Czech Republic compare favourably with those in Germany and the USA. They are outcome-oriented and pupil-focused, they emphasize relative rather than normative performance, they include the goal of lifelong physical activity and cover both health and movement topics in a similar way, given the cultural differences. Whatever the problems regarding congruence (cf. below) the public, teachers and other educational stakeholders in the Czech Republic can be satisfied that in this regard the curriculum documents are of a high standard.

Congruence

Congruence is not an issue in the US designed curriculum since the document is structured around individual standards that specify learning outcomes. This structure totally supports congruence. This is also the case with the German documents where the multi-perspective structure enhances congruence.

However, in the Czech Republic, there is a lack of congruence between the learning objectives, which are health-oriented and the educational content which is more balanced (health and movement) and is similar to the educational content in the documents from the other countries. The Czech curriculum document specifies the learning objectives for the whole educational area of 'Man and Health'. These learning objectives cover different dimensions (cognitive, affective, psychomotor, personal and social) but are always health focussed. Some learning objectives lack support in the form of educational content (that is subject matter and expected outcomes). In short, compared with the other documents, the value of the Czech curriculum is reduced by the incongruence between the learning objectives of PE and the educational content.

5.3.3 A comparison of the PE designed curriculum (the Republic of Ireland, the Czech Republic, the Netherlands)

This chapter is based on previously published texts (Habrdlová, Lupač, & Vlček, 2017; Lupač, 2016; Habrdlová & Vlček, 2015) which compared the PE curriculum documents (the designed curriculum) for primary education (ISCED 1) in the Czech Republic, Ireland and the Netherlands. As in Section 5.3 the aim of this section is to compare the learning objectives and educational content of PE in the curriculum documents from all three countries and to identify the concepts underpinning the curriculum documents. Again, this analysis reveals differences in the internal congruence that will be discussed at the end of the section.

The following documents constitute the set of primary sources that were analysed in the research:

The Republic of Ireland:

- *Physical Education Primary School Curriculum* (National Council for Curriculum and Assessment – NCCA, 1999a).

  The analysis was supplemented with information from the officially recommended methodological guide for teachers:

- *Physical Education Teacher Guidelines* (National Council for Curriculum and Assessment – NCCA, 1999b).

Czech Republic:

- *Framework Educational Programme for Basic Education* (FEP BE, 2017);
- *Standards for Primary Education: Physical Education (Remedial physical education)* (Tupý et al., 2015).

The Netherlands:

- *Kerndoelen Primair Onderwijs* (2006) – *Key objectives for primary and lower secondary education*, hereinafter referred to as Key objectives;
- TULE inhouden & activiteiten (TULE content and activities) (2019);
- *Basis dokument Bewegingsonderwijsvoorhet Basisonderwijs – PE Basic document for primary education* (Mooij et al., 2011), hereinafter referred to as the Basic Document.

A fortuitous outcome of the country selection is that discussions are now taking place regarding the development of new PE curriculum documents in all countries – Ireland (cf. NCCA, 2019), the Netherlands (cf. Ons Onderwijs 2032; Curriculum.nu, 2019) and the Czech Republic. This provides a unique opportunity to compare the contemporary designed curriculum in each country before any curriculum changes are implemented.

Structural differences

In Ireland, the PE curriculum document for primary education is a separate document containing more than 80 pages. Several key aims are formulated in the introduction and are elaborated further in specific learning objectives. The curriculum is designed in four levels for Grades 1–6. Educational content at each level is organized into thematic strands, and further into strand units. The document contains outputs that the pupil should accomplish, for each strand unit at a given level of education. Thus, the Irish curriculum is primarily outcome based. Interdisciplinary context (integration) is emphasised at all educational levels as well as links within PE (for example 'Athletics includes activities that are also suitable for developing skills in gymnastics and games', NCCA, 1999a, p. 16). Furthermore, the document describes ways of evaluating educational outcomes in PE. It is recommended to use formative evaluation[20], related to the defined learning objectives.

The Czech FEP BE (2017) has 166 pages. As previously stated, the educational fields of PE and Health Education are integrated into the educational area 'Man and Health'. This area accounts for 12 pages of the document, seven of which deal with PE in basic education. The educational content contains subject matter and expected outcomes that are binding (in theory but not in practice as discussed

20 A range of formal and informal assessment procedures conducted by teachers during the learning process in order to modify teaching and learning activities to improve student attainment (Crooks, 2001).

in Chapter 4). The Czech document '*Standards for Basic Education: Physical Education (Remedial Physical Education)*' (Tupý et al., 2015) was also analysed. The document has a total of 33 pages, 13 of which focus on the lower primary education. The standards are not binding. They are presented in tables that are developed according to the same system across all educational areas – they indicate the thematic area, the relevant expected outcome from FEP, the field of study (PE or Health Education), year, indicators, and several illustrative tasks with notes on the tasks provided.

The Dutch *Key Objectives* (Kerndoelen Primair Onderwijs, 2006) document is binding. It has 73 pages in total and PE takes up six pages. In addition to a description of PE, the document includes two key PE learning objectives:

- Goal 57 – Pupils learn to responsibly take part in the lifelong physical activity (*bewegingscultuur*) that surrounds us, and learn the main principles of the most important sports and forms of exercise;
- Goal 58 – Pupils learn to engage in physical activities with other pupils, with respect, in accordance with agreed rules and taking account of their own mobility.

These goals are translated into educational content in the TULE inhouden & activiteiten (2019). Since the key objectives (Kerndoelen Primair Onderwijs, 2006) begin with the phrase 'Pupils learn', the key objectives are outcome-based. The Key Objectives document is supplemented with guiding information in the Basic document which is not binding, is much larger in size (432 pages) and is differently structured.

Differences in the PE learning objectives and educational content

We compared the topics covered in the documents, to observe whether the concepts in the learning objectives and educational content are congruent. It should be noted that the topics mirror those in the previous study (Section 5.3.2).

Social aspects of PE

In all three countries, the curriculum documents emphasise that an important aim of PE is to influence the student's personality and social development. The Irish document, for example, has several specific learning objectives in this regard: (1) in relation to one's own person, PE should develop self-esteem, self-awareness, and initiative; and (2) in interpersonal relationships, pupils should learn trust,

sensitive communication and cooperation with the others. Trust activities[21] are included in the curriculum and there is an emphasis on group discussion (for example, discussing the impact of a run-up on the length of the long jump), the acceptance of success and failure, and on setting personal challenges. Working with others is emphasised, for example, pupils should be taught the ability to evaluate a partner's originality and attention should be paid to the support and assistance of a partner in some (for example gymnastic) exercises.

The Dutch curriculum also emphasises personality development and social relations; for example, the learning objectives state that PE should address individual development (pupils are supposed to learn about their own physical abilities and how to develop them) and social qualities (respect for a teammate). The Basic Document also highlights the importance of physical activity in social life and perceives PE as a means of building self-confidence and enhancing social relationships (cf. Mooij et al., 2011, p. 12).

The Czech curriculum highlights the effectiveness of physical activities for the mental and social welfare of an individual. In the learning objectives section of the document, quality interpersonal relationships and concepts such as ethical and moral attitudes are referred to. It should be noted that these learning objectives relate to the entire area of 'Man and Health' and do not specify whether they should be achieved through PE or Health Education. With respect to personality development and social relations the expected outcomes for PE only refer to fair play behaviour, which is also supported by the subject matter within the thematic group 'Activities Supporting Physical Learning'.

Development of volition

In the Irish document, both the learning objectives and the educational content address the development of volition in pupils. For example, pupils should strive to achieve improvements at the individual level, learn to overcome their own limitations and strive to purposefully fulfil personal challenges. The document also makes clear that self-evaluation needs to be fostered in pupils. The Czech PE learning objectives also focus on the development of volitional endeavour, highlighting that this should lead to improvement in fitness in individuals. However, the Dutch designed curriculum fails to explicitly address this issue.

21 Example: A blindfolded pupil, aided by a classmate, follows a path marked by a rope, holding the rope with one hand and being led by the classmate by the other hand (NCCA, 1999a, p. 23).

Development of emotional well-being

The Irish curriculum includes 'emotional development' as one of the main goals, for example, to provide pupils with an experience of physical exertion and satisfaction with their performance. The document claims that the positive emotions experienced by a pupil in PE help to ensure a positive attitude towards physical activity and, as a result, movement naturally becomes part of pupils' lifestyle. The educational content offers opportunities to express emotions in a non-verbal way, most often through dance. The intent is that pupils should learn communication and self-expression, to express emotions, and to practice the ability to interpret emotions from classmates' body language.

The goal of emotional well-being is not as clearly defined in the Czech curriculum documents as in the Irish ones. However, in the learning objectives of the educational area 'Man and Health' it states that pupils should be guided towards 'feeling a sense of joy from physical activities, a pleasant environment and a climate of positive interpersonal relations', as well as towards 'willpower' (cf. points 2 and 6 in the learning objectives of the educational area 'Man and Health' (FEP BE, 2017, p. 93).

However, the Dutch curriculum does not address emotions in an explicit way.

The importance of games and play

Although the documents from all three countries address physical and sports games, each of them approaches this in a different way. The Irish curriculum treats games as a separate thematic area to be implemented at each of the four levels of education. Inclusion of games is justified by their influence on the development of basic physical skills as well as by the fact that playing games provide numerous opportunities for social interaction. In this regard, the following aspects are emphasized: the impact on the pupil's personality with emphasis on social aspects, pupil's experience, deepening of physical knowledge, developing physical skills and applying creativity. The focus is obviously on the adoption of game strategies – inclusion of preparatory exercises aiming at development of necessary skills and dexterity. Teamwork, the ability to defend, attack and use the game space, application of tactics etc. are also highlighted. Pupils should also be given room to devise games with customized rules. Like in the Dutch curriculum, it is proposed to include modified versions of physical games.

The Czech curriculum does not neglect physical games. Games are included in the educational content in the thematic unit 'Activities affecting the level of physical skills'. Attention is paid both to sports games (respecting game rules,

game combinations, and individual game activities) and to physical games with different focus and non-traditional games.

The Dutch curriculum lists various games, their organization and provides a thorough description of each. It categorizes sports games in two learning categories (ball games and tags[22]) with the focus on the development of gaming skills and strategies; for example, various ways of overtaking the goalkeeper or bypassing an opponent, or a combination of these activities.

The issue of health

In Ireland, health education is primarily linked to a subject called 'Social, Personality and Health Education'. However, health is also part of the PE curriculum, and health-related fitness[23] is listed as one of the basic goals of PE. In addition, pupils should acquire some relaxation techniques to help them cope with physically demanding tasks. Physical activities are directed towards developing awareness of one's own body – the right tension and body posture or some regeneration exercises, etc. PE is also geared towards lifelong physical activity, which is evident from the objective – 'enjoyment of physical activities and to create a positive attitude towards them, to promote the contribution to lifelong healthy lifestyle, and to prepare the pupil for active and effective use of leisure time' (NCCA, 1999a, p. 10). Specifically, the document relates the development of positive emotions in PE lessons as a factor leading to a lifelong positive relationship to physical activity.

In the Czech document, the aim of 'Man and Health' is on the one hand at learning about one's physical potential and interests, on the other hand, at learning about the effects of specific physical activities on physical fitness, mental and social well-being (FEP EB, 2017, p. 91). The issue of health is dealt with directly in a separate thematic unit called 'Health-affecting Activities'. This focuses primarily on hygiene and the correct methodology of performing physical activities as well as on the hygiene of the training environment. The endeavour to develop lifelong physical activity is implied in the overall focus of the area 'Man and Health'.

22 In the original *tikspelen*. 'Tik' means slapping, clicking or clicking, 'spelen' means a game. Note that by a tag, the document understands a rather broader range of games than is usually found in the Czech environment under this term.

23 The methodological document (NCCA, 1999b) distinguishes between health-related fitness and physical fitness. Health-related fitness looks at health, the effective functioning of the body, and physical well-being and is not specified for particular physical activities. On the other hand, physical fitness represents a varied range of fitness appropriate to of an individual's development in physical activities. Physical fitness is not explicitly taken into account in the document (NCCA, 1999a).

The pupil's physical routine is mentioned in the expected outcomes: (the pupil shall) 'associate regular everyday movement activity with health and utilise the opportunities offered', 'participate in implementing a regular movement regimen' and 'participate actively in organising his/her personal movement regimen and include certain movement activities regularly and with a specific goal' (FEP BE, 2017, pp. 96–98).

The Dutch PE curriculum document includes a statement at the beginning that 'sport contributes significantly to the health of the population' (Mooij et al., 2011, p. 11) and emphasises that a key overall objective of PE is the need to guide pupils to a physically active and healthy lifestyle. However, the PE educational content does not explore the topic of health further as this area is covered in detail in the educational field '*Oriëntatieop jezelf en de wereld*' – Orientation to oneself and the surrounding world (TULE inhouden & activiteiten, 2019).

Theoretical knowledge

The Irish document stresses that pupils should understand the physical activities they perform and each of the thematic areas includes a section on 'Knowledge and Understanding'. Acquisition of theoretical knowledge is aimed at being familiar with rules or the ability to apply certain tactics in games, safe conduct of physical activities and handling of tools, at enabling pupils to solve problems competently and to decide independently. In all thematic areas, information on various sports organizations and clubs is included at the last level (5th and 6th grade), pupils are also expected to gain awareness of sporting events and athletes within their surroundings, country, and internationally.

In the Czech designed curriculum, theoretical knowledge is required but not explicitly stated in the thematic units 'Activities Influencing Health' and 'Activities Supporting Physical Learning'. Within the former, pupils are supposed to learn the principles of a healthy lifestyle, safety, and physical regimen, and the principles of preparation before exercise, cool-down after workout, stretching exercises, correct bodily posture, proper ways of lifting load, and various health-oriented exercises including preparatory, compensatory and relaxation exercises. Although these are often listed as activities, they require knowledge and attitudes without which it is largely impossible to perform.

Similarly, 'Activities supporting Physical Learning' include knowledge of basic gymnastic terminology of acquired activities, fixed commands, signals, basic organization of space and activities in a familiar environment, principles of behaviour (fair play, Olympic ideals and symbols) as well as the rules of game, races, and competitions or knowledge of basic physical tests and measurement, and assessment of physical skills and abilities (FEP BE, 2017, pp. 98–99).

Again, only abilities and skills are included but mastering them is (implicitly) conditioned by mastering the relevant theory.[24]

Theory is also necessary for the expected outputs connected to the subject, for example 'the pupil plays fair: adheres to the rules of games and competitions, recognizes and marks apparent violations of the rules and responds adequately to them; respects the opposite sex in physical activities' (FEP BE, 2017, pp. 97–99).

According to the Dutch document, pupils should be guided to learn about the rules of sports and physical games, about tactical individual and group activities (e.g. principles of defence or attack). There is also an emphasis on understanding that these principles are more important than practical skills. Pupils are required, if only indirectly, to know how to manage their activities. The document assumes that pupils need to know how to set up an activity or how to modify an activity to keep it easy to understand and entertaining, so that as many pupils as possible can be engaged in the activity.

Results

In the PE curriculum documents from the Czech Republic, Republic of Ireland and the Netherlands significant differences and similarities were identified. These are summarized below.

Structure

The way in which the learning objectives are included differs between curriculum documents. The Irish documents prescrib several key aims, which are then sub-divided into specific learning objectives that reflect several dimensions of pupil development. The Czech FEP BE (2017) does not have specific PE learning objectives as the learning objectives are for the integrated educational area of 'Man and Health'. The Dutch Key objectives (Kerndoelen Primair Onderwijs, 2006) include only two very general learning objectives for PE, which are specified more in detail into the educational content in the TULE inhouden & activiteiten (2019). All three documents emphasise individualization of goals – a personal maximum level of each pupil should be developed, depending on his or her individual capabilities. All the documents in define goals (not necessarily using this term) both for the pupil's level of development and in the form of specific subject matter that the pupil should master.

24 A thematic unit includes, for example, a long jump or throwing a ball. Both activities can be performed spontaneously without instruction, but in order to master them, one needs to acquire the right ability and skill, which requires theoretical knowledge.

Educational Content

The educational content of the curriculum largely aligns, but the differing emphasis attributed to the individual topic is obvious. All curriculum documents aim at changing the pupil's overall PE experience at school and not to deal solely with subject-specific issues of PE; for example, the marked shift from performance orientation in both the Czech and Irish documents to an emphasis on personal experience, satisfaction and self-realization of pupils.

In all documents, the emphasis is on physical competence and sports play a minor role. Furthermore, the concept of fitness is viewed similarly; it is not the performance achieved (so-called performance-oriented fitness), but fitness as a necessary part of human health (so-called health-oriented fitness).

All the documents envisage PE as having a complex impact on the pupil, on his or her development in the cognitive, social and personal areas, as well as in the volitional, and, in the Czech and Irish documents, in the emotional field as well.

Congruence

The learning objectives in the Irish document are directly linked to educational content within each theme. Furthermore, the learning content provides specific suggestions for activities that assist in achieving the learning objectives. Hence, congruence is not an issue in the Irish curriculum documents.

The Czech curriculum documents do not identify learning objectives specifically for PE as they are contained within the integrated educational area of 'Man and Health'. However, the PE objectives are clearly health-oriented while the analysis showed that the educational content included both health and movement expected outcomes and subject matter. As emphasised previously (Section 4.3) the Czech curriculum documents are incongruent in some respects.

The two PE learning objectives in the Dutch curriculum and the PE educational content is clearly movement oriented and congruency is not an issue.

The different ways the documents were structured led us to study not only the congruence of the content, but also the external congruence of the document between school levels. We found that in all the cases monitored, there is continuity and apparent overlapping of the topics in relation to the previous level. This means that the pupil encounters concepts and activities repeatedly at each educational level, which leads to gradual accumulation of the educational

content. However, as highlighted in Section 4.3.1, the Czech FEP BE is not wholly congruent between the upper and lower stages of basic education; at the lower stage (ISCED 1) the document is arranged with general expected outcomes followed by subject matter in separate activity thematic areas, whereas at the upper stage (ISCED 2) both expected outcomes and subject matter are individually separate (FEP BE, 2017, pp. 97–103).

5.3.4 Summary of the international comparisons

In this chapter the Czech PE designed curriculum (the learning objectives and the educational content) has been compared to that in other countries (Germany, the USA, the Netherlands and Ireland) with a view to learning from their designed curricula.

An important result is that the documents in the Czech Republic compare favourably with those of the other countries studied. They are outcome-oriented as well as content-oriented and pupil-focused, they emphasize relative rather than normative performance, they include the goal of lifelong physical activity and cover both health and movement topics in a similar way, given the cultural differences.

However, when compared to the other countries there is a major issue of congruence in the Czech Republic. While the concept in the PE curriculum documents is clearly health oriented, the educational content is both health and movement oriented. This lack of congruence is a key issue which will be discussed in the following chapter.

6 Reviewing the PE curriculum in the Czech Republic

The primary aim of this book is to present research into the quality of the Czech PE curriculum and to make recommendations regarding its redesign. As emphasised in Chapter 2 curriculum change is an on-going process for which curriculum research is a critical ally. These final chapters will review the key problematic aspects of the current curriculum identified in the previous research chapters. It will highlight that the redesign should focus not only on the structural aspects of curriculum (the curriculum as a product in its five forms) but also on its functional aspects (the processes that transition one form to another). Only when research focuses on both aspects can it contribute to positive change of the curriculum (cf. Wyse, Hayward, & Pandya, 2016, pp. 821–837; Dvořák, Holec, & Dvořáková, 2018, pp. 15–16, p. 151; Stabback, 2016, p. 9).

In 2018 the MEYS has announced a new cycle of revision for the Czech FEPs which will also affect the PE designed curriculum. This project is now referred to as *Revision of the FEP and preparation of the Education Policy Strategy of the Czech Republic until 2030+* (Strategy 2030+). In January 2019 an expert group was established under the leadership of prof. Arnošt Veselý. Their task is to prepare the initial document Guidelines for Education Policy of the Czech Republic 2030+, which will define the vision, priorities and objectives of education policy beyond 2030. It will describe what should be achieved and how these goals can be achieved.

In our opinion, a rigorous and comprehensive review of the curriculum, based on all five forms and processes, is an essential prerequisite to a quality redesigned PE curriculum. This circular process is shown in Figure 11. The five forms (concept, designed, implemented, results and effects) are linked by processes (conceptualizing, designing, implementing, realising, and internalizing). Review of these forms and processes feeds into redesign of the curriculum and curriculum change. Ideally this process is repeated and curriculum development is a spiral.

This is the purpose of this chapter. Within the five-level curriculum framework described in Chapter 2 the issues are identified, based primarily on our research results (Chapters 4 and 5) but also on some other more recent texts (e.g. Tupý, 2018a, b). It should be noted that the five curriculum forms and processes that comprise the framework significantly overlap and influence each other. The borders are not precise, for example between the results and effects forms,

but the framework facilitates the discussion of the structural and functional problematic areas of the Czech PE curriculum. The discussion in this chapter begins with the concept form of the curriculum, which influences all the other forms. The following sections will show how the choice of the health concept is problematic and has resulted in significant curriculum quality issues.

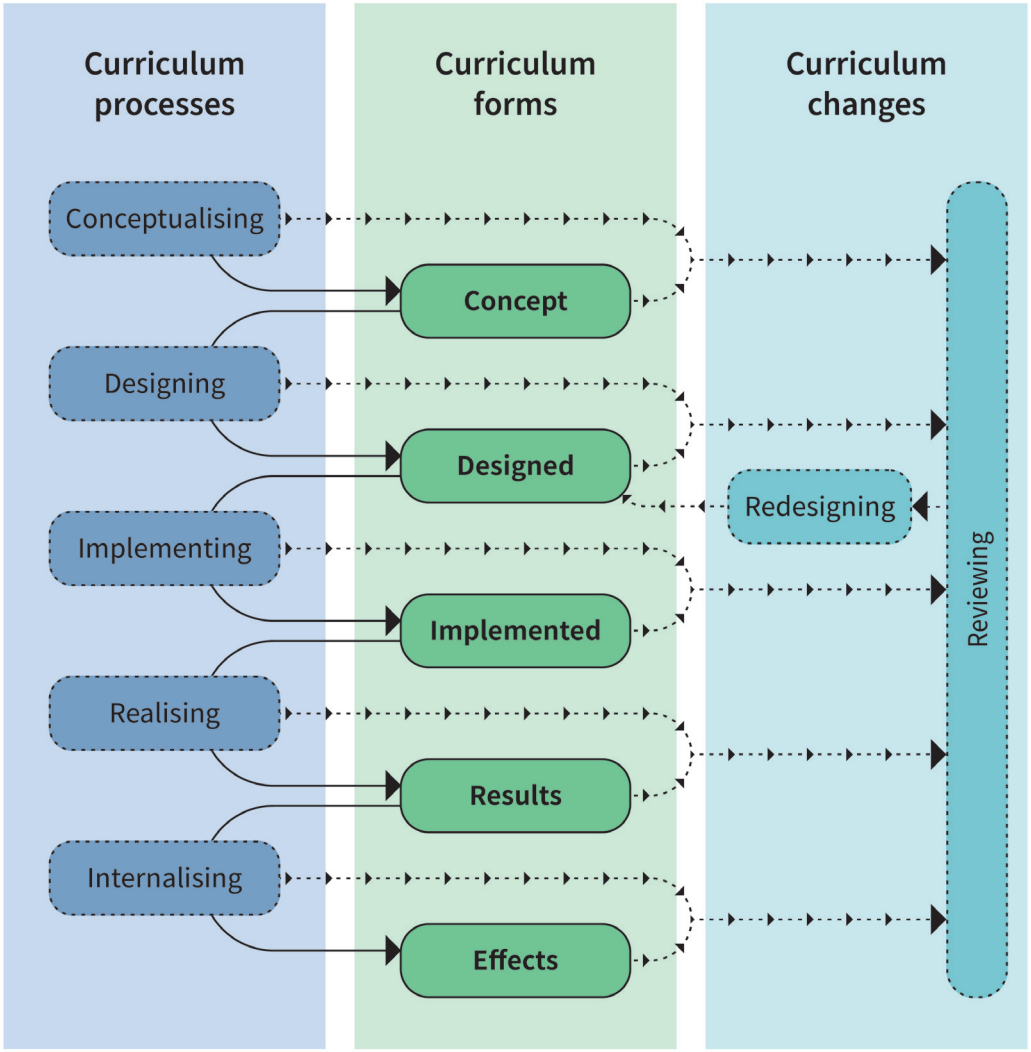

Fig. 11: *The circular process of curriculum review and redesign.*

6.1 Reviewing the concept curriculum (process and form)

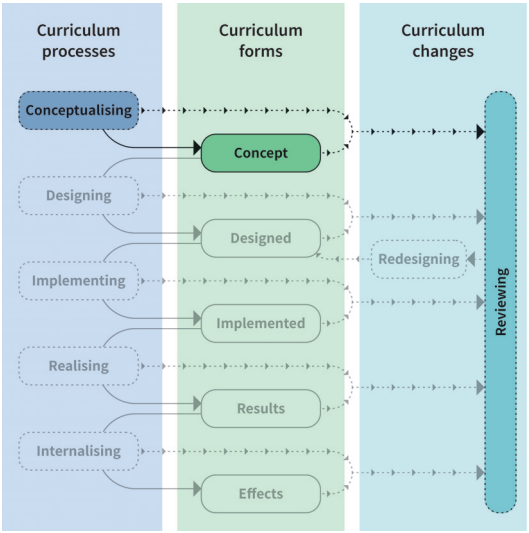

Fig. 12: *Reviewing the concept curriculum (process and form).*

As described in previous chapters, PE in the Czech Republic has undergone a complex historical and socio-political development over centuries. Consequently, the values that have influenced the learning objectives and educational content of PE in our country have frequently changed. In the current PE curriculum, the concept is to promote health and focuses primarily on the prevention and compensation of health impairments related to low physical activity of the population (Sections 3.2, 5.2).

The concept form is closely related to the effects form. If this health-oriented concept of PE is to be effectively implemented, it should be accepted by the whole of Czech society – by politicians, theoreticians, teachers, pupils, their parents, by everyone. Unfortunately, this is not always the case.

For instance, the public's view of what is important regarding the PE curriculum emphasises physical activity not health, as can been seen in Section 4.3.2 which presents research regarding the public's preferred concept of PE (Fialová et al., 2014; Mužík & Janík, 2007; Mužík & Vlček, 2016; Pokorná & Jansa, 2015; Vašíčková, 2016). The Czech opinion poll confirmed that most Czechs (51.6%) thought that PE curriculum should focus on the ability of pupils to move confidently and interact with their daily physical environment (motor versatility) and less than 5% preferred a health focus. This is an issue of *not respecting the reality* of public opinion (Table 11, Area 1). This is important issue since the public judge the quality of education based on what is taught at school, and they obviously do not consider the health concept relevant.

PE teachers also prefer a different concept of PE to what is in the FEP. The vast majority of PE teachers prefer a focus on sport in PE (Fialová et al., 2014, pp. 77–83) which, regardless of the current health concept of PE, is what they are often taught at most faculties or departments of PE (cf. Mužík & Vlček, 2016, p. 138). Many other research studies show that there are various conceptual implementations in practice, including the traditional concept (sports and physical). Clearly, the expected health-oriented outcomes are not implemented in practice. This is mainly due to different ways of choosing or handling the educational content of PE.

Many authors, including those responsible for preparing the background materials for the current review (Tupý, 2018b, p. 60) cite the recommendation from a 2014 seminar of the Senate of the Parliament of the Czech Republic – that the educational aim of both school and out-of-school PE and sports should be a clearly defined physical literacy. Mužík (2014), who actively participated in the seminar, adds to the proposal: 'If the contemporary society accepted as values physical literacy and the follow-up movement concept of PE (cf. Section 2.4) preparing pupils to participate in various physical activities (that is indirect health promotion), the content of PE education could be meaningfully defined'. Mužík also emphasized that 'this fundamental curricular problem should receive attention before the curriculum is redesigned, which is planned to take place in the future' (cf. Mužík, 2015, p. 35). Hence, a PE concept based on physical literacy may provide an alternative concept to the current health-oriented concept for the PE curriculum in the Czech Republic (Dvořáková & Engelthalerová, 2017; Mužík, Vlček, & Vrbas, 2011; Mužík, 2014, 2015; Tupý, 2018b; Vašíčková, 2016).

Physical literacy has been defined by The International Physical Literacy Association: 'Physical literacy is the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life.' (IPLA, 2017).

The concept of physical literacy first came to prominence in the early 1990s, but it did not receive significant theoretical and practical attention internationally prior to Whitehead's advocacy of the concept in 2005. For more understanding of physical literacy see for example McLennan and Thompson (2015) and the history of this concept, see Dudley (2018); Dudley, Cairney, Wainwright, Kriellaars, & Mitchell (2017) or Lounsbery & McKenzie (2015). After Whitehead's 2010 publication the Faculty of Physical Culture in Olomouc summarized physical literacy in the Czech context. This was accompanied by partial pilot studies to investigate the practical application of this concept for teachers and pupils of primary and secondary schools (Vašíčková, 2016).

Thus, the Czech PE sector is familiar with the concept of physical literacy and its definition (Whitehead, 2010, p. 5) which has been translated and interpreted in many ways (cf. Čechovská & Dobrý, 2010; Čechovská & Miler, 2019; Fialová, 2015; Havel et al., 2016; Mužík, 2015, 2017; Mužíková & Mužík, 2014; Mužík, Šeráková, & Janošková, 2019; Vašíčková, 2016).

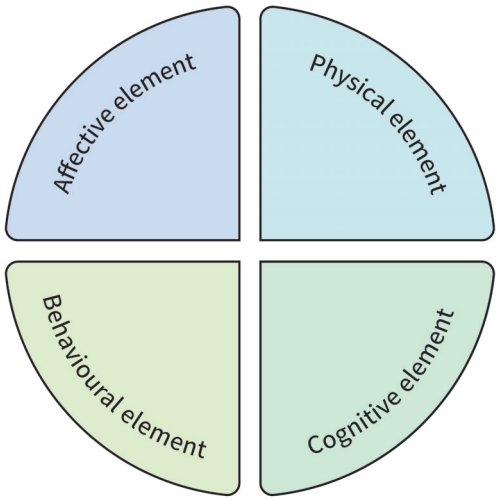

Fig. 13: *Elements of Physical literacy (cf. Sport for Life Society, 2019).*

From definition of physical literacy (IPLA, 2017), four dimensions (domains) of physical literacy can be distinguished – Physical, Psychological, Cognitive and Social (cf. Sport Australia, 2019; pp. 13–58). Alternatively, the Canadian *Sport for Life Society* divides physical literacy into four elements: Physical, Cognitive, Affective, and Behavioural as shown in Figure 13 (cf. Canada's Physical Literacy Consensus Statement, 2015, p. 2).

The following list presents the physical literacy model developed by the Canadian *Sport for Life Society* (2019).

The Elements of physical literacy

- **Affective (motivation and confidence)**

Motivation and confidence refer to an individual's enthusiasm for, enjoyment of, and self-assurance in adopting physical activity as an integral part of life.

- **Physical (physical competence)**

Physical competence refers to an individual's ability to develop movement skills and patterns, and the capacity to experience a variety of movement intensities and durations. Enhanced physical competence enables an individual to participate in a wide range of physical activities and settings.[25]

- **Cognitive (knowledge and understanding)**

Knowledge and understanding includes the ability to identify and express the essential qualities that influence movement, understand the health benefits of an active lifestyle, and appreciate the rules, principles and safety features associated with physical activity in a variety of settings and physical environments.

- **Behavioural (engagement in physical activities for life)**

Engagement in physical activities for life refers to an individual taking personal responsibility for physical literacy by freely choosing to be active on a regular basis. This involves prioritizing and sustaining involvement in a range of meaningful and personally challenging activities, as an integral part of one's lifestyle.

The discussion of the concept of physical literacy is an exciting development for the Czech PE sector. The implications of this will be discussed in the following sections and Chapter 7 in relation to the other structural and functional dimensions of the curriculum.

6.2 Reviewing the designed curriculum (process and form)

This section discusses the research results of the international comparison of PE curriculum presented in Chapter 5 and their implications for the designed form of the PE curriculum in the Czech Republic. The aim of this research was to analyse and compare the designed curricula of the selected countries (Czech Republic, the Netherlands, Germany, the USA, and the Republic of Ireland) with a view to learning how the Czech curriculum could be improved.

25 We agree with Whitehead (2010, p. 13) that a key attribute of physical literacy is the individual's ability to interact with the environment, their capability to respond appropriately to the demands that are encountered, whether they are commonplace or novel. In German PE curriculum, this issue is addressed as *Handlungsfähigkeit* (cf. Kurz, 1990).

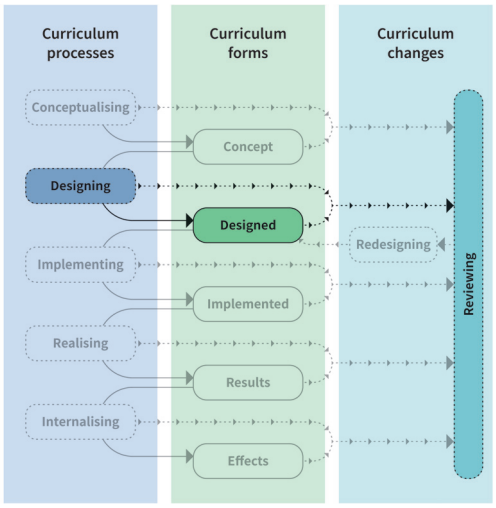

Fig. 14: *Reviewing the designed curriculum (process and form).*

Structurally, in all countries, there is internal congruence of the designed curriculum in that the organisation of educational content into themes is continued throughout the different school levels. This means that pupils encounter the concepts and activities from one year to the next, and, as a result, the educational content gradually accumulates. It should be noted that in the Czech Republic there is a structural discontinuity between the first and second stage of the basic school designed curriculum, in the way the activities and expected outcomes are presented (Section 4.3.1). While this is not a major issue it could be easily addressed during the revision.

The comparative research also showed that the designed PE curriculum in the Czech Republic is largely consistent with the curriculum in the countries included in the research. This is an important observation; it means that the Czech PE curriculum, while it may have some problems, which are being highlighted in this publication, is not fundamentally broken or significantly different from the curriculum in other countries.

While in the past curricula were designed with a strong input (content) orientation (Section 2.3), the comparative research in Chapter 5 showed that the PE curriculum documents in the Czech Republic and most other countries studied belong to the new generation of curricula that focus on both content and outcomes, with the American designed PE curriculum (solely outcome focused) being the only exception. The Czech designed PE curriculum sets expected outcomes that are followed up by the subject matter, subsequently specified by standards (cf. Section 5.3.1). The issues in relation to evaluating these outcomes is considered in more detail in the next section.

In our view, a curriculum that focuses only on outputs as in the American documents can be problematic (cf. Künzli, 2010, p. 443). There is an increasing tendency in the Czech Republic for the curriculum makers and other stakeholders for example the School Inspectorate to focus on expected outcomes rather than educational content. This is often resisted by teachers who require guiding and motivational content for use in the classroom. The quality of teaching is critical to learning outcomes. PE teachers must plan their educational activities based on (1) thorough knowledge of the physical capabilities and level of personal development of their pupils (2) the use of appropriate methods and learning styles taking into account the age specifics, gender and maturity of pupils and (3) the choice of suitable means of physical activity, examples and rules. Teachers must do all this while creating a joyful atmosphere in PE lessons and use class culture for personal development of the pupil. This means that teachers need content to guide them in these challenging activities. The concept of a core curriculum (a set of common and essential learning that is necessary for all pupils to function effectively) would meet this need. Currently the educational content in FEP is not *binding* (Table 11, Area 4, cf. Maňák, Janík, & Švec, 2008, p. 36) although it is in some of the countries studied.

The comparative research (Section 5.3) examined not only the structure of the designed curriculum documents but also the learning objectives and educational content in detail. The learning objectives clearly differ; while the learning objectives in the Czech curriculum are based on the health concept, and focus on health promotion, the learning objectives in the other countries are more balanced and tend towards the movement concept of PE.

While the learning objectives may differ, the PE content is generally similar. Although the emphasis on individual topics may differ, the designed curriculum in all the countries in the studies includes content based on both the health and movement concept. The main features that the curricula have in common can be summarized as follows:

- Overall, the educational content is similar although the priority given to different topics is not the same.
- There is a shift away from one-sided focus on performance to an emphasis on pupils' self-satisfaction, positive experience and self-realization.
- There is reduced support for sports with emphasis now being given to the development of physical (motor) competences.

- Fitness is regarded similarly, meaning that the goal is not the achieved performance (so-called performance-oriented fitness), but health-oriented fitness considered as a necessary part of the development and maintenance of human health.
- Social acceptance and interaction, the development of responsibility and cooperation among pupils is a common emphasis.
- To a varying extent, all the documents refer to the influence of PE on emotional development and the development of volitions and emphasize games and play.
- All the documents emphasize that the pupil's individual capabilities must be taken into account when setting goals.

These studies show that there is a *incongruity in the design of the Czech curriculum* (Table 11, Area 2) which is not found in the designed curricula of the other counties; while the learning objectives are clearly health based, the educational content is more balanced (health-movement). This incongruity is the key problematic area of the Czech PE designed curriculum and is a fundamental issue for PE curriculum redesign. Its implications for the remaining forms of the curriculum (implemented, results and effects) will be discussed in the following sections.

While the discussion in this section so far has related to the form of the PE curriculum in the Czech Republic, there are other issues that need to be considered. For example, there is a functional issue with the designed Czech curriculum in terms of its purpose which curriculum makers must consider. In Chapter 2, the different purposes of the curriculum were described. If a curriculum is conceived of as a tool for increasing autonomy, the quality criteria would be different than if it were conceived as a means of standardization. The official documents of the Czech Educational Policy of 2000–2010 state that the two-tier system (FEPs and SEPs) was introduced with the aim of decentralizing curriculum development and enhancing the autonomy of schools (Janík et al., 2011b). In recent years, however, the opposite trend has occurred – namely re-centralization and standardization, for example the development of PE standards.

This means that the purpose of the Czech curriculum documents has been slowly changing. This has occurred in the absence of proper analysis and reflection as to the consequences of this change. In our earlier publication (Janík et al., 2011a) we expressed the view that this shift should be formalised in a future curriculum change.

If such a fundamental change really has occurred, then the system does not need a minor change, it needs reform that reconsiders the principles underpinning the two-tier structure, which supports de-centralisation of the curriculum. However, this is a much broader issue than what is being considered in this monograph. It will require considerable debate and further research to assess whether the re-centralization and standardization is desirable, what the implications are, and how the curriculum should be reformed.

6.3 Reviewing the implemented curriculum (process and form)

As mentioned previously, the health-oriented concept of PE was introduced into the Czech Republic in 1995. The last major systemic reform was in 2005–2007 with the introduction of the two-tier curriculum, the aim was to achieve a higher degree of curricular decentralization and autonomy (Janík, 2013). There are now numerous texts and research papers that evaluate the outcomes of the reforms, not only at the structural level (for example the learning objectives and educational content) as discussed earlier (Sections 4.1, 5.2 and 5.3) but also in terms of its implementation (Section 4.4).

The research described in Chapter 4 shows that the curriculum that is implemented by teachers is not the curriculum that was designed. To understand why this has occurred, it is critical that we consider not only the design issues but also the functional processes that transform the designed form of the curriculum into the implemented form.

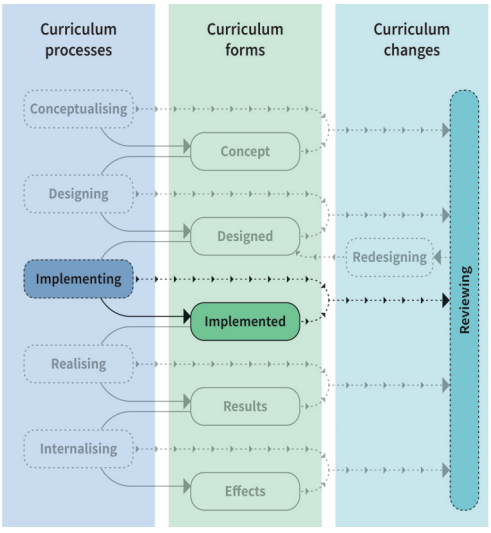

Fig. 15: *Reviewing the implemented curriculum (process and form).*

In Section 4.4 the many process issues surrounding the implementation of curriculum reform in the Czech Republic were presented: the speed of the curriculum reform was problematic as well as the coordination and communication; there was a lack of transparency in the reform processes; the State did not sufficiently supported the reform; the participation of university representatives was not sufficient; and teachers were not adequately involved in the reform, did not understand it and did not accept it. Most of these results came from interdisciplinary studies that did not focus specifically on the PE curriculum. However, this was the context for the lack of acceptance of the reform by PE teachers (cf. Fialová et al., 2014; Janík, Vlček, & Mužík, 2016; Vašíčková, 2016; Vlček, 2011b). Our research suggests that the aim and purpose of the reform was not communicated clearly and sufficiently to the PE teachers who would implement the reform (Janík, 2010a, p. 52–57; Janík, Vlček, & Mužík, 2016, p. 139).

Research has also confirmed that curriculum reform in the Czech Republic took place largely on paper, at the documentation level; to a much lesser extent in teachers' mind-set, at the cognitive-emotional level, or in their implemented teaching (cf. Janík, et al., 2018; Pešková, Spurná, & Knecht, 2019). The PE case study in Section 4.2 is consistent with this conclusion as it indicated that the teacher's expertise was more in her work with the PE content in the classroom (psychodidactic transformation), than in the development of the designed curriculum – ontodidactic transformation (cf. Figure 1).

What actions can be taken to encourage teachers to use curriculum documents in a conceptual way (Spurná & Knecht, 2018) and think about the curriculum documents or develop and adapt them so that they could improve the quality of their teaching (cf. Section 4.4)? While this research question is outside the scope of this monograph it is an important issue if the implemented form of the curriculum is to be consistent with the designed form. Spurná and Knecht (2018) identified some teachers who were using the curriculum documents conceptually and making efforts to innovate them and these instances should be investigated to identify possible strategies that can be adopted.

Many PE teachers accepted curriculum reform formally, in theory but not in practice (Janík, Vlček, & Mužík, 2016, p. 139). Despite the health-oriented concept clearly expressed in the FEP BE learning objectives (Section 4.2 and 4.3), most teachers prefer a focus on sport and do not seem to be motivated by the health-oriented PE concept (Fialová et al., 2014, pp. 77–83). The research also shows that PE teachers emphasise general sports and movement skills

and therefore there is a lack of congruity between the designed form and the implemented form. Because the educational content in the curriculum is not binding, teachers can choose what they want to teach, and the choice is based primarily on their teacher-training and their habits, personal values, and life experiences (Janík, Vlček, & Mužík, 2016, p. 140; from interdisciplinary point of view cf. Píšová et al., 2011).

Another reason for the lack of acceptance by PE teachers is that the health-oriented PE learning objectives are considered by teachers to be too abstract and difficult to operationalise (Section 4.2, Mužík, Vlček, & Vrbas, 2011; Vlček & Mužík, 2012). This is the content dimension of curriculum (Figure 3). Clarity and comprehensibility are important quality factors regarding the designed form of the curriculum with considerable effect on its implementaion.

There was also a problem with the conceptually confusing FEP BE structure, namely the relationship (or lack of it) between the visionary key competences of overall basic education and the PE learning objectives and educational content (cf. Section 4.2). This is the goals dimension of curriculum (Figure 3). This was another reason why the FEP BE was difficult to operationalize (cf. Janík et al., 2011b; Janík, Vlček, & Mužík, 2016, p. 134).

To summarize, the implemented form of the Czech curriculum is problematic regarding *congruency* with the designed form (Table 11, Area 2), *structural interconnectedness* (Table 11, Area 3), *clarity and comprehensiblility* (Table 11, Area 3) and teacher *motivation* (Table 11, Area 1). These issues must be addressed and, if the proposed redesign of the curriculum is to be successful, the curriculum must be designed in such a way that it can be understood, accepted and operationalised by teachers.

Furthermore, there must be an implementation plan to address the process issues and ensure that the changes are understood by teachers, the concepts and the designed curriculum are incorporated into a teacher's thought processes and adopted in teaching and learning practice. Teachers must be encouraged to use the curriculum documents in a conceptual way, which may lead to greater acceptance and understanding. Teachers should be encouraged to become involved in the current curriculum revision process as 'experts' or 'opponents'as this may also lead to greater acceptance and understanding. We must make sure that, this time, teachers are involved and accept the reform.

6.4 Reviewing the results curriculum (process and form)

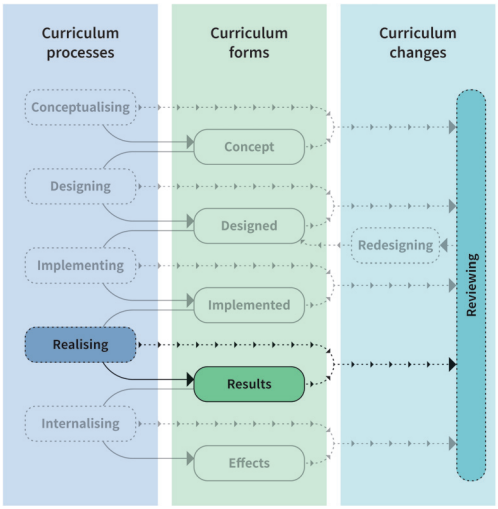

Fig. 16: *Reviewing the results curriculum (process and form).*

The results form of the curriculum is closely related to the designed form. The designed curriculum says what pupils should learn; the results form is what they do learn. Hence, a quality curriculum should exhibit congruence between the designed form and the results form. Unfortunately, this is not always the situation with respect to the Czech PE curriculum.

There are not many research studies into the results form of the PE curriculum in the Czech Republic particularly those focussed on physical (motor) competences. The reason may be that, under the communist regime, there was considerable emphasis on PE measurement and evaluation, primarily of performance and fitness, so there has been resistance to measurement in case it moves once again in that direction. Another reason might be the difficult differentiability between the results and effect form of curriculum. A designed curriculum that is more competence-oriented and an increased understanding of competences and how they can be used in assessment should result in a greater emphasis on the results form of the curriculum.

There are some studies that use surveys to research the results form to ascertain the opinions of the basic school pupils and graduates as well as Czech citizens regarding their views about their PE. In Section 4.3.2 the surveys of basic school pupils and graduates have been described in detail (Mužík & Janík, 2009, Mužík & Vlček, 2010; Mužík, 2015; Vlček & Mužík, 2012). Other surveys have also been carried out (Fialová et al., 2014; Tupý et al., 2015).To summarize the results of these surveys:

1) Surveys carried by Mužík (2010; Vlček & Mužík, 2012) identified poor teaching practices as one reason why Czech citizens were dissatisfied with the experience of PE at schools and 'problematic PE content' was seen as one of the negative aspects of the PE curriculum. However, satisfaction (or dissatisfaction) was more often related to the skills and personality of the teacher as well as pupil's attitude to physical activity.

2) According to research presented in Section 4.3.2, surveys of primary school pupils and graduates, the results form of the Czech PE curriculum is oriented towards sport performance and sporting skills. Less common are keep-fit exercises. It is clear from this research that the results form of the curriculum is focussed on sporting skills rather than health oriented (cf. Fialová et al., 2014, p. 82).

3) A survey by Tupý et al. (2015) showed PE teaching is not the main source of information about movement and physical activities for either children, young people, or for other Czech citizens.

These results reveal an *incongruity* (Table 11, Area 2) between the designed form and the results form of the PE curriculum – the health-oriented PE learning objectives are not what pupils learn. While PE teachers might include health-oriented PE goals and educational content formally in their SEPs and lesson plans as the designed PE curriculum (in FEPs) specifies, the reality shows that most PE teachers teach mainly sport specific skills.[26] This illustrates the issue highlighted in Chapter 2; that input factors do not by themselves lead to an increase in the quality of outcomes if they are not properly influenced by the processes standing between inputs and outcomes.

In our view the explanation for this lack of congruence between the designed and results form of the curriculum is that the health-oriented outcomes are often expressed in terms of behaviours and attitudes, such as a 'positive attitude towards the development of health-oriented fitness', 'influencing the physical regimen' or 'support of physical activity' (cf. FEP BE, 2017, pp. 96–98) and these behavioural and attitudinal outcomes are often not supported by specific subject matter.

For example, the FEP BE contains an outcome that the pupil shall: 'participate in implementing a regular movement regimen; make use of conditioning activities; demonstrate an adequate level of independence and will to improve his/her

26 Similar problems are defined for example in Germany (cf. Brandl-Bredenbeck & Sygusch, 2017).

level of fitness or participate actively in organising his/her personal movement regimen and include certain movement activities regularly and with a specific goal; strive to improve his/her physical fitness; select a suitable development programme from what is offered' (FEP BE, 2017, pp. 96–98; cf. English version of FEP BE, 2007, pp. 80–82). However, the FEP BE does not provide support for this outcome in terms of how teachers and pupils should deal with these issues, which part of the subject matter corresponds to this outcome, and how such outcomes should be evaluated. Even the Methodological Comments and Tasks for Standards for Primary Education – Physical Education of 2016 (Polívka, 2016) neglect many behavioural and attitudinal outcomes.

This is just one factor contributing to what Slavík, Janík, Najvar, & Knecht (2017, p. 312; cf. Janík, 2017; Janík, Slavík, Najvar, & Janíková, 2019) call 'content shedding'. It seems to be assumed that doing physical activity automatically translates into health effects without the need for specific educational content. Presumably, this is one reason why the health-oriented learning objectives are not properly implemented – teachers do not know how to implement them. Hence the designed curriculum is not sufficiently *instructive* in this regard (Table 11, Area 1).

A second problem is that these behaviours and attitudes are not easily measurable (*consistent with similar documents such as assessments*), althogh it is imperative that the results form of the curriculum can be evaluated. Despite the historically caused bias and resistance to measurement in current PE, it is a matter of fact that standardized testing is increasingly being implemented in the Czech Republic school system. Even though there is considerable debate about 'evaluation' versus 'grading (classification)' in PE (Fialová, 2015, 2017; Fialová et al., 2014; Havel, Fialová, & Jasanská, 2018; Mužík, Šeráková, & Janošková, 2019; Rychtecký & Fialová, 2004; Slavík, 1999), measurement, evaluation and testing in PE should not be neglected.

But what is being evaluated in the PE curriculum? In Vlček & Mužík (2012, p. 33) and Mužík & Vlček (2016, p. 33) we noted that while knowledge and skills are the desired outcomes in science and can be relatively easily measured and evaluated, this is not the case in the Czech PE where health-oriented learning objectives and the expected outcomes are frequently behaviours and attitudes. Hence, knowledge and skills are not sufficient outcomes in themselves, as they are only partial steps towards delivering the health-oriented goal of PE, which is a physically active pupil who understands physical activity as part of health promotion.

Is it possible that the current PE learning objectives and expected outcomes expressed in terms of attitudes and behaviours are primarily an *effect* rather than a *result*? Should the results form be knowledge and motor competences, which are easily measurable, and attitudes and behaviours the effects form?[27] This issue will be discussed in more detail in Section 6.5.

Currently the main goal of the Czech PE curriculum is health promotion. If it is agreed by the professional sector and the public that this goal remains, the curriculum developers need to be clear about what the PE should deliver and how it can be delivered (Kalman, Hamřík, & Pavelka, 2009). The behavioural and attitudinal outcomes must be supported by specific subject matter that can be implemented, and the outcomes must be measurable and achievable.

However, the experience of the last two decades in the Czech Republic has probably demonstrated that the current health-oriented attitudes and behaviours are unachievable, and we need to consider alternative goals and concepts. In Section 6.1 it was suggested that the concept underpinning PE might be physical literacy and that the goal of Czech PE might be a 'physically active person with individually appropriate physical and health literacy' with a corresponding movement PE concept. This proposed concept would be achievable and with measurable competences in knowledge and skills which provide the basis for the development of physical literacy (Mužík, 2014).

If physical literacy does become a key goal for Czech PE, what should the learning outcomes be? We maintain that motor competences (or physical competences according to the Canadian model described in Section 6.1, cf. McLennan & Thompson, 2015, p. 24), together with knowledge[28], are the key learning outcomes of quality PE. Basic motor competences include movements such as object movement (for example, safely handling a ball) and self-movement (for example, confident movements of the body). They are results-oriented and refer to the ability to act and cope with motor requirements and tasks such as throwing at a target (Herrmann, Gerlach, & Seelig, 2015).

The development of basic motor competence is recognized as the 'ABC' of physical activity and sport (Stodden et al., 2008) and is the basic requirement for participation in physical activity (Vrbas & Vlček, 2017). It is, therefore,

27 Of course, measurements in this form of PE curriculum can also be conducted (e.g. Havel et al., 2016; Mužík, Šeráková, & Janošková, 2019; Vrbas, 2010).

28 In this context we can for example refer to German educational document (Rahmenvorgaben für den Schulsport in Nordrhein-Westfalen, 2014; Section 5.3.2) and the multiperspective concept (Krüger, 2012) which is also reflected in the educational content developing the knowledge (cf. Vlček & Janík, 2010, pp. 123–124).

an essential aim of PE (Gerlach, et al., 2017; Herrmann, 2015; Herrmann & Gerlach, 2014; McLennan & Thompson, 2015). It provides an inclusive, qualified and significant opportunity for all children and has a determinant role in learning and subsequent engagement in complex motor skills. As such, all PE teachers should be concerned with valid and adequate assessment strategies to measure motor competence development together with respective knowledge.

Motor competences are not the same as motor skills and capabilities. From a theoretical perspective, the construct of basic motor competences can be considered as an addition to the constructs of motor capabilities and motor skills that have predominated sports science to date (Gerlach, Herrmann, Jekauc, & Wagner, 2017; Herrmann, Gerlach, & Seelig, 2016).

6.5 Reviewing the effects curriculum (process and form)

Current studies present worrying data on the health of Czech children, youth, and adults (cf. Antošová & Kodl, 2014; OECD/European Observatory on Health Systems and Policies, 2017; Mitáš & Frömel, 2013). Measures of physical activity, lifestyle and health indicators in children and youth (which are also part of the Czech designed PE curriculum) are unsatisfactory and have not shown improvement for a long time (cf. Havel et al., 2016; Kalman & Vašíčková, 2013; Madarasová Gecková et al., 2016). Clearly, the health-oriented concept of PE, adopted more than 20 years ago, has not had the desired effects in the daily life of the Czech population (cf. Mužík, 2014, 2015).

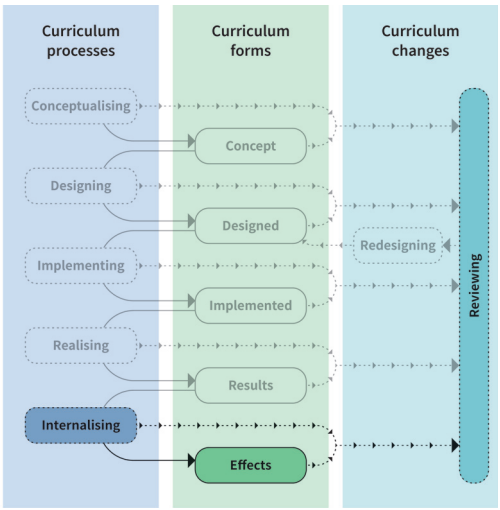

Fig. 17: *Reviewing the effects curriculum (process and form).*

As highlighted in the previous sections, it is critical that we address the question of whether the current health-oriented PE concept in the Czech Republic is still appropriate. The research presented in this monograph indicates that there are many reasons why this question needs to be asked. For example, teachers' lack of understanding of the designed PE curriculum because it is too abstract; realised PE that mostly focuses on pupils' sports skills rather than on their knowledge, behaviour and attitudes concerning health; the lack of congruence between the health-oriented learning objectives and the educational content which is more movement-oriented; the difficulty of evaluating the attitudes and behaviours learning objectives and expected outcomes. These issues are inter-related.

However, it is necessary to keep in mind that the effects form of the curriculum is influenced by many external factors and the context in which school PE exists (cf. National Report on physical activity of the Czech children and youth – Gába, 2018). Changes in the society are important, for example, the different values adopted by communities, increasing health awareness and the modern emphasis on exercise and fitness, and so on.

We have argued in the previous sections (referencing also other authors) that the modern PE concept of physical literacy may provide an alternative concept to the current health-oriented concept in the Czech Rupublic. This may better reflect the *current state of disciplinary knowledge* (Table 11, Area 2). In Section 6.1, the four elements of the Canadian Sport for Life Society (2019) model of physical literacy was described (Physical, Cognitive, Affective, and Behavioural).

It must be emphasised that all these elements of physical literacy are essential and no one element is sufficient by itself. However, it is important to note that the primary importance of physical (motor) competences in the concept of physical literacy is not accepted by some Czech authors (Čechovská & Dobrý, 2010; Mužík, 2014; Tupý, 2018b; Vašíčková, 2016). In our opinion, the Czech concept of physical literacy that Vašíčková (2016) borrowed from Whitehead (2010) and referred to by Tupý as a model concept (cf. 2018b, pp. 58–59) has shifted from its original concept.[29] In this definition, the importance of physical (motor) competences is weakend. This is clear from Tupý's study for the curriculum revision (Tupý, 2018b, pp. 58–59) which quotes results from the physical literacy survey conducted at the University in Olomouc (cf. Vašíčková, 2016). Not one of the five quoted findings from this study is focused on physical (motor) competences. All of them are either knowledge, attitudinal, or behavioural oriented.

29 This may have happened because of an inadequate interpretation by Vašíčková (2016, Figure 2, pp. 20–21) of the original model of physical literacy where physical competences were not included as one of the attributes (cf. Whitehead, 2010, pp. 15–16).

As discussed in the previous section we strongly believe that, in line with other authors, physical (motor) competences, progressively developed over time, are a critical output of the learning process in PE (Whitehead, 2010; Dudley et al., 2017; Dudley, 2018; IPLA, 2017; McLennan & Thompson, 2015; SHAPE America, 2013; The Australian Sports Commission, 2019). They must be considered as part of the goals (attributes) of physical literacy and are prerequisites for the effects form of the curriculum.

It is of significant concern that the developers of the Czech curriculum in the proposed revision will adopt a physical literacy concept and PE learning that predominantly specify knowledge, attitudinal and behavioural learning outcomes without consideration of the critical physical (motor) element. If this occurs, it is highly likely that the designed curriculum will be problematic and will once again be rejected by teachers and the public. The attitudinal and behavioural learning outcomes will probably not be implemented by teachers because they are not easily realized and are difficult to evaluate (cf. Fialová, 2015, p. 54). Therefore, logically, they will not deliver the desired effects.

It should be emphasised that we do not want to exclude the behavioural and attitudinal (affects) elements from the concept of physical literacy and PE curriculum in the Czech Republic, but we do believe that the way they are handled in PE curriculum should be reconsidered. Similarly, it needs to be stated that physical literacy is not just the development of physical skills or competences, as it is described in some places in the Czech Republic, for example Rinosport Academy (2019). In our view, neither extreme is acceptable. Physical literacy should be a balance between physical (motor) competences, attitudes and behaviours, and knowledge.

However, these concerns with how physical literacy is defined in the Czech Republic should not make us give up the search for meaningful, achievable physical literacy goals for PE and to relentlessly emphasise the significance of school PE to the development of a physical active and healthy lifestyle, and consequently, the health of society.

It is also necessary to keep in mind that the level of physical literacy is influenced by many factors and the context in which they interact, that we cannot achieve physical literacy in PE, only boost it. Physical literacy is a lifelong goal, and school PE offers just one step towards this. As Whitehead (2010) recalls ‘Physical Literacy is a journey we are all on through life’.

7 Summary and recommendations for PE curriculum redesign

As Chapter 3 highlighted, PE has been a part of compulsory basic education in the Czech Lands for nearly 150 years. The form of PE in the Czech Republic today reflects the decades of curriculum reform and change since 1989. The theory and research presented in this monograph not only allow us to assess the merits of the changes that have occurred, but also to consider what issues should be addressed in the current plans to redesign the curriculum to enhance the quality of the PE curriculum.

Should the curriculum be replaced rather than redesigned? Janík et al. (2011) surveyed Czech experts (Section 4.1) and found that nearly three-quarters of the respondents were of the view that: curricular documents should only be replaced if they are non-functional because of an observed decline in educational outcomes, for example, in international comparative surveys; the curriculum has not been updated to include new disciplinary knowledge; it conflicts with the structure of the school system and school legislation; and if the various academic disciplines have concerns regarding the designed curriculum. Less significant reasons for replacing a curriculum document were the general enthusiasm for reform among some teachers (reform for reform's sake) as well as changes in public opinion and political changes. It is worth noting that teachers who used the curriculum documents symbolically (that is, they doubted their usefulness and were reluctant to use them) were more likely to doubt the functionality of curriculum documents.

However, most teachers in the Czech Republic today do not have any major reservations concerning the form of the current FEP BE (cf. Tupý, 2018b). Tupý referred to a survey of 3,900 schools carried out by the Czech School Inspectorate report (2017) in which approximately two thirds of teachers did not have concerns. If there were concerns, they were primarily about the functional processes rather than structural forms, for example, lack of collaboration with the professional sector (Tupý, 2018b, p. 19).

Teachers generally have a positive view of the FEP BE, and the research presented in Chapter 5 indicates that the educational content of the FEP BE (2017) compares favourably to that in other countries. However, many teachers support change as proposed in the current revision to address the problematic areas of the current Czech PE. The focus of the previous chapters has been on these areas.

While the issues of curriculum quality are systemic in nature (cf. Mužík & Vlček, 2016, pp. 141–142), it must be emphasised that a systems approach is often lacking. Although the research is not easy to access because it is scattered across a multitude of sources, it is clear that studies seldom consider all five forms of the curriculum. For example, recommendations may be made to improve teaching practices (the implemented curriculum) but fail to consider the requirements of the concept form. We believe that research must consider the curriculum in all its forms and processes if it is to result in effective interventions and enhance the quality of the PE curriculum. This is the approach that has been taken in this monograph – the structural dimension of the PE curriculum has been analysed in its five forms, together with the associated process dimensions.

The work presented in this monograph clearly demonstrates that while many aspects of the PE curriculum in the Czech Republic are satisfactory, other areas are problematic because of issues relating to the designed curriculum. In our research described in Section 4.1, we developed a framework for assessing curriculum quality using four key areas: (1) feasibility and practicality, (2) professional accuracy and congruence, (3) clarity and comprehensibility, (4) flexibility within bindingness. The summary of research findings is presented within this framework.

Tab. 15: *Area 1: Feasibility and practicality.*

Area 1: feasibility and practicality Criteria/characteristics
1.1 respects reality and is manageable
1.2 respects teaching/learning practice and is practical
1.3 is instructive, inspirational and motivating for teachers
1.4 is usable in the school environment by managers and teachers
1.5 encourages communication and cooperation in school

The Czech PE designed curriculum is problematic in this regard. Research (cf. Chapter 4 and Section 6.3) shows that the health-oriented objectives of the designed curriculum are not implemented. Some teachers state that they are difficult to operationalise (*managable*), and the research shows that they choose from the curriculum what they want to teach, and what they know how to do (cf. Section 4.2). The designed PE curriculum in the FEP BE (2017) is not sufficiently *instructive*, because it does not provide specific content that enables the health-oriented attitudinal and behavioural learning objectives and expected outcomes to be implemented (implemented form), evaluated (results form)

and internalized (effects form) (cf. Sections 6.3, 6.4, and 6.5). The majority of teachers do not seem to be *motivated* by the health-oriented PE concept as they prefer a focus on sports physical activities. Furthermore, the designed curriculum does not *respect the reality* that most Czech citizens prefer a PE curriculum based on motor versatility (cf. Sections 4.3.2; 6.1).

Tab. 16: *Area 2: Professional accuracy and congruence.*

Area 2: professional accuracy and congruence Criteria/characteristics
2.1 is coordinated with similar documents (for example test requirements, inspection criteria)
2.2 is characterized by logic and interconnectedness of educational goals and contents
2.3 is correct in terms of qualification disciplines and is continuously updated with respect to changing state of knowledge in the disciplines

The *lack of congruence* is one of the main problematic areas of the Czech PE curriculum (cf. Section 4.3): the health-oriented learning objectives of PE are not congruent with the educational content, which contains both physical and health oriented subject matter and expected outcomes as shown by content analysis; and the results form of the curriculum demonstrates a focus on sporting skills rather than health as shown in surveys of basic school pupils and graduates (cf. Section 4.3.2). The learning objectives focus narrowly on the health-oriented concept of PE rather than a more broadly focused physical literacy concept that reflects the internationally promoted *current state of disciplinary knowledge* (cf. Section 6.1)

Tab. 17: *Area 3: Clarity and comprehensibility.*

Area 3: clarity and comprehensibility Criteria/characteristics
3.1 is thoughtfully structured and well-arranged
3.2 is written in a language that is reasonably demanding, comprehensible and accepted
3.3 its individual parts correspond among themselves
3.4 it is brief, but it includes the essentials

Teachers have expressed the view that the defined PE learning objectives and expected outcomes are too abstract and difficult to understand (cf. Section 4.4) – if learning objectives and expected outcomes are not written in a way that they are *accessible, understandable and accepted* there is considerable potential for misalignment between the curriculum forms. Some teachers formally accept the curriculum, in theory but not in practice (cf. Section 6.3). The designed

PE curriculum is not sufficiently *structurally interconnected* with respect to the arrangement of expected outcomes and subject matter between the first and the second stage of basic education (cf. Section 4.3.1). Another problem is that the FEP BE is conceptually confusing because of the lack of a clear relationship between the visionary key competences of overall basic education and the PE learning objectives and expected PE outcomes (cf. Section 4.2), that is, it is not *thoughtfully structured*.

Tab. 18: *Area 4: Flexibility within bindingness.*

Area 4: flexibility within bindingness Criteria/characteristics
4.1 provides a reasonable space for free decision-making
4.2 is timeless but provides flexibility for updating educational practice
4.3 provides a desirable degree of uniformity between schools
4.4 it defines what is important for pupils to acquire (the core curriculum) and it is binding

The two level Czech educational programmes provide considerable opportunity for free decision making by schools and teachers. However, the PE designed curriculum defined in FEP BE is not *binding* and does not contain a *core curriculum* that describes the main learning objectives and educational content of individual disciplines including PE (cf. Section 4.3.1 and 6.1).

Recommendations for the curriculum revision

We believe that the major weakness of the existing PE curriculum in the Czech Republic is with the health-oriented concept and designed learning objectives. As a result, there is a major incongruence between the concept form, the designed form and the other forms of the PE curriculum.

Our recommendation is (along with other authors) that the concept of physical literacy including all four elements (affective, physical, cognitive and behavioural) is adopted in the proposed revision of the Czech PE curriculum (cf. Mužík, 2014; The recommendation from a 2014 seminar of the Senate of the Parliament of the Czech Republic, Tupý, 2018b, p. 60). If this new physical literacy concept of PE is agreed, then the curriculum makers must ensure that all the PE learning objectives, content and activities are aligned with this goal and are internally congruent (cf. Mužík, 2015, p. 35). Teachers must focus, in a practical, engaging and age appropriate way, on activities and the acquisition of knowledge that relate to the importance of physical activity for health and a healthy lifestyle. Undergraduate and postgraduate teacher training also needs to be aligned with these concepts.

In our view the current revision of the PE curriculum in the Czech Republic should achieve the following: a **concept** of physical literacy that is accepted by all stakeholders and a designed curriculum with realistic learning objectives incorporating all four elements of physical literacy and relevant educational content, that can be **implemented** in practice by teachers, that **results** in PE learning outcomes that can be evaluated in practice and contribute to the desired **effects**, namely a positive influence on the level of the citizen's **physical literacy** in our society.

The forms and processes of the curriculum ideally combine to create a curriculum ring as shown in Figure 18. This circularity shows that the concept form and the effects form are linked – physical literacy is both the concept and the effects form.

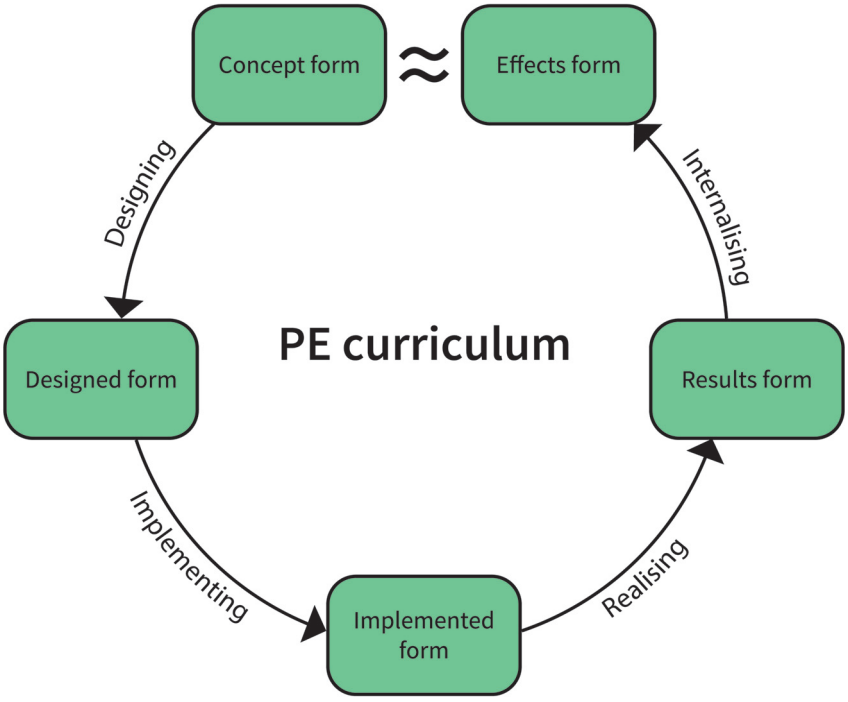

Fig. 18: *The PE curriculum ring.*

A key issue however is whether the curriculum developers will design learning objectives that reflect the full suite of physical literacy elements (motor competences, knowledge, behaviours and attitudes) and that these will be designed in a realistic way that can be implemented and will achieve results that can be evaluated (cf. McLennan & Thompson, 2015, p. 76).

The curricula ring illustrates another issue. As stated in Section 6.4 the designed form is closely related to the results form. It will be a major challenge to constructively align the curriculum design with the teaching-learning process and assessment and examination (Biggs, 2003). The curriculum makers need to keep in mind the statement by Brandl-Bredenbeck and Sygusch (2017; cf. Egger, 2005) that we should teach what we want to examine, and we should examine what we are expected to teach (the expected outcomes) in the designed curriculum. This is not as easy as it sounds but must be the guiding principle for the design of the new curriculum.

There are other issues that should be addressed in the curriculum revision process: a restructure of the FEP BE so that it is congruent between the lower and upper stages of basic school; clarification of the overarching key competences in the FEP BE as the vision for basic education rather than specific learning objectives to be achieved in the classroom; and the development of a binding, PE core curriculum for basic education. However, the development of an understandable, congruent, practical and measurable curriculum is the immediate priority (cf. McLennan & Thompson, 2015, p. 42).

And lastly, a comprehensive implementation plan must be developed to support and resource teachers and schools in implementing the new curriculum. Hand in hand with the curriculum re-design is the need to develop a new didactic concept, a new teaching and learning culture. As one of the survey respondents (Janík et al., 2011, p. 101) says: ‘There should be a team of people able to teach the others how to work with the designed curriculum.’

Curriculum change is only successful if it is accepted by teachers. A positive attitude and understanding of the curricular reform increase with the degree of familiarity, engagement and professional leadership of the reform and vice versa (Section 6.3). Teachers should be encouraged to become involved in the current curriculum revision process as ‘experts’ or ‘opponents’as this may also lead to greater acceptance and understanding.

The concepts and the designed curriculum must be incorporated into teachers’ thought processes and adopted in their teaching and learning practice. A question for intensive research into the PE curriculum and other discussions within the current revisions and the consequent overhaul of the curriculum in the Czech Republic is what changes should be made to the designed curriculum to ensure that PE teachers increasingly use the designed curriculum in a conceptual way, as discussed in Section 6.3.

These issues cannot be addressed merely by changes to the PE designed curriculum. They need to be addressed by future research, innovations in PE didactics, and the regular reviews of the PE curriculum. They also have a broader pedagogical dimension because they require significant changes to Czech education as a whole, that is, the curriculum in its broadest sense (Chapter 2).

While the designed form of the Czech PE curriculum is certainly problematic in some points, it needs to be repeated and emphasised that it is far from being broken or significantly different from the curricula of other countries. Most of those involved in the curriculum development in the Czech Republic consider the direction of the reform to be right, but they have reservations about or ambivalent attitudes towards the way curriculum changes are put into practice. The process of current revision of the curriculum must not end with the design of a new curriculum. It is just the beginning.

8 On the issue of dichotomies

In the preface to this monograph, we mentioned that while this monograph is about the PE curriculum in the Czech Republic it is also about dichotomies, which exist when two features of a phenomenon are contrasting opposites.

The fundamental dichotomy we have discussed is between the narrow curriculum as a curriculum document, syllabus or teaching programme and a broader understanding of the curriculum in all its forms. When researchers consider the curriculum, far too often they focus narrowly on the designed curriculum. However, as emphasised in Section 3.3 the designed curriculum is just one of five forms and it interacts with, and influences, all the other forms. The curriculum must be viewed as an interactive whole. This is a key issue for curriculum research, which we have attempted to address in this monograph.

Another important dichotomy is the one between the functional (dynamic) and the structural (static) dimension of the curriculum. From the research presented in this monograph, it is apparent that researchers often prefer to focus on the structural dimension where the curriculum is frequently perceived as a product, and the individual components as objects rather than processes, sometimes explicitly, sometimes implicitly. That is why both the structural and functional dimensions are considered in this monograph.

An important contextual dichotomy provides the framework for curriculum research in the Czech Republic – the different cultural and scientific traditions of the Anglosphere and continental Europe, the latter with its pronounced influence from the German tradition. As a result, the PE comparisons were challenging due to conceptual differences as well as the language and terminology. This professional monograph, written in English by a citizen of Slavic nationality with Czech as a mother tongue, aims at a text that is accessible to a wide range of readers and is unifying in terms of language and terminology.

The target audience presents another dichotomy with two main groups being distinguished, Czech readers and foreigners. The original intention was to focus primarily on the latter, to explain the historical development of a PE curriculum in a country that for decades had only limited communication with the West and a centralised educational system that required reform. We hope that foreign readers will still find the publication interesting from that perspective. However, because of the proposed FEP BE curriculum revision, Czech readers were also

targeted. The monograph has both Czech and foreign reviewers and, hopefully both groups of readers will find information that is valuable to them and will benefit from the topicality and originality of the discussion in the second part of the publication.

Another dichotomy is between the world of sport and education with PE somewhere in between. There is also the disciplinary divide, between Kinanthropology (the scientific studies of intentional human movement) and Pedagogy (educational sciences). From the Czech perspective, (an international comparison on this topic would need a separate publication if only with respect to terminology) Kinanthropology contains an element of education and, conversely, Pedagogy accepts the educational significance of human physical activities. However, in the Czech environment and with respect to the PE curriculum, the extent of cooperation between these different academic disciplines varies; as pointed out some time ago by Dobrý (1999), sometimes it is good, sometimes less so. Therefore, this monograph emphasises interdisciplinary cooperation. The reviewers are from both disciplines and hopefully, the monograph will attract the interest of experts from both, as well.

This text ends with a reference to Immanuel Kant and his dichotomy between 'is' (*Sein*) and 'ought' (*Sollen*) and the effort to bridge the gaps between guidelines and action and converge the laws of divergent, as do the natural (what it is) and positive (what it should be). Furthermore, since dichotomy is a term of Greek origin, it is relevant to refer to the dichotomy between the mind and the body, as defined by the ancient Greeks, and the ideal of their harmonization called *kalokagathia*. PE is of great importance for the realization of *kalokagathia* and it should not be overlooked that the harmonization of mind and body is still a general topic of discussion and is also an issue relevant to current PE curriculum in the Czech Republic. It may even provide a model for our highly polarized society today.

References

Akademie Rinosport. (2019). *O nás – teorie pohybové gramotnosti (PG)*. Retrieved from https://www.rinosport.cz/o-nas

Almond, G., A., & Verba, S. (1963). *The civic culture: Political attitudes and democracy in five nations*. Princeton, N. J.: Princeton University Press.

Altinyelken, H. K. (2010). Pedagogical renewal in Sub-Saharan Africa: The case of Uganda. *Comparative Education 46*(2), 151–171.

Altrichter, H., & Wiesinger, S. (2005). Implementation von Schulinnovationen – aktuelle Hoffnungen und Forschungswissen. *Journal für Schulentwicklung, 9*(4), 28–36.

Anderson, L. W. (2002). Curricular alignment: A re-examination. *Theory Into Practice, 41*(4), 255–260.

Annerstedt, C. (2008). Physical education in Scandinavia with a focus on Sweden: A comparative perspective. *Journal Physical Education and Sport Pedagogy, 13*(4), 303–318.

Antošová, D., & Kodl, M. (Eds.). (2014). *Zpráva o zdraví obyvatel České republiky*. [A report on Health of the Czech population]. Prague: Ministry of Health of the Czech Republic.

Aravopoulou, E., Stone, M., & Weinzierl, L. (2017). Modernising the curriculum and pedagogy – to be or not to be? Using film and online video to engage students and enhance learning. *International Journal of Higher Education Management, 4*(1).

Au, K. H., & Raphael, T. E. (2011). The staircase curriculum: Whole-school collaboration to improve literacy achievement. *New England Reading Association Journal, 46*(2), 1–8.

Bailey, W. J. (1991). *School-site management applied*. Lancaster: Technomic.

Ball, S. (2008). *The education debate*. Policy Press: Bristol.

Balz, E., & Neumann, P. (2005). Physical education in Germany. In U. Pühse, & Gerber, M. (Eds.), *International Comparison of Physical Education: Concepts, problems, prospects* (pp. 292–309). Oxford: Meyer & Meyer.

Bantwini, B. D. (2010). How teachers perceive the new curriculum reform: Lessons from a school district in the Eastern Cape Province, South Africa. *International Journal of Educational Development, 30*(1), 83–90.

Bennett, B. L. (1970). A historian looks at comparative physical education. *Gymnasion, 7*(1), 10–13.

Bennett, B. L., Howell, M. L., & Simri. U. (1975). *Comparative physical education and sport*. Philadelphia: Lea and Febiger.

Beran, J., Mareš, J., & Ježek, S. (2007). Rezervované postoje učitelů k dalšímu vzdělávání jako jeden z rizikových faktorů kurikulární reformy. *Orbis scholae, 1*(1), 111–130.

Bereday, G. (1964). *Comparative method in education*. New York: Holt, Rinehart and Winston.

Berkovich, I. (2011). No we won't! Teachers' resistance to educational reform. *Journal of Educational Administration, 49*(5), 563–578.

Biggs, J. B. (2003). *Teaching for quality learning at university*. Buckingham: Open University Press/Society for Research into Higher Education.

Bláha, L., Cihlář, D. (2010). Pohybová aktivita dětí ve starším školním věku. In V. Mužík & P. Vlček (Eds.). (2010). *Škola, pohyb a zdraví: výzkumné výsledky a projekty*. Brno: Masaryk University.

Bobbitt, F. (1918). *The curriculum.* Boston: Houghton Mifflin.

Bobbitt, F. (1924). *How to make a curriculum.* Boston: Houghton Mifflin.

Boehne, K., & Merkens, H. (1994). Methodologische Probleme des Ost-West-Vergleichs am Beispiel der Wertforschung zu Kollektivismus. *Zeitschrift für Sozialisationsforschung und Erziehungssoziologie, 14*(3), 212–226.

Böttcher, W. (2006). 'Standards-Based Reform' oder: Kann man für die Schul reform von den USA lernen? In F. Eder, A. Gastager, & F. Hofmann (Eds.), *Qualität durch Standards*? (pp. 71–84). Münster: Waxmann.

Böttcher, W., & Kalb, P. E. (2002). *Kerncurriculum*. Weinheim und Basel: Beltz Verlag.

Brandl-Bredenbeck, H. P. (2005). Comparative physical education – why, what and how? In U. Pühse & M. Gerber (Eds.), *International comparison of physical education: Concepts, problems, prospects* (pp. 19–31). Oxford: Meyer & Meyer Sport.

Brandl-Bredenbeck, H. P., & Sygusch, R. (2017). Highway to health – an innovative way to address health in physical education teacher education (PETE). *Retos*, *31*, 321–327.

Bray, M. (1990). The economics in education – what key economics issues concern educational planners? In R. M. Thomas (Ed.), *International comparative education: Practices, issues, and prospects* (pp. 253–277). Oxford: Pergamon Press.

Bray, M., & Thomas, R. M. (1995). Levels of comparison in educational studies: Different insights from different literatures and the value of multilevel analyses. *Harvard Educational Review, 65*(3), 472–491.

Bray, M., Adamson, B., & Mason, M. (2007). *Comparative education research: Approaches and methods.* Hong Kong: Comparative education research centre, The University of Hong Kong.

Brettschneider, W. D. (Ed.). (2003). *Die SPRINT Studie: Eine Untersuchung zur Situation des Schulsports in Deutschland*. Retrieved from https://kinderrechte.rlp.de/fileadmin/kinderrechte/Materialien/Entwicklung-und-Gesundheit/Bewegung/Sprint-Studie.pdf

Brettschneider, W. D., & Brandl-Bredenbeck, H. P. (1997). *Sportkultur und jugendliches Selbstkonzept. Eine interkulturell vergleichende Studie über Deutschland und die USA*. Weinheim und München: Juventa Verlag.

Brettschneider, W. D., & Brandl-Bredenbeck, H. P. (2011). Claims and reality: An empirical study on the situation of school physical education in Germany. In K. Hardman & K. Green (Eds.), *Contemporary issues in physical education* (pp. 30–46). Aachen: Meyer & Meyer.

Brettschneider, W. D., & Naul, R. (2007). *Obesity in Europe*. Frankfurt am Main: Peter Lang.

Brink, H. I. L. (1993). Validity and reliability in qualitative research. *Curationis, 16*(2), 35–38.

Brooker, R., & Macdonald, D. (1999). Did we hear you?: Issues of student voice in a curriculum innovation. *Journal of Curriculum Studies, 31*(1), 83–97.

Brunton, G., Harden, A., Rees, R., Kavanagh, J., Oliver, S., & Oakley, A. (2003). *Children and physical activity: A systematic review of barriers and facilitators*. London: University of London.

Buhren, C. G. (2004). Schulqualitätsentwicklung – Referenzpunkte für den Schulsport? In R. Naul & C. Richter (Eds.), *Qualitätsentwicklung im Schulsport* (pp. 1–24). Velen: Eads.

Bunc, V. (2010). Obezita a nadváha dětí – důsledek jejich neaktivního pohybového režimu. In V. Mužík & P. Vlček (Eds.). (2010). *Škola, pohyb a zdraví: výzkumné výsledky a projekty*. Brno: Masaryk University.

Canada's Physical Literacy Consensus Statement. (2015). Retrieved from https://sportforlife.ca/physical-literacy/consensus-statement/

Carroll, C., Patterson, M., Wod, S., Booth, A., Rick, J., & Balain, S. (2007). A conceptual framework for implementation fidelity. *Implemantation Science, 2*(1), 40–49.

Cazers, G., & Miller, G. (2000). The German contribution to American physical education: A historical perspective. *JOPERD, 71*(1), 44–48.

Čechovská, I., & Dobrý, L. (2010). Význam a místo pohybové gramotnosti v životě člověka. *TVSM, 76*(3), 2–5.

Čechovská, I., & Miler, T. (Eds.). (2019). *Didaktika plavání: Vybrané kapitoly* [Didactics of swimming: chosen chapters]. Prague: Karolinum.

Charalambous, C. Y., & Philippou, G. N. (2010). Teachers' concerns and efficacy beliefs about implementing a mathematics curriculum reform: Integrating two lines of inquiry. *Educational Studies in Mathematics, 75*(1), 1–21.

Charters, W. W. (1923). *Curriculum construction*. New York: Macmillan.

Cheng, Y. C. (1996). *The pursuit of school effectiveness: Theory, policy and research*. Hong Kong: The Hong Kong Institute of Educational Research, The Chinese University of Hong Kong.

Chisholm, L. (2005). The politics of curriculum review and revision in South Africa in regional context. *Compare: A Journal of Comparative and International Education, 35*(1), 79–100.

Christou, C., Eliophotou-Menon, M., & Philippou, G. (2004). Teachers' concerns regarding the adoption of a new mathematics curriculum: An application of CBAM. *Educational Studies in Mathematics, 57*(2), 157–176.

Connelly, F. M., He, M. F., & Phillion, J. A. (2008). *The SAGE handbook of curriculum and instruction.* Los Angeles: Sage Publications.

Cooper, T. (2017). Curriculum renewal: Barriers to successful curriculum change and suggestions for improvement. *Journal of Education and Training Studies, 5*(11), 115–128.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory.* Thousand Oaks, CA: Sage Publications, Inc.

Cowen, R. (2009). On history and on the creation of comparative education. In R. Cowen & A. Kazamias (Eds.), *International Handbook of Comparative Education* (pp. 7–10). Dordrecht: Springer.

Crooks, T. (2001). *The validity of formative assessments*. British Educational Research Association Annual Conference, University of Leeds. Retrieved from http://www.leeds.ac.uk/educol/documents/00001862.htm

Crum, B. (1986). Concerning the quality of the development of knowledge in sport pedagogy. *Journal of Teaching in Physical Education, 5*, 211–220.

Crum, B. (1992). Competing orientations for P.E. curriculum development: The trend towards a consensus in the Netherlands and an international comparison. In L. Williams, L. Almond, & A. Sparkes (Eds.), *Sport and hysical activity: Moving towards excellence* (pp. 85–93). London: Spon.

Crum, B. (1994). A critical review of competing physical education concepts. In J. Mester (Ed.), *Sport Science in Europe 1993. Current and future perspective* (pp. 516–533). Aachen: Meyer & Meyer.

CSI. (2017). *Výběrové zjišťování výsledků žáků na úrovni 5. a 9. ročníků základních škol ve školním roce 2016/2017* – Závěrečná zpráva. Prague: Czech School Inspectorate. Retrieved from https://www.csicr.cz/getattachment/17f8e265-b04f-4459-a106-3aecbf735ca0/Vyberove-zjistovani-vysledku-zaku-na-urovni-5-a-9-rocniku-ZS-zaverecna-zprava.pdf

Curriculum in beweging – Strategische Agenda SLO 2017–2020. Retrieved from http://downloads.slo.nl/Documenten/Curriculum-in-beweging-Strategische-Agenda-2017-2020.pdf

Curriculum.nu. (2019). *Leergebied Bewegen & Sport*. Retrieved from https://www.curriculum.nu/download/voorstellen-bewegen-sport/

Dane, A.V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: Are implementation effects out of control? *Clinical psychology review, 18*(1), 23–45.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The SAGE handbook of qualitative research.* Thousand Oaks, CA: SAGE Publications.

Dobrý, L. (1999). Moderní pedagogika, pedagogická kinantropologie a potřeba paradigmat. In L. Dobrý, J. Šafaříková, & Z. Marvanová (Eds.), *Pedagogická kinantropologie 1998* (pp. 9–14). Prague: Charles University.

Dollman, J., Norton, K., & Norton, L. (2005). Evidence for secular trends in children's physical activity behaviour. *British Journal of Sport Medicine, 39*(12), 892–897.

Dubs, R. (1998). *Qualitätsmanagement für Schulen*. St. Gallen: Universität in St. Gallen, Institut für Wirtschaftspädagogik.

Dubs, R. (2004). *Qualitätsmanagement in Schulen*. Bönen: Ketterer.

Dudley, D. (2018). Physical literacy: When the sum of the parts is greater than the whole. *Journal of Physical Education, Recreation & Dance, 89*(3), 7–8.

Dudley, D., Cairney, J., Wainwright, N., Kriellaars, D., & Mitchell, D. (2017). Critical considerations for physical literacy policy in public health, recreation, sport, and education agencies. *Quest, 69*(4), 1–17.

Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research, 18*, 237–256.

Dvořák, D. (2012). *Od osnov ke standardům: proměny kurikulární teorie a praxe*. Prague: Charles University.

Dvořák, D., Holec, J., & Dvořáková, M. (2018). *Kurikulum školního vzdělávání: zahraniční reformy v 21. století.* Prague: Charles University.

Dvořák, D., Starý, K., & Urbánek, P. (2015). Malá škola po pěti letech: proměny školy v době reformy. *Pedagogická orientace, 25*(1), 9–31.

Dvořáková, H. & Engelthalerová, Z. (2017). *Tělesná výchova na 1. stupni základní školy*. Prague: Karolinum.

Egger, K. (2005). Qualität kann nicht von oben nach unten delegiert werden, sondern muss als gemeinsames Anliegen definiert, implementiert und fortwährend evaluiert werden. In R. Naul & C. Richter (Eds.), *Qualitätsentwicklung im Schulsport* (pp. 135–155). 3. Europäisches Schulsportforum. Velen: Eads.

Egger, K., Kühnis, J. B., Nussbaum, P., & von Däniken, P. (2002). *Qualität des Sportunterrichts*. Bern: Schriftenreihe des Instituts für Sport und Sportwissenschaft der Universität Bern.

English version of FEP BE. (2007). Retrieved from file:///C:/Users/Vlcek/Downloads/IM_RVP_ZV_EN_final_rijen08%20(10).pdf

Ennis, C. D., & Chen, A. (1993). Domain specifications and content representativeness of the revised Value Orientation Inventory. *Research Quarterly for Exercise and Sport, 64*(4), 436–446.

Ennis, C. D., & Chen, A. (1995). Teachers' value orientations in urban and rural school settings. *Research Quarterly for Exercise and Sport, 66*(1), 41–50.

Eurydice Report on Physical Education and Sport at School in Europe. (2013). Retrieved from https://eacea.ec.europa.eu/national-policies/eurydice/content/physical-education-and-sport-school-europe_en

Feingold, R., S., & Fiorentino, L. (2005). United States of America, In U. Pühse & M. Gerber (Eds.), *International comparison of physical education* (pp. 699–713). Oxford: Mayer & Mayer.

Fend, H. (1998). *Qualität im Bildungswesen. Schulforschung zu Systembedingungen, Schulprofilen und Lahrerleistung*. Weinheim: Juventa.

Fend, H. (2008). *Schule gestalten. Systemsteuerung, Schulentwicklung und Unterrichtsqualität.* Wiesbaden: Verlag für Sozialwissenschaften.

Fialová, L. (2015). Pohybová gramotnost – analýza plnění standardů TV na 2. stupni ZŠ. In L. Fialová, L. Kašpar, & K. Králová (Eds.), *Aktualizované poznatky ke vzdělávací oblasti Člověk a zdraví* (pp. 53–60). Prague: Charles University.

Fialová, L. (2017). Evaluační standardy pro tělesnou výchovu. *Česká kinantropologie, 21*(1–2), 6–19.

Fialová, L., Flemr, L., Marádová, E., & Mužík, V. (2014). *Vzdělávací oblast Člověk a zdraví v současné škole*. Prague: Karolinum.

Flinders, D., & Thornton, S. (2013). *The curriculum studies reader*. New York: Routledge.

Framework Educational Programme for Basic Education. [FEP BE]. (2017). Prague: MEYS. Retrieved from http://www.msmt.cz/file/43792/

Frankfurter Arbeitsgruppe. (1982). *Offener Sportunterricht: Analysieren und Planen*. Reinbek: Rowohlt.

Frömel, K., & Bauman, A. (2006). Intenzita a objem pohybové aktivity 15–69leté populace České republiky. *Česká kinantropologie, 10*(1), 13–27.

Frömel, K., Novosad, J., & Svozil, Z. (1999). *Pohybová aktivita a sportovní zájmy mládeže*. Olomouc: Palacký University.

Funke, J. (1980). Körpererfahrung. *Sportpädagogik, 4*(4), 13–20.

Funke, J. (1983). *Sportunterricht als Körpererfahrung*. Reinbek: Rowohlt.

Gandal, M., & Vranek, J. (2001). Standards: Here today, here tomorrow. *Educational Leadership, 59*(1), 6–13.

Gehrmann, A., Hericks, U., & Lüders, M. (Eds.). (2010). *Bildungsstandards und Kompetenzmodelle. Beiträge zu einer aktuellen Diskussion über Schule, Lehrerbildung und Unterricht*. Bad Heilbrunn: Verlag Julius Klinkhardt.

Gerlach, E., Herrmann, C., Dania, A., Heim, Ch., Jidovtseff, B., Quitério, A., … Scheuer, C (2017). Basic motor competences. In C. Sheuer, A. Bund M. Holzweg (Eds.), *Changes in childhood and adolescence: Current challenges for physical education*. Keynotes, Invited Symposia and Selected Contribution of the 12th FIEP European Congress (pp. 81–90). Berlin: Logos Verlag.

Gerlach, E., Herrmann, C., Jekauc, D., & Wagner, M. O. (2017). Diagnostik motorischer Leistungsdispositionen. In U. Trautwein & M. Hasselhorn (Eds.), *Jahrbuch der pädagogisch-psychologischen Diagnostik, Tests & Trends, Band 15. Begabungen und Talente* (pp. 145–158). Göttingen: Hogrefe.

Gerring, J., & Thomas, C. W. (2011). Quantitative and qualitative: A question of comparability. In B. Badie, D. Berg-Schlosser & L. Morlino (Eds.), *International encyclopedia of political science* (pp. 2189–2196). London: Sage.

Geßmann, R. (2008). *Richtlinien und Lehrpläne für den Schulsport. Eine kommentierte Dokumentation 1945–2007* [Guidelines and curricula for physical education: A commentary documentation 1945 to 2007]. Köln: Strauß.

Glaser, B. G. (2004). Remodeling grounded theory. *Forum: Qualitative Social Research, 5*(2), Article 4.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Chicago: Aldine.

Glatthorn, A. A. (2004). *Developing a quality curriculum*. Long Grove: Waweland Press.

Gogoll, A. (2016). Handlungsfähigkeit im Sport – transversal und reflexiv. In V. Schürmann, J. Mittag, G. Stibbe, J.-U. Nieland, & J. Haut. *Bewegungskulturen im Wandel: Der Sport der Medialen Moderne – Gesellschaftstheoretische Verortungen* (pp. 323–336). Bielefeld: Transcript.

Greger, D. (2011). Dvacet let českého školství optikou teorií změny vzdělávání v post-socialistických zemích. *Orbis scholae, 5*(1), 9–22.

Greger, D., & Walterová, E. (2007). In pursuit of educational change: The transformation of education in the Czech Republic. *Orbis scholae, 1*(2), 11–44.

Grexa, J., & Strachová, M. (2011). *Dějiny sportu: přehled světových a českých dějin tělesné výchovy a sportu* [History of sport: an overview of Czech PE and Sport history]. Brno: Masaryk University.

Griffin, L. L., Mitchell, S. A., & Oslin, J. L. (1997). *Teaching sport concepts and skills: A tactical games approach*. Champaign, IL: Human Kinetics.

Gundem, B. B., Karseth, B., & Sivesind, K. (2003). Curriculum theory and research in Norway: Traditions, trends and challenges. In W. F. Pinar (Ed.), *International handbook of curriculum research* (pp. 517–534). London: Lawrence Erlbaum Associates.

Guttmann, A. (1992). *The Olympics: A history of the modern games.* Chicago: University of Illinois Press.

Ha, A. S., Wong, A. C., Sum, R. K., & Chan, D. W. (2008). Understanding teachers' will and capacity to accomplish physical education curriculum reform: The implications for teacher development. *Sport, Education and Society, 13*(1), 77–95.

Haag, H. (1989). Sportpädagogik. In H. Haag, B. Strauss, & S. Heinze (Eds.), *Theorie und Themenfelder der Sportwissenschaft: Orinetierungshilfen zur Konzipierung sport wissenschaftlicher Untersuchungen* (pp. 48–69). Schorndorf: Hofman.

Haag, H. (2005). Concerning the concept of sport pedagogy by help of the macro-mezo-micro paradigm. In F. Carreiro da Costa, M. Cloes & M. González Valeiro (Eds.), *The art and science of teaching in physical education and sport* (pp. 41–49). Lisboa: Faculdade de Motricidade Humana, Universidas de Technica de Lisboa.

Habrdlová, M., & Vlček, P. (2015). Srovnání kurikula tělesné výchovy pro primární vzdělávání v Irsku a České republice [Comparison of physical education primary curriculum in Ireland and the Czech Republic]. *Česká kinantropologie, 19*(4), 34–48.

Habrdlová, M., Lupač, M., & Vlček, P. (2017). Srovnání obsahu vybraných kurikulárních dokumentů tělesné výchovy pro primární vzdělávání v Irsku, Nizozemsku a České republice [Comparison of the PE content of the chosen primary curriculum documents in the Czech Republic, the Republic of Ireland and the Netherlands]. *Pedagogická orientace, 27*(3), 449–472.

Halbheer, U; Reusser, K (2008). Outputsteuerung, Accountability, Educational Governance. Einführung in Geschichte, Begrifflichkeiten und Funktionen von Bildungsstandards. *Beiträge zur Lehrerbildung, 26*(3), 253–266.

Halls, W. D. (1990). *Contemporary issues and trends*. Paris, Unesco: Jessica Kingsley Publishers.

Handal, B., & Herrington, A. (2003). Mathematics teachers' beliefs and curriculum reform. *Mathematics Education Research Journal, 15*(1), 59–69.

Harding, J. M., Kelly P. J., & Nicodemus, R. B. (1976). The study of curriculum change. *Studies in Science Education, 3*(1), 1–30.

Hardman, K. (2000). Comparative physical education and sport. In ICSSPE (Ed.), *Vademecum: Directory of Sport Science* (pp. 61–81). Berlin: ICSSPE.

Hardman, K. (2001). Comparative physical education and sport. *International Journal of Physical Education, 38*(3), 96–103.

Hardman, K. (2008). Physical education in schools: A global perspective. *Kinesiology, 40*(1), 5–28.

Hartig, J., & Klieme, E. (2006). Kompetenz und Kompetenzdiagnostik. In K. Schweizer (Eds.), *Leistung und Leistungsdiagnostik* (pp. 128–136). Heidelberg: Springer.

Havel, R. (2016). *Ověření navrhovaných standardů pro tělesnou výchovu ve školní praxi* [Verifying Propounded Physical Education Standards in School Practice]. Doctoral thesis. Prague: Charles University. Retrieved from https://dspace.cuni.cz/handle/20.500.11956/39721

Havel, R., Fialová, L., & Jasanská, K. (2018). Názory učitelů na standardy tělesné výchovy [Opinions of teachers on physical education standards]. *Česká kinantropologie, 22*(3–4), 24–36.

Havel, J., Janíková, M., Mužík, Vl. & Mužíková, L. (2016). *Analýza a perspektivy utváření pohybového režimu žáků na prvním stupni základní školy* [Analysis and prospects of shaping physical activity and nutrition programmes for pupils in primary schools]. Brno: Masaryk University.

Helmke, A. (2007). *Unterrichtsqualität: Erfassen, Bewerten, Verbessern*. Seelze: Kallmeyersche Verlagsbuchhandlung.

Hendl, J. (2016). *Kvalitativní výzkum: základní metody a aplikace*. Prague: Portál.

Hendl, J., & Vindušková, J. (2004). Standardy pro tělesnou výchovu na amerických školách. *Česká kinantropologie, 8*(2), 33–48.

Herrmann, C., & Gerlach, E. (2014). Motorische Basiskompetenzen in der Grundschule. Pädagogische Zielentscheidung und Aufgabenentwicklung. *Sportunterricht, 63*(11), 322–328.

Herrmann, C., Gerlach, E., & Seelig, H. (2015). Development and validation of a test instrument for the assessment of basic motor competences in primary school. *Measurement in Physical Education and Exercise Science, 19*(2), 80–90.

Herrmann, C., Gerlach, E., & Seelig, H. (2016). Motorische Basiskompetenzen in der Grundschule: Begründung, Erfassung und empirische Überprüfung eines Messinstruments. *Sportwissenschaft, 46*(2), 60–73.

Hladík, J. (2009). Paradigmatický dualismus ve výzkumu v multikulturní výchově. *Pedagogická orientace, 4*(19), 38–50.

Hodaň, B. (2006). *Sociokulturní kinantropologie I. Úvod do problematiky.* Brno: Masaryk University.

Holmes, B. (1981). *Comparative education: Some consideration of method*. London: Unwin Hyman.

Holmes, B. (1984). Paradigm shifts in comparative education. *Comparative Education Review, 28*(4), 584–604.

Hopmann, S., & Gundem, B. (Eds.). (1998). *Didaktik and/or curriculum: An international dialogue.* New York: Peter Lang.

Hopmann, S., & Riquarts, K. (Eds.). (1995). *Didaktik and/or curriculum*. Kiel: IPN.

Horlacher, R. (2018). The same but different: The German Lehrplan and curriculum. *Journal of Curriculum Studies, 50*(1), 1–16.

Howell, R., Howell, M. L., Toohey, D. P., & Toohey, M. D. (1979). *Methodology in comparative physical education and sport*. Champaign, Illinois: Stipes Publishing Co.

Hoyle, E. (1969). How does the Curriculum Change? *Journal of Curriculum Studies, 2*(1), 5–10.

IPLA (The International Physical Literacy Association). (2017). *Physical literacy*. Retrieved from https://www.physical-literacy.org.uk/

James, P., Leach. R., Kalamara, E., & Shayeghi, M. (2001). The worldwide obesity epidemic. *Obesity Research, 9*(4), 228–233.

Janík, T. (2008). *Metodologické problémy výzkumu didaktických znalostí obsahu* [Methodological problem of pedagogical conten knowledge research]. Brno: Paido.

Janík, T. (2011). Příběh české kurikulární reformy. In O. Kaščák & B. Pupala (Eds.), *Školy v prúde reforem* (pp. 49–83). Bratislava: Renesans.

Janík, T. (2013). Od reformy kurikula k produktivní kultuře vyučování a učení [From curricular reform towards productive culture of teaching and learning]. *Pedagogická orientace, 23*(5), 634–663.

Janík, T. (2017). From content to meaning: Semantics of teaching in the tradition of bildung-centred didactics. In J. Novotná & H. Moravová (Eds.), *Equity and diversity in elementary mathematics education* (pp. 31–41). Prague: Charles University, Faculty of Education.

Janík, T., Janko, T., Knecht, P., Kubiatko, M., Najvar, P., Pavlas, T., … Vlčková, K. (2010b). *Kurikulární reforma na gymnáziích: výsledky dotazníkového šetření* [Curricular reform at grammar schools: questionnaire survey]. Prague: VÚP.

Janík, T., Janko, T., Pešková, K., Knecht, P., & Spurná, M. (2018). Czech teachers' attitudes towards curriculum reform implementation. *Human Affairs – Postdisciplinary Humanities Social Sciences Quarterly, 28*(1), 54–70.

Janík, T., Knecht, P., Kubiatko, M., Pavlas, T., Slavík, J., Solnička, D., & Vlček. P. (2011a). *Kvalita školy a kurikula: od expertního šetření ke standardu kvality.* Prague: NIE.

Janík, T., Knecht, P., Najvar, P., Pavlas, T., Slavík, J., & Solnička, D. (2010a). *Kurikulární reforma na gymnáziích: v rozhovorech s koordinátory pilotních a partnrských škol.* Prague: VÚP.

Janík, T., Knecht, P., Najvar, P., Píšová, M., & Slavík, J. (2011b). Kurikulární reforma na gymnáziích: výzkumná zjištění a doporučení. *Pedagogická orientace, 21*(4), 375–415.

Janík, T., Maňák, J., & Knecht, P. (2009). *Cíle a obsahy školního vzdělávání a metodologie jejich utváření.* Brno: Paido.

Janík, T., Maňák, J., Knecht, P., & Němec, J. (2010). Proměny kurikula současné české školy: vize a realita. *Orbis scholae, 4*(3), 9–36.

Janík, T., Porubský, Š., Chrappán, M., & Kuszak, K. (Eds.). (2020). *Curriculum changes in Visegrád four: Three decades after…* Germany: Waxmann. Manuscript in preparation.

Janík, T., & Slavík, J. (2007). Vztah obor a vyučovací předmět jako metodologický problém. *Orbis scholae, 2*(1), 54–66.

Janík, T, Slavík, J., Mužík, V., Trna, J., Janko, T., Lokajíčková, V., … Zlatníček, P. (2013). *Kvalita (ve) vzdělávání: obsahově zaměřený přístup ke zkoumání a zlepšování výuky*. Brno: Masaryk University.

Janík, T., Slavík, J., Najvar, P., & Janíková, M. (2019). Shedding the content: semantics of teaching burdened by didactic formalisms. *Journal of Curriculum Studies, 51*(2), 185–201.

Janík, T., Vlček, P., & Mužík, V. (2016). Implementace kurikulární reformy v České republice: obecné problémy konkretizované pohledem na kurikulum tělesné výchovy [Implementig curricular reform in the Czech Republic: general issues in the light of Physical Education curriculum]. In Š. Porubský, Ch. Walhuter, B. Kosová, E. Walterová, T. Janík, V. Mužík, P. Vlček … A. Petrasová, *Premeny školského kurikula: slovenská a česká skúsenosť* (pp. 131–141). Banská Bystrica: Belianum.

Jewett, A. E., Bain, L. L., & Ennis, C. D. (1995). *Curriculum process in physical education*. Madison, Wis.: Brown & Benchmark.

Jin, A. (2013). Physical education curriculum reform in China: A perspective from physical education teachers. *Physical Education and Sport Pedagogy, 18*(1), 15–27.

Jirásek, I. (2005). *Filosofická kinantropologie: setkání filosofie, těla a pohybu*. Olomouc: Palacký University.

Johnson, R. B. (1998). Toward a theoretical model of evaluation utilization. *Evaluation and Program Planning, 21*(1), 93–110.

Jurkechová, M., Vlček, P., & Bartík, P. (2011). Development of school physical education in Slovakia and in the USA. *Acta Facultatis Educationis Physicae Universitatis Comenianae* (pp. 17–30). Bratislava: Komenský University.

Jůva, V. (2009). Pedagogika sportu. In J. Průcha (Ed.). *Pedagogická encyklopedie* (pp. 798–802). Prague: Portál.

Kádner, O. (1912). *Stručné dějiny paedagogiky a školství* [A short overview of history of education]. Prague: Dědictví Komenského.

Kádner, O. (1929). *Vývoj a dnešní soustava školství* [Development and current educational system]. Prague: Sfinx Bohumil Janda.

Kalman, M., & Vašíčková, J. (Eds.). (2013). *Zdraví a životní styl dětí a školáků*. Olomouc: Palacký University.

Kalman, M., Hamřík, Z., & Pavelka, J. (2009). *Podpora pohybové aktivity pro odbornou veřejnost*. Olomouc: ORE-institut.

Kaščák, O., & Pupala, B. (Eds.). (2011). *Škola – statický element v sociálnej dynamike*. Bratislava: Iura Edition.

Kaulitz, B. (2001a). Vergleichende Sportpädagogik. In H. Haag & A. Hummel (Eds.), *Handbuch Sport-pädagogik* (pp. 95–104). Schorndorf: Hofman.

Kaulitz, B. (2001b). Comarative physical education in German publications from mid 1999 until mid 2001. *International Journal of physical Education, 38*(3), 104–113.

Keeves, J. P. (Ed.). (1997). *Educational research, methodology and measurement: An international handbook*. London: Pergamon.

Keeves, J. P., & Adams, D. (1997). Comparative methodology in education. In J. P. Keeves (Ed.), *Educational research, methodology and measurement: An international handbook.* (pp. 31–40). London: Pergamon.

Kelly, L., & Melograno, V. (2004). *Developing the physical education curriculum: An achievement-based approach*. Champaign, IL: Human Kinetics.

Kirk, D. (1988). *Physical education and curriculum study: A critical introduction*. London: Croom Helm.

Kirk, D. (2013). Educational value and models-based practice in physical education. *Educational Philosophy and Theory, 45*(9), 973–986.

Klieme, E., Avenarius, H., Blum, W., Döbrich, P., Gruber H., Prenzel, M., … Vollmer, H. J. (2003). *Zur Entwicklung nationaler Bildungsstandards. Eine Expertise*. Bonn: BMBF.

Knecht, P. (2014). *Příležitosti k rozvíjení kompetence k řešení problémů v učebnicích a ve výuce zeměpisu*. Brno: MU.

Kössl, J., & Hubička, V. (1983). *Vývoj mezinárodního olympijského hnutí a jeho současné problémy*. Prague: Olympia.

Kössl, J., Krátký, F., & Marek, J. (1986). *Dějiny tělesné výchovy II. Od roku 1848 do současnosti* [History of PE II. Since 1848 till the present days]. Prague: Olympia.

Kössl, J., Štumbauer, J., & Waic, M. (1998). *Vybrané kapitoly z dějin tělesné kultury* [Chosen chapters in history of physical culture]. Prague: Karolinum.

Kougioumtzis, K. (2014). *The experienced physical education curriculum: A comparative study of primary and lower secondary school pupils in Sweden and South Africa*. Göteborg: University of Gothenburg.

Kovaříček, V., & Kovaříčková, I. (1989). *Vývoj školských soustav v českých zemích* [Development of the Czech educational system]. Olomouc: Palacký University.

Krátký, F. (1974). *Dějiny tělesné výchovy I. Od nejstarších dob do roku 1848* [History of PE I. Since the oldest times till 1848]. Prague: Olympia.

Krick, F. (2006). Manuskript für ein Themenheft über Qualiät im Schulsport – Bildungsstandards im Sportunterricht – Risiken und Chancen, Sportuntericht. Retrieved from http://www.uni-frankfurt.de/fb/fb05/ifs/sportpaedagogik/Mitarbeiter/Krick/2006_Krick_Bildungsstandards_im_SpU.pdf

Kridel, C. A. (2010). *Encyclopedia of curriculum studies*. Thousand Oaks, CA: SAGE Publications.

Krüger, A. (2012). Multiperspectivity as a basis of current German physical education. *Movement & Sport Sciences, 78*, 11–23.

Kudláček, M. (2006). American adopted physical education in the first half of the 20th century. *Acta Universitatis Palackianae Olomucensis. Gymnica, 36*(1), 23–28.

Kudlorz, P. (1989). Comparative physical education: An international scientific approach. *International Review of Education, 35*(1), 65–72.

Kulinna, P. H. (2008). Models for curriculum and pedagogy in elementary school physical education. *The Elementary School Journal, 108*(3), 219–227.

Künzli, R. (2010). Lehrpläne, Bildungsstandards und Kompetenzmodelle. Eine problematische Vermischung von Funktionen. *Beiträge zur Lehrerinnen – und Lehrerbildung, 28*(3), 440–452.

Kuřina, F. (2014). Kompetence a školní praxe. Rozpaky oborového didaktika nad kurikulární reformou. *Pedagogická orientace, 24*(3), 434–443.

Kurz, D. (1990). *Elemente des Schulsports* (1977). Schorndorf: Hofmann.

Kurz, D. (1993). *Leibes erziehung und Schulsport in der Bundesrepublik Deutschland: Epochen einer Fachdidaktik*. Bielefeld: Universetät Bielefeld.

Kurz, D. (2004). Von der Vielfalt sportlichen Sinns zu den pädagogischen Perspektiven im Schulsport. In P. Neumann & E. Balz (Eds.), *Mehrperspektivischer Sportunterricht. Orientierungen und Beispiele* (pp. 57–70). Schorndorf: Hofmann.

Kurz, D. (2005). Bildungsstandards für das Fach Sport – ein Problemaufriss. In A. Gogoll & A. Menze-Sonneck (Eds.), *Qualität im Schulsport* (pp. 65–72). Hamburg: Czwalina.

Landau, G. (1996). Critical theory in German sport pedagogy. In P. Schempp (Ed.), *Scientific development of sport pedagogy* (pp. 223–236). Münster: Waxmann.

Laporte, W. (1998). Physical education in the European Union in a harmonisation process. *ICHPER-SD*, 7–9.

Lawton, D., & Gordon, P. (1993). *Dictionary of education*. London: Hodder Stoughton.

Lednický, A., & Doležajová, L. (2011). Porovnanie všeobecnej pohybovej výkonnosti športujúcich dievčat s odstupom 25 rokov [A comparison of general physical activity of sport active women – 25 years interval]. In *Atletika 2011*. Bratislava: ICM AGENCY.

Liou, Y. H., Moolenaar, N. M., & Daly, A. J. (2016). Developing and assessing educator beliefs about the common core. *Educational assessment, evaluation and accountability, 28*(4), 377–404.

Liu, B. (2008). *Zeitgenössische deutsche und chinesische Sportpädagogik im Vergleich: Ausgewählte Beispiele Von der Deutschen Sporthochschule Köln zur Erlangung des akademischen Grades*. Köln: Institut für Pädagogik und Philosophie der Deutschen Sporthochschule. Retrieved from http://esport.dshs-koeln.de/75/1/Dissertation_Bo_Liu.pdf

Lounsbery, M. A., & McKenzie, T. L. (2015). Physically literate and physically educated: A rose by any other name? *Journal of Sport and Health Science, 4*(2), 139–144.

Lumpkin, A. (2004). *Introduction to physical education, exercise science, and sport studies*. New York: McGraw-Hill Humanities/Social Sciences/Languages.

Lupač, M. (2016). Obsahová analýza kurikulárních dokumentů tělesné výchovy v Nizozemsku z hlediska vybraných faktorů kvality projektovaného kurikula: komparace s RVP ZV [The content analysis of Dutch PE projected curricula from perspective of chosen curricula factors of quality: comparison with Czech PE designed curricula]. *Studia Sportiva, 10*(1), 15–32.

Luptáková, M. & Smreková, K. (2019). Školský systém na Slovensku a v Anglicku [School system in Slovakia and England]. *Telesná výchova & šport, 29*(3), 31–35.

Macdonald, D. (2003). Curriculum change and the postmodern world: is the school curriculum-reform movement an anachronism? *Journal of Curriculum Studies, 35*(2), 139–149.

Madarasová-Gecková, A., Dankulincová, Z., Sigmundová, D., & Kalman, M. (2016). *Mezinárodní zpráva o zdraví a životním stylu dětí a školáků*. [International Report on Health and Lifestyle of Children and Students]. Olomouc: Palacký University. Retrieved from http://docplayer.cz/29752747-Mezinarodni-zprava-o-zdravi-a-zivotnim-stylu-deti-a-skolaku.html

Maňák, J. (2006). Kompetence ve struktuře kurikula. In D. Greger & V. Ježková (Eds.), *Školní vzdělávání: zahraniční trendy a inspirace* (pp. 80–101). Prague: Karolinum.

Maňák, J., Janík, T., & Švec, V. (2008). *Kurikulum v současné škole* [Curriculum in contemporary school]. Brno: Paido.

Manzon, M. (2007). Comparing places. In M. Bray, B. Adamson, & M. Mason, *Comparative education research: Approaches and methods* (pp. 85–123). Hong Kong: Comparative education research centre, The University of Hong Kong.

Manzon, M. (2011). *Comparative education: The construction of a field*. Hong Kong: Springer.

Marsh, C., Day, Ch., Hannay, L., & McCutcheon, G. (1990). *Reconceptualizing school-based curriculum development*. London: The Falmer Press.

Masaryková, D. (2014). Revision of physical education curriculum in Slovakia – A political or professional issue? In P. Schickhofer & G. Buzgó (Eds.), *Sports, physical activity and health* (pp. 23–29). Bratislava: Komenský University in Bratislava.

Masaryková, D. (2015). *Súčasnosť a perspektívy telesnej výchovy na Slovensku a v zahraničí*. Trnava: Typi Universitatis Tyrnaviensis.

Massengale, J., & Swanson, R. (Eds.). (1997). *The history of exercise and sport science*. Champaign, IL: Human Kinetics.

McCarthy, T. M. (2009). Implementing curriculum change: A 'bottom-up' approach. In A. M. Stoke (Ed.), *JALT 2008 Conference Proceedings*. Tokyo: JALT.

McLennan, N., & Thompson, J. (2015). *Quality Physical Education, Guidelines for policymakers*. Paris: UNESCO.

Meuser, M., & Nagel, U. (2003). Das Experteninterview – Wissenssoziologische Voraussetzungen und methodische Durchführung. In B. Friebertshäuser, A. Langer, & A. Prengel (Eds.), *Handbuch Qualitative Forschungsmethoden in der Erziehungswissenschaft* (pp. 481–491). Weinheim, München: Juventa Verlag.

MEYS (2001). *White Paper, The national programme for the development of education in the Czech Republic*. Retrieved from http://www.msmt.cz/dokumenty/bila-kniha-narodni-program-rozvoje-vzdelavani-v-ceske-republice-formuje-vladni-strategii-v-oblasti-vzdelavani-strategie-odrazi-celospolecenske-zajmy-a-dava-konkretni-podnety-k-praci-skol?lang=1

Miller, J. L. (2006). Curriculum studies and transnational flows and mobilities: Feminist autobiographical perspectives. *Transnational Curriculum Inquiry, 3*(2), 32–50.

Mitáš, J., & Frömel, K. (2013). *Pohybová aktivita české dospělé populace v kontextu podmínek prostředí* [Physical aktivity of the Czech adult population in the setting context]. Olomouc: Palacký University.

Mooij, C., Berkel, M. van, Consten, A., Danes, H., Geleijnse, J., Graft, M. van der., … Tjalsma, W. (2011). *Basisdocument Bewegingsonderwijs voor het Basisonderwijs*. Zeist: Jan Luiting Fonds.

Morlino, L. (2018). *Comparison – A methodological introduction for the social sciences.* Opladen: Barbara Budrich Publishers.

Morris, M. W., Leung, K., Ames, D. & Lickel, B. (1999). Views from inside and outside: Integrating emic and etic insights about culture and justice judgment. *The Academy of Management Review, 24*(4), 781–796.

MŠMT (1995). *Standard základního vzdělávání* [Basic Education Standard]. Praha: Fortuna.

Murdock, J. (2008). Comparison of curricular breadth, depth, and recurrence and physics achievement of TIMSS population 3 countries. *International Journal of Science Education, 30*(9), 1135–1157.

Mužík, V. (1999). Gesundheitlich vorbeugende Körpererziehung – eine neue Richtung in der tschechischen Schule. In: J.C. Bussard & F. Roth (Eds.), *Which physical education for which school?* (pp.91–96). Berne: SVSS.

Mužík, V. (2010). Názory občanů České republiky na realizaci kurikula tělesné výchovy v základním vzdělávání. In V. Mužík & P. Vlček (Eds.), *Škola, pohyb a zdraví: výzkumné výsledky a projekty* (pp. 57–74). Brno: Masaryk University.

Mužík, V. (2014). Pohybová gramotnost – cíl školní tělesné výchovy. [Physical Literacy – the goal of PE]. In *Physical literacy*. Expert seminar. Senate of the Czech Republic.

Mužík, V. (2015). Pojetí tělesné výchovy v současném vzdělávání. In L. Fialová, L. Kašpar, & K. Králová (Eds.). *Aktualizované poznatky ke vzdělávací oblasti Člověk a zdraví* (pp. 30–36). Prague: Charles University.

Mužík, V. (2017). Pohybová gramotnost a perspektivy pohybového režimu dětí. In P. Fořterová-Matošková & J. Chrudimský (Eds.), *Fórum kinantropologie 2017: Vzdělávání v kinantropologie* (pp. 11–12). Prague: Charles University.

Mužík, V., & Hošková, L. (2010). Názory žáků základní školy na realizaci kurikula tělesné výchovy. In V. Mužík & P. Vlček (Eds.), *Škola, pohyb a zdraví: výzkumné výsledky a projekty* (pp. 75–92). Brno: Masaryk University.

Mužík, V., & Janík, T. (2003). Kvalita vyučování v tělesné výchově. In *Sborník ze semináře pedagogické kinantropologie 17.–19. října 2003 v Daňkovicích*. Prague: FSPS. Retrieved from http://www.ped.muni.cz/weduresearch/texty/muzikjanikkvalitavyucovaniok.pdf

Mužík, V., & Janík, T. (2007). Tělesná výchova z pohledu absolventa základní školy. In J. Maňák & T. Janík (Eds.), *Absolvent základní školy* (pp. 197–214). Brno: Masaryk University.

Mužík, V., & Janík, T. (2009). Der Sportunterricht aus der Sicht der Hauptschul-absolventen – projektiertes und realisiertes Curriculum im Vergleich. In E. Jeisy & W. Mengisen (Eds.), '*Möglichkeiten und Grenzen der Schulsportforschung*'. *VIII. Internationale Sommerakademie 2008. Eidg. Hochschule für Sport Magglingen* (pp. 205–222). Magglingen: BASPO.

Mužík, V., Jonášová, D., Nováček, V., Plecová, I., Šeráková, H., Švehlíková, B, … Vrbas, J. (2008). Výzkumné sondy do kurikula tělesné výchovy na základní škole. In V. Mužík; L. Dobrý, & V. Süss. (Eds.), *Tělesná výchova a sport mládeže v biologickém, psychologickém, sociálním a didaktickém kontextu* (pp. 80–93). Brno: Masaryk University.

Mužík, V., Jonášová, D., Nováček, V., Šeráková, H., Trávníček, M. Vlček, P., & Vrbas, J. (2011). Modelling of physical education and physical regimen in lower primary schools. In E. Řehulka (Ed.), *Health Literacy through Education* (pp. 271–280). Brno: Masaryk University.

Mužík, V., Kuchařová, A., & Vodáková, P. (2010). Pohybová aktivatá dětí v mladším školním věku. In V. Mužík & P. Vlček (Eds.), *Škola, pohyb a zdraví: výzkumné výsledky a projekty* (pp. 105–122). Brno: Masaryk University.

Mužík, V., Stojaníková, H., & Sedláčková, J. (2005). Physical education in Czech Republic. In U. Pühse & M. Gerber (Eds.), *International Comparison of Physical Education: Concepts, Problems, Prospects* (pp. 188–205). Oxford: Meyer & Meyer Sport.

Mužík, V., Šeráková, H., & Janošková, H. (2019). *Abeceda pohybové aktivity dětí*. Brno: Masaryk University.

Mužík, V., & Trávníček, M. (2006). Koncepce a realizace tělesné výchovy na české základní škole. *Pedagogická revue, 58*(4), 386–398.

Mužík, V., & Vlček, P. (Eds.). (2010). *Škola, pohyb a zdraví: výzkumné výsledky a projekty*. Brno: Masaryk University.

Mužík, V., & Vlček, P. (2016). Proměny tělovýchovných koncepcí a jejich vliv na realizaci obsahu vzdělávání v tělesné výchově [Conceptual Changes in Physical Education and Their Influence on the Realisation of Physical Education Content]. *Orbis scholae, 10*(2), 131–143.

Mužík, V., & Vlček, P. (2020). The development, current state and challenges of Czech PE and its didactics. In K. Kleiner & B. Högger (Eds.), *Sports didactics in Europe.* Waxmann: Münster. Manuscript in preparation.

Mužík, V., Vlček, P., & Vrbas, J. (2011). Co je skutečným cílem školní tělesné výchovy? In P. Matošková & P. Pravečková (Eds.), *Fórum pedagogické kinantropologie* (pp. 33–35). Prague: Charles University.

Mužíková, L., & Mužík, V. (2014). *Pohyb a výživa – šest priorit v pohybovém a výživovém režimu žáků na 1. stupni ZŠ*. Prague: NIE.

Mužíková, L., & Mužík, V. (2014). *Pyramida pohybu*. Prague: NÚV.

NASPE – National Association for Sport and Physical Education. (2004). *Moving into the future: National standards for physical education.* Reston, VA: Author.

Naul, R. (2003). Concepts of physical education in Europe. In K. Hardman (Ed.), *Physical education: Deconstruction and reconstruction – issues and directions* (pp. 35–52). Schorndorf: Hofmann.

Naul, R. (2011a). Conceptual diversity and future directions of physical education in the global context. *Japanese Journal of Sport Education Studies, 30*(2), 39–50.

Naul, R. (2011b). Ganztägiges Lernen mit Turnen, Spiel und Sport – historische Entwicklungslinien zwischen Schulen und Sportverein. In R. Naul (Ed.), *Bewegung, Spiel & Sport in der Ganztagsschule – Bilanz & Perspektiven* (pp. 30–50). Aachen: Meyer & Meyer.

Naul, R., & Brettschneider, W. D. (2005). Young peoples' lifestyles and sendetariness in Europe. *Acta Universitatis Carolinae, Kinantropologica, 41*(2), 25–34.

Naul, R., & Hardmann, K. (2002). *Sport and physical education in Germany*. London: Routledge.

Naul, R., Dreiskämper, D., & Hoffmann, D. (2014). Physical and health education in Germany. From school sports to local networks for healthy children. In M.– K. Chin & Ch. Edington (Eds.), *Sound communities physical education and health – global perspectives and best practice* (pp. 191–204). Urbana: Sagmore.

NCCA. (1999a). *Physical education primary school curriculum*. Retrieved from http://www.curriculumonline.ie/getmedia/ca8a385c-5455-42b6-9f1c-88390be91afc/PSEC05_Physical-Education_Curriculum.pdf

NCCA. (1999b). *Physical education teacher guideliness*. Retrieved from http://www.curriculumonline.ie/getmedia/2ca06265-2e75-4cc1-8174-661a877728d4/PE_Guidelines_english.pdf

NCCA. (2019). *Primary curriculum review and redevelopment: Information for schools*. Retrieved from https://www.ncca.ie/media/3963/pbm-english-final.pdf

Noah, H., & Eckstein, M. (1969). *Toward a science of comparative education*. London: Macmillan.

Kerndoelen Primair Onderwijs. (2006). Hague: Netherlands Institute for Curriculum Development. Retrieved from https://www.rijksoverheid.nl/documenten/rapporten/2006/04/28/kerndoelenboekje?fbclid=IwAR1mtbBi0e8Hr5JpVcpyB0vmNR9SYJnSl9A7_wYwgogBGz97W2P7pxCslLY

Noah, H., & Eckstein, M. (1969). *Towards a science of comparative education*. London: Macmilan.

Nováček, V., Mužík, V., & Kopřivová, J. (2001). *Vybrané kapitoly z teorie a didaktiky tělesné výchovy* [Chosen chapters from PE theory and didactics]. Brno: Masaryk University.

Novotný, F. (2006). *Stručný přehled dějin tělesné výchovy*. Ústí nad Labem: University of J. E. Purkyně.

Noyes, A., Wake, G., & Drake, P. (2013). Time for curriculum reform: The case of mathematics. *The Curriculum Journal, 24*(4), 511–528.

OECD/European Observatory on Health Systems and Policies. (2017). *Česká republika: zdravotní profil země 2017* [The Czech Republic: The health profile of the country 2017]. Retrieved from http://dx.doi.org/10.1787/9789264285125-cs

Ons Onderwijs 2032. (2016). Retrieved from https://www.rijksoverheid.nl/documenten/rapporten/2016/01/23/eindadvies-platform-onderwijs2032-ons-onderwijs2032

Park, M., & Sung, Y. K. (2013). Teachers' perceptions of the recent curriculum reforms and their implementation: What can we learn from the case of Korean elementary teachers? *Asia Pacific Journal of Education, 33*(1), 15–33.

Penney, D., Brooker, R., Hay, P., & Gillespie, L. (2008). Curriculum, pedagogy and assessment: three message systems of schooling and dimensions of quality physical education. *Sport, Education and Society, 14*(4), 421–442.

Perútka, J. (1973). *Pokrokové tradície telesnej výchovy v Československu* [Progress traditions of PE in Czechoslovakia]. Bratislava: STV.

Perútka, J., & Grexa, J. (1978). *Dejiny telesnej výchovy. II. diel* [History of PE II]. Bratislava: Univerzita Komenského.

Pešková, K., Spurná, M., & Knecht, P. (2019). Teachers' acceptance of curriculum reform in the Czech Republic: One decade later. *Center for Educational Policy Studies Journal, 9*(2), 73–97.

Pike, K. L. (1967). *Language in relation to a unified theory of the structures of human behavior*. Mouton: The Hague.

Píšová, M., Kostková, K., & Vlček, P. (2011). Kurikulární reforma na gymnáziích: případové studie. In T. Janík, P. Knecht, & S. Šebestová (Eds.), *Smíšený design v pedagogickém výzkumu*. Sborník příspěvků z 19. výroční konference České asociace pedagogického výzkumu (pp. 24–30). Brno: Masaryk University.

Píšová, M., Kostková, K., Janík, T., Doulík, P., Hajdušková, L., Knecht, P., … Vlček, P. (2011). *Kurikulární reforma na gymnáziích: případové studie tvorby kurikula*. VUP: Prague.

Pokorná, J., & Jansa, P. (2015). Vybrané poznatky z realizace školních vzdělávacích programů tělesné výchovy na základních školách. In L. Fialová, L. Kašpar, & K. Králová (Eds.), *Aktualizované poznatky ke vzdělávací oblasti Člověk a zdraví* (pp. 43–52). Prague: Charles University.

Polívka, P. (Ed.). (2016). *Metodické komentáře a úlohy ke Standardům pro základní vzdělávání – tělesná výchova.* Prague: NIE. Retrieved from https://clanky.rvp.cz/wp-content/upload/prilohy/21393/metodicke_komentare_a_ulohy_je_standardum_zv___telesna_vychova.pdf

Porubský, Š., & Pešková, K. (Eds.). (2018). Curriculum reform in the Czech Republic and Slovakia 10 years after: Evaluation and challenges for the current school [Special issue]. *Orbis scholae. 12*(1).

Porubský, Š., Trnka, M., Poliach, V., & Cachovanová, R. (2015). Curricular reform in Slovakia regarding the attitudes of basic school teachers. *Pedagogická orientace, 25*(6), 777–797.

Porubský, Š., Walhuter, Ch., Kosová, B., Walterová, E., Janík, T., Mužík, V., Vlček, P., … Petrasová, A. (2016). *Premeny školského kurikula: slovenská a česká skúsenosť*. Banská Bystrica: Belianum.

Posch, P. (1999). Qualitätsevaluation und Qualitätsentwicklung im Schulwesen. *Erziehung und Unterricht*, *5–6*, 326–337.

Posner, G. J. (1992). *Analyzing the curriculum*. New York: McGraw-Hill, Inc.

Priestley, M., & Philippou, S. (2018). Curriculum making as social practice: Complex webs of enactment. *Curriculum Journal, 29*(2), 151–158.

Prokop, J. (2009). Reformy školství a vzdělávání ve světě. In J. Průcha (Ed.), *Pedagogická encyklopedie* (pp. 564–569). Prague: Portál.

Průcha, J. (1996). *Pedagogická evaluace*. Brno: Masaryk University.

Průcha, J. (2002). *Moderní pedagogika*. Prague: Portál.

Průcha, J., Walterová, E., & Mareš, J. (2009). *Pedagogický slovník* [Dictionary of education]. Prague: Portál.

Pühse, U., & Gerber, M. (Eds.). (2005). *International comparison of physical education: Concepts, problems, prospects.* Oxford: Meyer & Meyer.

Rahmenvorgaben für den Schulsport in Nordrhein-Westfalen. (2014). Düsseldorf: Ministerium für Schule und Weiterbildung des Landes Nordrhein-Westfalen. Retrieved from https://www.schulentwicklung.nrw.de/lehrplaene/upload/klp_SI/HS/sp/Rahmenvorgaben_Schulsport_Endfassung.pdf

Reitmayer, L. (1972). *Dějiny školní tělesné výchovy v českých zemích* [History of PE in Czech lands]. Prague: SPN.

Richter, Ch. (2006). *Konzepte für den Schulsport in Europa: Bewegung, Sport und Gesundheit*. Aachen: Mayer & Mayer.

Richter, Ch. (2007). Concepts of Physical Ecucation in Europe: Movement, Sport and Health. *International Journal of Physical Education, 44*, 101–105.

Robinsohn, S. B. (1967). *Bildungsreform als Revision des Curriculums*. Berlin: Luchterhard.

Rossi, T., Tinning, R., McCuaig, L., Sirna, K., & Hunter, L. (2009). With the best of intentions: A critical discourse analysis of physical education curriculum materials. *Journal of Teaching in Physical Education, 28*(1), 75–89.

Roth, L. (1991). *Pädagogik – Handbuch für Studium und Praxis*. München: Ehrenwirth.

Rudduck, J. (1986). Curriculum change: management or meaning? *School Organisation, 6*(1), 107–114.

Rychtecký, A., & Fialová, L. (2004). *Didaktika školní tělesné výchovy* [Didactics of physical education]. Prague: Karolinum.

Rýdl, K. (2003). *Inovace školských systémů*. Prague: ISV.

Sandelowski, M., Voils, C. I., & Barroso, J. (2007). Comparability work and the management of difference in mixed research synthesis. *Social Science & Medicine, 64*(4), 317–331.

Schädler, J. (1999). *Qualitätssicherung und Organisationsentwicklung in Einrichtungen und Diensten für Menschen mit geistiger Behinderung*. Marburg: Lebenshilfe-Verlag.

Schmidt, W. H., Wang, H. A., & McKnight, C. C. (2005). Curriculum coherence: An examination of US mathematics and science content standards from an international perspective. *Journal of Curriculum Studies, 37*(5), 525–559.

Schmidt, W., & Prawat, R. (2006). Curriculum coherence and national control of education: Issue or non-issue? *Journal of Curriculum Studies, 38*(6), 641–658.

Seaman, J. A., & DePauw, K. D. (1982). *The new adapted physical education.* Palo Alto, CA: Mayfield Publishing Company.

Seebauer, R., Helus, Z., & Koliadis, E. (2002). *Kvalita cestou kvalifikace: 10 modulů k tematickým oblastem* '*Zvyšování kvality a zlepšování školního výkonu v aktuálních oblastech rozvoje školy*' *a* '*Zlepšování školního výkonu a hodnocení výkonu v definovaných oblastech*' *s vysvětlením často užívaných výrazů.* Brno: Paido.

SHAPE America. (2013). *Grade-level outcomes for K-12 physical education.* Reston, VA: Author. Retrieved from https://www.shapeamerica.org/standards/pe/upload/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf

Sherrill, C. (1993). *Adapted physical activity, recreation and sport: Crossdisciplinary and lifespan*. Dubuque, IA: Brown & Benchmark.

Siedentop, D. (1994). *Sport education: Quality PE through positive sport experiences*. Champaign, IL: Human Kinetics.

Siedentop, D. (2006). *Introduction to physical education, fitness, and sport*. New York: McGraw-Hill.

Singule, F. (1991). *Americká pragmatická pedagogika: John Dewey a jeho američtí následovníci*. Prague: SPN.

Skalková, J. (2007). Kategorie cíle, kompetence, jejich vzájemný vztah a význam pro obsah vzdělávání v kontextu současnosti. *Orbis scholae, 2*(1), 7–20.

Slavík, J. (1999). *Hodnocení v současné škole*. Prague: Portál.

Slavík, J., Janík, T., Najvar, P., & Knecht, P. (2017). *Transdisciplinární didaktika: o učitelském sdílení znalostí a zvyšování kvality výuky napříč obory*. Brno: MUNI Press.

Sport Australia. (2019). *The Australian physical literacy framework*. Retrieved from https://www.sportaus.gov.au/physical_literacy#psychological

Sport for Life Society. (2019). *Physical literacy*. Retrieved from https://sportforlife.ca/physical-literacy/

Spurná, M., & Knecht, P. (2018). Use of curriculum documents by Czech lower secondary school teachers: and application of Johnson's typology of utilization. *Studia Pedagogica, 23*(1), 29–54.

Squires, D. (2012). Curriculum alignment research suggests that alignment can improve student achievement. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 85*(4), 129–135.

Stabback, P. (2016). What makes a quality curriculum? Current and critical issues. In *Curriculum and Learning In-Progress Reflection No.2* (pp. 8–12). Geneva: UNESCO IBE.

Stake, R. E. (1967). The countenance of educational evaluation. *Teachers College Record, 68*, 523–540.

Stake, R. E. (1972). Verschiedene Aspekte pädagogischer Evaluation. In Ch. Wulf (Ed.), *Evaluation. Beschreibung und Bewertung von Unterricht, Curricula und Schulversuchen* (pp. 92–112). München: R. Piper & Co. Verlag.

Štekr, V. (1999). *Historie školní tělesné výchovy* [History of school PE]. Olomouc: Palacký University.

Štěrbová, G., & Vlček, P. (2015). A brief history of development of physical education in the Czech lands. In N., Živanović, P., Pavlović, B., Antala, & K. Pantelić-Babić (Eds.), *History of physical education in Europe* (pp. 58–71). Leposavic: University of Pristina.

Stibbe, G., & Aschebrock, H. (2007). *Lehrpläne Sport: Grundzüge der sportdidaktischen Lehrplanforschung* [Curricula of sports: Basics of research in sport didactics of curricula]. Baltmansweiler: Schneider.

Stillwell, J., L., & Willgoose, C., E. (2006). *The physical education curriculum*. Long Grove, IL: Waveland Press.

Stodden, D. F., Goodway, J. D., & Langendorfer, S. J. (2008). A developmental perspective on the role of motor skill competence in physical activity: An emergent relationship. *Quest, 60,* 290–306.

Straková, J. (2013). Jak dál s kurikulární reformou. *Pedagogická orientace, 23*(5), 734–743.

Straková, J., Tomášek, V., & Palečková, J. (1996). *Třetí mezinárodní výzkum matematického a přírodovědného vzdělávání. Souhrnné výsledky žáků 8. ročníku*. Prague: NIE.

Štumbauer, J. (2017). Vznik a vývoj školní tělesné výchovy a vzdělávání učitelů tělesné výchovy v českých zemích do roku 1945. *Česká kinantropologie, 21*(4), 9–30.

Štumbauer, J. (2019). Historie tělesné výchovy a sportu v Československu v letech 1945–1956. Od omezené demokracie k tuhému Stalinismu [History of physical education and sports in the Czechoslovakia from 1945 to 1956. From the limited democracy to hard Stalinism]. *Česká kinantropologie, 23*(1–2), 43–61.

Švaříček, R., Šeďová, K., Janík, T., Kaščák, O., Miková, M., Nedbálková, K., … Zounek, J. (2007). *Kvalitativní výzkum v pedagogických vědách.* Prague: Portál.

NEP – National Educational Programme. (2017). Retrieved from http://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/

Terhart, E. (2000). Qualität und Qualitätssicherung im Schulsystem. Hintergründe – Konzepte – Probleme. *Zeitschrift für Pädagogik, 46*(6), 809–829.

TESE. (2006). *Thesarus for educational systems*. Retrieved from https://www.lu.lv/materiali/biblioteka/es/pilnieteksti/izglitiba/TESE%20-%20Thesaurus%20for%20Education%20Systems%20in%20Europe.pdf

The International Physical Literacy Association – IPLA. (2017*). Physical literacy definition*. Retrieved from https://www.physical-literacy.org.uk/

Thijs, A., & Van den Akker, J. (Eds.). (2009). *Curriculum in development*. Enschede: SLO.

Töpfer, C. (2017). *Sportbezogene Gesundheitskompetenz. Kompetenzmodellierung und Testentwicklung für den Sportunterricht*. Erlangen: OPUS FAU. Retrieved from https://opus4.kobv.de/opus4-fau/frontdoor/index/index/docId/9052

Trávníček, M. (2008). Realizace školní tělesné výchovy pohledem učitelů 1. stupně základní školy. [Implementation of physical education from a primary school teachar's point of view]. In *Škola a zdraví pro 21. století* (pp. 47–48). Brno: Masaryk University.

TULE inhouden & activiteiten. [TULE content and activities]. (2019). Retrieved from http://tule.slo.nl/index.html

Tůmová, A. (2012). Effects of age and length of professional experience on teachers' attitudes to curriculum reform. *Central European Journal of Public Policy, 6*(2), 84–99.

Tupý, J. (2018a). *Tvorba kurikulárních dokumentů v České republice*. Brno: Munipress.

Tupý, J. (2018b). *Podkladová studie – člověk a zdraví.* Prague: NIE. Retrieved from http://www.nuv.cz/file/3505/

Tupý, J., Fialová, L., Hotový, A., Kopáčková, J., Mužík, V., & Vlček, P. (2015). *Standardy pro základní vzdělávání – tělesná výchova (Zdravotní tělesná výchova)* [Standards for basic education: Physical Education (Remedial physical education)]. Prague: NIE. Retrieved from https://digifolio.rvp.cz/artefact/file/download.php?file=67504&view=9832

Tupý, J., Mužík, V., Miklánková, L., Mužíková, L., Havel, J., & Janíková, M. (2015). *Pokusné ověřování účinnosti programu zaměřeného na změny vpohybovém a výživovém režimu žáků základních škol: výsledky ověřování edukačního programu Pohyb avýživa na 1. stupni ZŠ*. Prague: NIE.

Van den Akker, J. (2003). Curriculum perspectives: An introduction. In J. Van den Akker, W. Kuiper, & U. Hameyer (Eds.), *Curriculum landscapes and trends* (pp. 1–10). Dordrecht: Kluwer Academic Publishers.

Van Driel, J. H., Beijaard, D., & Verloop, N. (2001). Professional development and reform in science education: The role of teachers' practical knowledge. *Journal of Research in Science Teaching, 38*(2), 137–158.

Vanderlinde, R., & van Braak, J. (2011). A new ICT curriculum for primary education in Flanders: Defining and predicting teachers' perceptions of innovation attributes. *Educational Technology & Society, 14*(2), 124–135.

Váňová, M. (1998). *Teoretické a metodologické otázky srovnávací pedagogiky*. Prague: Faculty of Eucation, Charles University.

Vašíčková, J. (2016). *Pohybová gramotnost v České republice* [Physical literacy in the Czech Republic]. Olomouc: Palacký University.

Vašíčková J., & Frömel, K. (2009). Pohybově aktivní životní styl adolescentů České republiky: východiska pro kurikula tělesné výchovy. *Česká kinantropologie, 13*(4), 70–76.

Veselý, A. (2011). Veřejněpolitický a 'klasický' sociálněvědní výzkum: podobnosti a odlišnosti. In M. Nekola, H. Geissler, & M. Mouralová (Eds.), *Současné metodologické otázky veřejné politiky* (pp. 12–63). Prague: Karolinum.

Vlček, P. (2009). Komparativní kinantropologie [Comparative Physical Education and Sport]. *Česká kinantropologie, 13*(1), 82–95.

Vlček, P. (2011a). A comparison of physical education (PE) development in the Czech Republic, Germany, and the USA – A historical perspective. *Acta Universitatis Palackianae Olomucensis. Gymnica, 41*(1), 51–59.

Vlček, P. (2011b). Pohledy na kurikulum tělesné výchovy aneb co je vlastně cílem současné tělesné výchovy? In M. Píšová, K. Kostková, K., T. Janík, P. Doulík, L. Hajdušková, P. Knecht… P. Vlček. *Kurikulární reforma na gymnáziích – případové studie tvorby kurikula* (pp. 175–199). Prague: VÚP.

Vlček, P. (2011c). Kurikulum tělesné výchovy v ČR, SRN A USA. [The curricula of physical education in CR, SRN and USA]. *Česká kinantropologie, 15*(1), 90–101.

Vlček, P. (2015). Srovnávací výzkum v pedagogice – některé úvahy o metodologii problémového přístupu [Comparative education research: Some considerations about the problem approach methodology]. *Pedagogická orientace, 25*(3), 394–412.

Vlček, P. (2016). Comparative physical education – some methodological considerations from social science perspective. In M. Zvonař & Z. Sajdlová. *The 10th international Conference on Kinanthropology* '*Sport and Quality of Life*' (pp. 13–22). Brno: Masaryk University.

Vlček, P., & Janík, T. (2010). *Školské reformy a tvorba kurikula tělesné výchovy v České republice, Spolkové republice Německo a Spojených státech amerických* [School reform and PE curriculum design in the Czech Republic, Germana and the USA]. Brno: Paido.

Vlček, P., Kouřilová, I., & Šeráková, H. (2018). Evaluační kritéria a výstupové standardy tělesné výchovy ve Španělsku – vybrané kvality projektovaného kurikula. *Česká kinantropologie, 22*(3–4), 37–52.

Vlček, P., & Masaryková, D. (2014). A comparison of the recent physical education curriculum development in the Czech Republic and Slovakia. *International Journal of Physical Education*, *51*(2), 30–38.

Vlček, P., & Mužík, V. (2012). Soulad mezi projektovaným a realizovaným kurikulem jako faktor kvality vzdělávání v tělesné výchově [Congruence between projected and realidsed curriculum as a factor of quality in PE]. *Česká kinantropologie, 16*(1), 31–45.

Vlček, P., Resnik Planinc, T., Svobodová, H., & Witzel Clausen, S. (2016). *Integrating physical education and geography – case study of the Czech Republic, Slovenia and Denmark.* Brno: Masaryk University.

Vlček, P., Svobodová, H., & Resnik Planinc, T. (2019). Integrating physical education and geography in basic education in the Czech Republic and the Republic of Slovenia. *Compare: A Journal of Comparative and International Education, 49*(6), 868–887.

Vrbas, J. (2010). *Zdravotně orientovaná zdatnost dětí mladšího školního věku* [Health related fitness of children attending the primary school]. Analysis of selected indicators. Analýza vybraných ukazatelů. Brno: Masaryk University.

Vrbas, J., & Vlček, P. (2017). Selected results of initial measurement using MOBAK-3, a test battery of basic motor competencies – Comparison of the Czech Republic and Switzerland. In A. Bund & C. Scheuer (Eds.), *Changes in Childhood and Adolescence: Current Challenges for Physical Education* (pp. 36–37). Proceedings of the 12th FIEP EUROPEAN CONGRESS. Berlín: Logos Verlag Berlin.

Wallace, S. (Ed.). (2015). *A dictionary of education*. Oxford: University Press.

Walterová, E. (1994). *Kurikulum: proměny a trendy v mezinárodní perspektivě*. Brno: Masaryk University.

Walterová, E. (2006). *Srovnávací pedagogika: vývoj a proměny v globálním kontextu*. [Comparative education: development and changes in the global context]. Prague: Charles University.

Walterová, E., Černý, K., Greger, D., & Chvál, M. (2010). *Školství – věc (ne)veřejná: názory veřejnosti na školu a vzdělání*. Prague: Karolinum.

Weinert, F. E. (2001). Vergleichende Leistungsmessungen in Schulen – eine umstrittene Selbstverständlichkeit. In F. E. Weinert (Eds.), *Leistungsmessungen in Schulen* (pp. 17–31). Weinheim: Beltz.

Whitehead, M. E. (Ed.). (2010). *Physical literacy throughout the lifecourse*. London: Routledge.

Wilson, S. M., Shulman, L. S., & Richert, A. (1987). 150 different ways of knowing: Representations of knowledge in teaching. In J. Calderhead (Ed.), *Exploring teachers' thinking* (pp. 104–124). Sussex, England: Holt, Rinehart & Winston.

Wyse, D., Hayward, L., & Pandya, J., Z. (2016). *The Sage handbook of curriculum, pedagogy and assessment.* Los Angeles: Sage Reference.

Yin, R. K. (2009). *Case study research. Design and methods*. Thousand Oaks: Sage Publications.

Zeigler, E. (2005). *History and status of American physical education and educational sport*. Victoria, BC: Trafford.

Zhu, X., Ennis, C. D., & Chen, A. (2011). Implementation challenges for a constructivist physical education curriculum. *Physical Education and Sport Pedagogy, 16*(1), 83–99.

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About the author

Assist. Prof. Dr. Petr Vlček is an academic at the Department of Physical Education and Health Education, Faculty of Education, Masaryk University in Brno, Czech Republic. His research and academic work focus on preschool, primary and lower secondary PE. His academic and research experience covers especially PE curriculum research. He is an author or co-author of several scientific texts chapters and monographs.

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In 2017, he was awarded with FIEP Europe Thulin Price for contributions to the development of physical education in national level and in European level.

This monograph reviews the PE curriculum in the Czech Republic. It presents research into the quality of the Czech PE curriculum and makes recommendations regarding its redesign. It targets the scientific community and experts in the field and seeks to enrich international research on the PE curriculum and update the knowledge base of curriculum study. The text should be of general value and of particular relevance to any future change of the PE curriculum in the Czech Republic.

The first section of the monograph focuses on curriculum theory; the term 'curriculum' is defined and its structure described, some basic terminology regarding curriculum change is explained, some aspects of a quality curriculum are discussed, and the various concepts that can underpin a PE curriculum are identified.

The history of PE in the Czech Republic sets the scene for the research section of the monograph, which describes predominantly the author's PE curriculum research over the last decade. In the following chapters the current PE curriculum in the Czech Republic is reviewed based on research findings and recommendations made regarding the revision of the PE curriculum in the Czech Republic. Finally, the dichotomies that characterize research in this area are discussed.

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