

# KEY COMPETENCES – 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION



**etf**  
SHARING EXPERTISE  
IN TRAINING



**THE EUROPEAN TRAINING FOUNDATION (ETF)  
HELPS TRANSITION AND DEVELOPING COUNTRIES TO  
HARNESS THE POTENTIAL OF THEIR HUMAN  
RESOURCES THROUGH THE REFORM OF EDUCATION,  
TRAINING AND LABOUR MARKET SYSTEMS IN THE  
CONTEXT OF THE EU'S EXTERNAL RELATIONS POLICY.**

**HOW TO CONTACT US**

Further information on our activities, calls for tender and job opportunities can be found on our web site: [www.etf.europa.eu](http://www.etf.europa.eu)

For any additional information please contact:

External Communication Unit  
European Training Foundation  
Villa Gualino  
Viale Settimio Severo 65  
I – 10133 Torino  
**T** +39 011 630 2222  
**F** +39 011 630 2200  
**E** [info@etf.europa.eu](mailto:info@etf.europa.eu)

## KEY COMPETENCES – 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION



**Institute for Social Research, Zagreb  
Centre for Educational Research and Development**

*The contents of this publication are the sole responsibility of the authors and do not necessarily reflect the views of the European Union.*

*Prepared by: Boris Jokić (editor), Branislava Baranović, Petar Bezinović, Danijela Dolenc, Vlatka Domović, Boris Jokić, Iris Marušić, Tea Pavin Ivanec, Damir Rister, Zrinka Ristić Dedić.*

*ETF project: Key competences for lifelong learning, 2006 - 2007*

© Reproduction is authorised provided the source is acknowledged.

The views expressed in this publication are those of the authors and do not necessarily reflect those of the ETF or the European Union.

# CONTENTS

|   |           |
|---|-----------|
| <b>1. INTRODUCTION</b>  | <b>7</b>  |
| <b>2. EUROPEAN FRAMEWORK OF KEY COMPETENCES</b>   | <b>11</b> |
| 2.1 Background  | 11        |
| 2.2 Competence framework  | 11        |
| <b>3. THE LEARNING TO LEARN COMPETENCE</b>  | <b>15</b> |
| 3.1 Framing the Learning to Learn (LTL) competence  | 15        |
| 3.2 Defining the LTL competence in elementary education for the purpose of assessment   | 17        |
| 3.2.1 Multiple perspectives   | 17        |
| 3.2.2 Type of measurement   | 17        |
| 3.2.3 Triangulation   | 18        |
| 3.2.4 Level of the education system   | 18        |
| 3.2.5. Level of the school  | 18        |
| 3.2.6 Level of the pupil  | 18        |
| 3.2.7 Level of the teacher  | 22        |
| <b>4. THE ENTREPRENEURSHIP COMPETENCE</b>   | <b>25</b> |
| 4.1 Framing the Entrepreneurship competence   | 25        |
| 4.2 Defining the Entrepreneurship competence in elementary education for the purpose of assessment  | 26        |
| <b>5. AN OUTLINE OF THE CROATIAN ELEMENTARY EDUCATION SYSTEM</b>  | <b>31</b> |
| 5.1 General information   | 31        |
| 5.2 The curriculum  | 32        |
| 5.3 The assessment of pupils  | 32        |
| 5.4 Existing research and policies relating to key competences in the Croatian education context  | 33        |
| 5.5 An overview of the teacher training system for Croatian elementary school teachers  | 34        |
| 5.5.1 Pre-service teacher training  | 34        |
| 5.5.2 In-service teacher training   | 35        |
| 5.5.3 An appraisal of elementary school teachers' professional competences  | 36        |
| <b>6. AN ANALYSIS OF THE CROATIAN TEACHING PLAN AND PROGRAMME FOR ELEMENTARY EDUCATION (TPPE) WITH REGARD TO LEARNING TO LEARN AND ENTREPRENEURSHIP</b> | <b>37</b> |
| 6.1 The status of the LTL competence in the TPPE  | 38        |
| 6.1.1 Introduction  | 38        |
| 6.1.2 Implementation of the LTL competence in the Croatian language curriculum  | 39        |
| 6.1.3 Implementation of the LTL competence in the maths curriculum  | 39        |
| 6.1.4 Implementation of the LTL competence in the foreign language curriculum   | 40        |
| 6.1.5 Conclusion  | 40        |

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

|  |  |           |
|--|--|-----------|
| <b>6.2</b>   | The status of the Entrepreneurship competence in the TPPE  | 41        |
| 6.2.1  | Introduction   | 41        |
| 6.2.2  | Implementation of the Entrepreneurship competence in the nature and society curriculum   | 42        |
| 6.2.3  | Implementation of the Entrepreneurship competence in the technical culture curriculum  | 42        |
| 6.2.4  | Implementation of the Entrepreneurship competence in the geography curriculum  | 42        |
| 6.2.5  | Conclusion   | 43        |
| <b>6.3</b>   | General conclusions  | 43        |
| <b>7. RESEARCH METHODOLOGY</b>   |  | <b>45</b> |
| <b>7.1</b>   | The study sample   | 45        |
| 7.1.1  | 8 <sup>th</sup> grade pupils   | 46        |
| 7.1.2  | 4 <sup>th</sup> grade pupils   | 46        |
| 7.1.3  | Teachers   | 46        |
| <b>7.2</b>   | Research instruments   | 47        |
| <b>7.3</b>   | Procedure  | 48        |
| <b>8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION</b>              |  | <b>51</b> |
| <b>8.1</b>   | How do teachers and pupils perceive the status and role of learning and education in Croatia? What does learning mean to pupils? What types of conceptualisations of learning do Croatian pupils hold? | 51        |
| 8.1.1  | The perceived role of education and learning in Croatian society   | 51        |
| 8.1.2  | Pupils' attitudes towards learning   | 52        |
| 8.1.3  | Pupils' conceptions of learning  | 53        |
| 8.1.4  | Conclusion   | 54        |
| <b>8.2</b>   | What motivates pupils for learning? How do Croatian pupils learn?  | 54        |
| 8.2.1  | The motivation to learn  | 55        |
| 8.2.2  | Learning strategies  | 57        |
| 8.2.3  | Conclusion   | 61        |
| <b>8.3</b>   | What are the elements of the support for the development of the pupils' LTL competence?  | 62        |
| 8.3.1  | Teaching practices as a basis for the development of the LTL competence  | 62        |
| 8.3.2  | Pupil assessment   | 65        |
| 8.3.3  | Pupil-teacher relationship regarding learning  | 66        |
| 8.3.4  | Parental support   | 66        |
| 8.3.5  | Peer support   | 67        |
| <b>8.4</b>   | Teacher attitudes towards the introduction of the LTL competence in Croatian primary schools   | 68        |
| <b>9. INVESTIGATING THE ENTREPRENEURSHIP COMPETENCE IN CROATIAN ELEMENTARY EDUCATION</b> |  | <b>73</b> |
| <b>9.1</b>   | Teachers' and pupils' assessment of entrepreneurial characteristics and pupil behaviour  | 73        |
| 9.1.1  | Openness to novelty and change   | 73        |
| 9.1.2  | Goal-setting and self-monitoring of activities   | 74        |
| 9.1.3  | Pupils' readiness for teamwork and networking  | 74        |
| 9.1.4  | Pupils' future job preferences and entrepreneurial knowledge   | 75        |
| 9.1.5  | Pupil preferences for challenging tasks  | 75        |
| 9.1.6  | Pupils' knowledge in relation to the Entrepreneurship competence   | 76        |

## CONTENTS

|  |  |           |
|--|--|-----------|
| <b>9.2</b>                                       | <b>School support for the development of the Entrepreneurship competence</b>   | <b>76</b> |
| 9.2.1  | Entrepreneurial experiences in school  | 76        |
| 9.2.2  | Teacher support for entrepreneurial activities   | 78        |
| 9.2.3  | School environment   | 79        |
| <b>9.3</b>                                       | <b>Teacher attitudes towards the introduction of the Entrepreneurship competence in Croatian primary schools</b>     | <b>80</b> |
| 9.3.1  | Teachers' opinions on how the entrepreneurship competence might be introduced into Croatian compulsory education     | 80        |
| 9.3.2  | Teachers' perceptions of barriers to the inclusion of the entrepreneurship competence in Croatian elementary schools | 82        |
| <b>9.4</b>                                       | <b>Analysis of the interviews with head teachers</b>   | <b>83</b> |
| <b>10. CONCLUSIONS AND RECOMMENDATIONS</b>       |  | <b>85</b> |
| 10.1   | Conclusions  | 85        |
| 10.2   | Recommendations  | 91        |
| <b>ANNEX: THE SCHOOLS SELECTED IN THE SAMPLE</b> |  | <b>95</b> |



# 1. INTRODUCTION

One of the major developments in recent European education policy has been the introduction of key competences. Based on a perceived need for an education characterised by plasticity and suited to the ever-changing demands of a knowledge-based society and a vibrant labour market, the European Union has decided to develop a *framework comprising eight domains of key competences* that are considered necessary for all members of a knowledge-based society and essential for lifelong learning. These competences were established as a basic prerequisite for personal fulfilment, active citizenship and employment in a knowledge-based society. Many of these competences are *generic* or *transversal* in their nature and, as such, are subject-independent and based on *cross-curricular objectives*. The present research aims to introduce, in the first instance, the concept of two key competences in Croatian elementary education: learning to learn and entrepreneurship. This introduction is substantial for two reasons: firstly, it is the first exploration and research-based advocacy project regarding the Key Competences framework in Croatia and, secondly, it is the first investigation of concepts behind learning to learn and entrepreneurship at the level of elementary education in Croatia.

Every child, before coming to school, already possesses implicit notions of learning and entrepreneurial characteristics. Such notions and character traits will have developed over the years spent in the family home, as well as within the wider personal and social context. In the educational context, however, such development often assumes a different form. Here, this development occurs in an organised and structured form, often shaped by teaching. Formal education should thus serve to form, ameliorate and further develop the core concepts housed within the competences of interest. This, in turn, nurtures student potential for success through pupils' preparation for lifelong learning. Should the educational process fail to serve pupil development in this manner, students themselves will pay the personal and social price of the resulting disadvantage. This argument places the emphasis and responsibility for such development not only on pupils, but more significantly on teachers and the educational system. As such, teachers are highly dependent on access to the best available knowledge about key competences, as well as the manners in which to best apply this knowledge to their everyday teaching practice. It is for these reasons, among others, that we strongly believe that the Key Competence framework represents a worthy and valid platform for considering an educational system and advocating for educational change.

A general overview of the results of the present research effort indicates that there currently exists a positive anxiety regarding the state of education in Croatia. Both pupils and teachers estimate that formal education, and the key competences of learning to learn and entrepreneurship in particular, will become even more important in the near future. The large majority of research participants responded favourably to the introduction of the Learning to Learn and Entrepreneurship competences into Croatian elementary education. This positive view should not come as a surprise if one considers that a consensus on the value of education and knowledge in knowledge-based economies already exists in mainstream thought. However, the results also appear to suggest a partially failing system in which there is a lack of systematic and productive communication between important stakeholders in the educational process and in which teachers appear to be generally critical of pupils' current levels of knowledge, skills and beliefs. Another critical finding was the perceived deficiency, in pre-service and in-service teacher education, in training for how to best support the various elements behind the key competences in the classroom.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

These claims, at times contradictory, point to an intriguing and challenging context in which the Key Competences are being explored.

The aims of the present project are introduced, in the first instance, through the title of the project itself: "Assessing and Promoting 'Learning to Learn' And 'Entrepreneurship' in Croatian Elementary Education". Indeed, the concepts imbedded within this title immediately suggest the general purposes of the study: empirical measurement, research based advocacy, and an exploration of the key competences for lifelong learning within the delimiting context of Croatian elementary education. In this introduction, let us briefly describe the ideas behind these concepts and the rationale for why such an investigation is relevant in the current Croatian context.

Firstly, measurement and research based advocacy are closely related concepts, together illustrating the path from the collection of data and the generation of evidence-based conclusions towards the formulation of educational recommendations, which in turn influence policy decisions. The strength of the collected evidence will serve to illustrate the current state of affairs in the Croatian context and, in turn, serve as a tool for advocating change. Secondly, the concepts of "Learning to Learn" and "Entrepreneurship" are two of the eight competences for lifelong learning, as defined by European Commission. For the purposes of the present research, the notion of competence-based education represented a suitable platform from which to promote an alternative form of education than that which is currently present in the Croatian elementary education system. This system itself represents the delimiting educational context. As such, the entirety of the project has been developed in order to fit the purposes and needs of this system specifically. Together, measurement, advocacy, key competences and Croatian elementary education are not only terms which will be present throughout this report, but are constructs essential for a complete understanding of both our motivation to conduct this project as well as the decisions made in designing the project.

In order to address these aims, an empirical research has been conducted in 25 elementary schools in Croatia. The research was done through the application of questionnaires on 688 teachers, 1050 8<sup>th</sup> grade and 535 4<sup>th</sup> grade pupils. In addition, semi structured interviews with head teachers were organised. The research sought to include multiple perspectives on the same issues and a wide range of schools with varying backgrounds, as well as to examine the issues of interest as complex and multileveled. Specifically, the research was conducted in a manner that allowed for the perspectives of teachers, pupils and head teachers to be simultaneously considered in relation to the issues of interest. In addition, the current teaching plans and programmes, as well as the system of teacher pre and in-service training, were analysed.

In order to describe the logical rationale behind the project it is important to understand that an assumption was made that elements of both the learning to learn and entrepreneurship competences are in some form present and supported in present Croatian compulsory education. Therefore, the first step was to assess the present level of the development of two competences. Secondly, we aimed to assess the present educational and societal support for the development of the knowledge, skills and beliefs behind these competences. The logic behind this was that empirical data would best illustrate the specific needs of the present educational situation, and would therefore serve as an adequate platform from which a discussion of the broader issues regarding the Key Competences approach could be formulated. Paradoxically, although some elements of the competences of interest are currently present in Croatian compulsory education, the Key Competences framework represents a completely novel approach within the Croatian educational system. An analysis of Croatian compulsory education documents indicated that these documents fail to fully employ relevant theoretical conceptualisations and empirical findings regarding the development of key competences within their policies. Further, recent educational research has suggested that both pupils and teachers express

a wish for greater support for and emphasis on the development of meta-learning skills and techniques, creativity and innovation, all of which are, arguably, inherently embedded within the two aforementioned competences. For these reasons, we have included an assessment of teachers' views and perspectives on the introduction of the key competences of interest into Croatian elementary education, including an examination of the potential facilitators and obstacles to achieving such an introduction.

At the outset of the project, we generated a set of general principles that served to guide our work throughout the development and implementation of the research study. These principles were as follows:

- The project should address real and relevant educational issues in the context of Croatian elementary education. The collected evidence and the suggested recommendations should, in turn, have a positive influence on current educational practice.
- The research should serve as an advocacy tool for change within current educational policy. This change should be in line with the Key Competences (KC) framework.
- The research should take into account the complexity and particularity of the Croatian educational and societal context.
- Special attention should be devoted to presenting the empirical research findings in a straightforward and understandable manner, so that it might be accessed by a wider audience.

In order to apply these general principles, the research team made the following assumptions and decisions prior to embarking on the empirical research phases of the project.

### **Focus on compulsory education**

It might be argued that compulsory education represents one of the most critical stages in the educational cycle. This holds true not only for individuals, but also for the societal system as a whole. Within its scope, compulsory education includes the widest possible array of pupils, regardless of their abilities, characteristics, social status, religion or ethnic origin. It is for this reason that applying the KC framework at the level of compulsory education becomes so extremely important, in that it enables an educational system to arrive closer to achieving the humanistic educational goal of providing all pupils, regardless of ability, history or background, with equal access to consistent levels of education.

### **Developmental perspective**

Compulsory education in Croatia, which is offered to students from the ages of 6 to 15 years, involves pupils at various developmental levels. Therefore, the research needed to adopt a developmental perspective inherent in the concept of lifelong learning. This implies a dynamism within the system, in which the 'Learning to Learn' and 'Entrepreneurship' competences will be examined as ever-changing and developing concepts throughout compulsory education and where such competences can be acquired, strengthened, but also destroyed or weakened, as pupils progress along their educational path.

### **Educational influence**

The previous argument suggests the assumption that both competences can be influenced by systematic instruction within institutionalised education. Therefore, an exploration of the development of and support for these key competences in Croatian elementary education cannot be detached from the institutionalised context. In other words, competences must be examined as they are influenced within the realm of formal education.

### **Pupil at the centre**

Finally, the examination and promotion of these key competences within compulsory education in Croatia further aimed to place the pupil at the centre of the educational endeavour, thus shifting from a paradigm of 'pupil as object' to one of 'pupil as subject'.

For the research team, the aforementioned arguments suggested that Croatian compulsory education represented fertile ground for the investigation of the 'Learning to Learn' and 'Entrepreneurship' competences, as well as for their subsequent promotion and eventual introduction into the system itself. Indeed, this work represents a first attempt at applying the KC framework to the Croatian educational agenda. As such, the investigation into these two competences within the current context might be envisaged as a platform for the introduction of the concept of key competences for lifelong learning in general.

With these principles in mind, the research team next developed a number of aims the research needed to address. Briefly, the core aims driving the present project were:

1. To assess the present level of development of the aforementioned competences amongst pupils in Croatian elementary education.
2. To assess the present level of support provided regarding the development of the aforementioned competences in Croatian elementary education.
3. To assess the specific needs of teachers, pupils, and other educational stakeholders in Croatian elementary education regarding the aforementioned competences
4. To introduce and promote the 'Learning to Learn' and 'Entrepreneurship' competences in compulsory education in Croatia through research-based advocacy.
5. To advocate for the adoption of the Key Competences framework in the Croatian educational system.

The research project was formulated in order to achieve the above-mentioned aims. However, as a final report of the empirical investigation phase of the project, the present paper will address the first three aims specifically. As such, the paper will take on the following structure: this introduction is immediately followed by a brief overview of the Key Competences framework in Chapter Two, followed by a more in-depth examination of the competences of interest and the manner in which they have been conceptualised in the present research in the third and fourth chapters. The fifth chapter is devoted to a description of the Croatian educational context and an analysis of the current state of teacher training in Croatia. This will be followed by an analysis of the new curricula (HNOS) in relation to the Learning to Learn and Entrepreneurship competences in Chapter Six. Chapter Seven provides an outline of the methodology of the present project, while Chapters Eight and Nine present the research findings regarding the two aforementioned competences. These latter two chapters are both structured in the following manner:

1. The present level of the development of each competence in Croatian elementary schools is examined.
2. The present level of support for the development of each competence is discussed.
3. Views on the possible introduction of each competence into the Croatian elementary education are presented.

Finally, Chapter Ten will provide readers with conclusions and practical recommendations.

## 2. EUROPEAN FRAMEWORK OF KEY COMPETENCES

### 2.1 BACKGROUND

One of the major shifts occurring in European education policy over the last decade has been the introduction of key competences as the focus of all educational endeavours. The strategic goals set by the Lisbon European Council in March 2000 envisaged the need for more flexible education, suited to the demands of a knowledge-based society and a dynamic labour market. Recognizing this need, the Lisbon European Council called upon the Member States, the Council and the Commission to develop a European framework of the “new basic skills” to be provided through lifelong learning.

The European Council subsequently adopted a detailed work programme, entitled **Education and Training 2010**, in February 2002, proposing the elaboration of the following basic skills: literacy and numeracy (foundation skills), basic competences in mathematics, science and technology, ICT and use of technology, learning to learn, social skills, entrepreneurship and general culture.

A working group on key competences was established by the Commission in order to provide a detailed elaboration of the proposed concepts. The main objectives of the working group were to identify and define these new skills as well as how these skills might be better integrated into curricula, maintained and continuously learned throughout life. In February 2002, the working group introduced a **framework for eight key competences**, providing a description of corresponding knowledge, skills and attitudes related to these domains. The 2004 joint interim report of the European Council and the Commission called for the introduction of common European references and principles into national educational policies in order to support the adoption of commonly agreed-upon objectives. One such reference was suggested for the key competences that all pupils needed to acquire in order to successfully master the various learning demands presented throughout one’s life course.

The report of the working group on key competences “*Key competences for lifelong learning: A European reference framework*” was issued in November 2004, offering a more detailed elaboration of the proposed key competence framework. In 2005, a Recommendation of the European Parliament and of the Council was issued, presenting a European reference tool for key competences. In September 2006, a political agreement concerning the competence framework was reached between the Commission and the European Parliament.

### 2.2 COMPETENCE FRAMEWORK

Taking into account the challenges of a knowledge-based economy and international developments in the field, the working group defined a *framework comprising eight domains of key competences* that are considered necessary for all members of a knowledge-based society. These competences were established as a basic prerequisite for personal fulfilment, active citizenship and employment in a knowledge-based society. Many of these competences are defined as *generic* or *transversal* competences and, as

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

such, are subject-independent and based on *cross-curricular objectives*. They relate most closely to the management of one's own learning and social and interpersonal relations and communication, and reflect a general shift of emphasis from teaching to learning. Furthermore, this framework for competences should be seen from the *perspective of lifelong learning*. This means that the competences acquired by the end of compulsory schooling should be continuously developed, upgraded and maintained throughout life. The framework for key competences should be integrated into the full range of education and training activities throughout lifelong learning, in a way that is appropriate for specific national contexts.

The following definition of key competence is offered by the relevant EC documents: *Key competences represent a transferable, multifunctional package of knowledge, skills and attitudes that all individuals need for personal fulfilment and development, inclusion and employment. These should have been developed by the end of compulsory schooling or training, and should act as a foundation for further learning as part of lifelong learning* (EC: Key competences for lifelong learning: A European reference framework, 2004).

An overview of the eight key competences comprising European Competence framework is given in Table 1 on the next page:

**Table 1: The eight key competences of the European Key Competence framework**

| Key competence  | Definition of the key competence   |
|---|--|
| Communication in the mother tongue                                    | Communication is the ability to express and interpret thoughts, feelings and facts in both oral and written form (listening, speaking, reading and writing), and to interact linguistically in an appropriate way in the full range of societal and cultural contexts — education and training, work, home and leisure.  |
| Communication in a foreign language                                   | Communication in foreign languages broadly shares the main skill dimensions of communication in the mother tongue: it is based on the ability to understand, express and interpret thoughts, feelings and facts in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal contexts — work, home, leisure, education and training — according to one's wants or needs. Communication in foreign languages also calls for skills such as mediation and intercultural understanding. The degree of proficiency will vary between the four dimensions, between the different languages and according to the individual's linguistic environment and heritage. |
| Mathematical literacy and basic competences in science and technology | Mathematical literacy is the ability to use addition, subtraction, multiplication, division and ratios in mental and written computation to solve a range of problems in everyday situations. The emphasis is on process rather than output, on activity rather than knowledge. Scientific literacy refers to the ability and willingness to use the body of knowledge and methodology employed to explain the natural world. Competence in technology is viewed as the understanding and application of that knowledge and methodology in order to modify the natural environment in response to perceived human wants or needs.  |
| Digital competence  | Digital competence involves the confident and critical use of electronic media for work, leisure and communication. These competences are related to logical and critical thinking, to high-level information management skills, and to well developed communication skills. At the most basic level, ICT skills comprise the use of multi-media technology to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in networks via the Internet.  |

## 2. EUROPEAN FRAMEWORK OF KEY COMPETENCES

| Key competence                      | Definition of the key competence   |
|-------------------------------------|--|
| Learning to learn                   | 'Learning-to-learn' comprises the disposition and ability to organise and regulate one's own learning, both individually and in groups. It includes the ability to manage one's time effectively, to solve problems, to acquire, process, evaluate and assimilate new knowledge, and to apply new knowledge and skills in a variety of contexts — at home, at work, in education and in training. In more general terms, learning-to-learn contributes strongly to managing one's own career path. |
| Interpersonal and civic competences | Interpersonal competences comprise all forms of behaviour that must be mastered in order for an individual to be able to participate in an efficient and constructive way in social life, and to resolve conflict where necessary. Interpersonal skills are necessary for effective interaction on a one-to-one basis or in groups, and are employed in both the public and private domains.   |
| Entrepreneurship                    | Entrepreneurship has an active and a passive component: it comprises both the propensity to induce changes oneself and the ability to welcome, support and adapt to innovation brought about by external factors. Entrepreneurship involves taking responsibility for one's actions, positive or negative, developing a strategic vision, setting objectives and meeting them, and being motivated to succeed.   |
| Cultural expression                 | 'Cultural expression' comprises an appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media, including music, corporal expression, literature and plastic arts.  |

As mentioned previously, the present investigation chose to focus on an examination of the status of two of the eight key competences in Croatian elementary education: Learning to Learn and Entrepreneurship. Although the present project might be envisaged as two separate research endeavours conducted on a single sample of research participants, there do exist arguments to support the notion of a single project with two components. The differing nature of the two competences of interest, a notion corroborated in the KC framework, supports the separation of this investigation into two parts. Further, while the concept of Learning to Learn is both well-founded and highly-researched at the level of elementary education, the concepts of the Entrepreneurship competence have thus far been researched mostly in the realms of secondary and higher education. However, the arguments for the consideration of the present project as a single whole, regardless of the differing conceptual bases of the two competences, are equally strong in that both competences are cross curricular in nature. Further, both competences have been formulated under various common core behavioural and cognitive concepts (namely self regulation, motivation, volition, etc.). However, the strongest argument for considering the investigation of these two competences as a single project lies in the general aim of the project itself: that of introducing the concept of key competences into the Croatian educational context. For this reason, the research group anticipated that the impact of advocacy efforts resulting from our investigation would be more robust if both competences were considered. The following two sections outline the conceptual frameworks developed for the current investigation of both competences in turn.



### 3. THE LEARNING TO LEARN COMPETENCE

*“Since we cannot know what knowledge will be most needed in the future, it is senseless to try to teach it in advance. Instead, we should try to turn out people who love learning so much and learn so well that they will be able to learn whatever needs to be learned.”*

*John Holt<sup>1</sup>*

#### 3.1 FRAMING THE LEARNING TO LEARN (LTL) COMPETENCE

If pupils, while attaining ever increasing levels of specific content knowledge within various subjects, can acquire a more generic or generalised capacity to learn many different kinds of knowledge, they will be better served by their educational system. The significance of this ability for ‘learning to learn’ is regarded as one of the key tools for survival in the 21<sup>st</sup> century by many researchers, educationalists and politicians today. Indeed, one might argue that the Learning to Learn competence epitomises the essence of lifelong learning in that certain forms of knowledge and skills become rapidly outdated in today’s age, and thus need to be abandoned and replaced by new knowledge and skills at later stages of one’s life, education, or career. Those individuals who do not possess competency in learning will face educational, social and economic exclusion that will, in turn, create multiple personal and social problems. Therefore, in any society, it seems of vital importance to provide the basic knowledge, skills and beliefs necessary for achieving learning competency to the widest possible population.

While the value and importance of both learning and learning to learn competence appears immediately evident, thus precluding the need for any specific scientific explanation, it becomes a more challenging task to define and differentiate these terms. Key competences are defined in a manner that incorporates a set of aptitudes as well as a complex system of beliefs and values. Within the Key Competences framework, some of the basic elements of the operational definition of LTL are:

- A disposition and ability to organise and regulate one’s own learning
- The ability to manage own time effectively
- The ability to solve problems
- The ability to evaluate and assimilate new knowledge
- The ability to apply knowledge and skills in variety of contexts
- The ability to manage one’s own career path

This operational definition also includes the knowledge of and ability to identify one’s preferred learning methods, a sense of self-evaluation, and an awareness of possible educational choices and their consequences at both the personal and educational level. Further, the definition of this competence incorporates the skills of managing one’s learning and career path, as well as the ability to concentrate, to reflect critically on learning ability, and to communicate as a part of the learning process. Finally, but certainly not least importantly, this definition incorporates a set of attitudes towards learning which include a willingness to change, a willingness and readiness to excel, self motivation,

---

<sup>1</sup> Both the rationale for and importance of the LTL competence in present day education appears to be embedded even in these words of John Holt, one of formalised education’s largest opponents.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

confidence in one's capacity to succeed, a positive appreciation of learning as a life enriching activity and adaptability and flexibility.

This considerable list of knowledge, attitudes, skills, and aptitudes suggests that this competence is highly complex and multi-faceted. However, although the concepts of learning and learning to learn are both well-researched concepts, there exists serious terminological overlap amongst many of the competences' core concepts. Specifically, the learning to learn competence is often discussed synonymously with such terms as metacognition, self regulated learning, problem solving, and critical thinking. Although careful consideration of these concepts would surely indicate significant theoretical and empirical differences between them, it is important, for the purposes of the present research, to distinguish LTL with a separate identity, as defined in the European Key Competences for Lifelong Learning framework (European Commission, 2005). Specifically, the notion of holism and a lifelong perspective are, in the opinion of the primary investigators in the present research, critical characteristics unique to the aforementioned definition of the LTL competence. Furthermore, as part of a policy document of the European Union, this definition is broad in its scope and outreach, which further points to the significance of this framework. Succinctly stated, we envisage a definition of competence Learning to Learn as a broader concept than all of the aforementioned terms in its holistic and overarching nature.

While adequately describing and defining the concepts of learning and learning to learn is certainly broader than the scope of the present report, let us just briefly touch upon these intriguing topics. One common definition of learning is the process of gaining understanding that leads to the modification of attitudes and behaviours through the acquisition of knowledge, skills and values, through study and experience. However, a more encompassing response (and perhaps, for the purposes of the present project, a more applicable one) is Etienne Wenger's (1998) suggestion that learning, situated everywhere, is a human activity as natural to us as breathing or eating. As such, we are condemned to learning. Furthermore, due to the present state of rapid societal change, learning is no longer an exercise in repeating what is already known, but more so a process of creating something new. As Saljo (2006) states: 'It is not really important what you have in your 'brain', but how you relate, approach and use this knowledge'. The intrinsic nature of learning within everyday living, as proposed by Wenger, further suggests that we are learners throughout our lifespan, replacing the paradigm of childhood and adolescence as the 'times for learning'. It was previously mentioned that human beings learn, in various manners, quantities and qualities, prior to entering formal education. As such, learning is not exclusive to classrooms, with all pupils arriving at school having experienced informal learning from birth. In schools, it is the element of study and formal learning that is novel to the new pupil.

These considerations lead us to an examination of the core issues regarding the assessment of competency in LTL. Some of them are present in the following set of questions:

- Is it possible for students to become more competent in learning to learn, and thus become independent learners?
- Under what circumstances and by what methods are teachers able to develop students competence to learn and consequently to 'learn to learn'?
- How can we know that these methods work?

Although many of these questions remain unresolved, it is our belief that they can be answered. It is clearly evident that LTL is both a complex concept and a complex competence, making it highly difficult to incorporate and adequately research all facets of this competence. As such, for the purposes of the present research, it became necessary to carefully develop a conceptual framework for LTL that could be effectively used to

assess and promote the LTL competence within the Croatian context. This framework is described in detail in the following section.

## 3.2 DEFINING THE LTL COMPETENCE IN ELEMENTARY EDUCATION FOR THE PURPOSE OF ASSESSMENT

A starting point of our conceptualization of the competence Learning to Learn were the definitions provided in the '*Key competences for Lifelong learning – a European reference framework*' (European Commission, 2005) and '*The definition and selection of key competences*' (OECD, 2003) documents. The research team further consulted other relevant scientific projects regarding this topic, of which the following made the most significant contributions:

- *Learning How to Learn: In Classrooms, Schools and Networks* (James, McCormick, & Marshall, 2001-2005)
- *The L2 factor - Learning-to-learn at School: a Key to Life-Long Learning* (Hautamakki, 2002)
- *About Learning: Report of the Learning Working Group* (Hargreaves et al., 2003)

Finally, a wide variety of the scientific literature on specific topics was consulted in order to develop research instruments.

Prior to finalizing the conceptual framework employed in the present research, the research team agreed upon a number of important principles from which this conceptualisation of the LTL competence was derived. These principles are described in brief in the following paragraphs.<sup>2</sup>

### 3.2.1 Multiple perspectives

Institutionalised learning is a concept of applicability and interest in multiple contexts and for various stakeholders. As such, it was decided to investigate the LTL competence through multiple perspectives. Because the majority of all teaching-learning interactions occur between the dual system of teachers and pupils, the perspectives of these individuals were placed at the centre of our sphere of investigation. However, due to the complexity of the learning and competences concepts, the research team also attempted to investigate various other ecological influences relevant to this field, including peer and parental support. Furthermore, specific attention was given to schools as unique entities within the educational context. Finally, a wider analysis of curricula and the educational system itself was taken into account in an attempt to achieve as complete a picture as possible.

### 3.2.2 Type of measurement

In the present project, measurement was carried out through the use of questionnaires, which incorporated pupils', and teachers' self reports, attitude scales, and estimations of the other important educational stakeholders. As such, our terms of reference did not include *in vivo* measurement of the LTL competence amongst Croatian pupils, nor did it include observation of teaching practices. In this regard, the present research effort is limited only to the scope of results able to be provided by questionnaire and interview data. Indeed, for a more descriptive and multi-faceted picture of the state of this competence in Croatian elementary education, it might have been beneficiary to include these latter elements as well.

---

<sup>2</sup> These principles were also applied to our conceptualisation of the Entrepreneurship competence.

### **3.2.3 Triangulation**

In the present project, important emphasis has been placed on the process of triangulation, where data gathered from various participants was compared and contrasted in order to better understand the phenomena of interest. Triangulation, as used in social research and research based advocacy, is an analytical device in which a single research problem is observed from different perspectives in order to gain a more complete picture of the problem itself. In this research, the research team aimed to collect the views and reflections of both pupils and teachers regarding the same issues.

In order to further explain the conceptual framework for the LTL competence in particular, it is also necessary to consider the various levels at which our project was targeted. As previously mentioned, our research included analyses at the levels of the educational system, schools, teachers and pupils. For analysis at each of these levels, a specific framework has been developed.

### **3.2.4 Level of the education system**

Research undertaken at the level of the educational system consisted of an analysis of the current curriculum, including subject-specific curricula, in relation to the LTL competence. This was done in accordance with operational definitions of the competence itself. Here, the aim was to identify the scope and nature of elements of the LTL competence in the present curricula. Additionally, an analysis of other relevant policy documents in relation to LTL was conducted. Special attention was given to the analysis of teachers' in-service and pre-service professional development curricula. Additional emphasis was similarly given to the analysis of the capacity of institutions responsible for teacher education to apply and implement elements of the LTL competence in their curricula.

### **3.2.5. Level of the school**

Schools, as an organisational unit, have a distinguished set of characteristics that can systematically affect the development of and support available for the LTL competence. While various sampling techniques are responsible for the neutralisation of systematic differences amongst schools, it was also the intention of the research team to identify specific elements of the school climate and culture that might influence both teacher and pupil performance in relation to the LTL competence. As such, special attention was given to an exploration of the school management and school ethos. Data for this aspect of our examination arose, in the majority of cases, through interviews with head teachers and teacher questionnaires.

### **3.2.6 Level of the pupil**

At the level of the pupil, our conceptualisation of LTL can be framed under four main themes, outlined in Table 2 as four sets of questions to be addressed, along with the conceptual bases employed to investigate these questions. The concepts housed within each theme, and the manner in which they were addressed in the research questionnaires, will be described in detail in the following paragraphs.

**Table 2: Conceptual themes underlying the LTL competence at the pupil level**

| Questions/Themes   | Concepts employed   |
|--|---|
| <b>Theme 1</b><br>What are the conceptions of learning for the pupils?<br>What does learning mean to them?<br>What is their opinion on the importance and role of learning in Croatian society? What makes a successful learner? | <ul style="list-style-type: none"> <li>● Perception and value of learning</li> <li>● Conceptions of learning</li> <li>● Image of a successful learner</li> <li>● Croatian society as a learning context</li> </ul>            |
| <b>Theme 2</b><br>How do Croatian pupils learn?<br>What motivates pupils for their learning?   | <ul style="list-style-type: none"> <li>● Learning strategies</li> <li>● Motivation to learn</li> <li>● Strategies for regulation of motivation, learning behaviour and learning context</li> <li>● Learning habits</li> </ul> |
| <b>Theme 3</b><br>How do pupils perceive a support for learning provided by their teachers?  | <ul style="list-style-type: none"> <li>● Teachers' support for learning in teaching and assessment</li> </ul>   |
| <b>Theme 4</b><br>What kind of support for learning do pupils get in their homes and from their peer groups?   | <ul style="list-style-type: none"> <li>● Peers' support for learning</li> <li>● Parental support for learning</li> </ul>  |

### Theme 1

#### *Perception and value of learning and the Croatian society as a learning context*

In order to adequately determine the role of learning in pupils' lives, it was important to assess their attitudes towards learning itself. This was achieved through a set of questions which probed pupils' estimates on the following dimensions: importance of learning for future life, usefulness of learning for present life, level of difficulty, level of interest and level of enjoyment. In addition, a set of items was developed in order to investigate pupils' perceptions of the role education and learning plays in present-day Croatian society. This set of items allowed for a preliminary examination into the connection between pupils' perception of wider societal and educational context and their levels of motivation for and devotion to learning.

#### *Conceptions of learning*

This concept was adapted from the work of Marton and Saljo (1976) and the ongoing work of Entwistle (1995), who have all attempted to develop taxonomy for the conceptions of learning. In general, the concept of learning has been divided into two streams: *Learning as reproducing* and *Learning as transforming*. The former conceptualisation views learning as an accumulation of knowledge, or the memorisation and collection of knowledge and skills that can be used in later life. The latter formulation deals with learning as a means of discovering abstract meanings, as a tool for the successful interpretation of reality and as an agent for personal change. Generally, these conceptions of transformative learning are more advanced and appear at later stages of cognitive development. Arguably, the development of LTL competence strives towards the conception of learning as a transformative, as opposed to a reproductive, process.

#### *Image of successful learner*

The rationale behind the inclusion of this concept was the need to investigate pupils' perceptions concerning what constituted a successful learner. The emphasis here was on the learner in the context of formal education. Learner characteristics were derived from the operational definition of the LTL competence, as defined in the Key Competences framework.

## Theme 2

### *Learning strategies*

At the core of the LTL competence is an emphasis on the development of the skills and characteristics of a self-regulated learner. According to Pintrich's (2004) conceptual framework, self-regulated learning is defined as an active, constructive process. The first step in this process is the ability to set goals for learning, followed by the learners' attempts to monitor, regulate and control their cognition, motivation and behaviour while learning, guided by their goals and the contextual features of their environment (Wolters, Pintrich & Karabenick, 2003). In order to assess the degree to which these skills existed amongst Croatian elementary pupils, a set of scales was adapted from the self-regulation literature designed to measure pupils' use of strategies for the regulation of learning.

### *Strategies for the regulation of motivation, learning behaviour and the learning context*

This collection of concept includes the strategies pupils might use in order to effectively learn and perform tasks, as well as metacognitive strategies oriented towards controlling and regulating their cognition (e.g. monitoring comprehension, making adjustments in learning with regard to progress). Strategies for the regulation of motivation are those through which pupils intentionally try to influence their effort or persistence in learning (e.g. by reminding themselves of the relevance of learning and good performance). The regulation of learning behaviour includes pupils' attempts to control their own behaviour in terms of their persistence on a task, seeking help and making choices. Finally, regulation of the learning context refers to pupils' efforts to control and regulate the tasks and contexts they confront in the classroom (however, in the traditional classroom, opportunities to influence the learning context are strongly dependent on how teachers structure classroom processes).

### *Motivation to learn*

Pupils' motivation to learn, a crucial element for effective learning, is arguably one of the key elements underlying the LTL competence. On a general level, theories of motivation make a basic distinction between intrinsic and extrinsic motivation. Intrinsic motivation, in this context, can be described in terms of an interest in learning for its own inherent satisfaction and worth. As such, this type of motivation is related to high-quality learning and creativity. Alternatively, extrinsic motivation refers to learning as an instrument for achieving some tangible outcomes. Since these outcomes can be highly variable, ranging from external rewards (e.g. grades, gifts from parents, etc.) and the avoidance of punishment to internalized goals and values, many forms of extrinsic motivation can be used to explain an individual's behaviour. Recognizing the different types of extrinsic motivation seems to be rather important within the school context if one considers that the formal learning environment can hardly enhance learning 'just for the fun of it'. Therefore, it becomes important to promote autonomous, individually-driven forms of extrinsic motivation over those focused on external reinforcers. Here, pupils approach learning tasks willingly, with the sense that they are engaging in an activity that holds internalized personal value, instead of with feelings of resentment, disinterest and obligation (in the case of tasks that are highly regulated by some external rules).

### *Learning habits*

In addition to the aforementioned concepts, several questionnaire items were developed in order to assess the amount of time generally devoted to learning by pupils. While allowing, in the first instance, for a description of the amount of time devoted to learning generally, these items would further allow for an analysis of the learning patterns of pupils possessing different levels of strategic development for self-regulated learning.

#### **Theme 3**

##### *Teachers' support for learning in teaching and assessment*

Based on the foundations of the LTL competence, as well as the general principles driving the present research, it is evident that the pupil-teacher interaction is crucial for the development and fostering of pupils' knowledge, skills and beliefs regarding LTL. The dynamism of this system, as such, appears to be crucial for both educational outcomes and the nurturing of a long-term personal relationship with learning. Positive relations with teachers, and the manner in which teachers structure and manage the classroom, are crucial to the motivational and behavioural engagement of pupils in learning. Support for the development of the LTL competence should come through the following teacher activities: teacher involvement, autonomy support, and educational structure. Teacher involvement incorporates both, affection and dedication towards pupils, as well as an attunement towards pupils' needs. Through autonomy support, teachers should encourage and respect pupils' choices, while at the same time reserving the right to have those same privileges for themselves. Finally, educational structure refers to the need for a clear formulation of the educational and personal expectations placed on pupils, as well as the instrumental help and support available for learning and other activities. All these ingredients of effective teacher support further require a certain level of plasticity to allow for the adjustment of teaching strategies to the needs of a specific class or pupil. One of the most crucial elements that influence pupils' development of the LTL is teaching methods used by their teachers. Teaching methods which are aimed at pupils, and not at solely on content, are the ones which are most beneficial for the advance of the competence.

Teacher support for the development of the LTL competence must also be investigated within the context of pupil assessment. The educational literature reveals that pupils' perceptions about assessment can have considerable influences on their approaches to learning. This is especially evident in the case of inappropriate assessment procedures that encourage 'surface' approaches to learning characterized by memorizing and a lack of connectivity between subject contents. To best facilitate the development of the LTL competence, pupil assessment should be characterized by a high congruence with taught subject content, fairness and transparency, authenticity, a clear purpose, appropriate feedback and the accommodation of pupil diversity.

#### **Theme 4**

##### *Peer support for learning*

As part of an assessment of some of the ecological influences on pupils' learning, special attention was given to the perceived existence of peer support available to pupils. Scientific research has demonstrated a positive association between students' social competence in relating to their peers and their academic performance, including achievement, school adjustment and motivation for school work (Patrick, 1997). Furthermore, the availability of a peer network in school, which serves as an academic and social resource, can have a direct and positive influence on achievement outcomes in school (Wentzel, 1991). This can also be applied to the perception of peers towards the value of schoolwork, which can further influence the motivation for learning of the members of the peer group.

##### *Parental support for learning*

In our examination of environmental influences on learning, it was also important to assess parental support for learning. Research literature indicates that parents play a critical role in their children's academic achievement and, as such, in the development of LTL competence. Specifically, it has been demonstrated that family involvement with students'

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

learning at home improves both students' attitudes towards learning and school performance (Sanders and Epstein, 1998). Furthermore, parental involvement improves student learning differently in relation to student age: the influence of active interest and support from parents appears strongest amongst elementary school pupils (Trivette and Anderson, 1995). In our conceptual framework, the assessment of parental support for learning examined the following components:

- Parental academic aspirations and expectations for their children
- Home structure supporting learning
- Communication with children about school

### 3.2.7 Level of the teacher

Similarly to pupils, the conceptualisation of the LTL competence at the level of teachers is housed within four themes, as outlined by the relevant research questions and related concepts presented in Table 3. Because a large proportion of the themes presented at this level overlap with those at the level of pupils, only those concepts which are unique to teachers will be presented<sup>3</sup>.

**Table 3: Conceptual themes underlying the LTL competence at the teacher level**

| Questions/Themes  | Concepts employed   |
|---|---|
| <p><b>Theme 1</b></p> <p>What is teachers' opinion on the importance and role of learning in Croatian society?</p> <p>What makes a successful learner?</p>  | <ul style="list-style-type: none"> <li>● The Croatian society as a learning context</li> <li>● Image of a successful learner</li> </ul>           |
| <p><b>Theme 2</b></p> <p>How do Croatian pupils learn as perceived by their teachers?</p> <p>What are the reasons for their learning?</p>   | <ul style="list-style-type: none"> <li>● Assessment of pupils' LTL competence</li> <li>● Perception of pupils' motivation for learning</li> </ul> |
| <p><b>Theme 3</b></p> <p>How often do Croatian teachers use teaching methods and techniques which are beneficiary for the development of LTL?</p> <p>What is their opinion on the importance of these methods and techniques?</p> | <ul style="list-style-type: none"> <li>● Importance and usage of teaching methods that stimulate LTL</li> </ul>                                   |
| <p><b>Theme 4</b></p> <p>What is the teachers' perception of support for learning do pupils get in their homes?</p> <p>What support do teachers get from the pupils regarding the teaching and learning process?</p>              | <ul style="list-style-type: none"> <li>● Parental support for learning</li> <li>● Pupils' support for teaching and learning</li> </ul>            |

### Theme 2

#### *Assessment of pupils' LTL competence*

Teachers were asked to estimate their pupils' present level of development for various components of the LTL competence, as measured by their estimated use of various learning strategies and skills amongst pupils. The starting point for the conceptualization of this theme was the operational definition of LTL outlined in the Key Competences framework. The components from this definition emphasized in the present investigation were pupils' use of: elaboration strategies, note taking skills, metacognitive skills, time management skills, pupil motivation, ability to define learning goals, ability to maintain

<sup>3</sup> The investigation of common themes at both levels was carried out in accordance with the aforementioned principles of 'multiple perspectives' and 'triangulation', in which multiple groups respond to similar items.

concentration, and ability to persist at a learning task. Apart from the obvious advantage of allowing the researchers to compare estimates of pupil LTL competence between pupils and teachers, the inclusion of teachers' estimates of pupil LTL competence is of further interest in its potential for shedding light on the crucial role of teacher-pupil interaction in the development of LTL competence.

#### Theme 3

##### *Importance and usage of teaching methods that stimulate LTL*

The concepts imbedded within this title are perhaps some of the most significant to our conceptualisation and investigation of the LTL competence. As a starting point, consideration of the literature indicated various teaching methods that are most effective in the development of the LTL. As such, the aim of the investigation under the present theme was to assess the level of implementation of these teaching methods in Croatian elementary education.

However, based on the educational research literature, it became clear that one of the most challenging aspects involved in the current investigation is that of collecting teacher self-reports concerning their own teaching methods. In general, teachers have a tendency to provide somewhat biased answers in order to conform to that which is viewed to be a socially desirable conception of the role and actions of a good teacher. As such, it is extremely difficult to obtain a clear and consistent picture of what actually occurs in schools and classrooms without engaging in direct observations of teaching practices.<sup>4</sup> In our research, we have tried to formulate questions regarding teaching methods in a somewhat innovative way. Specifically, we expected that posing to teachers the question "Do you engage in (*activity of interest*)?" would provide us not with an accurate depiction of the practices in which teachers actually engage, but more likely with a representation of the practices in which Croatian teachers believed they should be engaging. Therefore, instead of posing such a straightforward question, we opted to employ questions with dual scales, a similar procedure to that used as in England by Ainsworth and others in 2004. These scales were designed to measure teachers' responses in relation to two estimations:

- a. their perception of to what extent certain methods are being employed in their school, excluding their own work
- b. their personal opinion on the importance of certain methods for the development of the LTL.<sup>5</sup>

The present chapter has provided an in-depth outline of how the LTL competence was conceptualised for the purposes of the present project. It has demonstrated how theoretical and empirical literature has been applied to the formulation of both a general framework of the competence itself, as well as the specific conceptualisations of the various subcomponents of the LTL competence for the purpose of its' assessment within the Croatian context.

---

<sup>4</sup> Researchers have attempted, with variable success, to eliminate this social desirability bias.

<sup>5</sup> The logic behind this design is the expectation that, in their estimation of the usage of a specific method in their school (while excluding themselves), teachers would provide more representative and less socially desirable responses. Similarly, when estimating the personal importance of a specific teaching method for the development of LTL, teachers are expected to rely less on various contextual factors (for example: salary, time constraints, lack of equipment, etc.) and provide more frank estimates of their views on what methods are beneficiary for the development of the LTL competence. Regardless of our attempt to minimize the social desirability bias, it most certainly cannot be claimed that this bias can be completely eliminated.



## 4. THE ENTREPRENEURSHIP COMPETENCE

### 4.1 FRAMING THE ENTREPRENEURSHIP COMPETENCE

As was described above, one of two key competences selected to be the focus for the present research project was the entrepreneurship competence. This competence is viewed as particularly relevant to the Croatian context in that it represents the interface between knowledge and the practical implementation of knowledge through action. This is precisely the dual focus that the European Council stressed in the Lisbon Agenda in 2000, emphasizing the enhancement of knowledge that will serve a productive function in the economy of a specific society. However, the entrepreneurship competence is also potentially the most complex competence to be conceptualised within the framework of primary education curricula and translated into methodologies for learning.

Why has entrepreneurship been identified as important for the future of the European Union and thus included in its strategic goals for development? The Lisbon Council argued that Europe's comparative advantage lies in knowledge-based activities. Therefore, actions are needed that will boost growth through the creation of knowledge, innovation and business dynamism. As part of this process, Europe requires greater entrepreneurial activity in order to further strengthen its economic position. Further, apart from the dominant economic benefit of fostering entrepreneurship, other important aspects of societal development have been identified as benefiting from entrepreneurship. Entrepreneurship can also be seen as a tool for unlocking personal potential through the encouragement of creativity, self-realisation and independence and, in turn, furthering the ideals of a liberal society. Finally, entrepreneurship is viewed as playing an important role in contributing to social cohesion in the member states of Union, as well as playing a role in the efficient delivery of social services in health, education and welfare. It is for these reasons that the entrepreneurship competence has been included within the Key Competences framework.

Within the span of the last few years, there have been several targeted reports and communications from the Commission and its expert bodies exploring the conceptualisation of the entrepreneurship competence in education while seeking examples of good practice of the entrepreneurship competence already being developed in primary education systems of countries in the Union. At this stage, it could be argued that this competence, along with guidelines for its implementation in elementary education, is still in an early experimental phase. As such, further time and research is necessary before existing policy recommendations and their implementation in educational practice are able to demonstrate observable results that could serve as a basis for quality assessment.

The *Green Paper of the European Commission* (Entrepreneurship in Europe, 2003) defines entrepreneurship as *'the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation.'* Entrepreneurs are seen as important for the future of the Union because they are agents of change and growth in a market economy and they can act to accelerate the generation, dissemination and application of innovative ideas. According to a report published by the OECD (1998), 'entrepreneurs not only seek out and

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

identify potentially profitable economic opportunities but are also willing to take risks to see if their hunches are right.' Within this economic framework, proxy measures for determining the level of entrepreneurship in a society include such factors as self-employment rates, business ownership rates, new born start-ups, business turnover, indicators of research and development, and number of patented inventions.

The Key Competences framework developed within the *Education and Training 2010 Programme* promotes the eight competences under the rationale that they are '*necessary for personal fulfilment, social cohesion and employability in a knowledge society*'. This educational framework therefore makes clear reference to employability and the link between education and economic development. However, it is also wider in its scope in that it further includes the social goals of equity and individual self-fulfilment, thus completing the circle of values that underpin a liberal democracy.

The entrepreneurship competence, as is defined in the Key Competences framework, can be broken down into elements representing personal qualities, skills and knowledge. Personal qualities that are seen to be at the root of entrepreneurial personalities are a disposition to show initiative, proactivity, independence, motivation and determination for success, leadership and the propensity for risk-taking. With respect to the skills necessary for entrepreneurial competence, the KC framework includes proactive management skills such as planning, organising, managing, delegation and analysis. Other relevant skills are the ability to work in teams as well as having good judgement in identifying one's strengths and weaknesses. Specific knowledge necessary for developing entrepreneurship initiatives includes basic economic literacy as well as a general understanding of how a market economy works.

Member states of the European Union unanimously agree on the importance of developing the entrepreneurship competence in their countries. As such, European Commission expert groups have set out to define specific actions for realising this goal. One key action to be developed is entrepreneurship education in schools, directed at the level of the individual. According to the *Action Plan of the Commission*, entrepreneurship education needs to be integrated into school curricula with the help and support of both national and local authorities. The *Green Paper of the European Commission* (Entrepreneurship in Europe, 2003) proposes that since '*both personality and management skills are key elements for success, personal skills relevant to entrepreneurship should be taught from an early stage and be maintained up to university level*'. In order to achieve this goal, it becomes necessary to revise national curricula to include the entrepreneurship competence. At the level of elementary education, activities should be introduced that raise children's awareness of the benefits of being an entrepreneur, which, in turn, nurture personal qualities and encourage attitudes and skills conducive to entrepreneurship. Furthermore, in order to make entrepreneurship education a reality in schools, the Commission argued that teachers need to receive adequate support through both resources and training. Finally, at a societal level, the Commission argues that all members of society play a role in creating a society that values entrepreneurship. Arguably, this action will require a shift in current attitudes held by European society towards getting involved in entrepreneurial activities.

### 4.2 DEFINING THE ENTREPRENEURSHIP COMPETENCE IN ELEMENTARY EDUCATION FOR THE PURPOSE OF ASSESSMENT

Within the context of the present research, there currently exists no defined set of measurements of the entrepreneurship competence in elementary in the academic literature. This is not surprising if we take consider that the competence itself has only been defined within the last couple of years. Therefore, researchers currently possess only

#### 4. THE ENTREPRENEURSHIP COMPETENCE

a limited understanding of the personal dispositions and decision processes that predispose an individual to entrepreneurial skill. Limited previous research in this area does exist, but this research has generally lacked a strong theoretical orientation. The existing studies also contain a second problem in that specific variables have been examined in isolation and have been included with no clear theoretical rationale. As such, an extensive list of possible antecedents exists but there have been few consistent findings. Therefore, it is important to emphasize that the introduction of the entrepreneurship competence into elementary education represents a situation in which a policy decision is only slowly being translated into the language of education, teaching and learning. It will take considerable time before these policy commitments have been translated into effective methodologies for teaching and learning, on the one hand, and quality measurements of these methodologies, on the other.

The present project, which aimed to determine the extent to which entrepreneurship is present and encouraged in Croatian elementary education, therefore represents a pioneering effort. In order to conduct this type of research, it was necessary both to conceptually define elements for the measurement of entrepreneurship in elementary school pupils, as well as to develop appropriate measurement instruments. The research team approached these tasks using a clear theoretical framework that was firmly grounded in social-cognitive and motivational theories. Specifically, the conceptual foundations adopted to explore the entrepreneurship competence were twofold. Firstly, the conceptual basis for the personal dispositions encompassing an entrepreneurial personality were found in the psychological theories of Albert Bandura's (1997) self-efficacy theory and Deci and Ryan's (1985) self-determination theory. Secondly, an elaboration of the elements of the entrepreneurial competence at the elementary education level built on existing programs for the development of entrepreneurial qualities in primary schools, such as those implemented in Australia (*Enterprise education in primary schools*, 2002) and in Scotland (*Determined to succeed*, 2004). These theoretical foundations will be explored, in turn, in the following paragraphs.

According to the Bandura (1997), self-efficacy refers to a person's belief about his or her own capability to have control over his or her functioning as well as over the demands of the environment (for instance, in performing a particular task or activity). The self-efficacy beliefs that an individual holds will influence one's choice of activities and goals, levels of motivation and perseverance, as well as the amount of effort invested in an activity. It also influences the level of performance in an activity and resilience in the face of obstacles (for example, individuals with a strong sense of personal self-efficacy will approach difficult tasks as challenges to be mastered rather than as threats to be avoided).

As emphasized earlier, we currently know very little about the individual dispositions and processes that foster the development of entrepreneurship. However, some research seems to suggest that self-efficacy plays a significant role. A recent study (Chen, Greene & Crick, 1998) demonstrated that entrepreneurial self-efficacy was directly related to the intentions of university students to start a business. It was further demonstrated that learning about entrepreneurship as well as entrepreneurial work experience increased the entrepreneurial self-efficacy of university students. Finally, research seems to suggest that efficient entrepreneurial education strengthens student self-efficacy beliefs through many diverse types of learning experiences from even earlier stages.

According to Deci and Ryan (2000), self-determination is a combination of skills, knowledge and beliefs that enable a person to engage in goal-directed, self-regulated, and autonomous behaviour. Essential to self-determined behaviour is an understanding of one's strengths and limitations and a belief in oneself as capable and effective. A self-determined person is guided by his or her own will and choice, and intrinsically motivated. Intrinsically motivated people engage in activities that interest them, choose them by their own will and choice, without reliance on external rewards, pressures or

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

punishments. In this sense, they are autonomous. Key characteristics of self-determined people are: an awareness of personal preferences, interests, strengths and limitations; an ability to consider multiple options, make choices, and evaluate decisions; an ability to initiate and take action when needed; an ability to set and work towards goals; an ability to self-regulate one's own behaviour; communication skills for the purposes of negotiation, compromise and persuasion; problem-solving and self-advocacy skills, self-evaluation skills, persistence, self confidence and creativity. Along with Bandura's conceptualization of self-efficacy, these characteristics of self-determination were used in the present project to describe and define the dispositions of an entrepreneurial individual.

As mentioned earlier, the examination of entrepreneurial competence in elementary education was also based upon an exploration of previously-existing programs designed to address entrepreneurship in schools. A Scottish program for introducing enterprise in education, *Excellence through enterprise* (2005), proposes that '*being enterprising means possessing the values, attitudes and abilities to develop and use personal resources creatively and constructively in innovative ways in a range of contexts*'. It further states that '*carefully planned enterprising environments for learning, and the ways in which those learning experiences are organized and assessed, will contribute to the development of these values, attitudes and abilities*'. The Australian program *Enterprise Education in Primary Schools* (2002) offers further elaboration of entrepreneurial competence along these theoretical lines. This program states that "*enterprise education involves the development of the willingness, skills and abilities of young people to take a proactive, self-determining and flexible approach to understanding, influencing and shaping their own futures.*" Furthermore this program argues that enterprise education '*fosters personal development so that young people are better equipped to adapt to and take advantage of changing circumstances in society, business, employment, career and their community*'. Specifically, the Australian program recognizes that an enterprising student should possess the following characteristics:

- able to solve problems
- able to work in teams
- prepared for change
- recognizes change as an opportunity
- able to deal with risk and uncertainty
- is creative
- able and willing to take initiative
- able and willing to take responsibility
- is purposeful and confident.

If we compare this set of personal characteristics with the concept of entrepreneurship as defined within the European framework of Key Competences, it becomes clear that these two sets are largely overlapping. As such, it provides a strong rationale for employing both the theoretical concepts from motivational theories in psychology and recent experiences in entrepreneurship education in order to develop the operational measures for assessing entrepreneurship learning in elementary schools. It is precisely this combination of theoretical and educational approaches that was employed in the present project to develop a framework for examining the entrepreneurship competence in Croatian elementary education. In doing so, the present project holds the assumption that schools can enhance autonomous, innovative, goal-oriented, proactive and responsible (in other words, entrepreneurial) behaviour in their students through specific instructional activities aimed at fostering these fundamental features of entrepreneurial competence. These activities should be aimed at increasing self-awareness, improving decision making skills, improving goal setting and goal attainment skills, improving planning, self-observation and self-evaluation skills, enhancing communication and relationship skills, and developing the ability to learn from experience. This will, in turn, have a strong influence on the development of entrepreneurial characteristics of the individual, but also on the increase of

#### 4. THE ENTREPRENEURSHIP COMPETENCE

the entrepreneurial potential of Croatian society and its aim of achieving standards of the European Union.

Before presenting the research design, findings and resulting conclusions and recommendations of the present project, it is worth briefly discussing the context in which the examination of the two key competences of focus was carried out. Indeed, any valid judgment of the findings of the present study requires, at the very least, a preliminary understanding of the Croatian elementary education system within which these findings are being considered. Below is a brief outline of the Croatian elementary education system, a review of existing research and policy relevant to the current investigation, and a description of teacher training in Croatia.

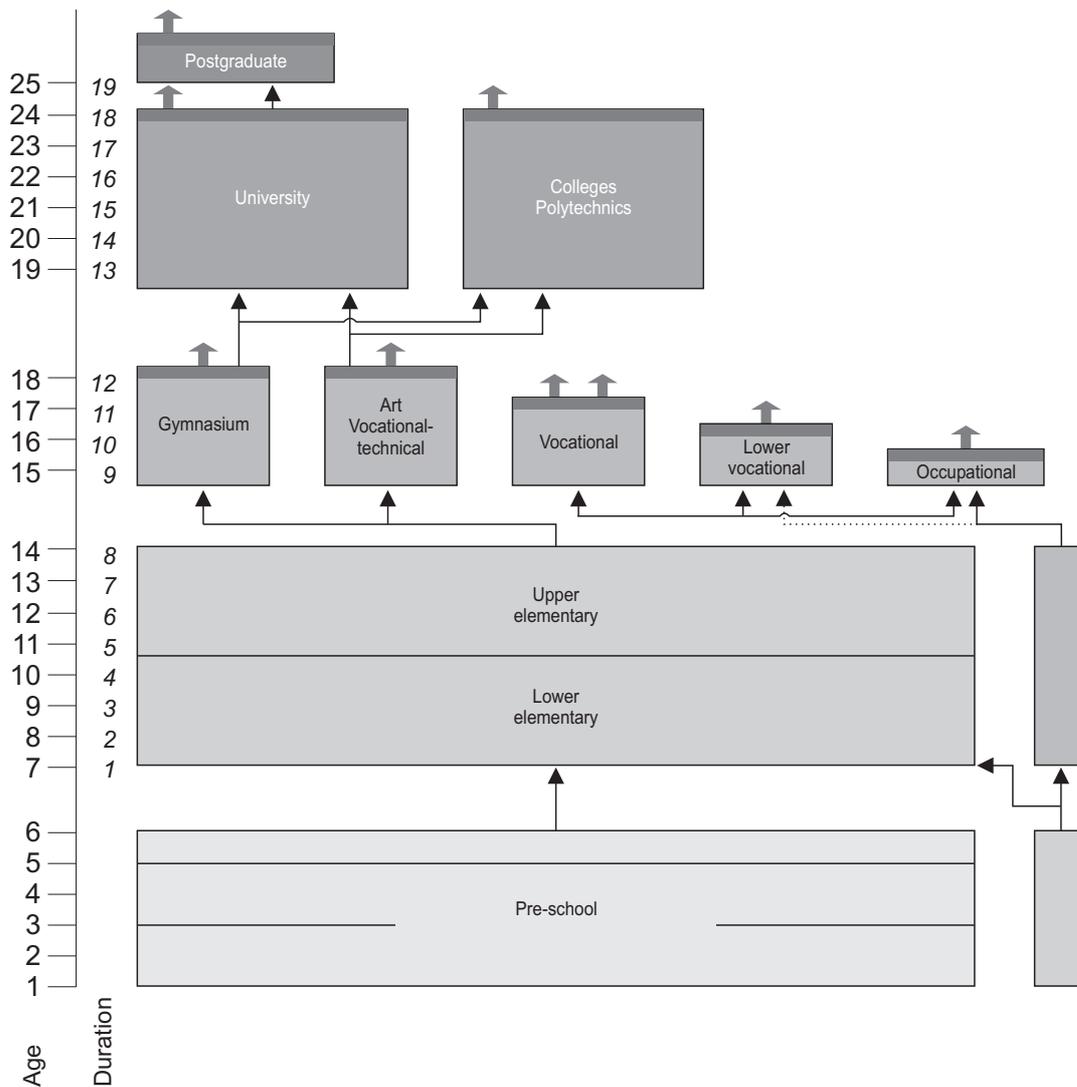


# 5. AN OUTLINE OF THE CROATIAN ELEMENTARY EDUCATION SYSTEM

## 5.1 GENERAL INFORMATION

The Croatian education system includes preschool, elementary (compulsory) schooling, secondary and higher education (Figure 1). It might be argued that elementary education forms the foundation of the Croatian educational system in that it is the only compulsory educational level in the Republic of Croatia (Law on Primary Education, 2003). In Croatia, elementary school education lasts eight years and caters to pupils between the ages of 6 and 15 years<sup>6</sup>.

Figure 1: The contemporary system of education in Croatia



<sup>6</sup> Children who reach the age of six by April 1 of the current year would enroll in the first grade of elementary school in that year (Law on Primary Education, 2003).

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

According to data from the Croatian Ministry of Science, Education and Sports (2004), the number of children enrolled in Croatian elementary schools amounts to 96.5% of children of the officially set age in the country as a whole. Approximately 9% of these enrolled pupils do not complete elementary school education, a figure that is approximately 5% lower than the EU average. There are currently 837 elementary schools in Croatia, attended by approximately 393,500 pupils. The majority of the teaching in these schools is divided into two periods per day (73.4% of schools), where half of the students attend school in the morning and the other half of the students attend school in the afternoon. Alternatively, approximately one fifth of all Croatian elementary schools operate with a single schedule (19.7%). In addition, there are a number of schools in which the teaching is organized in three periods per day (6.9%)<sup>7</sup>.

### 5.2 THE CURRICULUM<sup>8</sup>

Croatian elementary education is realized through an official curriculum divided into two major parts and implemented in two different ways. The first part covers lower elementary education (grades 1 through 4), where the curricular content is divided into six teaching subjects: Croatian language, Foreign language, Mathematics, Social studies, Music, Art, and Physical education. These school subjects are taught by one class teacher, with the exception of foreign language teaching. This form of organization in the first four grades of elementary education is called *class teaching*. The second part of the curriculum, implemented in the upper grades of elementary education schooling (grades 5 through 8), is discipline-based and, in essence, reflects the scientific division of knowledge. This part typically consists of approximately thirteen subjects: in addition to compulsory subjects, pupils can also select two electives.<sup>9</sup> Furthermore, gifted pupils can choose to attend additional classes, and supplemental classes are also provided for pupils with learning difficulties. The teaching in the upper grades of Croatian elementary schools is carried out by subject area teachers (i.e. each subject is taught by a subject specialist) and is thus labelled *subject teaching*. Finally, in addition to the compulsory and elective subjects, pupils can also select extracurricular activities. The number of elective subjects and extracurricular activities offered varies between elementary schools, depending on staffing, physical space and material resources.

### 5.3 THE ASSESSMENT OF PUPILS

Currently there is not any standardized assessment applied at the level of the elementary education. Ministry of Education has announced that from the next school year a system of standardized assessment will be piloted in Croatian elementary schools. The rationale for this introduction was explicated by inflation of the good grades and perceived unfairness and subjectivity of the present system. Currently, pupils in elementary schools are assessed by the individual teacher of each subject, whereas their overall conduct is marked using a descriptive grade.<sup>10</sup>

---

<sup>7</sup> Data on the number of schools, pupils and periods taught were taken from the Education Sector Development Plan 2005-2010 (Ministry of Science, Education and Sports of the Republic of Croatia, <http://mzos.hr>).

<sup>8</sup> Croatian education currently does not have a framework curriculum, a document whose development has just been initiated. Instead, the foundational document for Croatian elementary education is the Teaching Plan and Programme for Elementary Education (TPPE), which is sometimes colloquially called curriculum.

<sup>9</sup> These subjects in the 8th grade are: Croatian language, Maths, Foreign language, Music, Arts, Physical Education, History, Geography, Biology, Physics, Chemistry, Technical Education, ICT.

<sup>10</sup> Grades are given on a scale from 1 to 5 in a range: 1 (insufficient – failing grade), 2 (sufficient), 3 (good), 4 (very good), 5 (excellent)

## 5.4 EXISTING RESEARCH AND POLICIES RELATING TO KEY COMPETENCES IN THE CROATIAN EDUCATION CONTEXT

There has not been any empirical educational research conducted in Croatia directly dealing with the concept of key competences. Furthermore to date, no systematic research has been carried out in Croatia regarding the quality of elementary education based on student achievement data. Furthermore, until recently, Croatia has not been included in international comparative studies which assess the acquisition and development of various cross-curricular competences. Such data should soon be available as a result of Croatia's 2006 participation in the PISA project (*Programme for International Student Assessment*), which will enable an empirical analysis of the current situation in the Croatian educational system, as well as a comparison of students' results across participating educational systems with regard to the acquisition of certain key competences.

However, despite the relative lack of research critically examining the state of elementary education in Croatia, recent analyses have suggested that there are significant deviations in the structure, organization and educational philosophy of Croatian compulsory education from that of EU countries and that these deviations may pose obstacles for adoption of the key competences framework (Pastuović, 2006)<sup>11</sup>. Furthermore, research evaluating Croatian elementary education curricula (Baranović, 2006) demonstrated that, according to teachers' opinions in both the lower and upper grades of elementary education, the curricula and its implementation have numerous shortcomings. These problems included the vast scope of the required subject content, its lack of current relevance, the weak links between various subjects, and a dominance of traditional teaching methods. The results of this research further suggest a need for significant curricular changes in compulsory elementary education.<sup>12</sup>

The need for significant reform and improvement in the Croatian educational system has also been recognized by the Croatian educational authorities. In June 2005, the government of the Republic of Croatia adopted the *Education Sector Development Plan 2005-2010* (<http://mzos.hr>) which defines strategic goals, priorities and activities that should contribute to the development of a more efficient system of education 'in order to create intellectual and operational human capital as a key treasure of the Croatian state'. Among the priorities for the development of the educational system, the document emphasizes lifelong learning as a general principle applicable to all educational levels, and stresses the importance of the LTL competence specifically with the stated objective of 'preparing and developing the learning-how-to-learn competence'. The importance of entrepreneurship as a key competence has similarly been recognized in the document, and is expected to take form in the educational system as cross-curricular content within existing subjects and activities from preschool education through elementary education and higher education to adult education. A full chapter in this document is dedicated to priorities for the development of elementary education. Here, it is stated that the new *Croatian National Educational Standards*, along with a new national curriculum, would be introduced into elementary schools as of the 2006-2007 school year. Furthermore, it is expected that a self-assessment system will be applied in schools by the year 2008. The plan places special emphasis on the development of flexible educational solutions which place the pupil in the centre of the educational process, implying the need for both modern and individualized teaching methods.

---

<sup>11</sup> In this research, various structural changes to the current system have been recommended as part of compulsory education reform. These include a change in the organization of the compulsory educational cycle, where the recommended duration of elementary education would be six, instead of eight, years, and the recommended duration of compulsory education would be extended from eight to nine years. Arguably, this type of structural change might lead to the improved acquisition and development of key competences.

<sup>12</sup> It is important to note that both mentioned research projects have been conducted prior to the evaluation of the Croatian National Educational Standard (HNOS) and the development of the current Teaching Plan and Programme for Elementary Education (TPPE).

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

In accordance with the expected changes described in the development plan, a new Teaching Plan and Programme for Elementary Education was developed and implemented in Croatian elementary schools as of the 2006/07 school year. As this is the first year of the new curriculum's implementation, it is not yet possible to assess its full effect. However, it is expected that these new developments will incorporate some of the elements of the competences, thus enabling a possibility of the introduction of the competences framework into the Croatian elementary education. Finally, a *Committee for Pedagogical Standards* and a *Committee for the National Curriculum* were founded in September 2006. The first results of the efforts of these national bodies are expected in 2007.

### 5.5 AN OVERVIEW OF THE TEACHER TRAINING SYSTEM FOR CROATIAN ELEMENTARY SCHOOL TEACHERS

#### 5.5.1 Pre-service teacher training

Pre-service teacher training for elementary school teachers in Croatia is made up of two strands: one for class teachers teaching in the lower grades of elementary education (1<sup>st</sup> to 4<sup>th</sup> grade) and another for subject teachers teaching in the upper grades of elementary education (5<sup>th</sup> to 8<sup>th</sup> grade). According to data from the Croatian Central Bureau of Statistics, there were 28 125 employed elementary school teachers in 2005.

Traditionally, the education of class and subject teachers in Croatia has taken two different forms, operating at different institutions of varying status and for varying lengths of time. Namely, class teachers receive their training at teacher education academies and higher professional teaching schools. Until 2005, these institutions were recognised as part of the Croatian higher education system. While they held the status of higher professional schools rather than university departments, some of these institutions had been recognised as university constituents. Before 1980, subject teachers also attended such higher professional schools for their training. In 1980, however, subject teacher education was transferred to university departments specializing in specific subjects. Here, teacher training was undifferentiated according to the level of schooling (elementary or secondary) at which future teachers might teach.

The reform of the Croatian higher education system which began in the academic year 2005/2006, encouraged by broader changes in other European higher education systems under the umbrella term of the «Bologna process», has had a significant influence on pre-service teacher training in Croatia. The main structural change which has taken place with regard to teacher education has been the equalisation of the length of pre-service teacher training for all elementary school teachers. As a result, class teachers trained at professional teaching schools receive a university degree. Likewise, these institutions now have the opportunity to develop into full members of the university system.

#### *The education of class teachers*

Until 2005, class teachers were educated at 9 higher professional teaching schools in Croatia, seven of which were recognised as university constituents. Until 1996, the length of this course was two years, whereas, between 1996 and 2005, it lasted for four years. Students in this program spent 41% of course time following pedagogical, psychological and teaching methodology courses, and the remaining time studying those subjects taught in the first four years of elementary education. In addition, students were expected to gain work experience in schools amounting to 60 working days, a length of time which brought this programme close to European standards. In 2005, a 5-year study programme was introduced, upon completion of which the student receives the title of Master of Primary Education. The changes in 2005 have also enabled students studying to become class

## 5. AN OUTLINE OF THE CROATIAN ELEMENTARY EDUCATION SYSTEM

teachers to continue their training at the graduate level, thus equalising the opportunities for vertical mobility between class and subject teachers.

### *The education of subject teachers*

The pre-service education of subject teachers takes place within various departments at five Croatian universities. Until 2005, the length of this course of study was four years, during which students had the opportunity to follow either a single course of study or, in some departments, two courses in parallel. Upon completion of the course, these teachers were eligible to teach in elementary schools (in the 5<sup>th</sup> to 8<sup>th</sup> grades) as well as in secondary schools. These teacher education programmes were organised in such a way that students were expected to study the academic discipline or subject in which he or she wished to teach, coupled with subjects aimed at developing professional and pedagogical competences. However, in practice, the course of study was predominantly oriented towards mastering the content of the academic discipline, rather than developing teaching competences. Indeed, these competences were covered in only four subjects (pedagogy, psychology, didactics and teaching methodology), which collectively made up a mere 10% of the total study time of the course as a whole. Again, as a result of educational reform in 2005, the course of training for subject teachers currently lasts 5 years, primarily organised in two cycles according to a 3+2 model. In this programme of study, a student is expected to complete both cycles of study in order to qualify as a teacher.<sup>13</sup>

The transition to this new organisation of study programmes for both class and subject teachers is now in line with “Bologna process” changes and has resulted in significant positive changes to pre-service teacher education. However, problems still remain. Namely, Croatia does not currently have a national standard according to which key professional teacher competences could be defined, nor does there exist a consensus amongst universities regarding the ways in which professional teacher competences might be developed in education programmes. In practice, this has resulted in significant differences in the manner in which educational subjects are offered and the models by which they are realised, as well as the length of time students spend in schools as part of their work experience. These differences are not only identifiable amongst different universities. There also exist significant differences between teacher education departments within a single university regarding the development of educational competences. An assessment of the ways in which the newly implemented teacher education programmes have influenced the development of a student’s teaching competences will be possible once the first generation of students complete their course of study.

### **5.5.2 In-service teacher training**

A number of teacher education institutions, as well as professional associations and non-governmental organisations, organise in-service professional training and workshops for teachers and other school experts (i.e. pedagogues, school psychologists, etc.). The *Agency for Education* also has an important role in in-service teacher training. At the beginning of each school year, the Agency publishes a catalogue of professional seminars offered to teachers, none of which are obligatory. Instead, seminar participation is dependent on the individual teacher’s interest in professional development, as well as the financial support provided by the school at which the teacher is employed. This creates a situation in which the system of in-service teacher training often does not respond to the actual needs of schools and teachers. In other words, teachers often take part in specific seminars because they are invited to participate and have the resources to do so, and not necessarily because they have identified a specific need or interest in the seminar’s topic area. Further, the content and tasks presented at the seminars will typically revolve around what the organisers can supply, rather than what participants actually need.

---

<sup>13</sup> The undergraduate course of study will bring 180 ECTS points, whereas the graduate level has 120 ECTS points.

### 5.5.3 An appraisal of elementary school teachers' professional competences

Recent research exploring the quality of teacher competence development has been undertaken with students training to be class teachers, those training to be subject teachers, as well as those who are already employed as elementary school teachers in Croatia (Domoviæ, 2006; Pavin, Rijavec & Miljeviæ–Riðièki, 2005). The results of these research efforts have demonstrated that both students and practising teachers feel most adequately prepared and equipped in their knowledge of the academic discipline in which they teach or are already teaching.

The results further demonstrated that all other dimensions of professional competence were felt to be less adequately covered within teacher training.<sup>14</sup> These teachers also reported feeling that in-service professional development of teacher competences had been weak. When asked about the need for improvement in professional development, teachers most often quoted the following areas: working with special needs children, the use of ICT, working with gifted pupils, the use of new teaching methods and skills that are in tune with contemporary trends in classroom teaching, communication skills, cooperation with parents and children, methods of following and evaluating pupils' work and educational progress in general, as well as new knowledge within the subject area(s) taught.

These results demonstrate the introduction of new innovations into both pre-service and in-service teacher training is currently needed. Especially critical is the need to formulate priorities within the teacher education system, which would involve defining a national strategy for the development of the teacher education system, developing the institutions and human resources necessary for quality pre-service and in-service teacher training, and developing and implementing an effective and responsive programme for both pre-service and in-service teacher training for class and subject teachers.

---

<sup>14</sup> Specifically, students reported feeling least equipped in the areas of human rights education, adult learning, cooperation with parents, training required to be a form teacher, managing pedagogical documentation and special needs education. Employed subject teachers reported feeling least equipped in human rights education, adult learning, ecology education, special needs education and the use of ICT in teaching.

## **6. AN ANALYSIS OF THE CROATIAN TEACHING PLAN AND PROGRAMME FOR ELEMENTARY EDUCATION (TPPE) WITH REGARD TO LEARNING TO LEARN AND ENTREPRENEURSHIP**

In the days prior to the commencement of the 2006/2007 school year, the Croatian Ministry of Science, Education and Sports finalized development and implemented the new Teaching Plan and Programme for Elementary Education (TPPE). The TPPE can be viewed as a foundational document for Croatian elementary education. As stated in the document itself, the TPPE aims to establish the:

- educational values and aims as well as basic guidelines for teaching and learning
- methods, approaches and means of teaching
- educational elements of curricular, and some forms of extracurricular activities
- role and function of participants in the educational and school context

The TPPE has been developed in accordance with elements of the Croatian National Educational Standard (HNOS), which was experimentally introduced and piloted in the 2005/2006 school year in 5% of Croatian elementary schools. The HNOS has yielded positive results and, as such, has become a foundation from which the present TPPE was developed. The HNOS introduced a number of changes within the Croatian education system, which included the removal of excessive subject-specific curriculum content, an attempt to match curriculum content with pupils' developmental age in a more coherent manner, and an emphasis on group work.

In addition to outlining general aims and goals, the TPPE also incorporates teaching plans and programmes for each subject taught in Croatian elementary education (grades 1 through 8). For each subject, these plans and programmes outline the 'aims, tasks, educational content and results that need to be achieved by teaching and learning in each covered theme'. In each case, subject plans and programmes consist of an introduction, which states the aims and tasks covered by each subject, followed by a description of curricular content for each grade, which includes description at the level of subject areas followed by more precise description of corresponding subject themes. Finally, for each subject theme, pupils' expected educational achievements are outlined.

In this chapter, an attempt will be made to critically examine and analyse the TPPE as it relates to the two key competences of interest. This analysis will be carried out firstly at the level of the TPPE as a whole, and then at the level of specific subjects for the 4<sup>th</sup> and 8<sup>th</sup> grades. The decision to include these two age groups was made so that this analysis would correspond with the empirical research also included in the present project.

The status of the Learning to Learn competence was examined within the subject plans and programmes for the subjects of Croatian language, Mathematics and English. The rationale behind this decision was the feeling the LTL competence should be most evident in these subjects due to the fact that they:

- hold the most teaching hours,

- are responsible for the development of differing cognitive skills,
- and cover the content of three other competences of the KC framework.

For an examination of the Entrepreneurship competence, the selection of subject plans and programmes was made based on a comparative analysis of the elementary education from other European countries, which indicated that content related to the key competence of entrepreneurship is most often found in the curricula for subjects of Nature and Society, Technical Culture and Geography. As such, an analysis of the status of the entrepreneurship competence within the curricula for these subjects was carried out. This analysis was carried out using the qualitative methodology of content analysis, where various coding schemes were developed in order to ascertain the level of correspondence between the content of the present TPPE and the contents of the previously described competences. Specifically, keywords related to the concept of entrepreneurship were analysed for frequency and the context where they appeared. In the following sections, the analyses conducted for the LTL and Entrepreneurship competences will be presented in turn.

## 6.1 THE STATUS OF THE LTL COMPETENCE IN THE TPPE

### 6.1.1 Introduction

The introductory section of the TPPE specifies general educational objectives and tasks for elementary education in Croatia. One stated objective is the strategic goal of creating a 'knowledge society' in Croatia. The document further states that 'the development of competences that enable pupils for the successful adaptation to various roles one takes on as an adult is specified as a basic aim of compulsory education'. It also emphasizes that education should help in the 'development of active and responsible individuals who are open to change, and are motivated and enabled for lifelong learning', and that 'it is expected that schooling will enable pupils to learn how to learn'. According to the TPPE, one of six explicitly stated goals for elementary education is to 'enable and equip pupils for learning, teach them how to learn and help them in learning', where pupils should be able to 'learn and solve problems independently'. The document additionally states its stance towards teaching: "teaching should be directed at the pupil" where a focus on 'learning to learn' and 'guidance for independent learning at home and for the development of techniques for successful learning' is emphasized.

It seems clear that the general philosophies housed within this introductory section of the TPPE incorporate many of the concepts and ideas underlying the LTL competence, which suggests an attempt at introducing this competence into the elementary education curriculum. This is further suggested in the section outlining the roles and objectives of school libraries within elementary schools. Specifically, one of the educational aims of the library is to 'enable pupils to use different sources of information' and to 'introduce pupils to primary and secondary sources of information for lifelong learning'. When the roles of the school library at each grade level are analysed, one finds further evidence that the LTL competence appears to be incorporated into the stated objectives for pupil development:

- In the 4<sup>th</sup> grade, pupils should know how to find, choose and use information
- In the 5<sup>th</sup> grade, pupils should be able to independently use information and knowledge and judge the value of each piece of information
- By the 6<sup>th</sup> grade, pupils should independently (...) choose a technique of work, methods of searching and sources of information for problem and research solving tasks
- By the 8<sup>th</sup> grade, it is expected that pupils will gain knowledge about making connections among inter-subject contents using the library and informatics systems. Pupils should be able to read with understanding and retell the content with their own words, to make notes, to write an abstract, and use already-acquired knowledge and skills in lifelong learning'.

## 6. AN ANALYSIS OF THE CROATIAN TEACHING PLAN AND PROGRAMME FOR ELEMENTARY EDUCATION (TPPE) WITH REGARD TO LEARNING TO LEARN AND ENTREPRENEURSHIP

The TPPE document argues that the themes outlined in the section on the school library can, and should, be realised within any other area of the TPPE. Although the document makes no specific reference to the LTL competence itself, these objectives might be viewed as general principles for guiding and facilitating the development of pupils' learning competence in all areas of Croatian elementary education. However, it may be argued that the fact that the contents correspondent to the contents of LTL competence are found mostly in the part of the document describing library indicate less central position of the concept itself. A closer examination of the implementation of various elements of LTL competence in the relevant subject areas is also warranted, and is presented in the following three sections.

### 6.1.2 Implementation of the LTL competence in the Croatian language curriculum

In its' general guidelines, the TPPE states that the basic aim for the subject of Croatian language is 'to enable pupils' linguistic communication in order to facilitate the learning of curricular content in all subjects and make lifelong learning possible'. Although this overall aim seems to suggest a consideration of some of the elements of the LTL competence for the subject of Croatian language, an examination of the plans and programmes of the subject curricula at each grade level indicates limited consideration of such elements in the curricular content specifically. According to the TPPE, in the 4th grade, the Croatian language subject covers 21 stated themes. Of these 21 themes, only one seems to have a direct connection with learning strategies. Specifically, the 'Synthesis of text' theme outlines the following goals for educational achievements 'to notice and extract an event in a text; to extract important characteristics of the event; to succinctly retell the event including particularities important for the text's understanding, and to independently formulate an abstract'. A similar situation is found in the plans and programmes of the 8th grade curriculum. Of 43 stated themes at this level of Croatian language education, only two are directly connected with the development of the LTL competence:

- to expose arguments in a clear manner, by explicating thoughts and beliefs in oral and written communication
- to write a review on a chosen topic using personal notes.

### 6.1.3 Implementation of the LTL competence in the maths curriculum

One of the principles upon which plans and programmes for the subject of Mathematics was developed is the identified need 'to develop and deepen pupils' mathematical thinking, equipping them with the tools necessary for the creation and solution of various practical problems'. Amongst eight overall aims for this subject, the TPPE includes two objectives that suggest the fostering of the LTL competence. Specifically, the document states that Mathematics education should serve pupils in a manner that:

- prepares pupils for abstract thinking, making logical conclusions and for formulating precise concepts
- develops pupils' ability to carry out independent work, to take responsibility for one's work, to complete work in an accurate, organized, and systematic manner, and to achieve conciseness in written and oral expression.
- Upon careful examination of the plans and programmes outlined for the Mathematics subject in the 4th and 8th grades, there appears to be no concrete educational achievements that would correspond with the elements of LTL competence. Again, as in Croatian language, while the general objectives for the Maths curricula seem to suggest an attempt to include skills relevant to the LTL competence (albeit in a minimal fashion), there exists a startling absence of such a focus in the specific plans and programmes at each grade level.

#### **6.1.4 Implementation of the LTL competence in the foreign language curriculum**

In the TPPE, the primary goal for the teaching of foreign languages is the development of 'oral and written communicational competence'. It additionally states goals for the fostering of various other skills, amongst which is 'equipping pupils for problem solving'. Further, specific emphasis has been placed on the use of pupil-focused teaching methods characterised by exposing pupils to situations in which cognitive organisation is necessary and in which pupils will be required to use their previously-acquired knowledge. As stated in the TPPE, 'these approaches to teaching, along with the development of pupils learning strategies, will equip pupils for lifelong learning'. Also included amongst the educational goals and aims of foreign language subjects is the aim that 'pupils should be encouraged to engage in independent learning and in the internalisation of successful learning strategies and knowledge use, thus preparing them for lifelong learning. By doing that, pupils will also develop habits of group and cooperative work...'

##### *English language*

Consistent with the plans and programmes for all foreign languages taught in Croatian elementary education (which include German, French, and Italian), those for the English language curriculum include a specific theme devoted to 'Learning strategies and knowledge use' at each grade level. Closer examination of this theme suggests it to be directly connected with the development of the LTL competence. For example, in the eighth grade, the pupil is expected to demonstrate the following set of learning skills:

- Mastering the techniques of adequate note taking
- Taking notes for the purposes of more efficient memorising
- Using illustrations as an aid to understanding text content
- Keeping a personal dictionary based on various covered themes
- Using bilingual lists of words in textbooks
- Making independent conclusions
- Development of cognitive and metacognitive learning strategies during problem solving (for example, predicting the content of the text based on its' title, using context for efficient understanding, analytical techniques, etc.)
- Using memory strategies (for example, verbal mnemonics, rhymes, anagrams, synonyms, antonyms, etc.) for language learning
- Using possibilities of mass media for learning foreign languages
- Presenting individual and group project work
- Developing individual and cooperative learning
- Developing an awareness of self-progress and ability to assess one's own work
- Engaging in self- and peer-assessment

An examination of the plans and programmes for the 4th grade English language curriculum reveals similar skill sets and themes as those for the 8th grade, further reinforcing the suggestion that various elements of the LTL competence have been directly implemented into the aims of this subject in particular.

#### **6.1.5 Conclusion**

What seems readily evident from the aforementioned analysis is that, in general, the general guidelines (introductory part) of TPPE explicitly stress the importance of acquiring LTL competence. Specifically, LTL is referred to directly and has been given an important position in the document. Role and position of LTL has been further emphasised in the context of lifelong learning. This indications would suggest that elements of LTL are present in TPPE, although nor competence itself, nor most aspects derived from conceptual framework of competences have been mentioned. However, an analysis of the subject-specific plans and programmes indicate minimal efforts to implement the

## 6. AN ANALYSIS OF THE CROATIAN TEACHING PLAN AND PROGRAMME FOR ELEMENTARY EDUCATION (TPPE) WITH REGARD TO LEARNING TO LEARN AND ENTREPRENEURSHIP

development of the LTL competence in their stated aims for educational achievements. Although introductory parts of plans and programmes for Croatian language and Mathematics do state some of the elements of the LTL competence, it is quite startling how little has been done in operationalising the elements of the competence. An exception to this rule appears in the plans and programmes for foreign language, where the LTL competence appears to be adequately recognized and implemented in the 'Learning strategies and knowledge use' theme.

### 6.2 THE STATUS OF THE ENTREPRENEURSHIP COMPETENCE IN THE TPPE

#### 6.2.1 Introduction

As it was mentioned at the outset of this chapter, the extent of the presence of the key competence of entrepreneurship will be given through the analysis of the introductory part of the document, as well as through fourth grade plans and programmes of subject Nature and Society and eighth grade plans and programmes of subjects; Technical Culture and Geography. The introductory section of the TPPE specifies various educational objectives for elementary education in Croatia. As was stated previously, one of these aims is the strategic objective of moving Croatia towards becoming a knowledge society. In addition, the development of competences that enable pupils for successful adaptation to the various roles one takes on as an adult is specified as a basic aim of compulsory education. From the previous considerations of the Entrepreneurship competence, it is evident that these are some of the elements behind the competence itself, but also some of the reasons for its introduction.

The text of the TPPE itself does not explicitly make reference to the key competence of entrepreneurship. However, certain elements of the concept of entrepreneurship are represented in the general educational objectives. For instance, as mentioned previously, the text stresses how primary education needs to contribute to the 'development of active and responsible individuals who are open to change, motivated and capable of lifelong learning'. Furthermore it is specified that the 'national educational policy for primary education is directed towards creativity, innovation and competitiveness', which all constitute significant characteristics of an entrepreneurial personality. Finally, the introductory part specifies personality traits that should be developed through primary education: 'independence, initiative, exploratory spirit, communicativeness, honesty, (...) self-confidence, independent critical thinking, an appreciation of peaceful solutions, equal rights and equality among people, team spirit and self-awareness'. The personality traits specified here also constitute elements of the concept of entrepreneurship and, in this sense, it can be said that the key competence of entrepreneurship is to an extent formally present in the text of the TPPE.

The concept of entrepreneurship itself appears in the text once, in the context of the curriculum for technical culture (see below for a more detailed description of findings). However, the text of the TPPE makes no explicit reference to the key competence of entrepreneurship. Therefore, this analysis was primarily focused on identifying related concepts and keywords that constitute the concept of entrepreneurship in elementary education. For instance, in the entire text, there is one reference to the concept of innovativeness, in the introductory part on educational objectives in primary education. Openness as a personality trait is mentioned several times in the text, in the curriculum for German language as an intercultural competence, and also in the curriculum for history. Pupils' independence as a positive personality trait also shows up only in the introductory part of the text. Initiative and competitiveness show up as personality traits to be developed, but only in the introduction – later on there is no reference to them in the specific subject curricula. Team spirit shows up in the introduction, and later on team work

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

is listed as a learning strategy in curricula for arts, foreign languages, chemistry and biology. Individual and social responsibility also appears among the educational objectives for elementary education, while taking responsibility for one's own learning appears as a learning strategy in specific subject curricula.

As mentioned above, a comparative analysis of the elementary curricula from other European countries indicated that content related to the key competence of entrepreneurship is most often found in the curricula for subjects most closely matched with those of Nature and Society, Technical Culture and Geography in the Croatian context. Considering this, it was these three subject curricula that were analysed in more detail.

### **6.2.2 Implementation of the Entrepreneurship competence in nature and society curriculum**

According to the TPPE, the fundamental goal of the subject of Nature and Society is to contribute to the intellectual and socio-emotional development of pupils. One of the specified sub-goals is to encourage curiosity for exploring phenomena in nature and society. Generally speaking, such curiosity might be said to contribute to the development of an entrepreneurial character.

However, when specific themes, key concepts and educational objectives for the nature and society curriculum in the fourth grade are analysed, no concepts related to the key competence of entrepreneurship appear. In fact, wider analysis of the TPPE indicates only one thematic unit related to entrepreneurship, which is found in the second grade curriculum. This theme is titled 'occupations', and states as its' educational objective 'to get to know various occupations in the pupil's immediate environment'.

### **6.2.3 Implementation of the Entrepreneurship competence in the technical culture curriculum**

According to the TPPE, topics related to technology can be studied at six levels, one of which is entrepreneurship. The overall educational objective for this subject is to 'build a practice-oriented, entrepreneurial and creative, technical and technological frame of mind and to enable pupils to recognise and utilize technical objects in their environment'. One of the recommended teaching methods is project-based work, deemed to develop 'general creativeness and exploratory thinking in pupils which enables problem-solving'. This latter statement seems to incorporate a significant element of the concept of an entrepreneurial person. However, these objectives remain only declarative in the TPPE. As such, topics related to entrepreneurship do not appear anywhere in the themes, concepts and educational objectives in the curriculum for Technical Culture.

### **6.2.4 Implementation of the Entrepreneurship competence in the geography curriculum**

One of the educational objectives specified in the curricula for geography is the development of intellectual curiosity in pupils, as well as the development of a sensitivity for team work so that 'students adopt positive attitudes towards cooperation as well as respect for other peoples' work'. Although not made explicit in the TPPE itself, both of these elements can implicitly be linked to the development of the key competence of entrepreneurship. Similarly to what has been shown earlier, the specific topics, concepts and educational objectives in this curriculum for the 8th grade make no reference to the development of entrepreneurship.

## 6. AN ANALYSIS OF THE CROATIAN TEACHING PLAN AND PROGRAMME FOR ELEMENTARY EDUCATION (TPPE) WITH REGARD TO LEARNING TO LEARN AND ENTREPRENEURSHIP

### 6.2.5 Conclusion

While the introductory part of the text of TPPE does not make explicit reference to the competence of entrepreneurship, it does stress the development of several personality traits and specific skills in pupils that can be directly linked to the development of entrepreneurship: active and responsible individual, independent critical thinking, innovativeness, openness, competitiveness, team spirit and solidarity. However, a closer look at the specific elementary school subject curricula indicates a predominant focus on content units of knowledge. Within their specific content units, the curricula for Nature and Society, Technical Culture and Geography do not make any reference to the development of skills and competence. As such, there is no specific reference to the development of the entrepreneurship competence. As such, it seems that the educational objectives related to entrepreneurship formulated in the introduction to the TPPE remain unrealised in specific subject curricula and thus have only declaratory or formal value.

### 6.3 GENERAL CONCLUSIONS

The Ministry of Science, Education and Sports has been avidly working on the restructuring and changing the present state of Croatian elementary education. One of the results of these efforts was the development of the TPPE. This foundational document of the Croatian elementary education does not endorse the competence framework, but still incorporates some of the elements of both competences covered in this project. What comes striking from the analyses of TPPE in relation to the presence of two competences, is a very low correlation between what has been written in the general part of the document and introductions of each of subjects' plans and programmes, and its operationalisation in the expected educational achievements. Although introductory parts give an emphasis on the development of the elements of both competences, LTL in particular, they do not incorporate the essence of the competence framework. The standard division of expected knowledge, skills and beliefs is not explicitly stated. Furthermore, the situation in which the basic document incorporates progressive educational elements (contents of competences), which is not followed with transformation of the general phrases into teaching practices, learning outcomes and educational achievements suggests that the elements of the competence are just present "pro forma". In addition, the present situation places a heavy burden upon teachers as the information given is contradictory. The general part of the documents gives guidelines, subject aims and attainment targets, yet the subject plans and programmes do not support aforementioned development. One of the possible outcomes of the present situation is the lack of coherence, resulting in less clear goals of the present TPPE and a more difficult situation for both teachers and pupils. Therefore an effort should be made in making the logical coherence of the different parts of the documents larger.



## 7. RESEARCH METHODOLOGY

As presented above, the present project focuses on describing the status and developing potentials of two key competences – Learning to Learn and Entrepreneurship - in Croatian elementary education. Specifically, the project aims to measure the extent to which Croatian pupils have developed the knowledge, skills and attitudes at the core of these two competences, and to gain insight into the level of support pupils receive in competence development from teachers, schools and the educational system in general. Furthermore, the project aims to assess the specific needs of teachers and schools regarding the introduction of these competences into Croatian elementary schools.

In order to address these aims, the research sought to include multiple perspectives on the same issues and a wide range of schools with varying backgrounds, as well as to examine the issues of interest as complex and multileveled. Specifically, the research was conducted in a manner that allowed for the perspectives of teachers, pupils and head teachers to be simultaneously considered in relation to the issues of interest. While these perspectives allowed for the exploration of the key issues at the level of the individual (i.e. teachers, pupils), analysis also allowed a multi-layered examination of the issues at the levels of pupil-teacher interaction, teacher-school interaction, and the school-education system context.

### 7.1 THE STUDY SAMPLE

The present research study was conducted using a sample of 25 public elementary schools in the Republic of Croatia. The sample of schools was designed to include, a wide array of schools from different regions, locations (urban vs. rural) and socio-economic backgrounds.

Schools were selected using a two-stage procedure:

1. In the first stage, stratification of the sample by region was applied. Based on the total number of Croatian elementary schools and the total number of pupils in those schools, the number of schools that needed to be sampled in each region was established.
2. In the second stage, a random sampling procedure was used to select schools within each region. The sampling frame included both urban and rural schools, but only those schools that had a total number of pupils within  $-1 SD^{15}$  to  $+3 SD$  of the regional average for school populations in that region were included. This procedure allowed for the exclusion of schools with a very low number of pupils.<sup>16</sup>

Within each school, the research was conducted on four sub-samples:

- a. Pupils in the 8<sup>th</sup> grade
- b. Pupils in the 4<sup>th</sup> grade
- c. Teachers
- d. Head teachers

---

<sup>15</sup> SD – standard deviation.

<sup>16</sup> In addition, two very small schools were added to the sample in order to represent a subsample of small schools.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

The eighth and fourth grades were selected as target populations in the present research in order to allow for an examination of pupils' competence at different developmental phases and within different stages of Croatian elementary education (namely, within the class teaching structure of the early grades and within the subject teaching structure of the later grades).

### 7.1.1 8<sup>th</sup> grade pupils

Two classes of 8<sup>th</sup> grade pupils from each school participated in the present study. In each school, one class completed the questionnaire developed to investigate the 'Learning to learn' (LTL) competence, while the second class completed the questionnaire developed to investigate the 'Entrepreneurship' (ENT) competence.

All pupils in the selected classes participated. However, questionnaires completed by pupils participating in adjusted programmes (i.e. pupils with severe learning difficulties) were later excluded. In total, 513 8<sup>th</sup> grade pupils completed the LTL questionnaire, while 537 pupils completed the ENT questionnaire.

In the LTL sample, 52.1% of pupils were boys while 47.9% were girls. Grade point averages in the seventh grade for this group of pupils were distributed as follows: 38.6% of pupils achieved 5 (A), 36.6% achieved 4 (B), 21.6% achieved 3 (C) and 1.6% received 2 (D).

In the ENT sample, 49.7% of pupils were boys and 50.3% were girls. Grade point averages in the seventh grade for this group of pupils were distributed as follows: 35.6% of pupils achieved 5, 40.5% achieved 4, 23.0% achieved 3, and 1.0% achieved 2.

### 7.1.2 4<sup>th</sup> grade pupils

A single 4<sup>th</sup> grade class from each school also participated in the present study. These pupils completed the 'Learning to learn' questionnaire only.<sup>17</sup> In total, 555 4<sup>th</sup> grade pupils completed questionnaires, where 52.2% were boys, while 47.8% were girls. Grade point averages in the third grade for this group were distributed as follows: 69.6% of pupils achieved 5, 25.8% achieved 4, and 4.6% achieved 3.

### 7.1.3 Teachers

Within each participating school, all available class and subject teachers were included in the study sample. In total, 688 teachers participated in the study, 84.6% of which were females, while 15.4% were males. Class teachers (Grades 1-4) made up 38.7% of the total teacher sample, while 61.3% of the sample were subject teachers (Grades 5-8). Of the subject teachers, 15.6% lectured in the subject of Croatian language and literature, 15.1% in English language, 14.1% in Maths, 8.8% in Geography and History, 6.8% in Physics, 6.5% in Religious Education, 5.8% in Physical Education and 5.5% in Chemistry. Teachers in each of all other subjects (German, Music, ICT, Visual Arts and Technical Education, etc.) made up less than 5% of the sample.

Amongst the participating teachers, 52.0% held a University degree, while 46.2% held a degree from a teachers' college. Teachers' work experience was distributed as follows: 23.3% of participating teachers had been working as a teacher for less than 5 years, 23.6% had been working for 6 – 15 years, 28.7% for 16 – 30 years and 24.4% for over 30 years.

---

<sup>17</sup> The decision not to apply Entrepreneurship competence was based on the developmental level of pupils and assumption that themes covered in the questionnaire are not suitable for the pupils aged ten.

In total, 364 teachers (52.9% of the total sample) completed the LTL version of the questionnaire, while 324 teachers (47.1%) completed the Entrepreneurship version of the questionnaire.

### 7.2 RESEARCH INSTRUMENTS

The research instruments employed in the study were designed specifically for the purposes of the present project, and were based on an examination of relevant instruments used in previous research in topics such as self-regulated learning, learning-to-learn, metacognition, self-efficacy etc., as well as on a conceptual understanding of the domains of the key competences, situated within the context of Croatian elementary education.

Separate questionnaires for each competence and target group were developed, bringing the total number of questionnaires developed to five. The major themes for all questionnaires were two-fold: firstly, questionnaires sought to explore the assessment of pupils' competence in the LTL and ENT competences and, secondly, to examine perceptions on the support available for competence development in classrooms and schools.

#### *Entrepreneurship questionnaire for 8<sup>th</sup> grade pupils*

This questionnaire covered the following themes:

1. Novelty-seeking
2. Activity planning and management
3. Approaches to problem solving
4. Working with others
5. Self-efficacy
6. Perceived teacher support
7. Assessment of teaching methods
8. Future job preferences
9. Preferences for challenging tasks
10. Entrepreneurial experience and knowledge

#### *LTL questionnaire for 8<sup>th</sup> grade pupils*

This questionnaire covered the following themes:

1. Perception and value of learning
2. Conceptions of learning
3. The learning context
4. Image of a successful learner
5. Motivation to learn
6. Learning strategies
7. Strategies for regulation of motivation and learning behaviour
8. Teachers' support for learning in teaching and assessment
9. Peers' support for learning
10. Parental support for learning
11. Time spent on learning

#### *LTL questionnaire for 4<sup>th</sup> grade pupils*

This questionnaire covered the same themes as the 8<sup>th</sup> grade questionnaire, but was shortened and linguistically adapted in order to be suitable for younger children.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

### *Teachers' questionnaires*

For the purposes of the present study, two versions of a teacher questionnaire were developed for the 'Learning to learn' and 'Entrepreneurship' competences, respectively. Both versions were identical in the first section, which included the following topics for both questionnaires:

#### A. 'LEARNING TO LEARN' COMPETENCE

1. Societal context of learning
2. Importance and usage of teaching methods that stimulate LTL
3. Image of a successful learner
4. Perception of pupils' preference of teaching approach
5. Perception of pupils' motivation for learning
6. Assessment of pupils' LTL competence
7. Pupils' support
8. Parents' support

#### B. 'ENTREPRENEURSHIP' COMPETENCE

9. School activities
10. Importance and usage of methods and activities that promotes entrepreneurship
11. Assessment of pupils' Entrepreneurship competence
12. School climate

The second section of the questionnaire differed in the two versions. In the LTL version of the questionnaire, there was a brief description of the LTL competence followed by a series of items that dealt with teacher attitudes toward the introduction of the LTL competence in primary schools. In the Entrepreneurship version of the questionnaire, the entrepreneurship competence was briefly described followed by a series of items regarding the introduction of this competence in primary education.

Versions of the questionnaire were randomly assigned to teachers so that they could not choose which version to complete<sup>18</sup>. It was not disclosed to the teachers that there were two versions of the questionnaires.

### *Interviews with head teachers*

Semi-structured interviews were carried out with head teachers in nearly all participating schools. Here, head teachers were asked about their understanding of concepts behind each key competence, as well as their perceptions on the relevance and utility of these concepts and the need for the introduction of the LTL and ENT competences in elementary education. The facilitating and constraining factors for the introduction of these competences in the educational system and at the particular school were also discussed. At the end of the interview, head teachers had the opportunity to describe positive examples of school policy or teaching practice from their own school that they felt contributed to the development of the LTL and ENT competences.

## 7.3 PROCEDURE

After obtaining permission from the Croatian Ministry of Science, Education and Sports for conducting the present research, head teachers in all selected schools were contacted.

---

<sup>18</sup> The two versions of the teachers' questionnaires were almost identical in design and layout, so it was not easy to distinguish between the two.

## 7. RESEARCH METHODOLOGY

In a letter sent by fax or e-mail, permission was requested to conduct the proposed research with pupils from the 8<sup>th</sup>- and 4<sup>th</sup>-grades and with teachers.

In total, 23 schools agreed to participate. Two schools reported that they would be too busy during the research period, thus choosing not to participate in the study. Therefore, two additional schools with similar characteristics as those declining participation (according to geographic location, number of pupils and teachers) were selected for the sample, bringing the total number of participating schools to 25<sup>19</sup>. The administration of questionnaires in schools was carried out in November and early December, 2006<sup>20</sup>.

The administration of questionnaires for pupils took place during regular class time, and lasted an average of 35 minutes. The head teacher decided alone which classes, for each grade, would participate in the research. Within each school, two 8<sup>th</sup> grade classes (one for each competence of interest) and one 4<sup>th</sup> grade class were selected. In two schools, where there was only one 8<sup>th</sup> grade class, the administration procedure was different: here, half of the pupils in this class completed the LTL questionnaire while the other half completed the ENT questionnaire.

The procedure for administering teacher questionnaires was more flexible and adapted to the situation in each school. In the majority of schools, however, a teachers' council was organised for completing the questionnaires. The usual duration of the teacher questionnaire application was 30 minutes.

In schools where it was not possible to organise teachers' councils, three different procedures were applied:

- a. The teachers' questionnaires were sent to the school in advance, and were collected when researchers came to school (3 schools).
- b. The teachers' questionnaires were left at the school by the visiting researchers, after which the school sent the completed questionnaires to the Institute for Social Research by mail (3 schools).
- c. The teachers were given the questionnaires individually or in small groups, which they completed on the day of the researchers' visit (5 schools).

Finally, the principal researcher also interviewed the head teacher at nearly all schools.<sup>21</sup> The interviews were carried out in accordance with a semi-structured interviewer's guide, and lasted between 20 and 45 minutes. In the majority of cases, these interviews were audio-taped, and in three cases (where recording was not possible), detailed minutes were taken.

The above-described research procedure allowed for the collection of questionnaire data from pupils and teachers related to both the LTL and ENT competences. Below is a presentation of the results of an in-depth analysis and interpretation of this data, followed by a discussion of relevant conclusions and recommendations arising from the research findings.

---

<sup>19</sup> A list of participating schools with corresponding number of respondents is in the Appendix.

<sup>20</sup> The fieldwork was planned for November, but due to a strike in elementary schools that occurred at the end of November, the fieldwork was interrupted and extended to December.

<sup>21</sup> In four schools head teachers were not present at the times of the data collection.



## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

As was stated in the introductory chapter, this and the following chapter are divided into three sections according to the different levels of analyses relating to both competences of interest:

1. The present level of the development of each competence in Croatian elementary schools is examined.
2. The present level of support for the development of each competence is discussed.
3. Views on the possible introduction of each competence into the Croatian elementary education are presented.

In this chapter, these three levels of analysis will be divided into four sections. The first section will consider pupil and teacher perceptions on the role of learning and education in Croatia, pupils' attitudes to and conceptualisation of learning, as well as the learning habits and practices of pupils. The second section will incorporate considerations of pupils' motivation to learn as well as their use of learning strategies. The third section, housed under the broad title of support for learning, will incorporate an analysis of teachers' support for pupils learning, as well as the support pupils receive from their parents and peers. The final section will discuss teachers' attitudes towards the introduction of the LTL competence in Croatian elementary education.

### 8.1 HOW DO TEACHERS AND PUPILS PERCEIVE THE STATUS AND ROLE OF LEARNING AND EDUCATION IN CROATIA? WHAT DOES LEARNING MEAN TO PUPILS? WHAT TYPES OF CONCEPTUALISATIONS OF LEARNING DO CROATIAN PUPILS HOLD?

#### 8.1.1 The perceived role of education and learning in Croatian society

As previously stated, Croatian education has recently undergone significant change with the development, empirical piloting and implementation of the Croatian National Educational Standard (HNOS), along with the subsequent implementation of the Teaching Plans and Programmes for Elementary Education (TPPE). All of these actions were accompanied by strong media campaigns from the Ministry of Education, which culminated with an explicit statement of the primary educational and political goal for the present government: to create a knowledge society within Croatia. For these reasons, we believe it to be especially significant to probe specifically teachers' and pupils' opinions on the role of education and learning in Croatia.

Results indicate varying perspectives amongst teachers and pupils on this topic. Specifically, 87.3% of teachers agreed that the *'poor social status of their profession is indicative of the role education holds in present Croatian society'*. Furthermore, a similar proportion of teachers (84.7%) agreed that *'knowledge and expertise in Croatia are insufficiently valued'*. Overall, these general indicators are suggestive of a pessimistic climate inside the teaching profession. In contrast, almost 60 % of teachers agreed that *'the role of education in the near future in Croatia will ameliorate'*. This cautious optimism,

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

which may have been prompted by recent educational reform, is a significant finding in that it appears to suggest a willingness and openness, amongst teachers, for additional educational reforms.

However, this optimistic piece of data is harshly contrasted with other results regarding the role of education and learning in Croatia. Namely, 68.3% of teachers disagreed with the statement '*In the context of Croatian society, pupils can clearly see that it is valuable to learn*'. This point is further emphasized by the finding that 74% of teachers reported feeling that, in order to become financially successful in Croatia, you did not need to be a successful learner. This response was similarly given by 55% of pupils. Further light is shed on the social context within which the educational system exists by the finding that 57% of pupils agreed with the statement '*successful persons in Croatia were also successful pupils*', while only 25% of teachers did so. While this apparent discrepancy might be attributed to both age and differing perspectives, it is also suggestive of the evident problems and worldviews present in contemporary Croatian society.

Another disquieting result from our analysis was the responses of both pupils and teachers to the statement '*In order to enrol in university in Croatia, other conditions (such as personal connections, parents, etc.) are more important than learning ability*'. Responses to this item should reflect the openness of Croatian education, as well as the degree to which the educational system is fair and meritocratic. In the present research, a full 43% of the pupils agreed with this statement, while an even more startling 64% of teachers did the same. This is an especially problematic finding in that it suggests that teachers, as active agents within the educational system itself, largely do not perceive that system as one of equal educational opportunities.

In the light of these results, it is hard to imagine a well-functioning system in which almost two-thirds of teachers feel that learning ability and effort are not the most significant elements for educational progression. Most certainly, it throws into doubt the nature of the messages regarding the value of learning and education which are being transmitted to pupils and parents. In general, pupils' and teachers' perceptions of Croatian society as an educational and learning context differ in their level of criticism. While pupils are more optimistic towards, or perhaps less sensitive to, the shortcomings of the present societal moment and educational context, teachers are more strongly pessimistic regarding the role of education and learning in Croatian society, a sentiment most likely built on personal experience. Indeed, there exist no simple solutions to this problem - change in the general perceptions of a society is a gradual one and can certainly not be easily achieved by media campaigns, current educational buzz words, or simple political messages.

In consideration of pupils' relative optimism regarding learning as an instrumental tool for achieving personal goals and making one's way through life, a closer examination of their perceptions and conceptions on learning is warranted, and is presented in the following section.

### 8.1.2 Pupils' attitudes towards learning<sup>22</sup>

Generally speaking, 4<sup>th</sup> grade pupils hold a very positive attitude towards learning, with a full two-thirds reporting learning to be an interesting and fun activity. Furthermore, almost all 4<sup>th</sup> grade pupils report learning to be both useful for their present life and important for their future life. Only one-fifth of 4<sup>th</sup> grade pupils think of learning as a difficult activity. In contrast, 8<sup>th</sup> grade pupils demonstrated different attitudinal patterns. Nearly half of all 8<sup>th</sup> grade pupils, regardless of their level of educational achievement, perceived learning to be a difficult activity. Furthermore, 40% of 8<sup>th</sup> grade pupils viewed learning as boring, with only

<sup>22</sup> A 5-point 'semantic differential' scale was developed in order to assess pupils' attitudes towards learning on the following dimensions: level of difficulty, (easy – hard), level of interest (interesting – boring), usefulness for present life (useful – not useful), importance for future life (not important – important) and level of pleasure (happy – sad). This last dimension was present only in the questionnaires for 4th grade pupils.

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

a small proportion of pupils stating that learning is interesting for them. However, almost 90% of 8<sup>th</sup> grade pupils perceive learning to be important for their future lives and 75% think of it as useful for their present life. These results depict an interesting picture of pupils' attitudes towards learning. Perhaps most significant is the general finding that, regardless of age and educational achievement, pupils perceive learning as an important activity. This fact alone indicates the significant role pupils assign to learning, and suggests that successful learning, or LTL competence, is perceived as instrumental to overall achievement.<sup>23</sup>

However, further analysis of the data also revealed less optimistic findings that suggest a drop in enthusiasm for learning as pupils progress through elementary school. Specifically, pupils in the 8<sup>th</sup> grade seemed less affirmative towards learning by more significantly emphasizing its difficulty and low level of interestingness. The results also revealed significant gender differences in attitudes towards learning, with girls, regardless of their age cohort or achievement level, consistently more positive towards learning than boys. These findings have implications for any potential recommendations in that they suggest that pupils in later elementary grades (i.e. grades 5 to 8) along with male pupils seem to be two groups specifically at risk for poorer development of attitudes towards learning, thus requiring special attention.

### 8.1.3 Pupils' conceptions of learning

As was explained in the description of the conceptual framework of the LTL competence, conceptions of learning have traditionally been based on a distinction between 'learning as a reproductive activity' and 'learning as a transformative activity'. It was argued that the transformative concept of learning resembles and overlaps most closely with the definition of the LTL competence in the Key Competences Framework, as well as with the framework itself.

Our results indicate that, in general, pupils perceive learning as a transformative, lifelong activity that is not restricted to formal education. As expected, this appears to be more evident in the case of 8<sup>th</sup> grade pupils. Indeed, 4<sup>th</sup> grade pupils continue to express a conception of learning as one closely connected with school and the rote memorisation of taught content. Approximately three-quarters of 8<sup>th</sup> grade pupils agreed that learning is necessary for acquiring the characteristics of a complete person. An even larger proportion of 8<sup>th</sup> grade pupils agreed that learning assists us in the development of new ideas and that it is useful in our understanding of the world. Most encouraging is the finding that nearly 90% of pupils disagreed with the statement 'learning stops when formal education ends', an estimation suggestive of a general perception of learning as a lifelong activity. Furthermore, 93% of 8<sup>th</sup> grade pupils agreed that 'people learn throughout life', an attitude shared by only 43% of 4<sup>th</sup> grade pupils. In addition, approximately 80% of both 8<sup>th</sup> and 4<sup>th</sup> grade pupils disagreed with the statement that 'learning is specific to school only'. A similar percentage disagreed with the statement 'learning is a waste of time'. Furthermore, more than 90% of 8<sup>th</sup> pupils and almost 75% of 4<sup>th</sup> grade pupils agreed with the statement 'learning is important for getting a good job', suggesting a general perception of the instrumental role played by learning and the internalisation of a positive concept of learning.

In general, pupils' conceptions of learning depict a positive and optimistic picture of pupils' awareness of the lifelong and instrumental nature of learning. This awareness needs to be

---

<sup>23</sup> Several factors might be contributing to such positive attitudes towards learning: a) Pupil activity at school is predominantly centred around learning, making it their primary educational activity; b) The vertical stream of the Croatian educational system is hierarchical in nature, where elementary education is open to everyone but subsequent educational progression depends on the educational achievement of each individual pupil; c) Continuous parental and societal pressure is placed upon pupils about the importance of learning; d) Pupils' analysis of the societal context is such that they perceive that learning is instrumental for their personal and professional goals.

nurtured and might most usefully be employed as a starting point from which the competences framework, and the LTL competence in particular, can be introduced. However, mention needs to be made of several findings which suggest some exceptions to this general perception. Specifically, our findings suggest a moderate subscription to the conceptualisation of 'learning as reproductive activity' amongst some pupils, where 61% of 4<sup>th</sup> grade pupils and 45% of 8<sup>th</sup> grade pupils agreed with the statement 'learning is the same as memorizing'. This is especially the case among students with lower achievement levels. As such, this becomes a subgroup in need of particular attention in efforts aimed at nurturing transformative and instrumental views of learning. Furthermore, a significant difference was found among conceptions of learning between the two age cohorts. This suggests a need for specific attention to sensitizing younger pupils to the transformative role of learning.

#### **8.1.4 Conclusion**

The above- presented analysis discloses several optimistic findings regarding pupils' attitudes and conceptualisations of learning. Namely, learning is generally perceived and conceptualised by pupils as an important, transformative and lifelong endeavour. These findings represent a sound and solid foundation upon which attempts should be made to further internalize these conceptions of learning, and the pursuit of learning activities, amongst pupils. However, the results also depict the rather worrisome situation in which the level of intrinsic satisfaction derived from learning tends to deteriorate with age. By the 8<sup>th</sup> grade, learning has reached the potentially problematic status of being perceived as neither important nor interesting. Furthermore, it seems that Croatia represents an unhealthy context for the development of positive attitudes towards learning and education, where teachers express doubt over the value of learning and are uncertain of the equal educational opportunities available in the system in which they work.

## **8.2 WHAT MOTIVATES PUPILS FOR LEARNING? HOW DO CROATIAN PUPILS LEARN?**

These questions reflect some of the key issues to understanding the level to which the LTL competence is developed amongst Croatian elementary school pupils. As previously described, the LTL competence incorporates certain knowledge, skills and attitudes related to the organization and monitoring of one's own learning. Results presented within this section will provide a brief overview of pupils' motivation to learn as well as the presence (or absence) of certain learning skills related to the organization and monitoring of learning. In order to obtain a better understanding of these issues, they will be examined through both pupils' and teachers' perspectives. As such, a parallel comparison of pupils' self-reports and teachers' responses to questions concerning pupils' motivation to learn and learning skills will serve as the basis for this analysis. Firstly, a consideration of pupil motivation will be provided. This will be followed by a consideration of pupils' and teachers' conceptions of a successful pupil and an analysis of pupils' self reported learning habits. An examination of learning strategies will be given through an analysis of both the perspectives of pupils (who reported on their own use of different learning strategies) and teachers' (who estimated the present level of development of different elements of LTL competence).

### 8.2.1 The motivation to learn

As discussed in Chapter Three, motivation to learn is a key element housed within the LTL competence<sup>24</sup>. An analysis of the questionnaire results revealed that, when asked why they learn, most Croatian elementary school pupils indicate two main motives for learning: the *desire to learn something new* and *grades*. Altogether, 83.5% of pupils mostly or completely agreed that they learn because they want to learn something new, while 66.1% of pupils mostly or completely agreed that grades are their main motive. Of interest in these results is their suggestion of the coexistence of both types of extrinsic motivation. The desire to learn something new suggests a more volitional form of extrinsic motivation, and thus reflects the more advantageous form of motivation for the promotion of learning, as it most closely resembles intrinsic motivation. The other, less autonomous type of motivation suggested by these results refers to motivation for the accomplishment of certain rewards (i.e. good grades).

**Figure 2: Pupils' responses to the question: 'Why do you learn?'**

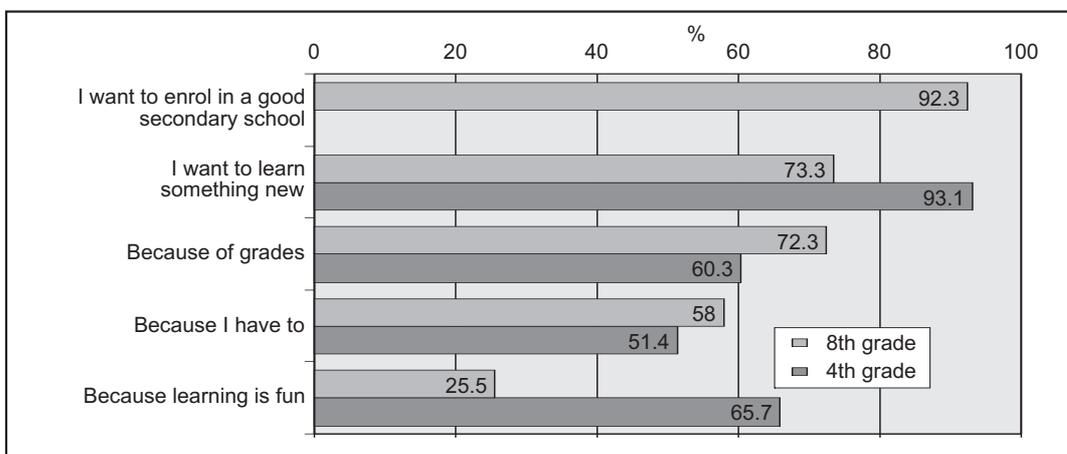


Figure 2 provides a general overview of pupils' motivation to learn with regard to pupil age. As this figure indicates, the desire to learn something new and learning 'for the fun of it' are both more prevalent amongst 4<sup>th</sup> grade pupils. In fact, only one out of four 8<sup>th</sup> grade pupils reported feeling motivated to learn because it was fun. These results are in accordance with previously described differences in pupils' attitudes towards learning where 4<sup>th</sup> grade pupils, in general, agreed that learning can be fun, while 8<sup>th</sup> grade pupils responded rather ambiguously when asked to rate learning as interesting or boring.

As previously mentioned, pupils generally reported that one of the most important motives for learning was the achievement of good grades. As illustrated in the above figure, this motive is more prevalent amongst 8<sup>th</sup> grade pupils. This appears to be closely linked with the primary motive amongst 8<sup>th</sup> grade pupils, where 92.3% of pupils reported that the main motive for learning was to enrol in a good secondary school.<sup>25</sup> In general, by the end of their elementary education, pupils' motivation for learning might best be described as an autonomous form of extrinsic motivation. Specifically, pupils are motivated by the

<sup>24</sup> In general, intrinsic motivation, where learning activities are carried out for their inherent satisfaction, promotes better learning outcomes. However, one should recall the existence of different forms of extrinsic motivation: pupils might learn because they feel obligated and forced to do so (where learning occurs amongst feelings of resentment and disinterest), or they might learn with willingness, accepting the value of learning as something that has personal importance. Since learning in a formal environment (e.g. school) often does not succeed in being inherently enjoyable, and therefore rarely promotes intrinsic motivation, educational institutions should strive to promote this latter form of extrinsic motivation in order to encourage pupils to accept learning as a volitional activity carried out with a feeling of doing something that is important and valuable.

<sup>25</sup> It should be noted that, due to their age, 4 grade pupils were not given this option for responding.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

achievement of certain goals that have some personal value, which in this case is the continuation of education in a good secondary education institution.

Aside from these age differences, the results also indicated that pupils at varying levels of academic achievement levels reported different motives for learning. Specifically, lower-achieving pupils more frequently reported that they are motivated by the feeling that learning is something they 'just have to do' and by the avoidance of potential conflicts with parents. Regrettably, in this case, it seems that forms of motivation fostering quality learning outcomes are barely present at all.

This brief overview of the results suggests the conclusion that pupils' motivation to learn shifts from intrinsic motivational factors in the 4<sup>th</sup> grade to those that are predominantly extrinsic in the 8<sup>th</sup> grade. Although the motivation to learn characterized by resentment and feelings of obligation is not the dominant type of motivation amongst pupils, it should be noted that approximately half of pupils agree that they learn because 'they have to'. The sheer size of this proportion is rather worrying, and is a result that should certainly not be ignored. More positive, however, is the finding that the most often reported form of extrinsic motivation is that which incorporates a desire to acquire new knowledge. This is encouraging in that it suggests that pupils have internalized specific goals they wish to accomplish through learning. This type of 'wilful' extrinsic motivation should be promoted, especially amongst lower-achieving pupils who most frequently reported a perception of learning as something they are forced to do

In order to obtain further insight into elementary school pupils' motivation to learn, an analysis was also carried out on teachers' responses to questions concerning this construct. As those who directly engage with pupils' in both learning and teaching processes, teachers would be expected to have a valid impression about what motivates their pupils. Further, teachers' perceptions of pupil motivation can also influence their teaching approach. Clearly, the selected teaching approach would be different if it was perceived that the motivation of pupils was for external awards only (e.g. grades) than if it was perceived that pupils were motivated to learn for the fun of it or because they were curious and expressed a desire to learn new things.

An analysis of teachers' perceptions of pupil motivation to learn indicates, somewhat surprisingly, a considerable lack of concordance with the responses of pupils themselves. In comparison to the result indicating that over half of pupils report that they are motivated to learn for the fun of it, a majority of teachers (72.4%) reported that only a small proportion or almost none of their pupils demonstrated this motive. Further, an even smaller proportion of subject teachers ascribed this motive to their pupils.<sup>26</sup> In contrast, a very high proportion of teachers (87.8%) perceived grades to be the main and almost exclusive motive for the majority or almost all pupils. Further, approximately half of teachers (51%) ascribed curiosity to only a small proportion of pupils. This perception is also more prevalent amongst subject teachers.

Similar to the analysis of pupil responses, this overview of teachers' perceptions of pupil motivation is rather worrying. In general, teachers do not appear to view the motivation of their pupils positively. Specifically, they perceive pupils to be predominantly extrinsically motivated for learning. Even more worrying is the finding that teachers, in general, ascribe the least autonomous form of extrinsic motivation to pupils, where learning is controlled by some external award (i.e. grades). The discrepancy in the perception of pupils' motivation is astonishing and reveals a potentially deep division in the teacher-pupil relationship. As this relationship represents a highly sensitive system, in which both sides are dependent on the behaviour of the other, it is of vital importance not only to note this difference with

---

<sup>26</sup> Since more 4 grade pupils reported this motive compared to those in the 8 grade, it appears that the responses of pupils and teachers, in this respect at least, do correspond. However, it was still only 13.4% of classroom teachers who ascribed this motive to a majority of their pupils, while a majority of pupils reported this motive to be one of their own.

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

interest and concern, but also to investigate what might underlie it. As it stands, teachers' perceptions of pupils' motivation depicts a situation in which the healthy motivational prerequisite for the development of LTL is currently not met.

### 8.2.2 Learning strategies

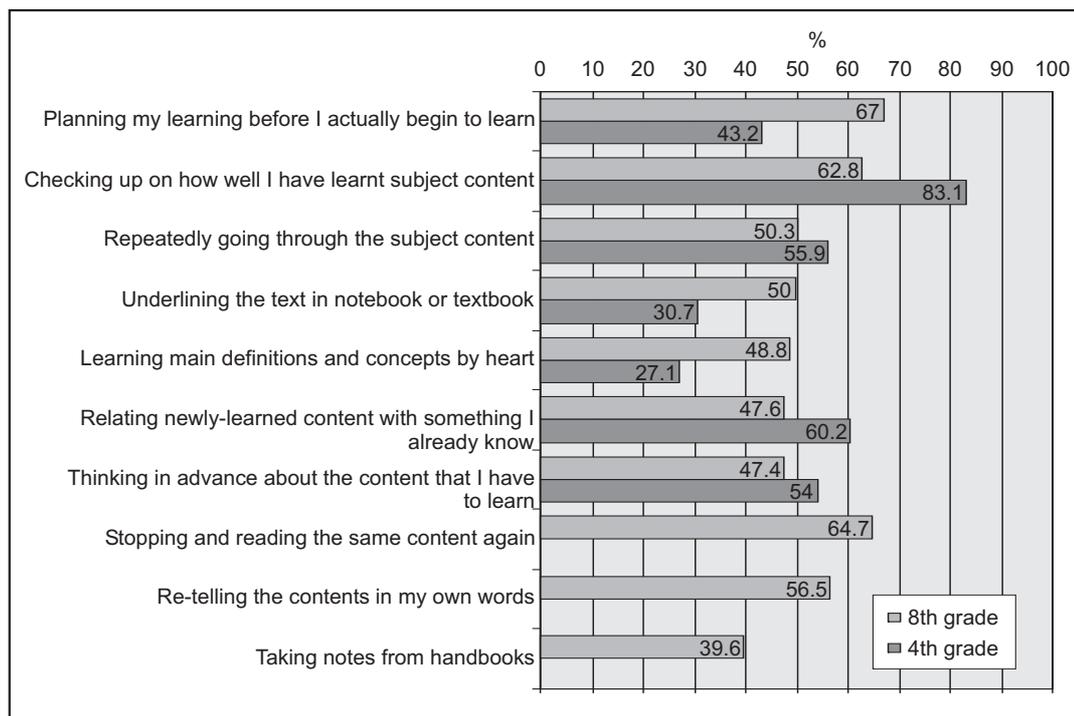
Apart from the motivation to learn, the LTL competence is also fundamentally founded upon a set of knowledge, skills and strategies related to the organization, management and self-monitoring of one's own learning. Research findings relevant to these aspects of the LTL competence will be discussed in this section from the perspectives of both pupils and teachers.

However, prior to an examination of specific learning strategies, we will briefly reflect on pupils' and teachers' perceptions of two related constructs: what constitutes a *successful pupil* and *learning habits*. In relation to the former, as will be demonstrated from participant responses, this issue is relevant in that they are closely linked with learning strategies for successful learning. Namely, when asked to describe a successful pupil, our participants agreed that the adequate development of learning strategies is critical for pupil success. Amongst 4<sup>th</sup> grade pupils, 'knowing how to learn' appeared in second place as a priority for pupil success, with 'excellent grades' reported as the main characteristic of a successful pupil. 'Knowing how to learn' appeared at the top of the list of characteristics of a successful pupil for both 8<sup>th</sup> grade pupils and teachers, with statements relating to successful time-management and self-monitoring also in high ranked positions. These are encouraging findings as they indicate that competence for meta-learning is one representative of pupil success in the opinion of both pupils and teachers.

In addition to the previous considerations, an attempt was also made to assess pupils' learning habits, and the ways in which pupils organise their learning and the time they devote to learning in particular. Here, findings depict a less optimistic picture than those from the previous section. Specifically, 62% of 8<sup>th</sup> grade pupils report that they do not learn every day. In addition, nearly half of 8<sup>th</sup> grade pupils and 30% of 4<sup>th</sup> grade pupils report that they only learn immediately before written or oral examination. When they do study, pupils state that they usually devote less than an hour to this activity. However, 90% of respondents from both cohorts state that they have a designated study space in their homes. The most frequently studied subjects, as reported by pupils, were 'Nature and Society' in the 4<sup>th</sup> grade and Mathematics and History in the 8<sup>th</sup> grade.

Once again, these results depict a somewhat negative picture in which pupils report a lack of systematic learning or studying, a crucial element for the development of the LTL competence. Furthermore, it seems that pupils tend to perceive learning as something that occurs only prior to assessment. This general opinion is extremely worrying, in that it fosters an environment in which learning occurs for the sake of assessment only and not for the sake of learning itself. Furthermore, the high proportion of pupils who do not profess to learning on a regular basis, particularly true amongst 8<sup>th</sup> grade pupils, might suggest that learning strategies are not optimally developed, if not underdeveloped.

Figure 3: Use of learning strategies (answers: often + very often)



An analysis of the learning strategies used by pupils, according to both pupil and teacher reports, should provide more detailed insight into what Croatian elementary school pupils actually do while learning. Indeed, pupils' responses regarding learning strategies reveals a complex pattern in which most learning strategies are used by approximately half of the respondents, as illustrated in Figure 3. According to pupils, one of the most frequently used strategies is *checking up on how well they have learned subject content* (e.g. by asking themselves questions). This strategy is more prevalent amongst 4<sup>th</sup> grade pupils, which might be expected due to the nature and complexity of the contents covered at that educational level in comparison with the contents in the 8<sup>th</sup> grade. The strategy of *relating newly-learned content with something they already know* is also more prevalent amongst 4<sup>th</sup> grade pupils (60.1%), while fewer than half (47.7%) of 8<sup>th</sup> grade pupils report using this strategy often or almost always. This result may be of some concern if one considers that building new knowledge onto already existing knowledge is generally agreed to result in better understanding and improved acquisition of new knowledge, and, as such, should be fostered. In contrast, fewer than half of 4<sup>th</sup> grade pupils report frequent strategic use of *planning their learning before they actually begin to learn*. Eighth grade pupils use this strategy more often, a result that should not be surprising due to age-related differences regarding the development of planning skills in general. In general, these results indicate inadequate usage of the aforementioned learning strategies by Croatian pupils, an argument that will be further amplified through a consideration of teachers' perceptions of pupils' LTL development.

Another finding of interest was that a significant proportion of pupils (27% of 8<sup>th</sup> graders and 12.5% of 4<sup>th</sup> graders) reported experiencing problems related to the understanding of learned content. Arguably, the prevalence of this difficulty might be related to the high frequency with which 8<sup>th</sup> grade pupils reported using the strategy of *learning by heart* (48.8% reported using this strategy often or almost always). This is a rather startling finding if one considers that pure memorization strategies, in general, do not lead to quality learning outcomes.<sup>27</sup> While pupils in the 4<sup>th</sup> grade report the use of a rote memorization

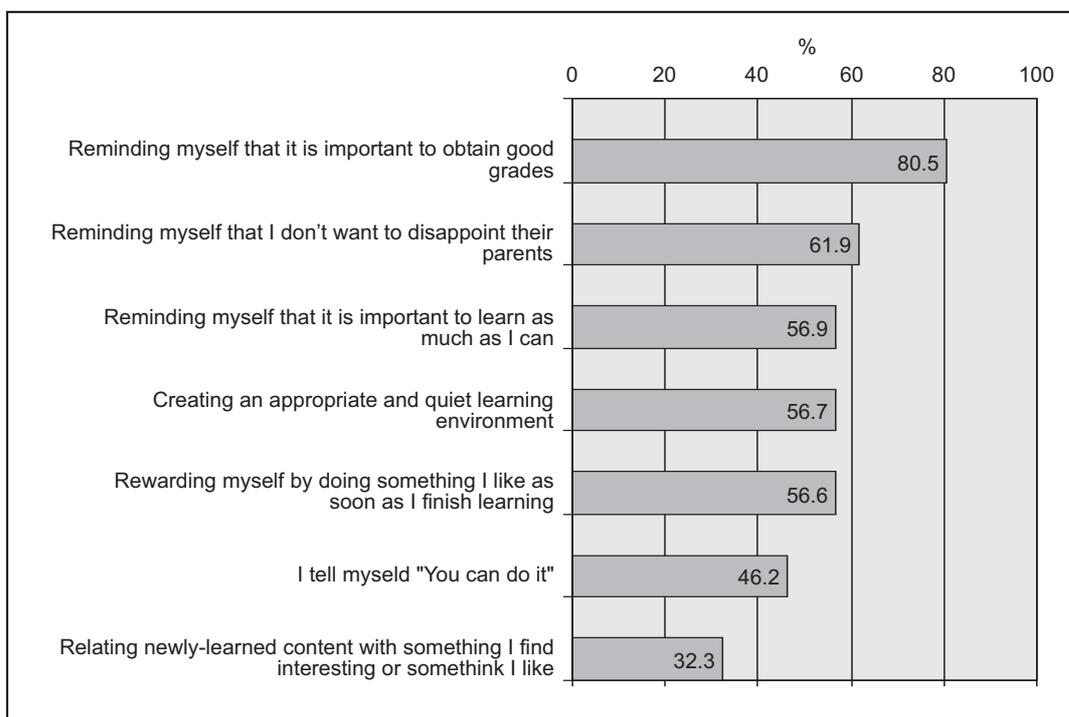
<sup>27</sup> One might further argue that problems in understanding learned content are hardly unexpected if almost half of all pupils are primarily using such a strategy: learning content 'by heart' certainly does not promote a deep understanding of learned material.

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

strategy less often (27.1% reported engaging in this strategy often or almost always), the higher frequency of use amongst 8<sup>th</sup> grade pupils suggests that 4<sup>th</sup> grade pupils will only tend to rely more heavily on this strategy as they progress through elementary school.<sup>28</sup> This negative trend should certainly be avoided, which implies a need for changes both at the level of pupil and at the level of assessment. Such change will be discussed further in a later section of this report.

When learning becomes difficult or boring, pupils generally do not report a tendency to give up or to learn the easiest parts only. The most frequently reported strategies employed when faced with difficulties while learning were *stopping and reading the same content again* and *creating an appropriate and quiet learning environment* (e.g. turning off the TV, mobile phone, etc.). Further, pupils also reported using various *self-motivating strategies* in order to enhance learning, as outlined in Figure 4.

**Figure 4: Use of strategies for regulating motivation (answers: often + very often)**



Specifically, one of the most frequently used motivational strategies (reported as being often or always used by 80.5% of 8<sup>th</sup> grade pupils) was *reminding myself that it is important to obtain good grades*. This finding appears consistent with that indicating that grades are high on pupils' list of motivators. Another self-motivating strategy prevalent amongst pupils is *reminding themselves that they don't want to disappoint their parents* (61.9%) as well as *rewarding themselves by doing something they like as soon as they finish learning* (56.6%). These self-motivating strategies indicate that pupils most often use methods that include some form of external regulation (i.e. rewards such as grades, parents' satisfaction and preferred activities). The only prevalent self-motivating method incorporating internalized and autonomous goals was *reminding myself that it is important to learn as much as I can* (56.9% of pupils reported often using this strategy). In general, the results relating to pupils' reported motivational strategy use appear to resemble and reinforce teachers' critical estimation of pupils as being primarily externally motivated.

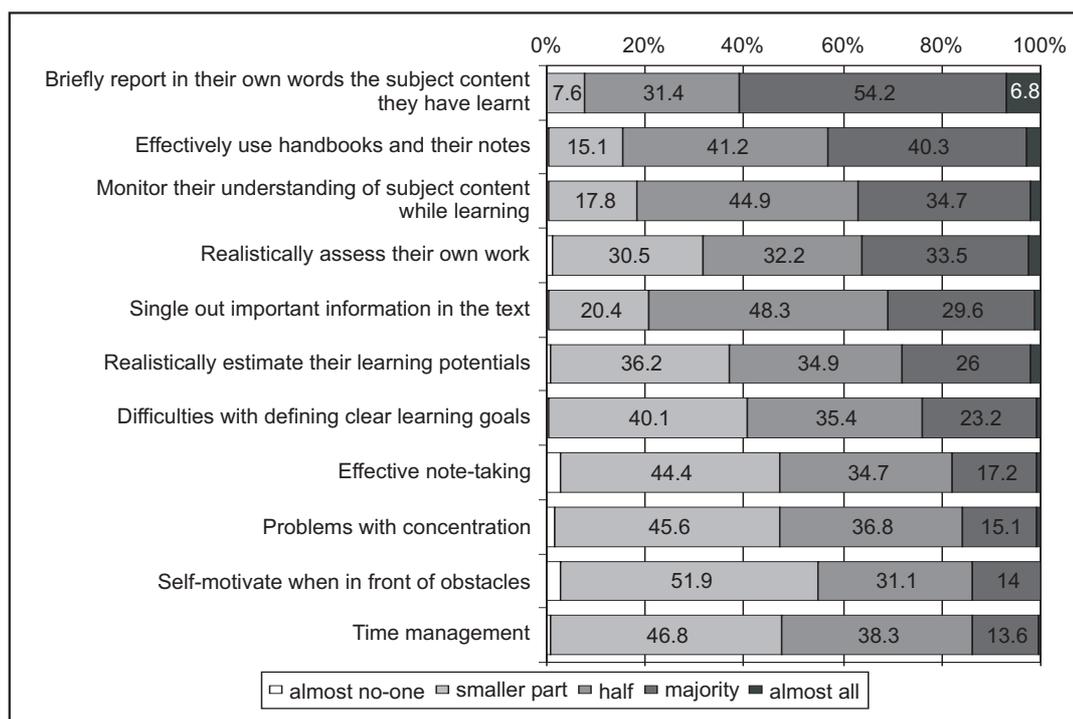
<sup>28</sup> This difference might be attributed to the unequal level of complexity of the 4th and 8th grade curricula as well as to the larger number of subjects in which pupils are enrolled in the eighth grade.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

Apart from the high prevalence of self-motivation strategies connected with external awards, it is also surprising to note that over one-third of 8<sup>th</sup> grade pupils reported rarely or almost never *relating newly-learned content with something they find interesting or something they like*. Relating school-content with something of interest to pupils requires a certain degree of overlap between these two constructs. In the present case, it seems that, for many pupils, school content presents limited overlap with personal interests. When these results are considered in conjunction with the previous finding that *relating newly-learned content with something pupils already know* was only cited amongst one-fourth of pupils, it seems evident that relating new and old knowledge is a generally challenging strategy for a significant proportion of pupils.

In sum, it appears that there is much room for the improved development of strategic learning amongst Croatian elementary school pupils. While some strategies connected with the development of LTL are more prevalent, this is certainly not the case for most identified strategies. Efforts at better fostering pupils' strategy use should be oriented towards improved methods for teaching pupils how to organize and enhance their learning in order to improve the overall quality of learning. This apparent need for a more systematic approach to teaching pupils how to learn is even more evident in the reports of teachers' in relation to the development of strategic learning skills.

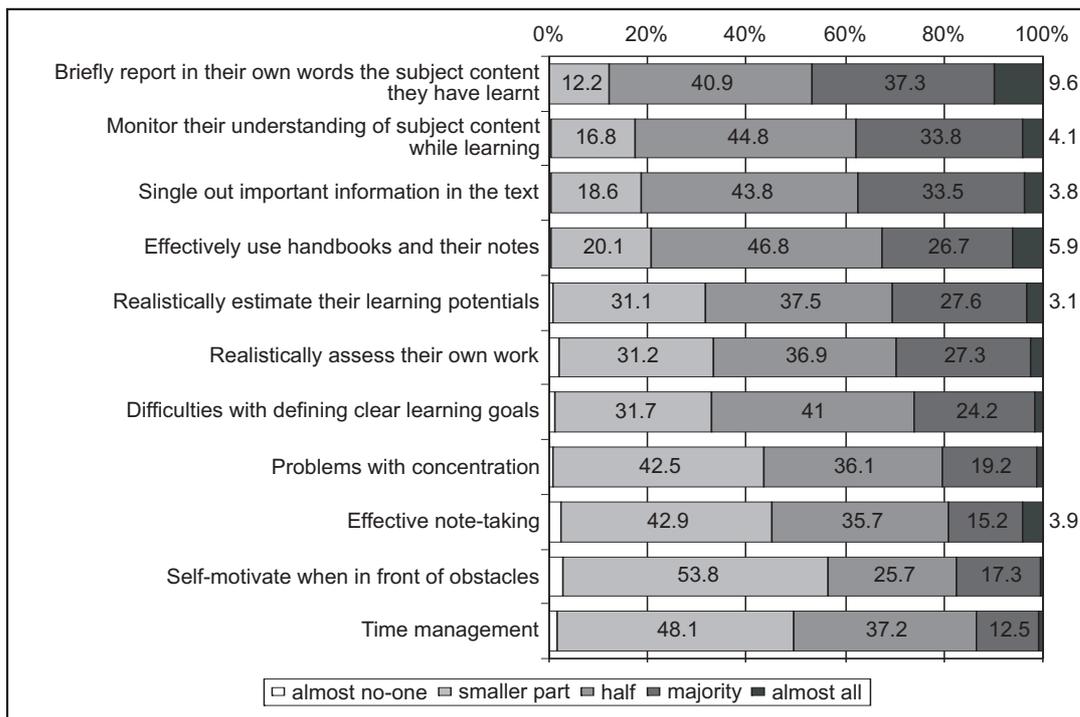
**Figure 5: Teachers' perceptions of 4<sup>th</sup> grade pupil strategy use**



Once again, teachers' perceptions of pupil strategy use are in sharp contrast to pupils' reports, thus painting a less positive picture of pupils' LTL competence. Arguably, these results are some of the most indicative markers of the current state of development of the LTL competence in Croatian elementary education. Teachers' perceptions here offer a dramatic picture through both their indication of the underdevelopment of LTL competence as well as of the overall failure of the educational system to adequately promote pupils' learning.

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

**Figure 6: Teachers' perceptions of 8<sup>th</sup> grade pupil strategy use**



Specifically, the findings indicate that the only learning-related skill that teachers perceive amongst a majority of their pupils is the ability to *briefly report, in their own words, the subject content they have learned* (51.8% of teachers report that a majority or almost all pupils are capable of engaging in this strategy). As illustrated in Figure 5 and 6, various other strategies are reported, but are, at best, ascribed to approximately half of pupils only (these include effective time-management, using notes and textbooks, monitoring learning and learning outcomes, and self-motivating strategies). Teachers also perceive that more than half of their pupils are *not able to realistically estimate their learning potential and assess their own work*. Further, approximately 65% of teachers report that at least half of their pupils experience *difficulties with defining clear learning goals*. In addition, 56% of teachers consider the same proportion of pupils to demonstrate *problems with concentration while learning*. The picture regarding the development of these elements of LTL becomes even more problematic if we consider that subject teachers are more critical in their estimation of 8<sup>th</sup> grade pupils. These results imply that not only has the educational system failed to nurture the development of these skills, it has in some ways contributed to their deterioration. Indeed, teachers' critical estimates of pupils also speak to their perceptions regarding their own work.

A consideration of all the results relating to pupils' abilities to use a variety of learning strategies leads to the somewhat provocative conclusion that the Croatian educational system, in which more than 50 % of pupils do not appear to possess these critical components of LTL competence, is failing in fostering the most basic of educational endeavours - learning.

### 8.2.3 Conclusion

This consideration of pupils' motivation for learning and their learning strategies depicts a grim picture by suggesting significant underdevelopment of the basic elements that constitute the LTL competence. Namely, pupils' motivation to learn appears to be primarily external, rather than internal. Further, learning habits are most closely connected with elements of the educational context, such as assessment, and are thus less led by the internalised value of learning. The analysis of pupil reports regarding applied learning strategies suggests that pupils hold average levels of development for adopting various approaches to learning. However, specific consideration of the strategies for the regulation

of motivation indicates, once again, that motivation is driven largely through external elements. Finally, an examination of teachers' perceptions on the present state of LTL competency offers a severe word of warning regarding pupils' present level of development of various components of the LTL competence.

In sum, there appears to be a clear and pressing need for improvement in the implementation of this area of the LTL competence. The effective use of learning strategies, as a basis of the LTL competence, needs to be essentially addressed through systematically planned actions. Although these actions might be primarily oriented towards pupils, teachers are crucially important in the process through which pupils acquire strategic learning skills that will, in turn, contribute to improved learning outcomes. For this to occur, teachers need to be supported in developing and applying the knowledge, skills and teaching practices necessary for fostering strategy use amongst their pupils.

### **8.3 WHAT ARE THE ELEMENTS OF THE SUPPORT FOR THE DEVELOPMENT OF THE PUPILS' LTL COMPETENCE?**

In this section, we will attempt to give an overview of pupils' and teachers' perspectives regarding various school-related activities: teaching methods, teachers' self-efficacy and support for learning. These activities themselves each contain several influencing factors and related elements such as assessment but also elements of the ecological support provided by parents and peer group. Indeed, it might be argued that together, through a complex system of interactions, these constructs have the power to offer significant insight into the current state of the LTL competence in Croatian elementary schools as well as the existing support available for its' further development. Firstly the analysis of the teaching practices as a basis for the development of consideration of the assessment practices. A consideration of the teacher-pupil relationship will be followed by the consideration of the parental and peer support.

#### **8.3.1 Teaching practices as a basis for the development of the LTL competence**

Teaching methods are certainly one of the most prominent aspects of any educational endeavour. As such, they have the potential of fostering, or in some cases discouraging, pupils' activities and habits related to learning as well as pupils' learning outcomes. In order to foster learning, teachers should help pupils in raising their awareness regarding specific aspects of the learning process (e.g. awareness of the availability of different learning strategies, problem solving skills, evaluation of learning outcomes). Aside from direct instruction to pupils on how to develop learning strategies, there are additional teaching methods that can contribute to the development of an educational environment supportive to the development of LTL competence. Underlying some of these methods is the inclusion of pupils as active participants in the teaching process as well as building new knowledge on the basis of already existing knowledge in order to achieve quality learning outcomes. A brief overview of teachers' responses regarding the use of specific teaching methods will provide insight into the use of some of the most frequently, and some more rarely, reported teaching methods. Broadly, these specific methods can be best described in terms of teaching pupils how to learn, cooperation with pupils regarding learning outcomes, cooperation on the clarity of these outcomes and expectations, as well as instructing pupils on methods of self-evaluation of learning outcomes and the learning process.

In the first instance, an overview of teachers' personal opinions on the importance of certain methods for the development of the LTL competence will be presented, followed by a discussion of teachers' perceptions regarding the extent to which certain methods are being employed in their own school, excluding their own work<sup>29</sup>.

---

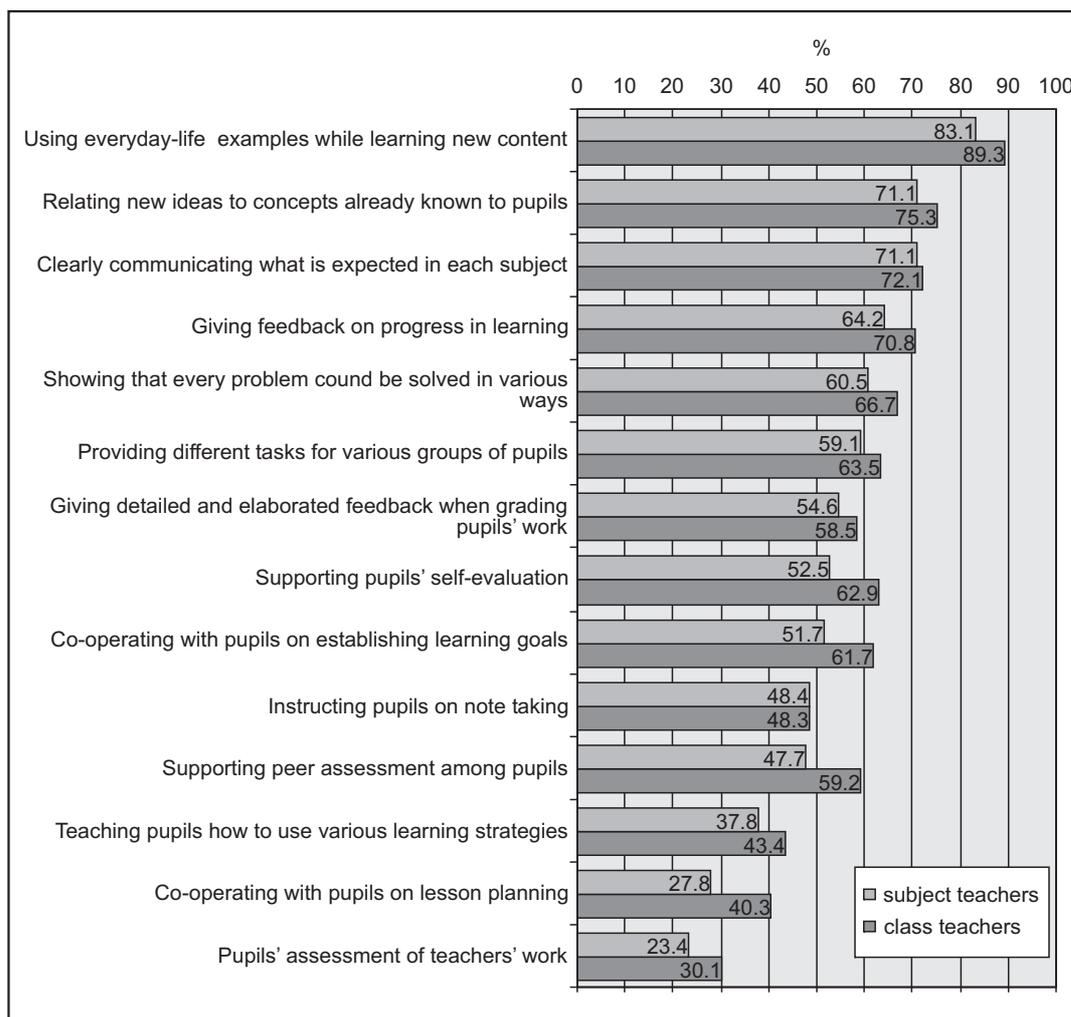
<sup>29</sup> As mentioned previously, we assumed that teachers would provide less socially desirable responses when estimating the use of certain methods at the school-level. This avoids the risk that, according to the literature review, teachers might provide somewhat biased answers relating to their own practices in order to conform to that which is viewed as a desirable conception of a good teacher and good teaching practices.

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

Teachers' responses regarding the importance of certain teaching practices for the development of the LTL competence indicate that general opinion is extremely homogenous. Simply, it seems that a significant majority of teachers consider all described methods to be important or very important. For at least 94% of teachers, almost all methods described were rated to be important or very important. Only two items were rated as important or very important by fewer than 90% of teachers – *cooperation with pupils on lesson planning* (80.8% rated this element as important or very important) and *pupils' assessment of teachers' work* (84.6% reported this to be important or very important). The implications of this result will be discussed later within this section.

Despite high rating of importance, teachers' estimations related to the degree to which these same methods are used in their schools are somewhat less high, a contrasting result that suggests there is room for improvement in the practice of methods aimed at fostering LTL competence. According to teachers' responses, the most frequently used methods are those aimed at enhancing pupils' understanding of a subject through examples related to a taught content. More specifically, this refers to *the use of practical everyday-life examples while learning new content* (84.9% of teachers report that this method is used often or almost always) and *relating new ideas to concepts already known to pupils* (72.1% responded often or almost always). In general, these practices are more prevalent amongst classroom teachers. The third most reported teaching practice was *setting clear expectations* (regarding pupils' obligations in a certain subject), where 71% of teachers reported that this method is used often or almost always.

**Figure 7: Use of teaching methods that foster LTL (answers often + very often)**



## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

This generally positive picture regarding the use of specific teaching methods can be contrasted with pupils' perceptions on the use of these same methods. In general, pupils' responses concerning their teachers' practice were somewhat more critical. Namely, while teachers' estimated that connecting new ideas with previously-learned concepts or everyday-life examples is a frequently used practice, only 41.6% of 8<sup>th</sup> grade pupils reported feeling that teachers employed this strategy often or almost always. In other words, it seems that more than half of pupils do not perceive a practice that teachers report performing on a regular basis. If we recall, from the previous section, that building new knowledge on the basis of already existing knowledge was not one of the most frequently used learning strategies for approximately half of all pupils, the present findings suggest that the absence of this strategy might be due to a lack of specific instruction from teachers. This implies a need for the investment of additional effort in explicitly explaining to pupils the importance of this strategy to learning, and demonstrating how it might be used to strengthen knowledge acquisition. Indeed, raising pupils' awareness on the importance and usefulness of this specific strategy would serve to enhance its use and, consequently, raise the quality of learning.

Practices that were less frequently reported by teachers included *teaching pupils how to use various learning strategies* (39.4% of teachers reported that this method was often or almost always used in their school) and *instructing pupils on note taking* (48% reported often or almost always used). Responses of 8<sup>th</sup> grade pupils regarding the same practices provide an even more pessimistic picture, where a mere third reported feeling that teachers often or almost always advised them on how to improve their learning. Interestingly, although classroom and subject teachers did not differ in their reported use of these methods, 87% of 4<sup>th</sup> grade pupils reported feeling that their classroom teacher often or almost always advised them on how to learn. In this case, it seems that 4<sup>th</sup> grade pupils perceived that their teachers employ this practice more often than the teachers themselves feel they do. The low reported frequencies of these methods by teachers are especially worrying if one considers the importance of these practices to the development of LTL competence. Both methods incorporate activities that can be of great assistance to pupils while organizing and regulating their own learning both within and outside the classroom context. Raising pupils' awareness (especially amongst older pupils) about the various learning strategies that can be applied in different learning contexts is certainly a critical element to enhancing the quality of learning. If we consider the present findings in relation to results presented in the previous section regarding teachers' low estimates of pupils' learning skills, we might suggest that one reason for the general absence of learning skills is a scarcity of opportunities, in Croatian elementary classrooms, to learn how to learn.

Two of the least reported teaching practices were those referring to *cooperation with pupils on lesson planning* (only 32.3% of teachers reported that this method was often or almost always used) and *pupils' assessment of their teachers' work* (25.7% reported often or almost always used). Again, pupils' responses provided a more critical estimation, where only 15.5% reported feeling that they often have the opportunity to participate in lesson planning. These two items are of particular importance in that they reflect the teacher-pupil partnership in the classroom, a critical element in the educational context. According to pupil and teacher responses, this partnership is not being nurtured through opportunities for pupil contribution to planning class activities. One might argue that more active participation of pupils in planning class activities, when possible, would lead to higher acceptance of and greater interest for taught content.

A comparison of teachers' personal opinions on the importance of specific teaching methods and their estimations on the use of the same methods suggest several patterns. Firstly, methods that teachers personally consider to be most important are also those used most frequently. Accordingly, methods ranked lowest on the importance scale are the least frequently used. As such, we might hypothesise that teachers' classroom practices are influenced by their personal beliefs regarding the importance of specific methods, but

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

also by teachers' skills in incorporating these methods into their everyday work. Consequently, one of the steps that should be undertaken is raising teachers' awareness on how specific teaching practices contribute to the development of the LTL competence, and supporting teachers in developing skills for employing these practices in their classrooms. Altering teacher attitudes and perceptions about teaching and learning processes can provide a solid foundation from which further changes in classroom behaviour can be promoted.

At first sight, consideration of the aforementioned results will depict a picture in which teachers are using teaching methods which are suitable for fostering of the development of LTL competence. However, an in-depth analysis shows that teachers are still not oriented towards pupils as an active participant of the teaching-learning process, as the items which probe this dimension are least estimated ones. Pupils' perspective shows a more critical stance towards used teaching methods, suggesting, once again a lack of sufficient communication between teachers and pupils, a characteristic substantial for any potential educational success.

### 8.3.2 Pupil assessment

As outlined in the third chapter of the present report, assessment plays an important role in the development of the LTL competence in a manner that pupils' perceptions about assessment can have considerable influences on their approaches to learning. This is especially evident in the case of inappropriate assessment procedures that encourage 'surface' approaches to learning characterized by memorizing and a lack of connectivity between subject contents. Here, we have attempted to triangulate teachers' and pupils' answers in order to probe the nature of assessment in Croatian classrooms. From the results, it is evident that assessment practices, and attitudes towards these practices, differ for 4<sup>th</sup> and 8<sup>th</sup> grade pupils. A similar pattern is visible in the division between class and subject teachers, with the former seemingly more in tune with more modern means of assessment.

In general, 8<sup>th</sup> grade pupils are critical of the assessment practices employed by their teachers, as around half of them feel that the present assessment method is only partially fair and meritocratic. However, 75 % of pupils perceive that, in order to get an excellent grade, one has to demonstrate an understanding of the assessed content. Similarly, 51% of pupils report feeling that teachers praise pupils for their progress in learning. In addition to these somewhat optimistic findings, pupils report a worrisome lack of feedback about their work, and limited explanations for achieved grades specifically. Furthermore, pupils are split on whether teachers' feedback is helpful for the improvement of their learning and whether teachers clearly communicated what is expected in order to achieve a certain grade. In contrast, 4<sup>th</sup> grade pupils are less critical of the assessment practices employed by their teachers. This finding might be expected due to the nature of classroom teaching, where pupils spend most of their time with just one teacher. This, in turn, enables more varied and original assessment patterns as well as closer tracking of each individual pupil.

Teachers' responses reveal that one-third of teachers do not feel that educational expectations are clearly communicated in their schools. In addition, an even larger proportion of teachers state that pupils are rarely encouraged to evaluate their own work.<sup>30</sup>

In sum, these results depict a somewhat critical picture of pupil assessment in Croatian elementary education. This picture is characterised by outdated assessment practices and a lack of clarity in assessment expectations. Furthermore, assessment in higher grades is perceived by pupils as somewhat unfair and lacking reasonable and useful feedback. These findings might be considered in relation to the previous result indicating that a large

---

<sup>30</sup> This gains further importance if considered in light of the class vs. subject teaching divide. In general, subject teachers are more critical of the practices employed in their schools.

proportion of pupils learn just for the purposes of assessment, a practice especially destructive to the development of LTL competence if this assessment is a poor reflection of pupil ability. This scenario positions pupil assessment at a critical point, not only for the development of the LTL competence but also for the general state of the current educational system. Indeed, it is difficult to expect the development of pupils' systematic and self-regulated learning skill if the assessment practices are destructive to that same development. As such, significant change is required in the methods of pupil assessment in Croatian elementary education, including the incorporation of modern assessment practices such as portfolios, pupil agendas, formative and assessment for learning. Before this change has been implemented, it is difficult to expect any substantial amelioration in the current state of development of the LTL competence amongst Croatian elementary education pupils.

### **8.3.3 Pupil-teacher relationship regarding learning**

As it was previously mentioned, the communication between pupils and teachers in Croatian elementary schools does not seem to be at the satisfying level. Teachers and pupils are critical of each others' work and educational effort. However, the relationship between teachers and pupils should not only be limited to the class period. It is also very important to acknowledge elements of the school ethos that have the potential to encourage mutual communication and openness between these two educational stakeholders. In general, our results indicate an astounding lack of communication and, as such, depict a rather worrying picture.

To begin with, due largely to the nature of classroom teaching, the situation in the 4th grade is less problematic, where both pupils and their teachers report feelings of mutual support and openness to inquiry about learning. In contrast, the results from 8th grade pupils and their respective subject teachers indicate a complete lack of mutual communication. It is startling to find that 66% of subject teachers stated that pupils rarely or never ask for help when in need of assistance in order to learn something. Furthermore, 78.8% of subject teachers reported that pupils rarely or almost never ask for advice in regards to their own learning. Eighth grade pupils themselves were similarly critical of their teachers, where only one-third of pupils reported that their teachers often or almost always provided advice on how to approach contents that needed to be learned. Further, nearly half of 8th grade pupils reported that teachers rarely or almost never treated all pupils in an equal manner.

These results are worrisome for several reasons. Mainly, they depict a system in which cooperation and communication is limited and insufficient. This system, which should be characterised by dynamism, dualism and a set of common goals, surely must suffer from a situation in which teachers are not consulted by their pupils regarding learning. If what teachers report is accurate, and there exists no reason to think otherwise, the teacher – pupil relationship, a core element of any educational system, is at stake in Croatian elementary education. These are serious problems which need to be more specifically formulated and addressed in order to set a more solid foundation for the implementation of the competence framework.

### **8.3.4 Parental support**

One of the crucial elements for fostering the LTL competence is the support pupils receive from their parents. This is especially the case in elementary education, where various elements of the competence are in their crucial formative phase. As in the case of formal education, parental support can be beneficiary, but also destructive, to the development of the LTL competence. In the present project, we wished to investigate how both teachers and pupils perceive this support.

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

Once again, there exist large, yet somewhat expected, differences between the responses of 4<sup>th</sup> and 8<sup>th</sup> grade pupils. Specifically, 4<sup>th</sup> grade pupils almost unanimously declared that parents always asked them about their school day, and that they assisted them in their school work. In contrast, the reports of 8<sup>th</sup> grade pupils depicted a slightly different picture which might be best described as a situation in which parents offer large educational expectations but average educational support.

The educational expectations parents place on pupils were most clearly evident by the finding that 92% of pupils reported that their parents often or always reminded them of the importance of learning and education, a result consistent with the previous finding suggesting that pupils, in general, perceived learning as highly important to their future lives. However, a less expected result was that 75% of 8<sup>th</sup> grade pupils stated that their parents expected them to receive a university education. This is an astonishing result if one considers that the current proportion of citizens with a university education in Croatia is 7%. Further, as compulsory elementary school houses pupils with the widest possible range of abilities, it is hard to expect that a full 75% of them would achieve a university education. Although striving for high educational achievement is certainly positive, the reality of these facts, in combination with the previously described notions of the importance of education and the perceptions of a faltering system of enrolment into higher education institutions, can be a potentially problematic mix. In contrast, two-thirds of pupils reported that their parents would be satisfied if they enrolled into secondary vocational education, suggestive of parental support for a diverse range of opportunities and the perceived worth of vocational professions.

The level of parental support available for learning is in part illustrated by the finding that nearly half of all pupils report rarely or almost never speaking with their parents about their school day. Even more interesting is the finding that the highest achieving pupils are those that report the highest levels of communication regarding school with their parents. Paradoxically, while communication with parents was lowest amongst low achieving groups, the emphasis placed on the importance of education was highest amongst these groups. This situation would suggest the highest level of imposed control and the lowest level of cooperation and fruitful communication.

An intriguing set of data regarding parental support is provided by the teachers. Firstly, a shocking 72% of subject teachers reported that parents rarely or almost never ask them about how to improve the learning ability of their children. This situation is in sharp contrast to that for class teachers, where two-thirds of this group stated that parents often or almost always seek such advice. Furthermore, 93 % of all teachers felt that parents often or almost always demonstrated more interest for pupils' grades than for his or her progress in learning. This finding is further augmented by that which indicates that 90% of teachers reported feeling that parents often or almost always motivated their children with material incentives. In general, these results suggest a lack of fruitful communication between two crucial stakeholders in the educational endeavour: teachers and parents. Most worrying is the perception of teachers that parental support is both insufficient and inadequate, a situation most certainly not conducive to supporting the development of the LTL competence.

### 8.3.5 Peer support

Peer support is an important ecological factor that can be influential to the development of the LTL competence. In the present research, we have tried to assess this support through an examination of various peer factors connected with learning and the classroom context. In general, our results demonstrate that there exist several ways in which pupils support each other in the educational environment. We have additionally attempted to measure peer support for situations that should not be encouraged, such as *copying someone's homework when I have not done mine* and *helping during assessment*.

Our research revealed that pupils in both the 4<sup>th</sup> and 8<sup>th</sup> grades reported receiving peer support. However, it is disturbing to find that more than 90% of pupils reported almost never or rarely learning together with other pupils in class. While this result might be an indication of generally low levels of independent, active learning in Croatian schools and the reported tendency, amongst Croatian pupils, to learn solely for the purposes of assessment, the most problematic element from this finding is its' suggestion of the scarcity of peer-to-peer learning in Croatian classrooms. Indeed, collaborative learning skills are ones that will follow pupils throughout their educational and professional careers, and thus should also be encouraged by the educational system.

#### 8.4 TEACHER ATTITUDES TOWARDS THE INTRODUCTION OF THE LTL COMPETENCE IN CROATIAN PRIMARY SCHOOLS

Through a brief description of the LTL competence in the questionnaire, the teachers were introduced to the conceptualisation of Learning to Learn as a key competence, and were then asked about their attitudes towards the introduction of this competence in Croatian elementary education. Teachers' attitudes, and their willingness to co-operate in the implementation of the competence within the educational system, become especially important if one considers that teachers would act as a primary agent of such change, while at the same time bearing the heaviest burden of the proposed changes.

Almost all teachers (99.4%), irrespective of their position (class or subject teacher) or teaching history, agreed that elementary schools should systematically work on fostering the development of the 'learning to learn' competence. Such unanimous agreement with the presented proposal indicates the importance of the "learning to learn" concept for teachers, and suggests that they view learning and learning skills as imminent to academic achievement and their teaching practice. Furthermore, such undisputed acceptance of the concept confirms the idea that teaching children how to learn is one of the main goals of education. As such, this finding suggests highly fertile ground for the implementation of the LTL competence into Croatian elementary education.

According to the survey findings, 46.5% of teachers believed that LTL should be implemented as a cross-curricular competence, taught through all subjects that make up the elementary school curriculum. This finding suggests that teachers are aware that the benefits of nurturing the LTL competence, as well as its' transferability, could be best achieved if the ideas and practices behind 'learning to learn' were incorporated into every class and every subject. Encouragingly, this majority opinion also corresponds with the proposal put forward by the European Key Competences Framework.

However, a full 24.0% of teachers reported feeling that the LTL competence should be introduced as an extracurricular activity (through workshops) for pupils, while 22.1% of teachers felt it should be introduced with the pupils' primary teacher (i.e. in home room). Only 7.1% believed that the best way to implement the LTL competence would be through a new subject. These findings are most likely the result of the prevailing perception amongst teachers that the Croatian elementary curriculum is already too extensive in content and overloaded with subjects, and thus does not leave much room for the introduction of a new subject or new content in existing compulsory subjects.

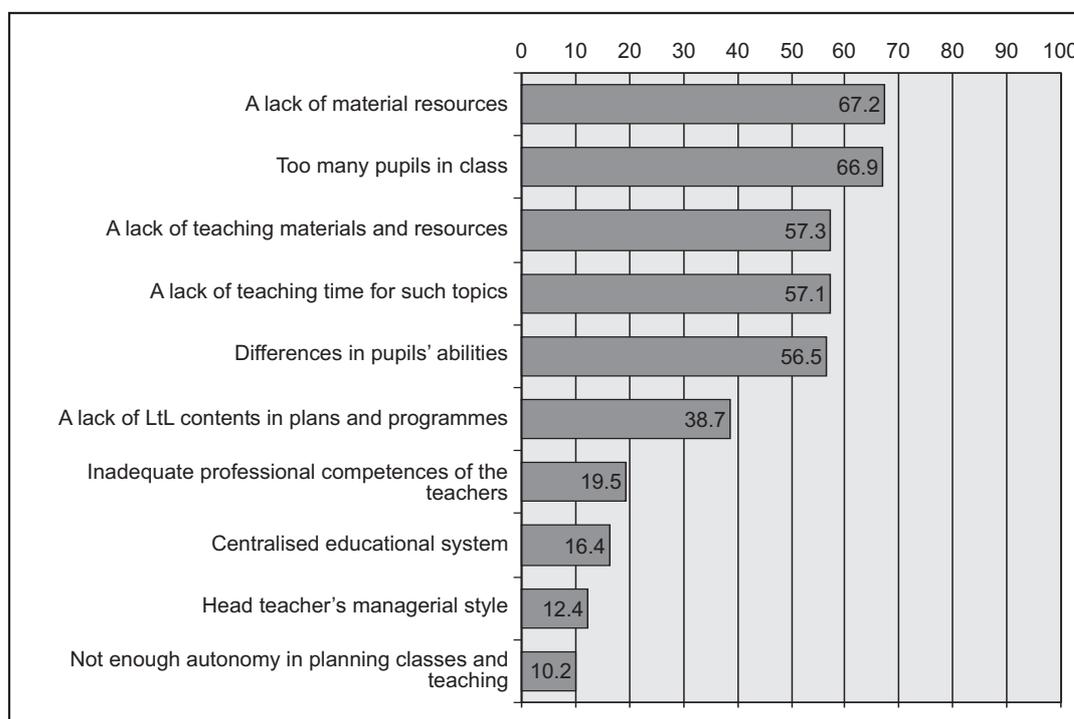
It is interesting to note that a majority of teachers (55.9%) claimed that they already make a (very) great effort in developing the LTL competence in their pupils. This view was especially prominent amongst class teachers, with 68.4% of these teachers reporting working (very) much on these topics. Among subject teachers, the reporting of these efforts was less prominent (48.4%). Teachers' perceptions of their efforts in fostering LTL is in sharp contrast with their estimates of pupils' competence in this area and might indicate that teaching practices and the support offered to pupils' efforts in areas such as

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

self-regulation and organisation of learning are actually less effective than what teachers would like to believe. The results also suggest that special support, encouragement and training in fostering the LTL competence should be provided to class teachers, who are currently less involved in helping pupils build their LTL competence. In addition, subject curricula and class planning in the higher grades (5<sup>th</sup> – 8<sup>th</sup> grades) should undergo substantial changes in order to effectively incorporate key competences as important learning outcomes, and to make room for new conceptions of learning, active and collaborative learning methods, construction of learning, pupils' self-direction and self-regulation, metacognitive discussions, and formative assessment.

Class and subject teachers also differed in their estimates of the presence of the LTL competence (including knowledge, skills and attitudes) in the newly developed and introduced teaching plans and programmes (TPPE). While 79.1% of class teachers claimed that LTL is visible within the TPPE, 70.2% of subject teachers believed the same. This observed difference was statistically significant and might be related to the observed differences in class and subject teachers' practices regarding the LTL competence. It might be said, however, that both groups of teachers perceived that the TPPE incorporates the elements of the key competences and prescribe its' usage in the classroom. This result might be interpreted as an indication of the general acceptance of the newly developed TPPE. However, due to the fact that our analysis of the TPPE found that the key competences of interest are, in general, only present at the level of global educational goals and not operationalised at the level of each subject and its' learning outcomes, this result might also indicate that teachers' knowledge about the core ideas behind the concept of the LTL competence is rather superficial and incomplete.

**Figure 8: Perceived constraining factors for implementing LTL in teaching**



When asked about the perceived constraints currently posing a limit to the degree to which the LTL competence might be addressed in schools, teachers emphasized most frequently the following limitations: a lack of material (financial) resources (67.2%) and too many pupils in one class (66.9%). A lack of teaching materials (57.3%), a lack of teaching time for such topics (57.1%), differences in pupils' abilities and potentials (56.5%) and a lack of LTL content in subject plans and programmes (38.7%) were also frequently mentioned,

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

while only a minority of teachers reported feeling that centralisation of the system and inadequate teacher competences were constraining factors.

The presented list of the major constraints (see Figure 8) clearly indicates that teachers attribute the challenges of implementing the LTL competence mainly to external and uncontrollable factors such as financial resources and number of pupils per class. This situation might be interpreted as unfavourable, as it positions teachers in a passive position, removing them from any responsibility for action, and thus demotivating them to put extra effort into implementing change.

In parallel with teachers' views on the constraints to implementing the LTL competence, most teachers (70.9%) agreed that, in order to fully develop LTL in our schools, the most significant changes needed to be performed at the level of the educational system (i.e. the Ministry level). Only 10.4% of teachers reported that the major changes should be performed at the level of pupils while 6.5% reported that changes should occur at the level of teachers.

Responses to open-ended questions posed to teachers concerning the implementation of the LTL competence in schools showed the following consistent themes:

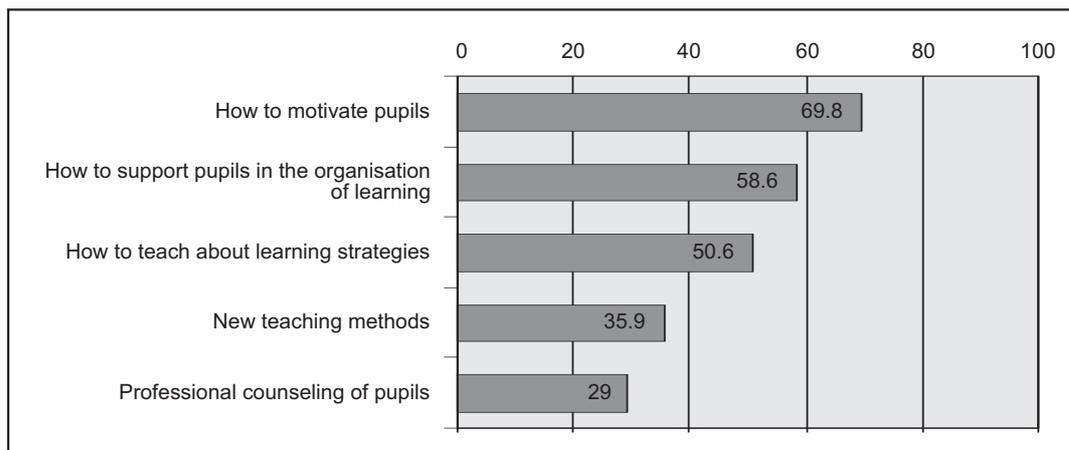
- Teachers reported that the most significant work needs to be done at the level of the system,
- The most common recommendations regarding improvement at this level were those concerning higher valuation of teachers' work, higher wages and in-service teacher professional development,
- At the level of the school, the most common recommendations focused on improved correspondence between subjects, greater opportunity for professional development, and improved relationships with parents,
- At the level of specific subjects, the most common recommendations were a need for better teaching materials and for the inclusion of content specific to the LTL competence within subject curricula.

As previously mentioned, the professional competences of teachers themselves were not perceived by teachers as a limiting factor in addressing the LTL competence with pupils. Class and subject teachers evenly asserted that they were sufficiently trained to successfully foster LTL skill in their pupils: in total, 71.8% of teachers claimed this to be so. Although the presented data documents the high level of reported teachers' self-efficacy and perceived competence, which are in themselves positive and valuable characteristics, it might be suspected that these estimates are somewhat overly optimistic.

Indeed, while expressing confidence in their ability to address LTL competence in their classrooms, teachers were also largely interested in training that would educate them further in implementing LTL into their teaching practice. The most relevant topics of interest to teachers, as illustrated in Figure 9, were how to motivate pupils (69.8% of teachers reported an interest in this topic), how to support pupils in the organisation of learning (58.6% reported an interest), and training in teaching learning strategies (50.6%). Teachers' selection of topics of interest for training is not unexpected, as pupils' motivation, or a lack thereof, poses one of the greatest challenges to a teacher's practice (especially for class teachers).

## 8. INVESTIGATING THE LTL COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

**Figure 9: Reported interest in topics for in-service training**



Teachers' responses also revealed that pre-service training contributed less to the development of teachers' competences for teaching LTL than in-service training. While only 52.7% teachers thought that pre-service training prepares teachers adequately for LTL teaching, 70.9% agreed that in-service training trained them well.

In general, the results clearly demonstrate that teacher training, especially pre-service training, insufficiently prepare teachers for their role of learning facilitator and model. Arguably, in order to foster LTL in their classrooms, teachers should also be self-regulated learners. New training modules for teachers should directly and explicitly teach teachers how to construct a powerful learning environment in the classroom and how to foster LTL competence (including the self-regulation of learning, construction of knowledge, etc.) in pupils, while building the character of teachers as self-regulated learners.



# 9. INVESTIGATING THE ENTREPRENEURSHIP COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

## 9.1 TEACHERS' AND PUPILS' ASSESSMENT OF ENTREPRENEURIAL CHARACTERISTICS AND PUPIL BEHAVIOUR

One of the crucial indicators of the state of entrepreneurial education in Croatian elementary schools is the findings related to the entrepreneurial characteristics of pupils themselves. For this purpose, several scales were developed in order to measure key elements of entrepreneurial competence in pupils. Furthermore, a 12-item scale was developed for the teacher assessment of the entrepreneurial characteristics and behaviours of pupils. Both pupil and teacher responses concerning these characteristics, as they arose from the questionnaire results, will be discussed in turn in the following sections. Interpretations of these results will be offered, along with relevant recommendations for future advocacy and educational development.

### 9.1.1 Openness to novelty and change

An attitude of openness to novelty and change is, arguably, one of the key features of an entrepreneurial character. The prevalence of this characteristic amongst Croatian elementary school students was measured through pupils' self-assessments on a number of dimensions. In the present research, the majority of 8<sup>th</sup> grade pupils reported preferring new ways of doing usual activities (82%) and activities where they are not bound with clear rules (67%). Further, the vast majority of pupils also preferred generating new ideas and activities (85%) and participating in many different activities (65%). This preference for novelty and openness to new experiences was recognized by their teachers as well. According to teachers' estimates, the most commonly reported entrepreneurial characteristic observed in pupils was an "openness to change/new experience" (36% of teachers reported that most or almost all pupils held this characteristic). However, not all results suggested that this characteristic was held unanimously amongst all pupils. According to pupils' reports on problem-solving, the majority of students (65%) prefer employing familiar and well-practiced approaches to solving problems, rather than finding novel or alternative ways of arriving at a solution. This might be a reflection of pupils' fear of possible failure. Teachers' perceptions of pupils' approaches to problem-solving is in line with the pupils' self-assessments. In fact, teachers appear to have even less confidence in pupils' innovativeness in problem solving: approximately half of all teachers reported feeling that only a minority of pupils used innovative and creative approaches to problem-solving.

In general, pupils appear to be generally open to both novelty and change, an important attribute of entrepreneurial behaviour. However, they are less likely to attempt new approaches to problem solving, possibly due to a fear of failure and a lack of support for exploring new ways of solving problems. This attitude might represent a serious impediment to the development of entrepreneurial competence and might be addressed by greater teacher support for sensible risk-taking behaviour in problem-solving situations.

### 9.1.2 Goal-setting and self-monitoring of activities

The ability to set realistic goals, to work towards these goals in a systematic and planned manner, and to monitor and correct one's own goal-directed activities have long been recognized as important prerequisites for successful entrepreneurial behaviour. According to pupil self-reports, the majority of 8<sup>th</sup> grade pupils in the present study typically apply a systematic approach to academic activity. Approximately two-thirds of pupils report that they usually set a specific goal prior to engaging in the activity (67% responded *often* or *very often*) and plan their actions accordingly (68% responded *often* or *very often*). As many as 75% of pupils reported that they will *often* or *very often* monitor their own progress and correct their actions accordingly. An even higher proportion of pupils (82%) reported completing activities they started.

On the other hand, teacher respondents did not provide such an optimistic outlook on pupils' goal-setting and planning skills related to performance in various activities. Only 22% of teachers reported that a majority of their pupils had the ability for realistic goal-setting, while only 19% believed that a majority of pupils demonstrated persistence in their activities. An equally small percentage of teachers reported feeling that a majority of their pupils could effectively work independently (21%), take responsibility for their own behaviour (22%), independently make decisions (19%) or realistically assess their own abilities. According to teachers' estimations, the least prevalent entrepreneurial characteristic amongst their pupils was the willingness to take initiative. Over half of all teachers (53%) felt that only a minority of their pupils were ready and willing to take initiatives. Teachers were slightly more positive in their judgments of pupils' achievement motivation, where 33% reported feeling that a majority of their pupils held this quality.

In general, there is an apparent discrepancy between pupils' and teachers' estimations of pupils' ability to set goals and work towards these goals in an organized, systematic manner. Arguably, independent goal-setting and planning skills develop through practical experience with these skills gained through academic and non-academic situations. As such, it might be argued that pupils of this age do not yet have an accurate picture of their own goal-setting, planning and self-monitoring skills. Indeed, specific school activities directed at offering pupils an opportunity to engage in these tasks might be organized so as to facilitate greater pupil autonomy in setting goals, planning actions and monitoring progress within academic tasks.

### 9.1.3 Pupils' readiness for teamwork and networking

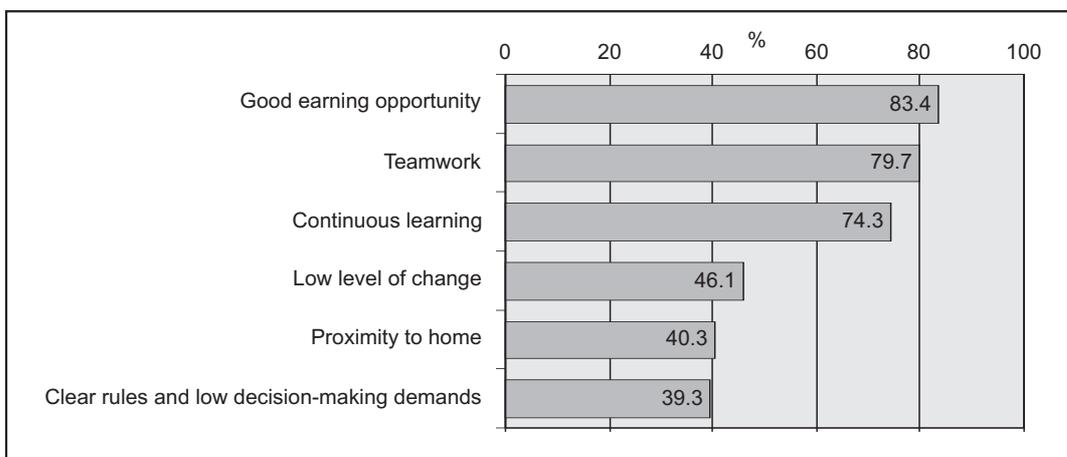
As might be expected according to their developmental stage, the pupils in the present study appear to enjoy participating in group activities with their peers. As many as 82% of respondents reported that they readily propose activities to their peers, and are willing to motivate others to take part in the activities they have proposed (71%). Fewer than half of all pupils report that they typically allow others to take initiative in group activities (46%). This result is contrasted by teacher reports, where the general perception appears to be a pervasive absence of initiative amongst pupils', as perceived by their teachers. A large majority of pupils report feeling that they can rely on their friends when they need assistance (89%) and can easily reach agreement when working with their peers (85%). Again, teachers' views of pupils' readiness for teamwork are significantly less positive compared to pupils' self-assessments. Only 38% of teachers reported feeling that the majority of their pupils demonstrated a readiness to cooperate and negotiate with their peers, while an even lower percentage of teachers (24%) reported that the majority of their pupils were able to communicate with others effectively.

Despite negative teacher perceptions on pupils' abilities for effective teamwork, pupils' preferences for group activities might represent an asset for promoting the development of effective networking skills and team building strategies. The promotion of these characteristics in the school setting might be viewed as an important prerequisite for the development of pupils' successful entrepreneurial character.

#### 9.1.4 Pupils' future job preferences and entrepreneurial knowledge

When surveyed about their priorities in relation to future careers or employment, pupils responded consistently that the most important features of a desirable job were good earning opportunities, followed by the opportunity to work as part of a team (Figure 10). Engaging in a challenging job that provides opportunities for learning new knowledge and skills was also highly valued amongst pupils. The least valued features for prospective jobs were their proximity to one's home, the existence of clear rules, the likelihood for change and low decision-making demands. Interestingly, both clear rules and low demands related to decision-making were less important to high academic achievers as compared to lower achieving groups.

**Figure 10: Levels of importance of features of future careers amongst pupils (answers: important + very important)**



Gender differences in pupils' stated job preferences reflected gender-role stereotyping, where boys reported preferring jobs offering good earning opportunities and societal prestige more frequently than girls who, in turn, reported valuing job security more than boys.

In general, it might be argued that pupils' preferences reveal that they value challenging, well-paid jobs with opportunities for teamwork and continuous learning. This set of preferences indicates a readiness amongst pupils to behave in an entrepreneurial manner in future career decisions and can serve as a good foundation from which to design and implement programs stimulating the development of entrepreneurial culture in Croatian elementary schools.

#### 9.1.5 Pupil preferences for challenging tasks

According to pupil responses, 8<sup>th</sup> grade students in Croatian elementary schools clearly prefer tasks with a high probability for successful mastery (83%) over challenging tasks with a risk for failure (17%). Pupils also clearly prefer easy tasks (64%) over effort-demanding ones (36%). Perhaps not surprisingly, easy tasks are particularly preferred by low achievers: 75% of those with an average grade of 3/5 prefer easy over demanding tasks, compared to 64% in the group with an average grade of 4/5 and 54% of pupils with an average of 5/5. Conversely, a majority of pupils reported preferring autonomous solving of difficult tasks (65%) over asking others for assistance (35%), as well as activities offering cooperation with others (66%) over competition (34%). In this latter item specifically, there existed a gender difference in pupil preference for cooperation over competition. As might be expected according to gender-role stereotypes, girls reported preferring cooperative activities (75%) more often than boys (57%).

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

Expectedly, high achievers reported the highest preference for autonomous problem-solving: 75% of these students prefer investing autonomous effort versus asking others for assistance, compared to 64% offering the same response amongst pupils with a 4/5 average and 54% amongst those with a 3/5 average. Both novel tasks and tasks similar to those previously performed are preferred by approximately equal percentages of pupils (48% and 52%, respectively). The questionnaire results also suggest that school achievement is related to pupils' preference for risk-taking: 57% of pupils in the highest achieving group prefer novel tasks to routine ones, whereas only 33% in the least successful group reported preferring novel tasks.

Pupils' preference for easy tasks, where the risk of failure is low, support the previously stated conclusion that sensible risk-taking behaviours should be better supported and encouraged at school. The support of such an approach should be accompanied with the fostering of positive attitudes towards taking calculated risks that are inherent to various enterprising activities and to entrepreneurial behaviour itself.

### 9.1.6 Pupils' knowledge in relation to the ENT competence

At the end of the ENT questionnaire, 8<sup>th</sup> grade pupils were asked to answer two open-ended questions aimed at probing the existence of knowledge regarding the general concepts of the entrepreneurship competence. Despite the fact that entrepreneurial knowledge is not currently included in the elementary school curriculum and is thus not explicitly and systematically taught in Croatian elementary schools, the research team agreed on the benefits of the inclusion of such questions in the overall assessment of this competence. In general, pupil responses to these questions demonstrated an overall deficiency in knowledge of the basic entrepreneurial concepts amongst a majority of 8<sup>th</sup> grade pupils. As such, it might be argued that systematic teaching of basic entrepreneurial concepts should therefore represent an integral part of an enterprise education program in elementary schools.

## 9.2 SCHOOL SUPPORT FOR THE DEVELOPMENT OF THE ENTREPRENEURSHIP COMPETENCE

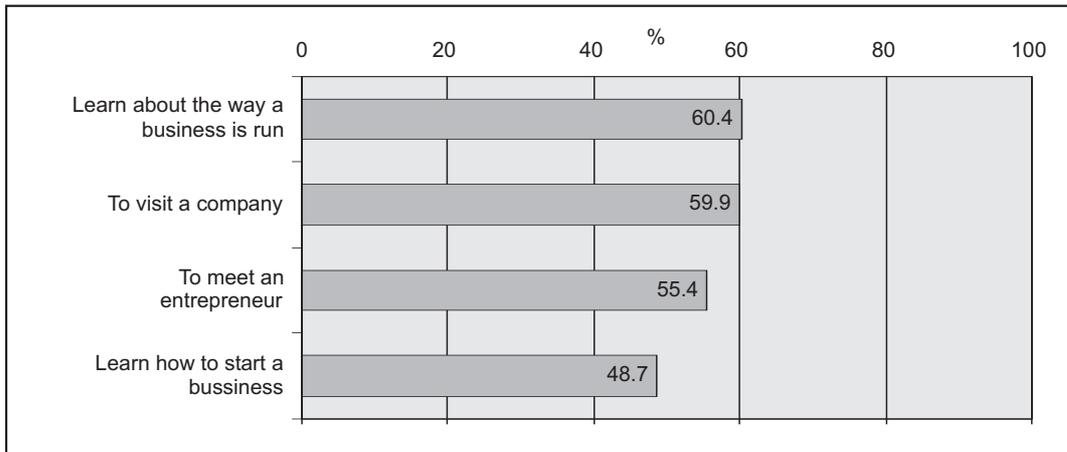
The previous section illustrated the multiple perspectives held by both pupils and teachers concerning the entrepreneurial characteristics and behaviours currently held by Croatian elementary school pupils. Several preliminary recommendations for further promoting these qualities in elementary education were suggested. Before discussing fully the conclusions and recommendations arising from the results of the present study, a closer examination of pupil and teacher perspectives on the existing level of support in schools for the development of the entrepreneurship competence is warranted.

### 9.2.1 Entrepreneurial experiences in school

The analysis of this section of the survey revealed that activities related to entrepreneurship are not common in Croatian elementary schools. According to pupil reports (Figure 11), more than half of pupils report never having had an opportunity to meet an entrepreneur at school (56%), to receive information about the way a business is run (60%), or to visit a company in their town (60%). However, approximately half of pupils reported receiving at least some information on how to start one's own business (51%). Pupils more commonly reported opportunities in school to discuss their future careers with their teachers (69% had the opportunity to do so), and learn how to save money, how to manage their pocket money or how to earn money on their own (69%, 60% and 69%, respectively).

## 9. INVESTIGATING THE ENTREPRENEURSHIP COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

**Figure 11: Least frequently reported entrepreneurial experiences amongst 8th grade pupils (answer: never)**



When gender differences were examined, girls seemed to be less exposed to information related to various aspects of entrepreneurial activities than boys: more girls than boys reported never meeting an entrepreneur in school (60% vs. 51%), nor ever having the opportunity to learn about the way a business is run (68% vs. 53%), to visit a firm in their town (68% vs. 51%) or to learn how to start their own business (57% vs. 41%). However, a slightly higher percentage of girls reported having had the opportunity to learn how to save money (71% vs. 67%) or to discuss their future career with teachers (74% vs. 63%).

According to teacher responses, approximately two thirds of teachers report being sometimes involved in school activities through which pupils can learn about successful entrepreneurs and different occupations, thus supporting the conclusion that entrepreneurial experiences are not regularly offered in our schools. At the same time, a small percentage of teachers (11%) reported that they have never been engaged in the previously mentioned school activities.

As expected, statistical significance testing indicated that the teachers' involvement in school activities supporting the development of the entrepreneurship competence in pupils is primarily connected to the length of the teachers' work experience. Analyses indicated a statistically significant difference between teachers in all of the listed school activities, demonstrating that the involvement of teachers in school activities promoting the entrepreneurship competence increases with longer work experience. Further analyses demonstrated that teachers with five or less years of work experience were significantly less involved in the majority of the mentioned school activities than those teachers with greater work experience.

The survey data reviewed in this section suggest a lack of systematic provision of entrepreneurial content and activities in Croatian schools. When such content is provided, it most typically relates to pupils' future careers or ways of managing personal finances. As such, in order to more fully develop and promote the entrepreneurship competence in Croatian elementary schools, experiences related to enterprises or entrepreneurs, entrepreneurial activities, and knowledge need to be introduced in a more systematic manner, so as to reach every pupil in elementary education.

### 9.2.2 Teacher support for entrepreneurial activities

Pupils' perceptions of teacher support in relation to their academic engagement and class activities conducive to the development of entrepreneurial behaviour revealed a general lack of consistency within the school system in relation to reward strategies used by teachers. According to pupils' reports, teachers most consistently rewarded entrepreneurial behaviour through their support of pupils' teamwork on various tasks (63% report that the majority or all teachers supported teamwork). Teachers' self-reports on methods used are in line with pupils' observations. From the teachers' standpoint, activities aimed at encouraging "the development of pupils' team working skills" and "pupils' independence in their work" were the most often performed teaching activities in the schools. More than two thirds of teachers (approximately 69% in each activity scale) estimated that these teaching activities were mainly or almost always used in their schools while all other activities were considerably less frequently performed. Pupils' reports further suggested that the most successful pupils receive more support for cooperation with others compared to lower achieving groups. At the same time, a majority of pupils reported seldom having the autonomy to choose with whom they wish to form a team (only 29% reported being supported to do so by a majority or all teachers), and are seldom supported to negotiate their wants and needs with other pupils (38% receive support from a majority or all teachers).

Alternatively, teachers in Croatian schools appear to consistently support pupils to take responsibility for their own behaviour and to consider the consequences of their behaviour (62% and 65% of pupils, respectively, report being supported by a majority or all teachers in these tasks). Again, higher achieving pupils seem to receive more support for taking responsibility for their behaviour as compared to lower achieving groups. Further, approximately half of all pupils reported receiving support by a majority or all teachers for autonomous decision-making (50%), thinking about their future career (54%), and considering their own strengths and weaknesses (48%).

From the teachers' standpoint, activities through which pupils are taught "how to judge the consequences of their own decisions" and "how to evaluate risk taking opportunities" are positioned in the middle of the rank scale of the estimated activities (47% and 47% of teachers, respectively, reported that these activities are mainly or almost always used in their school). Bearing in mind the purpose of this report, it is important to stress that only 16% of teachers stated that pupils in their schools are mainly or almost always taught how to earn money to meet their own needs.

Furthermore, pupil demonstration of initiative, choice and flexibility are do not seem to be consistently rewarded and stimulated as positive outcomes in Croatian schools. More specifically, only 21% of pupils report being encouraged by a majority or all teachers to propose school activities, 28% to participate in selecting school tasks, 27 % to give new ideas or try different ways of doing things, 35% to find several solutions for a problem, 26% to self-evaluate their work, 28% to give a presentation during class. A majority of pupils perceive that their opinion is not consistently respected by their teachers (66% responded never or sometimes), and that their teachers' priority in class is to keep order and discipline (88% of pupils responded often or very often). Further, according to pupil responses, it appears that teachers do not consistently adapt tasks to pupils' abilities (50% of pupils report never or sometimes), seldom allow pupils to solve problems at their own pace (61% say never or seldom), and do not leave pupils enough time to ask questions (67% say never or seldom). The majority pupils also perceive that their teachers' attention is more often directed to stronger pupils (70% of pupils say often or very often). In teamwork activities, pupils responded that teachers primarily evaluate performance of the group as a whole (70% of pupils responded often or very often) in addition to evaluating the process of group work and group communication (66% of pupils responded often or very often).

## 9. INVESTIGATING THE ENTREPRENEURSHIP COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

In sum, from the pupils' standpoint, the teachers' main priority is to maintain order and discipline in the classroom. Pupils generally perceive limited encouragement and support for their independent initiative and choice. In addition, they do not perceive that teaching is well-adapted to pupil ability or readiness to progress, nor does it allow for pupil questions.

It is encouraging to note, however, the finding that a large number of teachers recognise the importance of the above-mentioned activities for entrepreneurship education. Specifically, more than 90% of teachers believe that most of the evaluated activities are mainly or very important for the development of entrepreneurial competence in pupils. Even less frequently mentioned activities ("teaching the students how to earn money to meet their own needs" and "encouraging the students to take part in activities fostering cooperation with local communities") are perceived by a large proportion of the teachers (84%) as mostly or very important for the entrepreneurial development of pupils.

Statistically significant differences were found between classroom and subject teachers in the use of teaching and learning methods for fostering the development of enterprising pupils. In general, it appears that classroom teachers have a more positive attitude towards the frequency with which these teaching methods are applied in their schools. Further analyses indicated that teachers' estimates regarding the use of various teaching and learning methods were related to the length of teachers' work experience, whereby teachers with greater work experience tended to have a more positive opinion concerning the frequency with which the above-mentioned teaching and learning methods were used in their schools.

However, contrary to these differences, teachers' opinions regarding the importance of teaching and learning activities for entrepreneurship education were fairly homogenous. Here, teachers' opinions did not differ significantly with regard to the length of their work experience nor whether they were classroom or subject teachers. It is important to stress that all teachers consistently placed high levels of importance on teaching and learning methods for fostering the development of the entrepreneurial characteristics and behaviour of pupils.

### 9.2.3 School environment

In this study, we have assessed only those aspects of the school climate that could directly contribute to the development of the entrepreneurship competence. Specifically, a majority of teachers reported being involved in the development of the annual school plan (83.5%) as well as having a high level of autonomy in teaching practice accompanied by a low level of perceived external control. For example, 16% of teachers reported feeling that they are excessively controlled, while 81% stated that they have autonomy for solving problems. Approximately 90% of teachers reported that they are encouraged to introduce new methods in their teaching, while more than 90% reported that they are expected to continuously learn and bring innovations into their work. Furthermore, high levels of reported openness to change were also observed amongst teachers participating in the research. In general, teacher self-reports suggest an enabling climate in the participating schools, thus providing a solid basis from which to implement efforts for fostering the development of entrepreneurial traits in pupils.

On the other hand, teachers' reports revealed less positive assessments of some of the organizational aspects of their schools. For example, 55% of teachers reported that they are required to follow declared rules of conduct, while only 7% perceived that these rules were not obligatory. Teacher perceptions about the existence of strict rules might be a result of the important role played by the implicit school culture in determining teacher conduct. Surprisingly, almost one third of teachers reported feeling that their colleagues did not display sufficient responsibility for their work.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

In contrast, cooperation and collegial support amongst teachers in schools received very positive assessments. More than 90% of teachers reported that they received professional assistance from their colleagues when needed. According to a vast majority of teachers (over 90%), there exist various incentives for cooperation on activities and projects. However, a significant number of teachers (31%) reported feeling that there were insufficient levels of openness for critical and constructive feedback of the work of other teachers in their school. This finding suggests that schools are, to some extent, "loosely coupled organizations", where teachers perceive their work as being independent from the work of other teachers and thus should not be subject to their critical judgments.

Support received from head teachers was also assessed very positively. In general, head teachers were reported to encourage teachers to offer initiatives and suggestions, to engage in in-service training activities and to invest efforts to ensure quality working conditions. However, 41% of teachers perceived that they do not have any influence on head teachers' decisions, suggesting a low participation rate of teachers in decision-making.

In general, the data relating to the role of the school environment on developing the entrepreneurship competence are somewhat contradictory. On the one hand, teachers assess their working climate to be stimulating. However, this observation appears to be limited to their teaching activities in the classroom. Teachers' perceptions' regarding their involvement in and influence over school processes are substantially less positive, as reflected in teacher reports of limited opportunities for critical judgments and low levels of participation in decision-making processes in school. In sum, these findings highlight the absence of various substantial organizational prerequisites for the development of the entrepreneurship competence in Croatian elementary schools.

### 9.3 TEACHER ATTITUDES TOWARDS THE INTRODUCTION OF THE ENTREPRENEURSHIP COMPETENCE IN CROATIAN PRIMARY SCHOOLS

The final portion of the investigation into the nature of support currently available for implementing the entrepreneurship competence in Croatian elementary schools aimed to explore what factors are currently facilitating and restraining this implementation and what is necessary for successful implementation. Specifically, teachers' conceptions of the entrepreneurship competence along with their understanding of how such implementation might occur in schools were examined as two crucial conditions for successful implementation of the entrepreneurship competence into teaching practice. Issues such as how teachers understand the entrepreneurship competence and their opinions about the ways in which it should be introduced into compulsory education in Croatia were examined through several aspects in the questionnaire: 1. teachers' understanding of the entrepreneurship competence; 2. teachers' opinions on ways in which the entrepreneurship competence should be introduced into Croatian compulsory education; 3. teachers' estimates of the degree of inclusion of the entrepreneurial competence in current teaching programmes (HNOS); 4. teachers' perceptions of their professional capacity to teach entrepreneurship (through pre-service teacher education and in-service training).

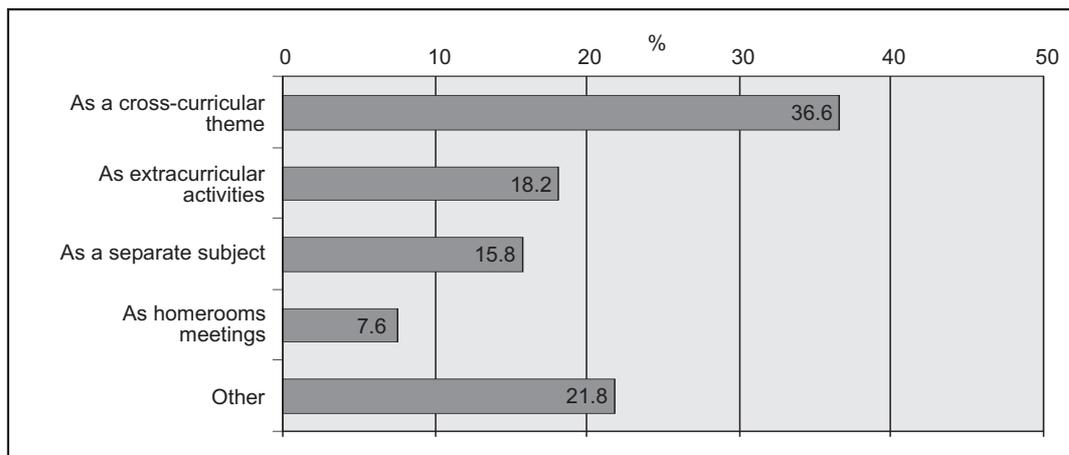
#### 9.3.1 Teachers' opinions on how the entrepreneurship competence might be introduced into Croatian compulsory education

With regard to the teachers' understanding of the concept of entrepreneurial competence, research findings demonstrated that a large proportion of teachers (83%) define this concept in its' broader sense, as economic literacy or knowledge, as well as with the personal characteristics and behaviours that are prerequisites for becoming a successful entrepreneur. In line with this finding, half of all teachers (48%) believed that teaching

## 9. INVESTIGATING THE ENTREPRENEURSHIP COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

entrepreneurial competence should embrace both economic literacy and the development of entrepreneurial characteristics and behaviours of pupils. A more striking finding is that approximately 75% of teachers support its introduction into compulsory education in Croatia. Within this group, 37% of teachers felt that the entrepreneurship competence would be most effectively taught as a cross-curricular theme (the most frequently selected response) while 16% felt that it would be more appropriately taught as a separate subject (Figure 12). The remaining teachers suggested other ways of teaching the entrepreneurship competence, such as through extracurricular activities (18%) or homeroom meetings (8%).

**Figure 12: Teachers' opinions on the best ways of teaching entrepreneurship in elementary schools**



Further, survey responses indicated that teachers perceived that a certain level of experience in teaching entrepreneurial competence already existed in Croatian schools. Namely, only 28% of respondents stated that teachers in their schools did not teach entrepreneurship at all or only to a small degree. Approximately 46% of teachers responded that it is taught in their schools to an average degree. Teacher responses here suggest that entrepreneurial competence is also integrated into new teaching programmes introduced through the HNOS, or national curriculum, with half of all teachers estimating that entrepreneurship is sometimes represented in teaching programmes. However, only 7% of teachers believed it to be represented very highly in these programmes.

In general, these research findings suggest that teachers perceive Croatian schools to currently possess a certain level of experience in teaching entrepreneurial competence. However, following the expressed views of the teachers, it might be argued that entrepreneurship education in Croatia needs to be more clearly conceptualised and introduced and taught in schools in a systematic way. According to teachers' suggestions, entrepreneurship education should have an important position in Croatian elementary schools and should be primarily delivered as a cross-curricular theme or module. Analyses of the experiences of other European countries in this domain, in addition to the school experiences and teachers' suggestions from the current project, will prove useful in developing and implementing such educational programmes for fostering the entrepreneurship competence in Croatian elementary schools.

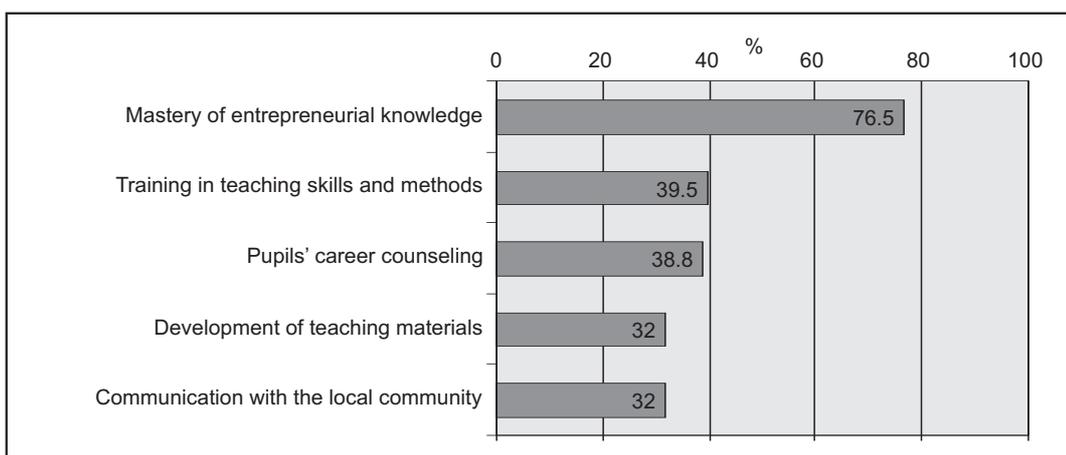
### 9.3.2 Teachers' perceptions of barriers to the inclusion of the entrepreneurship competence in Croatian elementary schools

An important issue in the analysis of teachers' perceptions was to identify perceived obstacles to the successful implementation of entrepreneurship competence in schools. Teachers identified, as the main obstacles to implementing this competence, insufficient financial resources (82% of teachers reported this as being a constraint) and the low social status of teachers (76% corresponding responses), followed by a lack of teaching tools and low teachers' wages (both holding approximately 70% of teachers' responses). The obstacles perceived as those which could considerably or highly limit the implementation of entrepreneurship education emphasize both a problem with a lack of teaching resources and materials as well as the unsatisfactory professional and financial status of teachers.

Indeed, a high percentage of respondents (69%) reported that teachers in their schools were not appropriately trained for teaching entrepreneurship. Regarding the aspects of training perceived to be most useful for implementing the entrepreneurship competence (Figure 13), teachers mostly commonly reported a need for training in the mastery of entrepreneurial knowledge (76%), followed by training in teaching skills and the application of new teaching methods (39%). Teachers reported communication with the local community and the development of teaching materials as the least useful for training endeavours.

One particularly prominent finding is that, in general, a large majority (84%) of the surveyed teachers had not attended any kind of professional development relating to the knowledge and skills at the core of the entrepreneurship competence. Moreover, the majority the teachers who had attended professional development efforts directed towards this competence reported feeling that they did not benefit from the training. These data indicate that teacher training for teaching the entrepreneurship competence has not been successfully integrated into initial teacher education nor into any professional development program.

**Figure 13: Teachers' reported needs for training in entrepreneurship education**



In sum, the findings suggest a need for introducing the entrepreneurship competence into the pre-service education program for class and subject teachers. In addition, specific professional development programs aimed at developing further skill in teaching the entrepreneurship competence should be developed. At present, Croatia does not have a tradition of developing competence-based teacher training curricula. As such, it becomes necessary to develop programs and to train higher-education teachers and other teacher trainers to implement these curricula in pre-service education as well as teacher in-service training.

## 9. INVESTIGATING THE ENTREPRENEURSHIP COMPETENCE IN CROATIAN ELEMENTARY EDUCATION

Finally, the research findings indicate that certain prerequisites for the systematic inclusion of entrepreneurship in schools need to be created. These include: more appropriate in-service teacher education, as well as better material conditions for teaching. This latter prerequisite might include the improved financial status of the teaching profession, coupled with a positioning of higher status and prestige in society.

### 9.4 ANALYSIS OF THE INTERVIEWS WITH HEAD TEACHERS

In addition to the examination of pupils and teachers, in each participating school an attempt was made to conduct a semi structured interview with head teacher. Following is a very brief analysis of the collected data. Interviews were structured around following topics:

- Head teachers' implicit concept of competences
- Opinions on the possible introduction of the competences
- Strengths and weaknesses of the educational system in case of possible introduction of the competences
- Situation regarding the LTL and Entrepreneurship in their schools

Analysis indicated that most of the head teachers did not have an informed opinion about the Key Competence framework and underlying educational philosophies. Despite that, what they perceived as a positive educational achievement after the completion of the elementary education, resembled elements of a KC framework. Almost all of head teachers were favourable of the introduction of LTL and Entrepreneurship into the Croatian elementary education. For the LTL competence, they expressed an opinion that it is extremely important, but that a lot of activities regarding LTL are already done in Croatian schools. Regarding Entrepreneurship opinions were more polarised and stronger. Some participants perceived that Entrepreneurship should not be part of the elementary education, due to its assumed relationship with economy and business. On the other side, considerable number of head teachers expressed opinion that entrepreneurship is exactly what the elementary education and pupils need. The biggest strengths of the system, according to the head teachers, is teaching personnel, which paradoxically for some of them represents an obstacle to the possible changes. However, the biggest problem for most head teachers is a lack of financial support and, with it connected, lack of school autonomy in raising financial assets. Finally, in a number of schools examples of good practice regarding entrepreneurship were recognised. These were usually student companies or agricultural societies. Head teachers expressed their enthusiasm and satisfaction with these projects as they, in their words, raised a level of entrepreneurial thinking among pupils. An effort was made and a database of these pupil ventures was collected.



# 10. CONCLUSIONS AND RECOMMENDATIONS

## 10.1 CONCLUSIONS

Due to the large nature and scope of the project, a discussion of project conclusions will be divided into three parts. Firstly, general conclusions regarding the introduction of the Key Competences Framework in Croatia will be provided. This will be followed by conclusions based on the specific analyses of the results regarding the LTL and Entrepreneurship competences' in the context of Croatian elementary education.

### **Analysing the current educational climate and Croatian education documents: Implications for the introduction of the Key Competences Framework**

Any consideration of the introduction and implementation of a novel educational concept, in this case the KC framework, needs to take into account the current educational climate in Croatia. As previously stated, Croatian elementary education has recently undergone a considerable amount of change. These changes have been followed by extensive media campaigns over the past few years and have been generally well accepted by teachers, the media, and the public. This appears, at first glance, a positive indication of the systems' willingness to absorb possible changes in the future, including the introduction of the KC framework. However, thus far, elementary education in particular is the segment least prone and willing to reform.

The most recent educational reforms were outlined in the *Education Sector Development Plan 2005-2010*, a document which defines the strategic goals, priorities and activities that are necessary for the development of a more efficient system of education and '*in order to create an intellectual and operational human capital as a key treasure of the Croatian state*'. This document explicitly emphasizes lifelong learning as a general principle applicable to all educational levels, and stresses the importance of the LTL competence specifically with the stated objective of '*preparing and developing the learning-how-to-learn competence*'. The importance of entrepreneurship as a key competence has similarly been recognized in the document, and is expected to take form in the educational system as cross-curricular content within existing subjects and activities from preschool through elementary education and higher education to adult education. However, as was previously discussed, although this document incorporates some elements of the competence framework, it does not refer to, nor does it encompass, the philosophy behind it.

In accordance with the expected changes described in the development plan, a new *Teaching Plan and Programme for Elementary Education* was developed and implemented in Croatian elementary schools as of the 2006/07 school year. This new TPPE has, arguably, brought considerable change to teaching and learning practices.

Our analyses have shown that this foundational document of Croatian elementary education does not endorse the competence framework, while still incorporating some of the elements of both competences covered in this project. However, what came as most striking from the TPPE analysis were the very low correlations between what was outlined in the general and introductory parts of the document in relation to the two competences of

interest, and the operationalisation of these competences as expected educational achievements in the specific plans for each subject. Further, although introductory sections place emphasis on the development of various elements of both competences, and LTL in particular, they do not incorporate the essence of the competence framework. This finding, in which the document incorporates the progressive educational elements of both competences but does not follow this with the specific operationalisation of how these elements would be transferred into teaching practices, learning outcomes and educational achievements, seems to suggest a highly superficial treatment of the competences themselves where these competences are present only 'pro forma'.

A critical examination of the present state of pre-service teacher training further revealed that, although the recent structural reorganisation under the 'Bologna process' has resulted in some positive changes, there still exists an absence of national standards according to which key professional teacher competences might be defined. Furthermore, a consensus amongst universities regarding the ways in which professional teacher competences might be developed in education programmes has not been reached, resulting in different modes and quality of teaching and training. Analysis of in-service teacher training similarly revealed a lack of systematic professional development which, when offered, was not always suited to the needs of teachers and schools. Furthermore, our analysis of programmes of both pre- and in-service teacher training revealed a stark absence of any training and development opportunities related to the competences framework.

This leads us to the conclusion that new innovations in both pre-service and in-service teacher training are desperately needed. Especially critical is the need to formulate priorities within the teacher education system, which would involve defining a national strategy for the development of the teacher education system, and developing the institutions and human resources necessary for quality pre-service and in-service teacher training. Furthermore, from the present project, it is evident that effective and responsive programmes regarding both LTL and Entrepreneurship for pre-service and in-service teacher training for class and subject teachers need to be developed.

### **Conclusions on the status, development, and introduction of the LTL competence in Croatian elementary education**

#### *1. Conclusions regarding teacher and pupil perceptions of education and learning*

In general, pupils' and teachers' perceptions of Croatian society as an educational and learning context differ in their level of criticism. While pupils are more optimistic towards, or perhaps less sensitive to, the shortcomings of the present societal moment and educational context, teachers are more strongly pessimistic regarding the role of education and learning in Croatian society, a sentiment most likely built on personal experience. The perspective of teachers is perhaps most distressing in that it depicts Croatia as a society that does not highly value learning or education, while also portraying the educational system as one in which learning ability and effort are not the most significant elements for educational progression.

Pupil attitudes towards learning were found to be generally positive, with an overall perception that learning was an important and instrumental activity for achieving their personal goals. However, a closer examination of the findings suggested a drop in this enthusiasm for learning as pupils' progressed through elementary school. Specifically, pupils in the 8<sup>th</sup> grade seemed less affirmative towards learning by more significantly emphasizing its difficulty and low level of interestingness. As was discussed in Chapter 8, this combination of high importance, high difficulty and low level of interestingness may lead to negative extrinsic motivational patterns. The results also revealed that girls, regardless of their age cohort or achievement level, are consistently more positive towards learning than boys.

## 10. CONCLUSIONS AND RECOMMENDATIONS

In general, pupils' conceptions of learning depict a positive and optimistic picture of pupils' awareness of the lifelong and instrumental nature of learning. This awareness needs to be nurtured and might most usefully be employed as a starting point from which the competences framework, and the LTL competence in particular, can be introduced. However, mention needs to be made of one finding which suggests that exceptions to this general perception exist. Specifically, in both age cohorts, pupils with lower educational achievement tend to hold a conceptualisation of 'learning as reproductive activity'. As such, this becomes a subgroup in need of particular attention in efforts aimed at nurturing transformative and instrumental views of learning.

### *2. Conclusions regarding the current development of the LTL competence in Croatian elementary education*

The consideration of pupils' motivation for learning and their learning strategies depicted a rather grim picture by suggesting significant underdevelopment of the basic elements that constitute the LTL competence. Namely, pupils' motivation to learn appears to be primarily external, rather than internal. More specifically, our research suggests that pupils' motivation to learn shifts from intrinsic motivational factors in the 4<sup>th</sup> grade to those that are predominantly extrinsic in the 8<sup>th</sup> grade. This discrepancy in the perception of pupils' motivation is astonishing and reveals a potentially deep division in the teacher-pupil relationship. As this relationship represents a highly sensitive system, in which both sides are dependent on the behaviour of the other, it is of vital importance not only to note this difference with interest and concern, but also to investigate what might underlie it.

As it stands, teachers' perceptions of pupils' motivation similarly depicts a situation in which the healthy motivational prerequisite for the development of LTL is currently not met. The results regarding learning habits also depict a negative picture in which pupils report a lack of systematic learning or studying, a crucial element for the development of the LTL competence. Furthermore, it seems that pupils tend to perceive learning as something that occurs only prior to assessment. This general opinion is extremely worrying, in that it fosters an environment in which learning occurs for the sake of assessment only and not for the sake of learning itself.

The analysis of pupils' reports regarding applied learning strategies suggests that pupils hold average levels of development for adopting various approaches to learning. However, specific consideration of the strategies for the regulation of motivation indicates, once again, that motivation is driven largely through external elements. Finally, an examination of teachers' perceptions on pupil strategy use offers a severe word of warning regarding pupils' present level of development of various components of the LTL competence. In essence, teachers' estimations of the present developmental levels of these elements of LTL competence amongst their pupils suggest complete underdevelopment.

In sum, there appears to be a clear and pressing need for improvement in the implementation of these areas of the LTL competence. The effective use of learning strategies, development of sound motivational attitudes regarding learning and a development of systematic learning habits as a basis for LTL competence all need to be fundamentally addressed through systematically planned actions. Although these actions might be primarily oriented towards pupils, teachers are also crucially important in the process through which pupils acquire strategic learning skills that will, in turn, contribute to improved learning outcomes. For this to occur, teachers need to be supported in developing and applying the knowledge, skills and teaching practices necessary for fostering the development of these components amongst their pupils.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

### 3. *Conclusions regarding the current levels of support for the development of LTL competence*

Our results on the levels and nature of the support for the development of LTL in Croatian elementary education reveal a complex picture. Perhaps the most salient conclusion is the existence of poor levels of communication and understanding between teachers and pupils. This is suggestive of a lack of sufficient cooperation between teachers and pupils, a characteristic vital for any potential educational success. The role of parents in the whole educational enterprise, and learning in particular, needs further examination in light of our results that suggest a potential conflict in the relationship between parents and teachers.

At first sight, our results depict a scenario in which teachers are using methods suitable for fostering the development of LTL competence. However, in-depth analysis of pupils' perspectives, as well as a consideration of some of the less reported teaching methods, suggests that teachers are still not oriented towards pupils as active participants in the teaching-learning process. As such, teachers do not appear to perceive pupils as the determinants of their own educational paths nor as co-partners in the whole educational process. Furthermore, it seems that the situation regarding pupil assessment in Croatian elementary education is similarly critical, where teacher and pupil reports paint a system characterized by outdated assessment practices and a lack of clarity in assessment expectations. Furthermore, assessment in higher grades is perceived by pupils as somewhat unfair and lacking reasonable and useful feedback. It is difficult to expect the development of pupils' systematic and self-regulated learning skill if the teaching methods are not supportive of such development, nor if assessment practices are destructive to that same development. As such, significant change is required in the use of both teaching methods and pupil assessment in Croatian elementary education, including the incorporation of modern assessment practices such as portfolios, pupil agendas, and continuous assessment. Before this change has been implemented, it is difficult to expect any substantial amelioration in the current state of development of the LTL competence amongst Croatian elementary pupils.

Finally, according to our results, parental support for learning might best be described as paradoxical, where parents have lofty educational expectations but offer only average educational support to their children. Specifically, while parents emphasise the importance of learning and education, they fail to provide guidance for their children, a finding most especially emphasized by the reports of pupils in the 8<sup>th</sup> grade. Most worrying is the perception of teachers that parental support is both insufficient and inadequate, a situation most certainly not conducive to supporting the development of the LTL competence. These findings may be in line with current educational debate concerning the role of parents in the education, where parents are criticized as users of a commercial service rather than equal partners in the education of their children. Our results seem to confirm this argument by suggesting a complete absence of communication between two crucial stakeholders in the educational endeavour: teachers and parents.

### 4. *Conclusions regarding teachers' views on the introduction of the LTL competence in Croatian elementary education*

In response to questions concerning the introduction of the LTL competence, all teachers, irrespective of their position (class or subject teacher) or teaching history, agreed that elementary schools should systematically work on fostering the development of the 'learning to learn' competence. Such unanimous agreement with the presented proposal indicates the importance of the LTL concept for teachers, and suggests that they view learning and learning skills as imminent to academic achievement and their teaching practice. As such, this finding suggests highly fertile ground for the implementation of the LTL competence into Croatian elementary education. Furthermore, a majority of the teachers reported feeling that this competence should be introduced in a cross-curricular

## 10. CONCLUSIONS AND RECOMMENDATIONS

manner. This finding suggests that teachers are aware that the benefits of nurturing the LTL competence, as well as its transferability, could best be achieved if the ideas and practices behind LTL were incorporated into every class and every subject.

It is notable that the present research indicated that a majority of teachers felt that they were already significantly and actively promoting the development of the LTL competence in their classrooms. Teachers' perceptions of their efforts in fostering LTL is in sharp contrast with their estimates of pupils' competence in this area, a finding that might indicate that teaching practices, as well as the support offered to pupils' efforts in areas such as self-regulation and organisation of learning, are actually less effective than what teachers would like to believe. Another discrepant finding is that both groups of teachers reported feeling that the TPPE adequately incorporated elements of the key competences and prescribed to its usage in their classrooms. This result might be interpreted as an indication of the general acceptance of the newly developed TPPE. However, due to the fact that our analysis of the TPPE found that the key competences of interest are, in general, only present at the level of global educational goals and not operationalised at the level of each subject and its' learning outcomes, this result might also indicate that teachers' knowledge about the core ideas behind the concept of the LTL competence is rather superficial and incomplete.

Furthermore, our results demonstrate that teachers attribute the challenges of implementing the LTL competence mainly to external and uncontrollable factors such as financial resources and number of pupils per class. This situation might be interpreted as unfavourable, as it positions teachers in a passive position, removing them from any responsibility for action, and thus demotivating them to put extra effort into implementing change. In addition, our results clearly demonstrate that teacher training, especially pre-service training, insufficiently prepare teachers for their role as learning facilitator and model. Arguably, in order to foster LTL in their classrooms, teachers should also be self-regulated learners. New training modules for teachers should directly and explicitly train teachers in how to construct a powerful learning environment in the classroom and how to foster LTL competence (including the self-regulation of learning, construction of knowledge, etc.) in pupils, while simultaneously building on the character of teachers as self-regulated learners.

### **Conclusions on the status, development, and introduction of the Entrepreneurship competence in Croatian elementary education**

#### *1. Conclusions regarding the current development of the Entrepreneurship competence in Croatian elementary education*

Entrepreneurship, as a key competence, represents a complete novelty in Croatian elementary education. However, with respect to our conceptualisation of the competence, Croatian pupils appear to possess various characteristics fundamental to this competence. In general, pupils appear to be open to novelty and change, important attributes of entrepreneurial behaviour. However, they are less likely to attempt new approaches to problem solving, possibly due to a fear of failure and a lack of support for exploring new ways of solving problems. This attitude might represent a serious impediment to the development of entrepreneurial competence and might be addressed by greater teacher support for sensible risk-taking behaviour in problem-solving situations.

Another finding of interest was the apparent discrepancy between pupils' and teachers' estimations of pupils' ability to set goals and work towards these goals in an organized, systematic manner. Arguably, independent goal-setting and planning skills develop through practical experience with these skills gained through academic and non-academic situations. As such, it might be argued that pupils of this age do not yet have an accurate picture of their own goal-setting, planning and self-monitoring skills. Indeed, specific

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

school activities directed at offering pupils an opportunity to engage in these tasks might be organized so as to facilitate greater pupil autonomy in setting goals, planning actions and monitoring progress within academic tasks.

Further, despite negative teacher perceptions on pupils' abilities for effective teamwork, pupils' preferences for group activities might represent an asset for promoting the development of effective networking skills and team building strategies. Pupils' reported preference for easy tasks, where the risk of failure is low, support the notion that sensible risk-taking behaviours should be better supported and encouraged at school. The support of such an approach should be accompanied with the fostering of positive attitudes towards taking calculated risks that are inherent to various enterprising activities and to entrepreneurial behaviour itself. The promotion of both networking and sensible risk-taking behaviours in the school setting might be viewed as an important prerequisite for the development of pupils' successful entrepreneurial character.

Our research also indicated that, in general, pupils value challenging, well-paid jobs with opportunities for teamwork and continuous learning. This set of preferences indicates a readiness amongst pupils to behave in an entrepreneurial manner in future career decisions and can serve as a good foundation from which to design and implement programs stimulating the development of entrepreneurial culture in Croatian elementary schools.

Finally, pupils' responses to open-ended questions aimed at probing the existence of economic knowledge and entrepreneurial awareness revealed problematic results. In general, pupil responses to these questions demonstrated an overall deficiency in knowledge of basic entrepreneurial concepts amongst a majority of 8<sup>th</sup> grade pupils. As such, it might be argued that systematic teaching of basic entrepreneurial concepts should therefore represent an integral part of an enterprise education program in elementary schools.

### *2. Conclusions regarding the current levels of support for the development of Entrepreneurship competence*

In general, our research suggests a lack of systematic provision of entrepreneurial content and activities in Croatian schools. When such content is provided, it most typically relates to pupils' future careers or ways of managing personal finances. As such, in order to more fully develop and promote the entrepreneurship competence in Croatian elementary schools, experiences related to enterprises or entrepreneurs, as well as entrepreneurial activities and knowledge, need to be introduced in a more systematic manner, so as to reach every pupil in elementary education. Although teachers in Croatian schools appear to consistently support pupils to take responsibility for their own behaviour and to consider the consequences of their behaviour, the conclusion cannot be made that the entrepreneurial characteristics are supported by the teaching methods. In general, our findings revealed that pupils generally perceive limited encouragement and support for their independent initiative and choice and do not perceive that teaching is well-adapted to pupil ability or readiness for progress.

One of the main aspects which might influence the development of entrepreneurial spirit comes from a consideration of the school environment. In general, the data relating to the role of the school environment on developing the entrepreneurship competence are somewhat contradictory. On the one hand, teachers assess their working climate to be stimulating. However, this observation appears to be limited to their teaching activities in the classroom. Teachers' perceptions regarding their involvement in and influence over school processes are substantially less positive, as reflected in teacher reports of limited opportunities for critical judgments and low levels of participation in decision-making processes in school. In sum, these findings highlight the absence of various substantial

## 10. CONCLUSIONS AND RECOMMENDATIONS

organizational prerequisites for the development of the entrepreneurship competence in Croatian elementary schools.

Finally, interviews with head teachers revealed high variance, amongst Croatian elementary schools, in support for the development of the Entrepreneurship competence. While some of the researched schools had developed entrepreneurial models, other had no such activities. However, in general, all head teachers stressed the importance of such activities for the whole school and pupils in particular. One of the main constraints to developing and implementing activities for the promotion of entrepreneurial development was reported to be a lack of financial resources from the Ministry of Education.

### *3. Conclusions regarding teachers' views on the introduction of the Entrepreneurship competence in Croatian elementary education*

According to teachers' suggestions, entrepreneurship education should be introduced into and have an important position in Croatian elementary schools. Similar to the opinions on the introduction of the LTL competence, teachers also reported feeling that entrepreneurship should be primarily delivered as a cross-curricular theme or module. Research findings also suggested that teachers perceive Croatian schools to currently possess a certain level of experience in teaching entrepreneurial competence. However, following the expressed views of the teachers, it might be argued that entrepreneurship education in Croatia needs to be more clearly conceptualised and introduced and taught in schools in a systematic way.

Teachers' responses concerning the potential obstacles to introducing Entrepreneurship in schools, as well as their perceived level of professional expertise regarding Entrepreneurship, suggest a need for introducing the entrepreneurship competence into pre-service teacher training programmes for class and subject teachers. In addition, specific professional development programmes aimed at developing further skill in teaching the entrepreneurship competence should be developed. At present, Croatia does not have a tradition of developing competence-based teacher training curricula. As such, it becomes necessary to develop programs and to train higher-education teachers and other teacher trainers to implement these curricula in pre-service education as well as in-service teacher training. Finally, the research findings indicate that certain prerequisites for the systematic inclusion of entrepreneurship in schools need to be created. These include: more appropriate in-service teacher education, as well as better material conditions for teaching. This latter prerequisite might include the improved financial status of the teaching profession, coupled with a positioning of higher status and prestige in society.

### **10.2 Recommendations**

At the outset of this recommendations section, special attention needs to be given to the timing and nature of any further advocacy or policy action. As it was continuously reiterated during the report, Croatian elementary education has recently undergone considerable change. As such, it is the opinion of the research team that the promotion of any radical change would not be easily absorbed by the current educational policy structures, nor by teachers or the general public. Therefore, it would not be pragmatic to offer the Key Competence framework in opposition to the current TPPE, although it is our opinion that this should be done. Instead, an attempt should be made to work with the current policy structures in the gradual incorporation of the philosophy behind framework of Key Competences within the present TPPE and the future elementary education curriculum. The competences of Learning to Learn and Entrepreneurship appear to be the best choices for such an incorporation. In general, teacher opinion about the introduction of these two competences in Croatian elementary education is very affirmative.

## ASSESSING AND PROMOTING 'LEARNING TO LEARN' AND 'ENTREPRENEURSHIP' IN CROATIAN ELEMENTARY EDUCATION

The current projects' findings need to be properly presented to the widest possible audience. The following is a list of the most critical, telling and significant elements of our findings that should be advocated and upon which the recommendations presented later were based:

- A lack of any concrete operationalisation of both competences in specific subject plans and programmes, as outlined in the TPPE
- Positive pupil attitudes towards learning
- Significant weaknesses in the present state of development of various elements of the LTL competence, most particularly the promotion of learning strategies and motivation for learning
- A complex and troubled relationship between teachers and pupils
- A *critical* state of pupil assessment in Croatian elementary education
- A strong potential for the development of pupils into enterprising persons
- A current lack of contact between schools and entrepreneurial structures
- A *critical* state regarding the economic knowledge presence of economic knowledge amongst pupils

On the basis of the aforementioned findings, the most obvious recommendation would be for thorough and extensive reforms across subject and grade curricula in Croatian elementary education in order to accommodate the philosophies, approaches and methods housed under the LTL and Entrepreneurship competences. However, for the reasons presented above, such reform is neither pragmatic nor realistic in the present context of Croatian education. As such, it is recommended that several short-term instructional modules regarding the two competences should be developed and implemented. These modules should be provided to pupils through a series of workshops or offered during a class period. The following lists outline the themes upon which these modules should be based, for the LTL and Entrepreneurship competence, respectively.

### 1. *Proposed LTL instructional module*

This module should incorporate the following sub-modules:

- A reconfirmation of the value and importance of learning and of learning as a lifelong activity
- The development of pupil skill in acquiring and applying a range of learning strategies
- The development of pupils' learning techniques supporting LTL, such as skill in goal setting, study planning, and organization of learning
- The development of intrinsic motivation for learning

It is further necessary for all of the aforementioned elements of this module to take into account the findings of the present research and place special emphasis on the development of LTL amongst the more problematic subgroups.

### 2. *Proposed Entrepreneurship instructional module*

This module should incorporate the following sub-modules:

- The development of the entrepreneurial characteristics amongst pupils
- The development of pupil awareness of professional and entrepreneurial opportunities
- The development of pupil awareness for socially-responsible entrepreneurial behaviour

In accordance to the findings of the present project, special and immediate emphasis should be given to the incorporation of instructional content relating to economic knowledge. Furthermore, an attempt should be made in order to identify schools that are exemplifying good entrepreneurial practice themselves. These examples should be collected, analysed and disseminated so that other schools might adopt similar practices.

## 10. CONCLUSIONS AND RECOMMENDATIONS

For the above recommendations to be possible, it is also critical specific modifications be made to both pre- and in-service teacher training programmes. This is explicated in the following set of recommendations:

- The development of pre-service teaching curricula regarding the Key Competences framework, its underlying philosophy and content.
- The development of training modules for each competence and their integration into existing teacher training programmes for both class and subject teachers.
- The immediate development of in-service teacher training modules for both the LTL and Entrepreneurship competences, with special consideration of the most problematic findings from the present research. Namely a special attention should be given to the in-service training of subject teachers as they seem to be the sub-group most in need of professional development.

Furthermore, several other general recommendations arise from the present project and are:

- To develop a general awareness raising campaign directed towards the general public regarding the development of both LTL and entrepreneurial characteristics amongst Croatian pupils
- To involve other associated professionals (pedagogues, psychologists, special needs professionals) in the development and implementation of any action regarding the key competences as potentially positive agents for the communication of the foundational ideas of the KC framework
- To organize actions that would involve parents in the debate regarding key competences in order to promote their partnership in the education of their children.

Finally, several recommendations arise in consideration of the needs for future research:

- Because personal characteristics relevant to the development of entrepreneurial competence are developed from the years of early elementary education, special attention should be given to the conceptualisation of this competence in these years specifically.
- Specific emphasis should be placed on clarifying the nature of the Entrepreneurship competence in elementary education as one at the nexus of personal, social and economic dimensions.
- Further research that would include a greater range of age cohorts is required in relation to both competences in Croatian elementary education context.
- Further research on other key competences in Croatian elementary education is required.
- Research investigating the Key Competences framework at other educational levels in Croatia is also of vital importance.
- Specific attention needs to be devoted to a thorough and critical examination and reform of pupil assessment practices in Croatian elementary education.



## ANNEX: THE SCHOOLS SELECTED IN THE SAMPLE

| no. | Region <sup>31</sup> | School name                         | Location            | Total number of class teachers <sup>32</sup> | Total number of subject teachers | Total number of pupils | Number of class teachers in the sample | Number of subject teachers in the sample | Number of pupils in the sample: 8-th grade LTL | Number of pupils in the sample: 8-th grade EN T | Number of pupils in the sample: 4-th grade |
|-----|----------------------|-------------------------------------|---------------------|--|----------------------------------|------------------------|--|--|--|---|--|
| 1   | A                    | OŠ SESVETSKI KRALJEVEC              | SESVETSKI KRALJEVEC | 20   | 28                               | 917                    | 10                                     | 11                                       | 24   | 29  | 27   |
| 2   | A                    | OŠ EUGENA KUMIČIĆA                  | VELIKA GORICA       | 23   | 36                               | 1003                   | 19                                     | 24                                       | 22   | 23  | 27   |
| 3   | A                    | OŠ PAVLEKA MIŠKINE                  | ZAGREB              | 14   | 32                               | 700                    | 6                                      | 13                                       | 26   | 22  | 33   |
| 4   | A                    | OŠ GUSTAVA KRKLECA                  | ZAGREB              | 18   | 30                               | 729                    | 9                                      | 9  | 19   | 18  | 21   |
| 5   | A                    | OŠ JORDANOVAC                       | ZAGREB              | 15   | 39                               | 810                    | 21                                     | 25                                       | 18   | 20  | 21   |
| 6   | B                    | OŠ DR. JURE TURIĆA                  | GOSPIĆ              | 19   | 29                               | 898                    | 17                                     | 27                                       | 22   | 27  | 30   |
| 7   | B                    | OŠ IVANA KUKULJEVIĆA                | SISAK               | 10   | 19                               | 407                    | 9                                      | 11                                       | 21   | 25  | 18   |
| 8   | B                    | OŠ BARILOVIĆ                        | BARILOVIĆ           | 10   | 9                                | 171                    | 2                                      | 8  | 4  | 5   | 7  |
| 9   | C                    | OŠ IVANA GORANA KOVAČIĆA            | DELNICE             | 10   | 25                               | 457                    | 11                                     | 16                                       | 20   | 19  | 21   |
| 10  | C                    | OŠ FRAN FRANKOVIĆ                   | RIJEKA              | 17   | 31                               | 728                    | 15                                     | 23                                       | 20   | 22  | 25   |
| 11  | C                    | OŠ JURJA DOBRILE                    | ROVINJ              | 14   | 31                               | 738                    | 16                                     | 30                                       | 23   | 25  | 20   |
| 12  | D                    | OŠ ANTUNA MIHANOVIĆA-PETR OPOLJSKOG | DRNIŠ               | 31   | 53                               | 814                    | 12                                     | 17                                       | 16   | 18  | 27   |
| 13  | D                    | OŠ o. PETRA PERICE                  | MAKARSKA            | 12   | 34                               | 489                    | 9                                      | 16                                       | 25   | 22  | 17   |
| 14  | D                    | OŠ MEJAŠI                           | SPLIT               | 12   | 29                               | 616                    | 3                                      | 18                                       | 24   | 26  | 22   |
| 15  | D                    | OŠ MAJSTORA RADOVANA                | TROGIR              | 16   | 31                               | 795                    | 14                                     | 14                                       | 22   | 24  | 26   |
| 16  | D                    | OŠ ZEMUNIK                          | ZEMUNIK             | 6  | 10                               | 159                    | 4                                      | 6  | 17   | 16  | 13   |
| 17  | E                    | OŠ MIJAT STOJANOVIĆ                 | BABINA GREDA        | 8  | 14                               | 453                    | 8                                      | 12                                       | 21   | 22  | 24   |
| 18  | E                    | OŠ TINA UJEVIĆA                     | OSIJEK              | 14   | 31                               | 767                    | 12                                     | 15                                       | 27   | 29  | 22   |
| 19  | E                    | OŠ HUGO BADALIĆ                     | SLAVONSKI BROAD     | 23   | 37                               | 1007                   | 12                                     | 13                                       | 18   | 23  | 16   |
| 20  | E                    | OŠ IVAN GORAN KOVAČIĆ               | VELIKA              | 13   | 20                               | 531                    | 5                                      | 17                                       | 26   | 18  | 22   |
| 21  | F                    | IV. OSNOVNA ŠKOLA                   | BJELOVAR            | 17   | 36                               | 932                    | 13                                     | 29                                       | 25   | 27  | 31   |
| 22  | F                    | OŠ VLADIMIR NAZOR                   | BUDINŠČINA          | 12   | 20                               | 387                    | 10                                     | 15                                       | 14   | 17  | 18   |
| 23  | F                    | II. OSNOVNA ŠKOLA                   | ČAKOVEC             | 10   | 22                               | 499                    | 8                                      | 11                                       | 24   | 20  | 21   |
| 24  | F                    | OŠ ĐURO ESTER                       | KOPRIVNICA          | 18   | 40                               | 915                    | 12                                     | 24                                       | 23   | 27  | 24   |
| 25  | F                    | OŠ JOSIPA BROZA                     | KUMROVEC            | 7  | 17                               | 259                    | 3                                      | 7  | 12   | 13  | 22   |

<sup>31</sup> A - Zagreb, B – Lika and Banovina, C – Istra, Hrvatsko Primorje and Gorski Kotar, D – Dalmacija, E – Slavonija, F – Sjeverna Hrvatska

<sup>32</sup> Source: School Matrices, Ministry of Education and Sport, 2001.

