

## DEVELOPMENT OF CRITICAL THINKING - WISFUL THINKING OR REALITY IN ELEMENTARY SCHOOLS

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### Abstract

One of the trends in the current curriculum design and goals of teaching methodology at all levels of education is the development of critical thinking as one of the highest priorities of educators. The authors of the article reflect on the extent to which the development of critical thinking is implemented in primary schools as part of the foreign languages teaching (FLT). In some countries of continental Europe, it reflects their long history of transmissive and encyclopedic education and its only very slowly weakening influence on the current training of future specialists. Is the development of critical thinking still just a teacher's wishful thinking or a phrase about cross-cutting competence in the school curriculum? What is the cause of this phenomenon? The article presents the results of a content analysis of current foreign language teaching curricula in the area of critical thinking implementation, and compares them with experiences with development of critical thinking of primary school teachers. The authors bring ideas for the development of critical thinking in the teaching of foreign languages in primary schools.

**Keywords:** *Critical thinking, educational curriculum, development, primary school teachers, teaching foreign languages.*

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### 1. Introduction: The concept of critical thinking

The term 'critical thinking' as a kind of scientific attitude of mind was introduced by John Dewey as early as 1910. According to Dewey, critical thinking should be one of the main educational goals. In 1933, in his revised edition of *How We Think* with the sub-title "A restatement of the relation of reflective thinking to the educative process", Dewey replaced the use of the words "critical" and "uncritical" in the previous edition with "reflection" or "reflective thinking" (Hitchcock, 2018).

Another important step in the development of the concept of critical thinking in education was the first hierarchy of educational goals for the cognitive domain by B. S. Bloom et al. (1956). This taxonomy distinguished between lower (knowledge, understanding, application) and higher (analysis, synthesis, evaluation) intellectual or critical thinking abilities and skills. In the revised Bloom's Taxonomy, Anderson & Krathwohl said that 'critical thinking' and 'problem solving' „are widely used and tend to become touchstones of curriculum emphasis" (2001, p. 269-270). According to neuroscientific research, all thinking skills seem to be relatively independent of each other (Kagan, 2005).

From a normative aspect, critical thinking is "the correct assessing of statements" (Ennis, 1962, 83). According to later Ennis's works, "critical thinking is reasonable and reflective thinking focused on deciding what to believe or do" (Ennis, 2015, p. 45). In deciding what to believe or do, we are helped by the employment of a set of critical thinking dispositions and abilities. Critical thinking skills are not subject specific, so they have to be developed across the whole curriculum (Ennis, 2015).

Critical thinking is a concept that is written a lot by individual experts, educational authorities, international organizations, e.g. the OECD, the EU, the UN, the World Bank, but there is no general agreement about what, precisely, it means (Kerr, 2022). For the purposes of this study, by critical thinking we mean "the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning ... as a guide to belief and action" (Scriven & Richard, 1987).

#### 1.1. Historical trajectory and current trends of critical thinking in education

The increasing emphasis on critical thinking is a significant shift in continental European education with a long history of encyclopedic teaching. It is not just about proclaiming the need to teach students to think critically; it emphasizes verifying whether higher cognitive skills have been developed.

In Central and Eastern Europe, the first calls to transform the transmissive approach to educating young people date back to the 1990s, after the fall of the Iron Curtain. In the context of the previous historic development, the personalized and humanistic orientation of teachers in post-communist societies

was a great challenge. This emphasis went hand in hand with the constructivist approach, aimed at developing not only lower but also higher thinking skills. With a sufficient amount of simplification, the 1990s can be described as a shift from teaching facts using indoctrinating, encyclopedic approaches to development of humanistic, constructive and reflective ways of teaching how to think.

With the emergence of democracy in the post-Soviet states, efforts to reform education began to intensify. Teachers were encouraged to focus more on development of students' cognitive and non-cognitive functions than on their learning outcomes. In Slovakia, the Millennium project and the National programme of education (2001) appealed to educators to several important shifts, e.g. from dogmatism to humanization, from uniformity to variability, from reproductive methodology to heuristic one, and from passing on encyclopedic knowledge on the pupils to children's holistic development, including their ability how to learn and critically think. The aim of cognitivization in Zelina's KEMSAK model (1996) was to start teaching children to explore, think and solve problems, using various thinking strategies and heuristic methods. Zelina suggested that the higher thinking skills (analysis, evaluation, creativity) should be developed in all school subjects in all age groups. This challenge was also supported by the influence of the constructivist theory of learning in school practice. At the turn of the Millennium, the cognitive-affective-heuristic model began to be used in the teaching of English as a foreign language in Slovakia.

Currently, in the third decade of the 21st century, the development of critical thinking as one of the highest priorities of educators has become one of the inevitable components of the current curriculum and the goal of teaching methodology at all levels of education in many countries. Teachers' tasks need to be expanded to include providing students with both cognitive and non-cognitive skills, including critical thinking (TALIS, 2014, 86). To develop critical thinking, curriculum designers and teachers use Halpern's model (2014) that includes development of not only skills and methods of critical thinking, but also of an attitude, inclination, or willingness to apply these skills, the ability to identify appropriate opportunities for critical thinking and the ability to monitor progress and quality of thinking.

The development of critical thinking skills in foreign language teaching (FLT) is becoming more real with the growing emphasis on CLIL – content and language integrating learning since 1994. CLIL as a constructivist methodology has a real potential to stimulate the development of critical skills because it refers to authentic situations of acquiring knowledge from various subjects through a foreign language. CLIL allows learners to use language as tool of thought rather than only a tool of communication, as it develops higher mental flexibility, including ability of concept-formation, analyzing semantic features in greater detail, ability of reorganizing information etc. (Kovács & Benkó, 2014).

Learners do not learn a language only just to get to know the language, but to find new information in the target language and to think in it. CLIL offers such an educational environment in which students have the chance to use their cognitive abilities and create their own knowledge. They are intellectually challenged to transform information, solve problems, discover meaning through critical and creative thinking. When creating meaning, students mainly use the following thinking skills: analyze, differentiate, organize, sort, compare, contrast, synthesize, guess, evaluate and create. This kind of learning works to develop flexibility in their thinking.

## **1.2. Critical thinking - a wishful dream or a reality in elementary schools?**

Although according to TALIS 2014 & 2018, over 80% of teachers self-reported that they help students think critically. and almost 60% 'frequently or always' give students tasks that require students to think critically. However, the truth behind these self-reports is debatable. Some Australian experts doubt whether the self-reports of 2/3 Australian teachers in TALIS 2018 are a real evidence of whether their children are actually learning critical thinking in school; "the understanding of how students actually learn is rarely reflected in school curriculums, teaching practice guides, and student assessment" Henebery (2022). Here data from Slovakia are used as an example. According to TALIS 2014, 90% of Slovak teachers - in contrast to 51.8% of Czech and 15.6% of Japanese - think that they can help students think critically. On the other hand, according to GLOBSEC survey, Slovakia is the most conspiracy-prone in Visegrad (Klingová, 2019). About 20% of TALIS 2018 teachers are not convinced that there is enough research-based evidence about the impact of critical thinking activities (Huber & Kuncel, 2016).

Despite the fact that, for more than a century individual teachers as well as national and transnational organizations (the U.N., the OECD, the E.U., the World Bank) have been enthusiastic about critical thinking as one of the key educational goals, some authors are skeptical about the real fulfilment of this trendy dream. Kerr doubts "the ability of educational activities to have a positive impact on the *generic* critical thinking skills of learners in English language classes," and adds that "there is so little critical thinking about critical thinking in the world of English language teaching" (2022).

## 2. Research methodology and results: The case of Slovakia

The *aim* of our research was to find out the current state of the development of critical thinking from two perspectives - to what extent it is part of the new educational curricula to what extent it is part of the professional preparation of teachers in higher education in Slovakia. Two *research methods* were used to assess the level of the presence of critical thinking development: qualitative content analysis of the latest educational curricula and its comparison with the results of a quantitative-qualitative survey among primary teachers. Here are some of the *data obtained*:

Slovakia is currently in the midst of launching a curriculum reform called Education for the 21st century. Until now, education in Slovakia has been governed by the State Educational Program, a complex binding document that set out the general goals of education and the key competencies towards which 'basic' education for children 6-15 years old should be directed. It has been valid from 2011. This document includes an emphasis on critical thinking, i.e. the ability to seek, analyze and select information using interdisciplinary knowledge, diverse skills and a critical approach; construct informed decisions based on evidence and changing attitudes in the light of persuasive and valid argument; critically evaluate one's own progress, receive feedback and be aware of opportunities for one's own development; be able to critically evaluate the products of one's own culture and those of other cultures.

The forthcoming reformed curriculum for primary and lower secondary pupils further emphasizes critical thinking and the ability to solve problems as one of the six *global skills*, the development of which must be ensured at all levels of education, within all subjects including foreign languages (Pupala & Fridrichová, 2022). Their graduates should be able to use critical thinking based on knowledge and ethical values (p.17). The section focusing on Language and Communication, which includes educational principles for all linguistic subjects (mother tongue and 2 foreign languages), is devoted to the age-appropriate development of critical thinking. At the age of 12 to 15, the emphasis is on the active use of an increasingly wide range of various texts and multimedia (in addition to the textbooks) with the intention of searching, sorting and critically evaluating the text, its information and sources, as well as on the skills of active and critically listening, reasoning and problem-solving skills.

So as far as curriculum text is concerned, Slovakia has for more than a decade emphasized the development of critical thinking - comparably to its neighboring countries. However, it does answer the question whether creative and critical thinking is really a matter of our schools.

Although there are some ways of assessing partial critical thinking skills, there is no single standardized way across countries that conclusively shows the current level of critical thinking development in a certain school. Nevertheless, as part of the *Learning Makes Sense* project in 2018, we accomplished an in-depth and, as far as the respondents were concerned, extensive survey to find out whether critical thinking was part of school practice. Survey respondents (N=2826) included principals, teachers and students of 399 kindergartens, 434 primary and 212 secondary. The results showed that about 20% of students develop their critical thinking (e.g at secondary level). According to the experience of almost a third of secondary school teachers, students leave primary school with insufficient skills, which indicates insufficiently developed critical and creative thinking. Vančíková et al (2019) also found out that around 80% of teachers still use explanation and discussion as their main teaching methods; explorative methods and EUR strategies are used only by 20% of teachers. The survey authors came to the conclusion that it is more than questionable whether the way children are led in schools meets the requirements for the development of critical thinking. They call for more intensive use of such strategies, with which the school educates critically-minded personalities with their own attitude towards the world.

When comparing both sets of data (from the survey and the curriculum), we can state this: Despite the fact that the state curriculum has long emphasized the development of students' critical thinking, it is still not clear to what extent it is applied in schools. There is not enough research-based evidence for this.

## 3. Discussion and recommendations for developing critical skills in FLT

To teach young learners critical thinking that would develop their autonomy, increase their motivation, and promote their authentic communication has to be faced not as a self-evident capability of most teachers; it is a real challenge – especially for the generation of teachers, whose own education is either marked by indoctrination, or at the very least, based on memorizing facts rather than analysis and problem solving. Among the experts, there are several suggestions on how to respond to it. Some say that there is still a lack of a sufficiently clear definition of critical thinking or that teachers still lack sufficient knowledge and skills about how to develop students' critical thinking (Gedik, 2013). According to Hughes and Dummet (2020), critical thinking in FLT must include rational and reasonable *reflection* on language at three levels: of words and sentences, of text and of the idea. Sweller suggests supporting the learners' innate abilities by "increasing the domain-specific knowledge base" (2022, p.1).

Based on the experience of good practice, here are some recommendations for developing the

critical thinking of FL teachers and students in primary schools:

- Encourage learners to communicate producing spoken or written outputs while continuing a responsible teaching and teacher training about the linguistic phenomena of languages (knowledge of vocabulary and grammatical structures) – This helps them “to think through ideas, to express them, to share knowledge, to give feedback, review ideas, to adapt and refine ideas and to negotiate solutions” (Dale, Van der Es & Tanner, 2011, p. 121).
- Implement neuroscientific findings into FLT - creating a stimulating learning environment enabling positive emotional state of learners (Jensen, 2005). Emotions can stimulate the learner’s brain chemically which will help them to more effectively recalling of knowledge.
- Use productive, open questions and tasks in EFL to contribute to acquiring higher cognitive skills and communicative competence (Gondová, 2011). They help learners to construct their own learning through using their cognitive skills (via comparing, reflecting, finding purpose).
- Teach to formulate argumentation - The argument can be thought of as the message that is being conveyed, whether through speech, writing, performance, or other media. Cottrell suggests that teachers use also the following skills developing critical thinking: identifying other people’s positions, arguments and conclusions, evaluating the evidence for alternative points of view, weighing up opposing arguments and evidence fairly, being able to read between lines, seeing beneath the surface, and identifying false or unjustified assumptions, recognizing techniques used to make certain positions more appealing than others, such as false logic and persuasive devices, reflecting on issues in a structured way, bringing logic and insight to bear, drawing conclusions about whether arguments are valid and justifiable, presenting a point of view in a structured, clear, well-reasoned way that convinces others (Cottrell, 2005).
- Apply novelty and variation in time, space, movement and grouping: energizers; problem solving techniques; presentation of meta-cognitive strategies to improve the memory and information retrieval; visualization (mnemonics, peg words, music, discussion, pictures, mind-maps, graphic organizers, posters); peer teaching, co-operative work, interrupted and repeated solution seeking; episodic strategies (changes in location, circumstances; emotions, movement, novel classroom position (field trips, music, guest speakers, journal writing, projects, peer teaching; quizzes, small group presentations, structured timed tests, real life studies); reflexive strategies (Taylor, 2006).
- Implement scaffolding class activities (discussions, writing, presentations) around critical-thinking tasks. This integration helps to strengthen language knowledge (better use of grammar) and develops not only cognitive, but also communication skills in more complex topics (Snider, 2017).
- Be an example of critical thinker for students (Snider, 2017).

In order to develop unbiased cognition and skills, the person has to get involved not just in straightforward thinking and acting impulsively, but also in a reasonable process of plan preparation, has to be flexible and open-minded, willing to “abandon nonproductive strategies in an attempt to self-correct”; and aware “of the social realities that need to be overcome” (Halpern, 2014, p. 24).

#### **4. Conclusion**

Critical thinking has become not only a fashionable educational trend, but also a mandatory part of state educational curricula and teacher training. School inspectorates have a mandate to check whether teachers at all levels teach critical thinking in everyday professional practice. We think that the first question that foreign language teachers must be able to answer is whether they understand what critical thinking is, whether they can identify it not only in their FLT textbooks, but especially in real life - private, institutional and social. Thus, "explicitly teaching critical thinking skills in a foreign language" will become “one way to strengthen language and cultural knowledge while building students' higher-order thinking skills” (Snider, 2017). A second, equally important question is whether the language teachers are willing to reflect and think critically about their own critical thinking, as well as their own ability to teach critical thinking to their FLT students and subject it to regular scientific inquiry (at least action research).

#### *Acknowledgements*

The contribution is an output of the research project KEGA No. 011UMB-4/2022 called Creation of a web portal for methodological support of foreign language teaching in primary education and also of the research project KEGA No. 008UMB-4/2022 called Education as a gateway to thinking: integration of reading, academic and critical skills as a precondition to intellectual capital of universities and internationalization of education.

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