

Implementation of Integrated Curriculum in the Opinions of Primary Education Teachers

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Abstract

The integration of educational content is one of the conceptual pillars of the current curricular reform in primary education in Slovakia. It represents a shift from a fragmented subject-based approach to meaningful, interconnected learning that contributes to the comprehensive development of students' competences. The implementation of an integrated curriculum in primary education is not just an organisational change, but also requires a change in teachers' professional thinking. Its practical implementation depends on teachers' professional understanding of changes in the curriculum and their project competences. The aim of this paper is to analyse how primary school teachers conceptualise the integration of educational content, what their experiences are, how they approach their own design of an integrated curriculum, and what barriers they identify in this process. The research was conducted using a qualitative design and focus group interviews. The data were processed by thematic content analysis focusing on semantic frameworks, professional strategies, and systemic limits to the implementation of reform principles. The findings suggest that the participating teachers perceive integration as a pedagogically meaningful approach that supports contextualised student learning, but its implementation is conditioned by the degree of curricular autonomy, time available for planning, and the level of methodological support. Their statements reveal a tension between the declared flexibility of curricular documents and the practical reality of schools. The results of the study contribute to a deeper understanding of the implementation of curriculum reform at the level of pedagogical practice and point to the need for systematic support for teachers in the creation and implementation of an integrated curriculum, including adequate initial teacher education and continuing professional development. The study emphasises the importance of supporting teachers in the areas of interdisciplinary project design, ensuring content coherence, and reflective professional development.

Keywords: integration of educational content, curriculum reform, key competences, primary school teacher, focus group interview

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Introduction

Current curricular reforms across many educational systems are shifting from the fragmented acquisition of isolated knowledge towards fostering students' holistic development, competence development, and meaningful connections across educational domains. The curricular reform introduced in Slovak primary education in 2023 reflects this international trend by promoting an integrated approach to curriculum design and implementation. A key principle of the reform is the integration of educational content, based on the premise that learners construct knowledge through interconnected experiences rather than within the boundaries of isolated school subjects.

The *State Educational Programme for Primary Education* (Ministry of Education, Research, Development and Youth of the Slovak Republic & National Institute of Education and Youth, 2023) represents a substantial transformation in the goals and organisation of primary education. The reform emphasises contextualised learning, interdisciplinary connections, and the development of competences required for life in the twenty-first century. Its objectives include supporting students' holistic development, fostering critical thinking and problem-solving skills, strengthening communication and collaboration, promoting learner autonomy and responsibility, encouraging creativity and initiative, creating an inclusive and stimulating learning environment, connecting learning with authentic real-life situations, and developing civic, social, and digital competences.

These objectives have important implications for curriculum design. Within the reform framework, content integration is understood not merely as combining topics from different school subjects but as the purposeful creation of meaningful relationships among educational objectives, learning content, and students' authentic experiences. Such an approach is expected to enhance conceptual understanding, facilitate knowledge transfer, and promote the development of higher-order thinking skills.

The successful implementation of an integrated curriculum, however, depends largely on teachers' professional understanding of the concept and their ability to translate curricular intentions into classroom practice. Designing integrated learning experiences requires teachers to identify meaningful relationships among educational standards, formulate interdisciplinary learning objectives, and create coherent learning activities that support competence development.

Against this background, the present study aims to explore how primary school teachers conceptualise content integration, examine their experiences with its implementation, investigate the ways in which they design an integrated curriculum, and identify the barriers they encounter during this process.

Theoretical Foundations of Curriculum Integration

Curriculum integration is not a new topic in educational research. Constructivist theories of learning have long emphasised the importance of connecting knowledge and actively constructing meaning through experience (Piaget, 1970; Vygotsky, 1978). In the Czech and Slovak pedagogical tradition, Chlup (1957) was among the first to warn against the didactic limitations of fragmented knowledge acquisition and advocated a dialectical approach to teaching that encourages thinking in relationships and broader contexts. Similarly, Maňák (2024) argues that neglecting interdisciplinary connections leads to isolated knowledge

structures, whereas instruction should promote the synthesis of knowledge and skills across subject boundaries.

Integrated thematic instruction represents a pedagogical approach that connects knowledge from different educational domains through common themes or authentic problems, thereby creating more meaningful learning experiences. Kerry (2015) suggests that cross-curricular teaching enables teachers to design more creative learning situations while fostering deeper understanding. Likewise, Björklund and Ahlskog-Björkman (2017) demonstrated that integrating mathematics and the arts in early childhood education promotes holistic learning and supports children's ability to establish conceptual connections from the beginning of formal education.

Evidence from cognitive psychology further supports integrated curricula. Bransford et al. (2000) argue that meaningful learning occurs when learners recognise relationships among concepts and transfer knowledge to new contexts. Similarly, Perkins (2009) emphasises the importance of transfer learning, whereby knowledge acquired in one domain can be effectively applied in different situations. Curriculum integration therefore facilitates the development of interconnected cognitive structures and enhances conceptual understanding.

Contemporary neuroscience provides additional theoretical support for integrated learning. Brain research indicates that learning is mediated through interconnected neural networks rather than isolated subject-specific systems (Sousa, 2022). Jensen (2008) argues that learning is more effective when new information is embedded in meaningful contexts and connected with prior knowledge, emotions, experiences, and social interaction. From this perspective, integrated thematic instruction aligns with natural learning processes by promoting multiple representations of knowledge and meaningful cognitive connections.

The rationale for curriculum integration is also grounded in developmental psychology. Young learners perceive the world as an interconnected whole rather than as separate school subjects. Consequently, integrated learning enables students to better understand relationships among phenomena, transfer knowledge across contexts, and develop higher-order thinking skills.

The effectiveness of integrated curricula has been supported by several intervention studies conducted in educational settings (Portaankorva-Koivisto & Havinga, 2019; Ratcliffe et al., 2005; Siew & Ambo, 2018; Šindelková et al., 2016). However, successful implementation depends not only on curriculum design but also on teachers' understanding and enactment of reform principles. Fullan (2007) emphasises that teachers are the key agents of educational change and that sustainable reform occurs only when they understand and internalise its underlying purposes.

Despite the documented benefits of curriculum integration, empirical studies also identify significant implementation challenges. Effective integrated teaching requires teachers to possess a deep understanding of disciplinary content as well as the ability to identify and intentionally construct meaningful interdisciplinary connections (Cherni, 2020). Furthermore, integrated curriculum planning places considerable demands on teachers' pedagogical design, instructional planning, and selection of appropriate teaching strategies (Yunisrul et al., 2021). Successful implementation also depends on collaboration and coordinated planning among teachers, which remains one of the most challenging organisational aspects of curriculum integration in school practice (Retnawati et al., 2018).

Methods

A qualitative research design was employed to explore primary school teachers' perceptions of curriculum integration. Data were collected through semi-structured focus group interviews, which served as a pilot study within a broader research project investigating teachers' approaches to curriculum integration in the context of the Slovak curricular reform.

The interview protocol combined predetermined questions with flexible follow-up prompts, enabling participants to elaborate on their experiences and perspectives. The discussions focused on teachers' understanding of curriculum integration, their previous experiences with integrated teaching, approaches to designing integrated curricula, perceived barriers to implementation, and their evaluation of concept maps as a planning tool. All interviews were audio-recorded, transcribed verbatim, and analysed using inductive open coding.

The pilot sample consisted of four female primary school teachers. Three participants worked in schools that had not joined the curricular reform pilot programme and had between three and seven years of teaching experience. One participant taught in a school involved in the second year of the reform pilot and had five years of teaching experience.

At the beginning of each interview, participants were introduced to the Integrated Thematic Instruction model (Kovalik & Olsen, 1996) and to a set of concept maps developed by the research team. The concept maps were created through qualitative content analysis of the educational standards for individual curriculum areas. Units of analysis included words, phrases, and sentences representing concepts, themes, relationships, facts, or activities. The coding process was conducted independently by two experts—a specialist in primary education and a subject-specific didactics expert—to enhance analytical reliability. Differences in coding were subsequently discussed until consensus was reached, and the agreed categories formed the basis for constructing the concept maps used during the interviews.

Results of the Focus Group Interviews

The results of the content analysis of the focus group interviews are presented in Table 1. Segments of the interview transcripts were assigned codes, which are listed in the right-hand column, and were grouped into thematic categories (left-hand column).

Table 1

Results of the Coding From the Content Analysis of the Interviews

Category	Code
Understanding the concept of content integration	Integrated projects
	Theme day
	Interdisciplinary links
	Inclusion
	Incorrect or narrow understanding of the concept
	Lack of knowledge of the theoretical foundations of content integration
	Perception of a lack of knowledge of content integration amongst colleagues
	Positive self-assessment of understanding of content integration

Designing an integrated curriculum	Intuitive planning Working with the curriculum is largely implicit Flexibility in terms of time and organisation Combining resources The curriculum as a starting point for lesson planning Teaching based on pupils' interests The need for professional development and participation in training courses
Views on concept maps	Clearer guidance on content standards Positive feedback – helpful for teachers
The benefits of introducing integrated teaching	Freedom to choose topics to meet the standards Joint decision-making on the choice of topics Greater teacher autonomy
Barriers to integrated teaching	Topics set by the school management Discrepancies between the content of different subjects within the planned curriculum (in the case of a project or theme day) The need for further training in the integration of educational content

Source: Compiled by the author

Teachers' Perceptions of Content Integration

The results suggest that the teachers participating in this pilot study tend to view content integration in a rather narrow and pragmatic way. Most often, they equate it with organising themed and project days (e.g. Apple Day, Earth Day, Tree Day) or with linking the same topics across different subjects. Whilst the teachers do create thematic coherence for the day, they lack an explicit link to common educational objectives and a conceptual connection between content standards.

Theoretical Foundations of Content Integration

The results point to conceptual ambiguity, as some teachers also associate the term “integration” with the inclusion of pupils with special educational needs.

The interviews revealed a lack of theoretical grounding regarding the issue of content integration. Terms such as “integrated thematic teaching,” “brain-compatible learning” or the names of authors such as S. Kovalik and K. Olsen are, according to the teachers, completely unfamiliar to them. The teachers reflected on the lack of systematic preparation for the implementation of the reformed curriculum and pointed out that the training they had undergone had focused primarily on a mechanical approach to working with educational standards. At the same time, they expressed an interest in further professional development that would foster a deeper understanding of the principles of content-integrated teaching.

Designing an Integrated Curriculum

Teachers described the design of an integrated curriculum as a largely intuitive process based on pedagogical experience, textbooks and pupils' interests.

Although they stated that they focused on integrating content within the educational standards, the use of these standards in lesson planning remains largely implicit. The interviews also revealed a perception that teaching is focused on the pupil and their needs, whilst emphasising the diversity of classes and the need to adapt teaching to the specific class group. They view content integration as a means of promoting motivation, active learning and respect for pupils' individual needs.

Perceptions of Concept Maps

Concept maps were assessed by the teachers as an effective methodological aid in designing an integrated curriculum. They appreciated their contribution to navigating educational standards, identifying content connections and exploring new ways of linking educational content (e.g. linking tourism within the social sciences curriculum to physical education). The results suggest their potential to support more systematic and conscious planning of integrated teaching.

Barriers and Prospects for Content Integration

The freedom to choose topics and support from the school management were cited as the most significant positive factors in the context of the discussion on the integration of educational content. Where the teachers have the opportunity to have a say in choosing topics, they perceive content integration as more meaningful and authentic. Their visions point towards greater autonomy, systematic methodological support and continuous professional development in the field of content-integrated teaching.

The teachers identified the main obstacles to the implementation of integrated teaching as limited autonomy in the choice of topics – which is linked to regulations imposed by the school management – inconsistencies between the content of individual subjects (in the case of project-based or thematic days) and insufficient methodological support. These obstacles lead to a sense of uncertainty and confusion when seeking suitable links, which in turn highlights the need for clear methodological tools and support within the curriculum.

Discussion

The results of the qualitative study suggest that, among the participating primary school teachers, content integration has not yet been clearly conceptualised despite the ongoing implementation of the reformed curriculum. Most participants interpret it in terms of thematic or project days, or as linking the same topics across different subjects. However, this understanding represents the realisation of cross-curricular links or the thematic contextualisation of the curriculum rather than content integration based on the conscious linking of educational objectives, content standards and expected learning outcomes. The results therefore suggest a discrepancy between the theoretical concept of content integration presented in the reformed curriculum and its interpretation in pedagogical practice.

This finding is consistent with research indicating that the implementation of an integrated curriculum requires a significantly higher level of curricular thinking on the part of the teacher than traditional lesson planning (Cherni, 2020). The integration of educational content involves not only linking subject areas thematically, but above all designing shared learning objectives and deliberately establishing connections between knowledge from different subject areas. The

results of the interviews suggest that this shift in the participating teachers' professional thinking is not yet sufficiently established.

Another significant finding is the acknowledged lack of theoretical knowledge regarding content integration. Teachers openly admit that their professional training for the implementation of the reformed curriculum focused predominantly on working with educational standards, whilst the principles of content integration themselves took a back seat. These findings support the conclusions of Yunisrula et al. (2021), according to whom designing an integrated curriculum is one of the most professionally demanding tasks for a teacher. Similarly, Retnawati et al. (2018) point out that the successful implementation of integrated teaching requires not only the teacher's individual competences, but also systematic methodological support and coordination of lesson planning.

The results also showed that the participating teachers intuitively apply several principles of content integration, particularly focusing on pupils' interests, creating authentic learning situations and linking the curriculum to everyday experiences. These principles are consistent with constructivist approaches to learning; however, they are often put into practice without conscious curriculum design. It can therefore be assumed that the problem with implementation does not lie in the absence of integration activities, but rather in their insufficient theoretical grounding and systematic planning.

The teachers themselves highlight the difficulty of transitioning from a transmissive model of teaching to student-centred learning, which is one of the fundamental requirements of the current curriculum. This aspect confirms that the implementation of the reform is not primarily a matter of adopting new methodological approaches, but of changing professional beliefs and pedagogical thinking.

The evaluation of concept maps can be considered particularly insightful. The teachers unequivocally identified them as an effective methodological aid in designing an integrated curriculum. In particular, they praised their ability to visualise relationships between learning content, to facilitate navigation of the educational standards, and to encourage the exploration of new ways of linking subject matter. These findings suggest that one effective tool for supporting the implementation of the reformed curriculum may be the creation of methodological materials that present content relationships to teachers in a clear, visual format.

Another significant finding is the discrepancy between the participating teachers' positive attitudes towards content integration and the conditions under which it is implemented. Although they regard integration as beneficial in terms of pupil motivation and the authenticity of learning, they highlight their limited autonomy in choosing topics, the time-consuming nature of planning, and a lack of methodological support. These findings suggest that the successful implementation of an integrated curriculum does not depend solely on teachers' individual competences, but is also conditioned by the school's systemic conditions, professional development and support from the school management.

Summary and Recommendations

The implementation of curricular changes begins in Year 1 of primary school – that is, in primary education – and the guiding principles of the education reform are gradually being incorporated into and shaping higher levels of education as well. In the reformed curriculum, the role of the teacher is changing most significantly, as teachers are becoming curriculum

designers: under the two-tier curriculum, each school develops its own school curriculum based on the national curriculum.

The findings suggest that content integration is still in a phase of gradual adoption among the participating teachers. They express a positive attitude towards the reform changes, are highly motivated to develop their professional competences, and recognise the need for further professional development. Future professional development should therefore be directed not only towards the acquisition of methodological approaches, but above all towards a deeper understanding of the theoretical principles of a content-integrated curriculum and their application in the systematic planning of lessons.

The reform moves away from the traditional emphasis on the isolated acquisition of knowledge in individual subjects and focuses on developing pupils' comprehensive competences by linking knowledge, skills, attitudes and experiences from different areas of education. The new curriculum creates scope for linking educational areas through thematic blocks, project-based teaching, problem-based learning and research activities. It can be said that the integration of educational content represents one of the key requirements of the reformed curriculum. This is not merely an organisational change in teaching, but a shift in the philosophy of education, which should, above all, be embraced by teachers – the primary and most important agents of change in education.

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