Developing General Competences in the Context of Different Learning Subjects: Between Fragmentation and Systematicity

Agnė Juškevičienė,

Institute of Educational Sciences, Faculty of Philosophy, Vilnius University, Lithuania

ABSTRACT: The aim of this article is to identify: which general competences are developed during different learning subjects lessons and which active learning methods are used in the development of general competences. The sample for the data analysis consisted of 53 Lithuanian general education schools that participated in an external risk assessment in 2019. A total of 883 lesson cards were analysed, indicating the teaching methods used by teachers in specific lessons. The study found that the development of general competences is not systematic in the schools where external risk assessments have been carried out.

KEYWORDS: General Competences, Development, Learning Subjects, Fragmentation, Systematicity

INTRODUCTION

In order to cope with a fast-paced, technology-driven world, students need not only to have competences in languages, mathematics or other sciences, but also to develop critical thinking, problem-solving, perseverance, collaboration and curiosity skills (New Vision for Education, 2015). The global education landscape is dominated by a diverse set of general (core) competences that are important for the development of the younger generation - the society of the future (Table 1). For example, as D. N. Perkins (2014) argues, there is already a global trend towards developing critical and creative thinking, collaborative skills and attitudes. This position is also maintained at the national level − the General Programmes of Primary and Basic Education (2008); Guidelines for the Update of the General Programmes (2019) refer to the development of critical thinking, creativity, communication. However, some unique trends are also emerging. Looking at The OECD PISA global competence framework (2018), the emphasis is on collective well-being, sustainable development, and open and inclusive communication in a cross-cultural society. The OECD's learning guidelines, 'Education and skills for the future. The Future of Education and Skills. Education 2030 focuses on individual and collective well-being, learner agency, self-regulation, stress management and other skills relevant to the future society.

Table 1. Expression of general competences in international education documents

New Vision for Education. Unlocking the Potential of Technology (2015)	Future Work Skills, 2020	Future education and skills. Education 2030 (2018)	The OECD PISA global competence framework (2018)	Framework programmes for primary and basic education (2008)	Guidelines for updating the Framework Programmes (2019)
Critical thinking, problem solving Communication Collaboration Creativity Literacy (linguistic, mathematical, science, information, financial, cultural and civic)	Cognitive information management Interculturalism Digital thinking New, adaptive thinking Interdisciplinarity Social intelligence Media literacy Creating meaning	Individual and collective well-being Learner agency Critical thinking Creative thinking Learning to learn Social and emotional competence Self-regulation Creating a new meaning Voltage management Taking responsibility Building a sustainable society	Collective well-being Sustainable development Open, inclusive communication in a multicultural society	Communication Cognition competence Learning to learn Social competence Initiative and creativity Personal competence	Communication Cognition competence Civic competence Social and emotional Creativity competence Cultural competence

Developing General Competences in the Context of Different Learning Subjects: Between Fragmentation and Systematicity

The analysis of international and national educational documents shows the unquestionable importance of the development of general competences and their necessity for the modern and future human being. Therefore, the aim of this study - to investigate the expression of the development of general competences in the lessons of different subjects or in non-formal activities - is topical and timely.

METHODOLOGY

The quantitative research was made up of 53 Lithuanian mainstream schools that participated in an external risk assessment in 2019. A total of 883 lesson cards were analysed, recording the general competences teachers planned to develop (Table 2).

	Personal	Collaboration	Proactive	Creativity	Communication	Cultural	Social	Learning to learn	Cognition
Lithuanian language	23,7	5,1	10,2	15,3	67,8	1,7	30,5	72,9	44,1
Literature	29,7	6,3	17,2	29,7	67,2	3,1	46,9	59,4	50
English language.	17,4	6,5	4,3	2,2	63	0	28,3	58,7	21,7
Polish language	8,3	0	16,7	8,3	41,7	0	25	50	75
Mathematics	27,5	7,7	13,2	12,1	40,7	0	37,4	70,3	47,3
Chemistry	40	6,7	20	13,3	86,7	0	40	46,7	40
Physics	21,4	0	0	21,4	35,7	0	42,9	42,9	50
Music	47,8	0	30,4	52,2	52,2	4,3	34,8	30,4	56,5
History	15,6	3,1	9,4	12,5	50	0	28,1	46,9	53,1
Geography	17,6	0	0	0	47,1	0	58,8	47,1	58,8
Economy	50	0	0	0	50	0	0	50	50
Psychology	100	0	0	100	100	0	0	0	100
Technologies	32	4	28	52	44	4	32	60	20
German language	25	25	0	0	50	0	25	0	75
Ethics	71,4	0	0	0	85,7	0	57,1	0	42,9
Physical culture	61,3	12,9	16,1	22,6	35,5	0	54,8	32,3	19,4
Art	21,4	0	28,6	42,9	28,6	14,3	0	35,7	50
Russian language	17,9	0	17,9	25	71,4	3,6	35,7	60,7	35,7
Religion	25	33.3	0	8,3	25	0	41,7	16,7	33,3
Biology	26,7	6,7	33,3	20	73,3	0	20	66,7	80
Career planning	0	0	100	0	0	0	100	0	100
Information technology	12,5	0	18,8	37,5	18,8	0	12,5	62,5	25
Nature and human	18,5	3,7	11,1	18,5	59,3	3,7	40,7	51,9	63
Dance	57,1	0	0	14,3	28,6	14,3	14,3	14,3	0
Class hour	33,3	33,3	0	0	100	0	100	0	33,3
Human safety	60	0	20	20	60	0	60	40	60
Nonformal activity	50	0	40	40	30	0	40	10	20

Figure 1. Expression of general competences in different subjects and non-formal activities

The most commonly developed general competence.

The least frequently developed general competence (less than 20%) is the general competence.

As can be seen from the table below, the least attention is paid to the development of creativity, initiative and cooperation competences, while cultural competences are practically absent. It is obvious that bringing the pupil closer to the social and cultural environment, its characteristics, behaviour, thinking, traditions and customs is not a priority of lessons in social sciences, humanities and other fields, as only 14.3% of art, 3.7% of nature and human, 3.6% of Russian lessons are devoted to the development of cultural competences.

However, the development of teaching, cognitive and communicative competence(s) is the most common focus of the various subjects and non-formal activities. The survey revealed that the development of learning competences is most often carried out during lessons in Lithuanian (72.9%), mathematics (70.3%), biology (66.7%) and ICT (62.5%). However, this competence was not planned to be developed in German, Ethics, Psychology and Career Counselling classes.

Cognitive competence also plays an important role in the modern school. This competence was to be developed in all psychology and career guidance classes (100%) and in 70% of German or Polish classes. There is a significant number of lessons (Lithuanian, literature, mathematics, history, chemistry, physics, etc.) in which this competence was developed in about 50% of these lessons. However, cognitive competence is least often developed in English (21.7%), technology (20%), physical education (19.4%) or informal activities (20%).

The survey shows that teachers also see the importance of developing communicative competence. The latter competence was most often developed in class periods (100%), psychology classes (100%), chemistry (86.7%), ethics (85.7%) and biology (73.3%). The development of this competence is also given considerable attention in Lithuanian language (67.8%), literature (67.2%), Russian (71.4%) and English (63%) classes. Although an ambiguous situation can be discerned where this competence was not essential in the lessons of the different languages of instruction. The study also shows that the development of this competence is rare in other lessons, with percentages below 50%.

As one of the key conditions for the development of general competences is an active, fully engaged learner, capable of individual and responsible decision-making, it is important to examine the opportunities for developing cognitive, communicative and learning competences through active learning methods. The classification of active learning methods proposed by Spiro and Finkel (1998) is based on three groups: methods for underprepared, moderately prepared, and highly prepared groups of students. This type of analysis allows us to reveal and predict whether the conditions are right for the development of the expected general competences.

Following the logic of the study, it was found that communication competences were most often developed in lessons with medium-preparedness methods, such as brainstorming, discussion, presentations, role-playing, etc. However, 22.7% of the lessons with only underprepared group methods, such as reading, studying texts, engaging lectures, etc., also developed communicative competence (Figure 2).
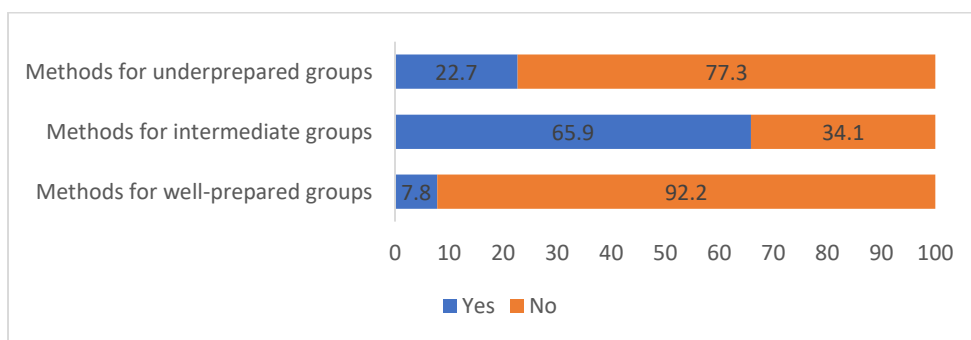

Figure 2. Developing communicative competence through active learning methods

However, there is an antithesis between the methods used and the development of cognitive and learning competences. Given that the development of cognitive competence is essentially linked to motivation, the ability to know oneself and the world through reflection on experience, knowledge and research, it is clear that the methods used can only partially develop this competence (Figure 3).
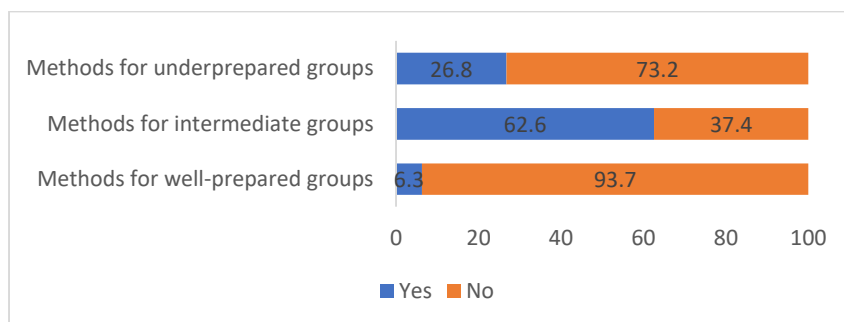

Figure 3. Developing cognitive competence through active learning methods

Figure 3 shows that cognitive competence is most often developed in lessons where the predominant methods are those aimed at intermediate prepared groups. In these lessons, the teaching activities are based on brainstorming, student interviews, group presentations, debates, role-playing, etc. Given the specific nature of these methods, it can be argued that teachers allow students to explore ideas and to reveal their own point of view, but that these methods do not allow for self-directed learning, for the freedom of the child to make his/her own decisions. In only a small proportion of the lessons observed during the external risk assessment (6.3%) was cognitive competence developed in lessons involving project work, peer learning, peer counselling etc. This provided ample opportunities for pupils to explore, develop critical thinking, problem-solving and self-reflection skills (Guidelines for the update of the General Curriculum, 2019).

A similar situation emerges in the development of competence in learning to learn, where the specificity of the methods used in most lessons limits the comprehensive development of competence in learning to learn.
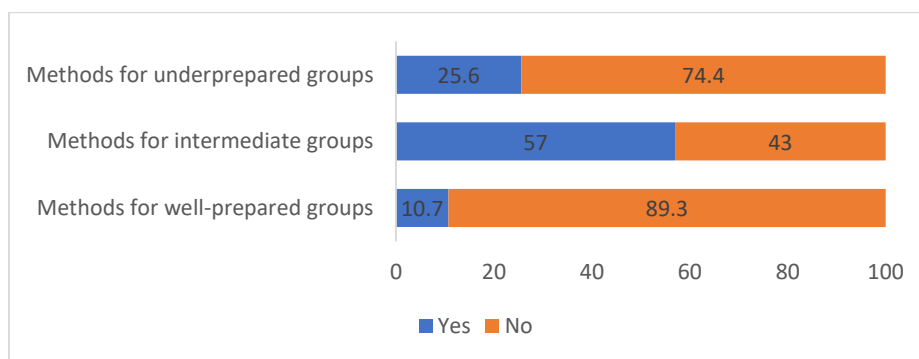

Figure 4. Developing competence in learning to learn through active learning methods

Such doubts are raised by the discrepancy between the purpose of the competence itself and the possibilities offered for its implementation. While the competence of learning to learn is associated with self-directed learning, where each learner individually sets goals and objectives, chooses learning strategies and tools, plans for effective time and information management, evaluates learning progress, and makes recommendations for individual development, the study shows that as many as 57% of lessons use methods aimed at moderately prepared groups. This means that the learning process is controlled and structured by the teacher. The study also shows that 25.6% of lessons are based on methods for underprepared groups, which also aim to develop the aforementioned competence of learning to learn. In these lessons, the structure of the lesson is clear and tightly controlled by the teacher, which can lead to fragmented and staged pupil autonomy. In only 10.7 lessons is the competence in learning to learn developed through the use of active methods for well-prepared groups.

CONCLUSIONS
1. The study found that the development of general competences is not systematic in the schools where external risk assessments have been carried out. Some general competences - cultural, social - are developed only in a few subjects or not at all. However, the main focus of most activities and lessons is on learning, cognitive and communicative competences.
2. An analysis of the active learning methods used in the classroom and the general competences chosen to be developed has highlighted the prevailing antitheses. The methods used in the majority of lessons for moderately prepared groups restrict the full and appropriate development of these competences.
3. Based on the data presented, it can be argued that the development of cognitive and learning competences is not supported by opportunities for self-directed learning in the majority of lessons

REFERENCES
1) General Programmes of Primary and Basic Education (2008). Education and Science of the Republic of Lithuania by Order of the Minister of Education and Science of 26 August 2008 No ISAK-2433.
2) Guidelines for the Update of the General Programmes (2019). Vilnius: National Education Agency. Online access: bendruju-programu-atnaujinimo-gaires_internetine-versija.pdf (smm.lt)
3) New Vision for Education Unlocking the Potential of Technology. Industry Agenda (2015). World Economic Forum. Online access: NVE_ver21 (weforum.org)
4) Perkins, D. N. (2014). *Future Wise. Educating our children for a changing world.* Jossey-Bass.
5) The OECD PISA global competence framework (2018). Preparing our Youth for an Inclusive and Sustainable World. Online access: Global competence - PISA (oecd.org)
6) The OECD Future of Education Skills 2030. Online access: OECD Future of Education and Skills 2030 - Organisation for Economic Co-operation and Development