

## Applying Active Learning Methods in Education: Possibilities to Become a Modern Person

**Agnė Juškevičienė**

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

---

**ABSTRACT:** The aim of this article is to identify the subjects in which active learning methods are used, and to identify which active learning methods are used in the development of general competences. The sample for the data analysis consisted of 53 Lithuanian mainstream 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 classification of active learning methods proposed by J. Spiro and L. Finkel (1998) is used to group the methods, distinguishing three groups: methods for underprepared, moderately prepared and well-prepared groups of students.

**KEYWORDS:** Active Learning Methods, Modern Person, Education

---

### INTRODUCTION

In education there is main attention to active learning methods and the importance of their use in the educational process, as it is activities that engage students in the learning process, promote higher levels of thinking, creativity, initiative, the dissemination of effective ideas, and the full integration of teamwork (S. Freeman, S. L. Eddy, M. McDonough et al., 2013). At the same time, researchers (C. L. Konopka, M. B. Adaime, P. H. Mosele, 2015) point out that active learning methods often become just part of the everyday school routine, with teachers selecting teaching/learning methods on the basis of their modernity or simply on the basis of the ease of application, forgetting the relevance to the lesson's purpose or objectives. At the same time, it is stressed that traditional classroom discourses of teacher-dominated classrooms continue to prevail at different levels of education, and S. Freeman, S. L. Eddy, M. McDonough et al. (2014) critically point out that some teachers tend to believe that their classrooms are full of active activities based on asking students questions, doing homework or doing laboratory activities. However, this is a misleading insight, as such pupils find it difficult to think critically, to interpret and to perform tasks creatively. C. R. Rogers (2005) argues that we tend not to develop creative, original thinkers, but rather stereotypical individuals characterised by regimented group activity and almost invisible group participation. The highly directed teacher-led educational process limits the importance of developing imagination, creativity, analytical and critical thinking skills (W. J. Galindo, 2010). Therefore, the validity and effectiveness of active learning methods are an integral part of a quality lesson. For example, using thin-pair-shair method promotes students' interest and understanding of the subject (R. F. Yuretich, S. A. Khan, R. M. Leckie & J. J. Clement, 2001). There is also a preponderance of research that also recognises the importance of active learning methods in higher education. For example, M. J. Gómez-Poyato, A. Aguilar-Latorre, M. M. Martínez-Pecharromán, R. Magallón-Botaya & B. Oliván-Blázquez (2020) mention that active learning in university degrees, such as flipped classroom and role-playing require a higher degree of student involvement, greater dynamism in learning and increased content interaction. L. Stoll (2020) points out that, given the rise of digital technologies, it is also important to rethink teaching methods, content and the educational process, as the use of mobile technologies alone means that the learner is constantly connected to what is happening in the world or in the life of the individual. Digital technologies open up, widen access to information, create new ways of learning, provide opportunities for communication, collaboration, participation and the acquisition of new skills. H. Arieli (2021) links the pedagogy considered as the future of education to three aspects: innovation, creativity and excellence. The first goal of innovative education is to show learners how to learn, i.e. to develop and develop knowledge of how to acquire, discover, execute, and apply new ideas, concepts, techniques, and systems. This is learning how to learn. Empowering students to learn, according to H. Arieli (2021), is based on two aspects: the learning style and the educational-social experience of the learner. Developing the idea of pedagogy, it is worth noting that L. Stoll (2020) identifies the idea of an innovative pedagogy, which inevitably has to touch the school of the future. The five main aspects of an innovative pedagogy are as follows: (a) a play-based approach that creates joyful experiences so that children can find meaning in learning, develop active thinking and social interaction; (b) an experiential approach that interweaves educational content with the real world; a digitally-oriented approach that supports problem-solving; an embodiment-based approach that involves physical engagement in learning; and a multilingual approach that focuses on diversity and different ways of using language. As can be seen, creativity is a particular

## Applying Active Learning Methods in Education: Possibilities to Become a Modern Person

focus in the design of the school of the future, where it is important to talk about the expression of students' creativity in a variety of contexts, situations or forms of learning (real, virtual). The third aspect relates to learner excellence, something we must strive for, without giving up the same high performance for all. Excellence is personal, fair and cannot be staged. In order to achieve such excellence, learning programmes and content must be learner-centred. As H. Arieli (2021) argues, the journey towards mastery begins with the will of the learner, not the teacher, peers or others, but the learner.

Based on these insights, the aim of this paper is to identify the subjects in which active learning methods are used, and to identify which active learning methods are used in the development of general competences.

### METHODOLOGY

The sample for the data analysis consisted of 53 Lithuanian mainstream 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 classification of active learning methods proposed by J. Spiro and L. Finkel (1998) is used to group the methods, distinguishing three groups: methods for underprepared, moderately prepared and well-prepared groups of students (Figure 1).

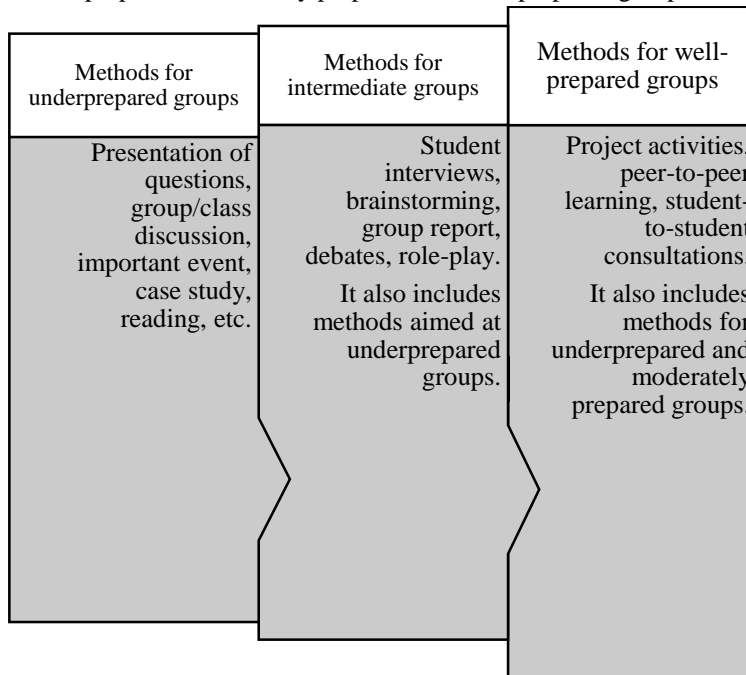


Figure 1. Classification of active learning methods according to J. Spiro, L. Finkel (1998)

In unprepared groups, strictly structured methods are used, with clear instructions from the teacher: questioning, class or group discussion, case studies, reading, exploring relevant facts. In intermediate groups, unprepared groups may also use the methods of unprepared groups, but already in these classes there is the use of brainstorming, student interviews, a group report, debates, role-playing. In this case, the input of the students is important, they are given the opportunity to make choices, to act independently and the learning process is already more flexible. In lessons using the well-prepared group method, the role of the teacher changes dramatically, with pupils making their own decisions and acting independently. The teacher becomes a facilitator, a consultant, in the project work, in the independent setting and implementation of learning objectives. At this stage, the importance of pupils learning from each other is emphasised. It is stressed that this study does not seek to answer the question of the reasons why teachers use the chosen methods, but only to highlight the trend in the use of methods.

The aim of the study was to find out which active learning methods are used in different grade concentrations in modern schools. The findings are presented in Table 1.

Table 1. Application of active methods in different classes of concentrates

Levels of schools	Methods	Methods for underprepared groups		Methods for intermediate groups		Methods for well-prepared groups	
		Yes	No	Yes	No	Yes	No
Primary school		28	72	64	36	3,3	96,7
Main school (5-8 classes)		29,9	70,1	53,5	46,5	9,8	90,2
Main school (9-10 classes)		32,3	67,7	52,5	47,5	7,1	92,98
Secondary school		25	75	58,8	41,3	12,5	87,5

## Applying Active Learning Methods in Education: Possibilities to Become a Modern Person

An analysis of the lesson planning cards provided to the external evaluators of the schools shows that teachers in all grade concentrations tend to use methods for moderately prepared groups, i.e. brainstorming, student interviews, group presentations, debates, role-plays, etc. However, methods that promote project-based activities, self-directed learning and peer support, which, according to Spiro and Finkel (1998), have already been associated with well-prepared groups, are less frequently used. Similarly, in the core concentrations in grade 9-10, more than a third of the lesson cards studied indicated the use of underprepared group methods - studying the teacher's material, examining it, asking questions/answering questions, etc.

It also aimed to explore the active learning methods used in different subjects and informal activities. The findings are presented in Table 2.

**Table 2. Applying active methods in lessons and other non-formal activities in different subjects**

Subjects, activities	Methods for underprepared groups		Methods for intermediate groups		Methods for well-prepared groups	
	Yes	No	Yes	No	Yes	No
Lithuanian language	27,1	72,9	67,8	32,2	5,1	94,9
Literature	17,2	82,8	68,8	31,3	9,4	90,6
English language	26,1	73,9	52,2	47,8	6,5	93,5
German language	0	100	100	0	2,5	97,5
Russian language	25	75	67,9	32,1	3,6	96,4
Polish language	33,3	66,7	65	35	0	100
Mathematics	25,3	74,7	57,1	42,9	15,4	84,6
History	46,9	53,1	50	50	3,1	96,9
Chemistry	33,3	66,7	53,3	46,7	6,7	93,3
Physics	28,6	71,4	57,1	42,9	0	100
Biology	33,3	66,7	66,7	33,3	0	100
Music	43,5	56,5	43,5	56,5	4,3	95,7
Geography	41,2	58,8	52,9	47,1	5,9	94,1
Technologies	40	60	32	68	16	84
Ethics	42,9	57,1	57,1	42,9	0	100
Religion	33,3	66,7	66,7	33,3	0	100
Physical culture	16,1	83,9	64,5	35,5	6,5	93,5
Art	35,7	64,3	7,1	92,9	35,7	64,3
Psychology	0	100	100	0	0	100
Career planning	0	100	100	0	0	100
Information technology	56,3	43,8	18,8	81,3	6,3	93,8
Nature and man	11,1	88,9	66,7	33,3	14,8	85,2
Dance	42,9	57,1	42,9	57,1	0	100
Class hour	66,7	33,3	33,3	66,7	0	100
Economy	50	50	55	45	0	100
Human safety	40	60	60	40	0	100

The study shows that technology, art, science and nature and man lessons are mostly based on active learning methods, which focus on project-based and creative work, peer tutoring and counselling, and students' full self-management of the learning process. However, it has emerged that in most of the different lessons this type of method is not used at all (religion, ethics, economics, Polish, etc.) or in most lessons (Lithuanian language, literature, English, mathematics, chemistry, geography, music, etc.) the percentages do not reach ten percent. This shows that the teacher, not the pupil, dominates the educational process, and that the development of critical thinking, creativity and other skills that are important for a modern society are not fully promoted. Also there is a clear tendency for teachers in the educational institutions involved in the external risk assessment to work with strategies that are sufficiently under their control, using methods for moderately prepared groups. Of course, this shows that teachers tend to encourage students' critical thinking, group work, etc., but the logic and flow of the lesson is teacher-determined, without opening up more possibilities for personalised learning. It is also worth drawing attention to the data that show the specificity of the use of methods aimed at unprepared groups. It emerged that in a significant proportion of class periods (66.75%), IT (56.3%), history (46.9%), music (43.5%) and geography (41.2%), unprepared group methods are used, which involve reading and studying the textbooks, asking questions, and examining concrete facts.

## Applying Active Learning Methods in Education: Possibilities to Become a Modern Person

The quantitative study was also interested in discovering which active learning methods are used in the classroom to develop general competences. The results are presented in Table 3.

**Table 3. Using active approaches to develop general competences**

Methods	Methods for underprepared groups		Methods for intermediate groups		Methods for well-prepared groups	
	Yes	No	Yes	No	Yes	No
General competences						
Personal	30,1	69,9	59,6	40,4	7,8	92,2
Collaboration	31,3	68,8	53,1	46,9	12,5	87,5
Proactive	25	75	58,3	41,7	13,1	86,9
Creativity	30,8	69,2	50,4	49,6	12	88
Communication	22,7	77,3	65,9	34,1	7,8	92,2
Cultural	20	80	50	50	20	80
Social	16,1	83,9	75,8	24,2	11,2	88,8
Learning to learn	25,6	74,4	57	43	10,7	89,3
Cognition	26,8	73,2	62,6	37,4	6,3	93,7

Following the logic of the study, it was found that communicative and social competences were most often developed in lessons with moderately prepared groups, i.e. brainstorming, discussion, presentations, role-plays. Again, teachers were least likely to use methods for well-prepared groups, and in this case, 20% of the lessons in which cultural competences were developed used methods that enabled self-management, project-based learning. It is clear that the development of subject and general competences has the greatest potential to focus on moderately prepared group methods. It can be argued that in such lessons, teachers allow students to explore ideas and their own point of view, but these methods do not allow for self-directed learning, or for the freedom of the child to make his/her own decisions.

### CONCLUSIONS

An analysis of the lesson planning cards provided to the external evaluators of the schools shows that teachers in all grade concentrations tend to use methods for moderately prepared groups, i.e. brainstorming, student interviews, group presentations, debates, role-plays, etc. However, methods that promote project-based activities, self-directed learning and peer support, which have already been associated with well-prepared groups, are less frequently used.

The research shows that technology, art, science and nature and man lessons are mostly based on active learning methods, which focus on project-based and creative work, peer tutoring and counselling, and students' full self-management of the learning process.

Communicative and social competences were most often developed in lessons with moderately prepared groups, i.e. brainstorming, discussion, presentations, role-plays so the development of subject and general competences has the greatest potential to focus on moderately prepared group methods.

### REFERENCES

- 1) Arieli, H. (2021). *The Future of Education: How to Evolve Old Schools' to Exciting & Innovative Learning Hubs*. eBookPro.
- 2) Galindo, W. J. (2010). *The Power of Thinking Differently: An Imaginative Guide to Creativity, Change, and the Discovery of New Ideas*. Hyena Press.
- 3) Yuretich, R. F., Khan, S. A., Leckie, R. M. & , J. L. (2001) Active-Learning Methods to Improve Student Performance and Scientific Interest in a Large Introductory Oceanography Course, *Journal of Geoscience Education*, 49:2, 111-119, DOI: 10.5408/1089-9995-49.2.111
- 4) Konopka, C. L., Adaime, M., B., Mosele, P. H. (2015). Active Teaching and Learning Methodologies: Some Considerations. *Creative education*, 6, 1536-1545. DOI: 10.4236/ce.2015.614154
- 5) Rogers, C. R. (2005). *Apie tapimą asmeniu. Psichoterapeuto požiūris į psichoterapiją [On becoming a person. A psychotherapist's approach to psychotherapy]*. Vilnius: Via Recta.
- 6) Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., Wenderoth, M. P. (2013). Active Learning Increases Student Performance in Science, Engineering, and Mathematics. *Psychological and Cognitive Sciences*, 111 (23),1-6. <https://doi.org/10.1073/pnas.1319030111>
- 7) Spiro, J., Finkel. L. (1998). *Aktyvaus mokymosi metodai. Mokytojo knyga [Active learning methods. Teacher's Book]*. Vilnius: Garnelis.
- 8) Stoll, L. (2020). Creating capacity for learning: Are we there yet? *Journal of Educational Change*, 21:421–430.