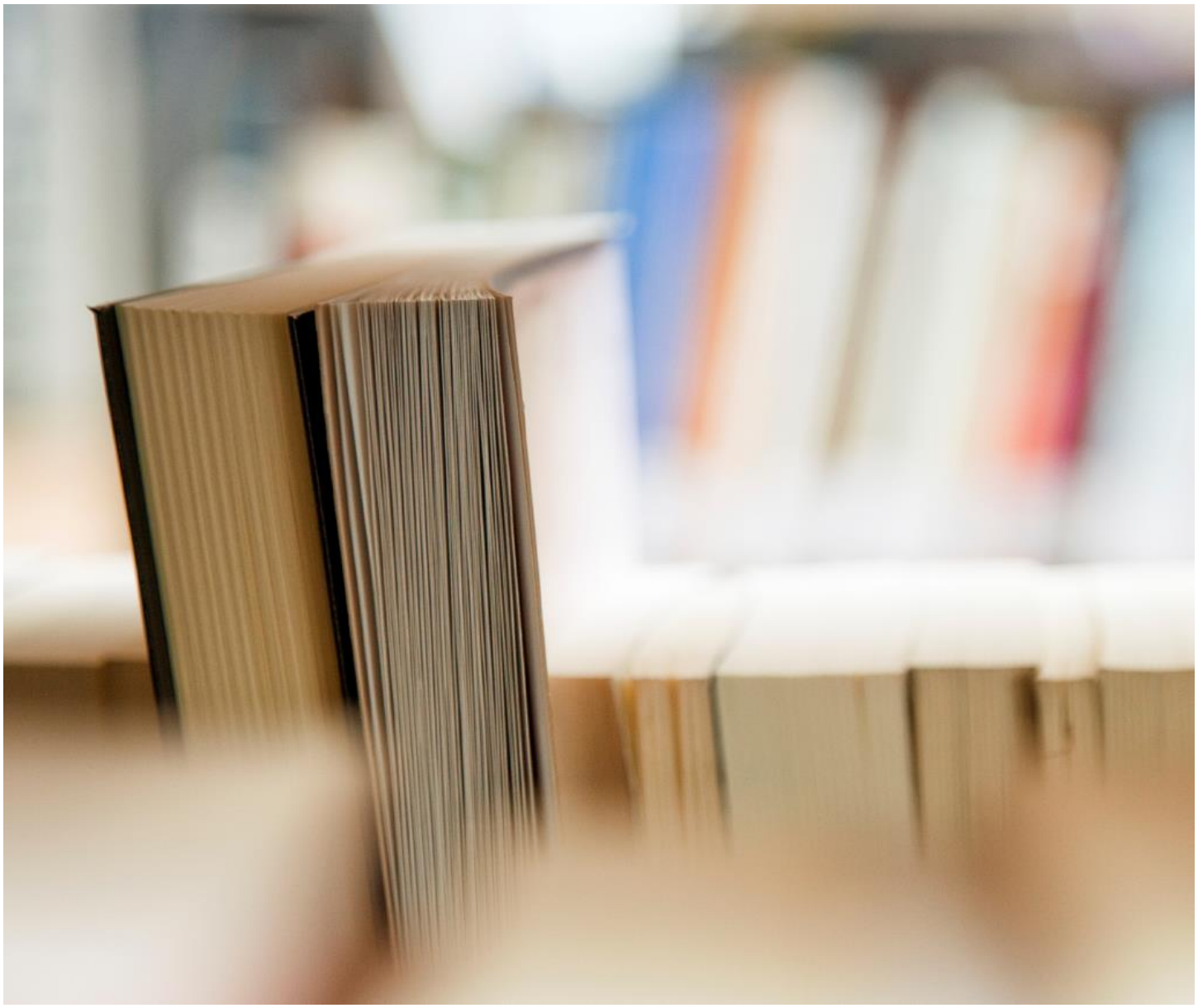


Methodological guide

for teachers to establish and apply operational pedagogical tools for preventing, reducing and overcoming functional illiteracy

“Overcoming functional illiteracy through ICT, to ensure social and professional integration”

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SCOALA GIMNAZIALA CRISTIAN – ROMANIA

Coordinator:

STANCIU VALENTINA NARCISA

Authors:

ENACHE MARIA CAMELIA;

COMAN FLORENTINA;

GRAPĂ BOGDANA GABRIELA;

GIURGIU LOREDANA SONIA;

ONUȚE OTILIA;

TAROPA LAVINIA;

TĂNASE MARINA LAURA;

TOADERE DANIEL;

TUDOR MIHAELA.

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Argument

According to the needs analysis conducted by the applicant, based on the information gathered from the partner schools, the current situation is showing that, annually, at least 2 students, form each school under review, leave the educational system in secondary school years, after they fall back once or twice, while the number of drop outs during the first two high school years is double. More so, almost 40% of the students do not have a legible writing, not even them being able to understand what they wrote. The motivation behind this methodological guide is given by the results of the PISA tests. For reading literacy, Romania scored 428, North Macedonia 393, Greece 457, Turkey 466, Italy 476, Croatia and Lithuania 479, the level of functional illiteracy, in these countries being more than 40%. Romania and the Republic of North Macedonia, are situated among the 8 countries that gave the test using paper and pen instead of digital instruments. Traditional teaching and assessment, in a digital era with native digital students, is the main cause for functional illiteracy. Children prefer to button, writing and reading being a chore for them. Jane Healy, in „Endangered Minds" draws attention to the fact that, after learning how to read, students that spend lots of time in the virtual world, lack the necessary support for progress. Not only their reading, but also their ability to write are affected, students having real difficulties in expressing their ideas, thoughts and feelings. They need specialized support, which can be provided by teachers specialized in literacy. Unfortunately, schools lack specialized human resources.

Through it, we aim at supporting staff by presenting innovative practices in a digital era, but also at reinforcing the development of key competences, by presenting concrete exemples of methods and activities that can be used, inside and outside the classroom, to strengthen and develop literacy skills. Reading is one of the elementary competences to be acquired. Without reading and without understanding the read texts, students are at risk for school failure and drop out, while individuals can not function in society and can not integrate professionally, being exposed to exclusion and poverty.

We intend this product to be a manual of digital and practical ways to prevent and overcome functional illiteracy, a methodological guide for teachers around Europe, because a good teacher is a well-trained teacher.

The main goal is to create innovative school materials, using ICT, to make reading more attractive and understandable, but also to give teachers the necessary tools to indentify, as early as possible, te students at risck, so that they can reorganize their didactic approach, to help students overcome their learning difficulties.

A. Functional illiteracy, a European issue:

1. Introduction

2. Assessing functional illiteracy within the partner schools and countries

2.1. Functional illiteracy in Croatia

Definitions and signs for functional (il)literacy

Literacy, in a narrower sense is the ability to read and write. The concept of literacy is ambiguous and changes in accordance with the information imposed by the level of technological and civilizational development of society. As information channels expanded beyond the printed word, the notion of literacy was no longer limited to the ability to read and write.

The modern information age, transcending geographical differences, has imposed a new social practice, media and ways of creating meaning, and thus a new interpretation of literacy. Today, different types of functional literacy are needed: information, computer, graphic, literacy in the field of writing scientific reports or that required for business presentations. The contents of literacy are increasingly expanding into various fields of profession and science, so we are talking about academic literacy, health literacy, literacy without borders (knowledge of the language), legal literacy, etc. Different types of literacy are a prerequisite for effectiveness in the workplace and community participation.

Literacy is also associated with age differences, so there is a difference between preschool and early literacy and the literacy of young people and adults. The term literacy profile is also used; finding relevant information in a scientific text, searching for information in a timetable, understanding the content of a form to be filled out, writing a job application or calculating a monthly repayment all require specific literacy profiles.

There are a number of different definitions of "literacy" used in Croatia.

In the Literacy Report (February 2005), the Ministry of Science, Education and Sports cites the Central Bureau of Statistics, defining literacy as “the ability of an individual to read and write on topics from everyday life.", which is in line with the international approach. In the following section, the author quotes the Croatian definition of a literate person, which reads: “Every person with completed primary school who is compulsory for all citizens of the Republic of Croatia.”

The definition of literacy related to time spent at school has been strongly criticized.

On the one hand, this definition categorizes individuals as illiterate or literate without taking into account the achieved level of certain competencies.

On the other hand, some individuals without eight years of education may have a high level of literacy, and others, who have completed primary school, often lack basic functional literacy skills.

These data are often the only data reported by individual countries and therefore represent a quick and inexpensive assessment of national literacy status (although they may be quite inaccurate).

Croatian Readers' Society distinguishes

Elementary or primary literacy: knowledge of reading and writing as basic skills

Secondary or functional literacy: understanding written instructions in everyday life, eg use of certain products, filling in contracts or forms, traffic, public institutions, etc.

Tertiary literacy (information, internet, SMS) literacy.

The trend of literacy testing, which does not describe an individual only as illiterate or literate, is on the rise.

This approach reflects changes in literacy thinking, nationally and internationally, as something that develops and evolves over an individual's lifetime. This is reflected in the definition used in the International Adult Literacy Study (IEPS): *'[Literacy is] the ability to understand and absorb printed information from everyday life at home, at work and in the community - to achieve goals and develop knowledge and skills. potentials of the individual."*

Therefore, the term "literacy" is associated with the demands placed on adults by their environment. Literacy is defined as a function of the real needs of the business / professional and private / social environment. "Functional literacy" is the name generally used for this type of definition.

The European Framework of Key Competences for Lifelong Learning emphasizes the role of education in acquiring the competencies needed by citizens to adapt to a rapidly changing world with a strong connection. The key to achieving this goal is: communication in the mother tongue, communication in a foreign language, mathematical literacy, science and technology, IT competencies, learning how to learn, interpersonal, intercultural, social and civic competencies, sense of innovation and entrepreneurship, cultural awareness and expression. In Europe, functional literacy: is growing due to the increased need for reading, writing, comprehension, analysis and synthesis; includes other areas, such as computer use, information retrieval, data retrieval and analysis; it is less and less associated with time spent in school; it is increasingly influenced by factors such as migration, social exclusion and the development of core competencies; it is closely associated with self-esteem, self-confidence, and self-management.

Literacy is the lowest level of education of the population and is considered necessary for possible further education. Also, literacy is a minimum prerequisite for inclusion in the modern work process and a better quality of life.

The importance of the (illiteracy) rate is best manifested in the fact that it is one of the indicators of the human development index, which actually shows that it is also one of the indicators of the general development of a society.

Tools for (il)literacy evaluation and statistics

When it comes to literacy, it is important to note that in international statistics this issue usually refers to the population aged 15 and over, while in Croatia the population aged 10 and over is most often taken into account.

When defining literacy, it can be divided into elementary or primary literacy (knowledge of reading and writing as basic skills), secondary or functional literacy (understanding written instructions in everyday life, eg. filling in contracts or forms) and tertiary literacy (information and information literacy). With the development of information technology, information literacy is becoming increasingly important, which is defined as the ability to use computers and computer programs (Nadrljanski, 2006).

Throughout the spectrum of definitions of functional literacy, we can conclude that functionally literate is a person who, in addition to reading and writing, has the ability to understand written materials and the ability to apply them in everyday life, at home, at work and in society.

UNESCO, 2004 recognizes functionally illiterate persons as those persons who are unable to engage in all activities which need literacy to participate effectively in its immediate and distant environment, and in its abilities reading, writing, and arithmetic cannot contribute to the personal well-being and the well-being of the social community in which they live.

The generally accepted areas of functional literacy testing determined by UNESCO in 2004 are:

• *Prose/ reading Literacy - implies knowledge and skills that allow understanding and use of information obtained from texts, including various publications, stories, poems.*

• *Document Literacy - represents the knowledge and skills necessary to locate the information contained in various forms, graphics, timetables, payment forms, application forms, etc.*

• *Numeracy Literacy* - implies knowledge and skills necessary for the application of basic mathematical operations (addition, subtraction, division, multiplication) as individual operations or

more complex operations such as reports on the balance in the bank account, calculation of interest on loans, determination of personal income tax, etc.

Illiteracy is ignorance of the alphabet, ignorance of the skill of reading and writing.

Functional illiteracy rate in Croatia

According to the methodology used in the 2001 Census of Population, Households and Dwellings in the Republic of Croatia, a person who can read and write a short, simple essay about his / her everyday life is considered literate. According to the methodology used in the 2011 census, the definition of literacy remains the same.

Until 1950, alphabetic literacy was taken as the criteria of literacy, which implied basic knowledge of letters. After 1950, the broader notion of functional literacy is taken as a criterion, according to which being literate means understanding, ie being able to read, write, listen and speak (Dijanošić, 2012).

A change in the definition of literacy in Croatia was made in November 2004 when the Government of the Republic of Croatia adopted the *Adult Education Strategy*.

The Strategy for the first time highlights a new understanding of '21st century literacy' which, in addition to the 'traditional' notion of literacy - writing, reading and (sometimes) numeracy skills, means reading comprehension, communication skills, knowledge of foreign languages and the use of modern information and communication technologies, which enable a quality understanding of natural and social events, the ability to solve problems, skills and readiness for teamwork, acceptance of others and different, and the ability for continuous learning.

In practice, however, the prevailing understanding of literacy as the ability to read, write and (occasionally) count, combined with the definition of a literate person as one who has completed primary education.

The definition of literacy used for the last census in 2011 describes a literate person as a person with or without a school if he or she can read and write an essay on everyday life, or who can read and write a letter regardless of the language or script he or she can read or write which corresponds to UNESCO's definition of functional literacy, but not to the definition of' 21st century literacy 'as it is understood in the Adult Education Strategy.

However, this definition of literacy has been used for a long time. Today we are talking more and more about functional literacy, that is, the ability to use language and various forms of expression, communication, which are not always even written forms, sometimes graphic and some other forms,

meaningfully. And not only meaningfully, but to understand what was read. That we have an attitude in relation to what has been read, that we ourselves are able to produce a certain written text which, also, is not only reproductive but has content and meaning.

In 2014. Croatian government adopted *Strategy for education, science and technology.*

It pointed out acquisition and development of some groups of key competencies, it is necessary to nurture: critical thinking, aesthetic evaluation, responsibility towards oneself, others and the environment, teamwork, problem-solving orientation, fundamental ethical values, parenting skills, civic activism, media, financial and consumer literacy, etc.

The importance of acquiring transversal and fundamental knowledge and skills in science, technology and engineering from an early age. and mathematics (STEM - Science, Technology, Engineering, Mathematics) is emphasized.

These knowledge and skills are necessary for coping in a technology-dependent society - for later action within scientific research, technological development and serve as a solid foundation for lifelong learning. Learning through work practice is strongly advised.

According to the 1953 Census, 16.3% of the total population of the Republic of Croatia aged 10 and over were illiterate.

If we observe changes in the number of illiterate persons through censuses, we notice that the share of illiterate persons is decreasing and in 2011 it was only 0.8%.

The majority of illiterate people are women, who in 1953 were 2.8 times more than illiterate men, and in 2011 there were as many as 3.8 times more, primarily due to the fact that women live on average 7 years longer than men and that in in the past decades they have not been as represented in the education system as they are today.

Data from the 2011 Census show that most illiterate women belong to older age groups. As many as 64.6% of illiterates are women over 60, and the remaining 35.4% of illiterates are men of all ages and women under 60.

If we look at the illiterate by regional distribution, the largest share of illiterate people aged 10 and over is in Šibenik-Knin County and amounts to 2.0% of the total population of that county, while the smallest share is in Primorje-Gorski Kotar County, only 0.3%.

According to these data, the least illiterate are in Zagreb and in the Primorje-Gorski Kotar County.

Between the ages of 10-14, 323 boys and 208 girls are illiterate. Among the illiterate are 14,521 people over the age of 75.

Causes, threats and measures to combat functional illiteracy

The most data about funcional illiteracy in Croatia comes from international testing and research such as TIMS, PISA, ICILS.

Croatian 15-year-olds achieve (below) average results in international knowledge assessments (PISA4) in language and mathematics literacy and science, which indicates that the approach to acquiring knowledge, teaching basic skills and especially application orientation must change in primary schools.

Croatia has so far participated in four PISA research cycles and in all literacy our students achieved statistically significantly worse results than the OECD average.

Moreover, the performance of our students over the past ten years has stagnated at best or, as in the case of science literacy, declined.

The first is the share of those who are not functionally literate, ie achieve a result below PISA 2 level. This does not mean that they do not know how to read, write, add and subtract, because they certainly know that, but that even at the basic level they are not able to apply the acquired knowledge in life situations.

In 2015, there were 24.6 percent of them in the case of science literacy, compared to 17 percent in 2006.

In the case of mathematics literacy in 2015, there were 32.1 percent in Croatia.

One third of our students are functionally mathematically illiterate.

Perhaps even more important is the percentage of students who achieve the highest levels of achievement because it is on these individuals that countries base their innovation, technological and economic development.

The fifth and 6th levels of PISA achievements indicate coping in more complex situations and tasks and show a highly developed level of individual literacy.

Only 5.6 percent of Croatian students achieve the two highest levels of mathematical literacy in 2015.

The basic level of reading literacy in Croatia is not reached by every fifth fifteen-year-old, ie every fourth boy and every seventh girl, and it is especially worrying that it is not reached even by every other fifteen-year-old who is educated in an industrial or craft program.

So big the share of fifteen-year-old students without basic reading competencies means that in the future, Croatia could face a large share of underdeveloped citizen s skills necessary in modern society and the labor market.

At the other end of the spectrum, there are students at the highest levels of knowledge and ability. These students will be the "drivers" of the national and global economy in the future and data on the share of such students show the extent to which a system succeeds develop excellence.

The highest levels of reading literacy in Croatia is reached by only 5% of students.

Reading literacy is a set of competencies that are not developed exclusively in mother tongue teaching.

For this reason, it is important to make teachers of all subjects aware of the importance reading literacy for student success in their subject. Teachers should know well all dimensions of reading literacy and to encourage in the teaching of their subject`s development of competencies for finding information, using different reading strategies, understanding what is read and especially evaluating the quality and credibility of information and reflections that are least developed in Croatian students.

In addition, students should be exposed to greater diversity and authenticity of texts of different formats in print and digital environment because only in this way can their reading literacy be developed in whole.

Considering that in Croatia it has been shown that students who receive support from their parents in the form of strengthening self-confidence achieve a significantly better result in reading literacy, to help students face difficulties in school and to encourage students to put effort into learning, schools should work to make parents aware of the importance of such forms of support through workshops, lectures and individual interviews.

In mathematical literacy, Croatia also records a below-average result in this research cycle, which has not changed significantly since 2006.

Even every third fifteen-year-old student in Croatia is below the basic level of mathematical literacy (level 2).

6% of high school students do not reach the basic level, 33% of students in vocational schools in four-year or five-year programs and almost 59% of students in industrial and 68% of students in craft programs.

Only 5% of students in Croatia have high levels of mathematical literacy, half less than the OECD average

The fact that in Croatia every third fifteen-year-old is not functionally mathematical literate has serious implications for Croatian society, the economy and the labor market in the future.

Due to the accelerated development of computer technology and automation of routine processes, competencies in formulating mathematical problems and interpreting results and translating

real life situations in mathematical terms and concepts are more important today than performing learned, routine mathematical procedures.

In mathematics teaching should place emphasis on conceptual learning and on the development of the ability to develop models in complex, unfamiliar situations. In doing so, they should be represented more often open-ended tasks in which students need to develop argumentation competencies and communicating solutions.

As in reading and mathematical literacy, Croatian students achieved below-average results in this cycle of research and in science literacy, where the basic level of science literacy (level 2) was not reached by every fourth Croatian students, 4% of high school students, every fourth student of vocational four-year or five-year programs and roughly every other student in industrial and craft programs.

These students do not possess basic knowledge and are not able to apply competencies which they will need in their daily future life in making informed decision-making and dealing with science-related challenges.

In science teaching, emphasis should be placed on conceptual learning, the application of knowledge in problem-based non-routine tasks, research learning that stimulates interest and cognitive activating students and integrating teaching content from all subjects in the area natural sciences. Such activities often require more intensive collaboration of these teacher`s creativity, adequate professional and methodological skills, time required for preparation and adequate accessories and materials.

One of the possible reasons why Croatian students achieve below - average results in all three literacy could be a common practice in which students' knowledge is evaluated on the basis of content reproduction, and such abilities are on the PISA scales literacy in all three areas located at the lowest literacy levels. Evaluation and student assessment should be based on understanding and applying concepts in familiar but also unfamiliar contexts

The results showed that students who start using digital devices and the Internet earlier and students who estimate that they are more independent and more competent in using digital devices achieve a better result in all three literacy.

However, the results also show that better results are achieved by students who have learned less about the use of the Internet in school and who have used digital devices in teaching certain subjects.

That might point to a conclusion that information and communication literacy of students should be systematically developed in in all subjects, and especially in the subject of Informatics,

which should be compulsory and that digital devices and the Internet should be used purposefully and in accordance with teaching strategies.

Although the data are poor, targeted research on functional literacy in Croatia is not conducted. Research that would refer to the state of functional literacy of all those who have not completed schooling or have completed it in a formal sense, but new conditions have arisen in the labor market during the transition and remained unemployed, is not conducted. In Croatia, there is a need to conduct research on functional literacy according to the methodology used in world research.

In Croatia, there are a number of generations of individuals who, despite completing formal education, do not have certain knowledge and skills necessary to function in today's society. There is also a large population of older people without completed or incomplete primary education.

It can be assumed that almost all of them have not acquired most of the key competencies, so they do not master the elements of the so-called functional or new literacy that includes basic knowledge and skills for working on a computer, knowledge of the mother tongue and the basics of knowledge of foreign languages, readiness and motivation to learn.

For all these citizens, their acquisition can be organized and offered through adult education programs.

Therefore, for the adoption and development of the aforementioned competencies, curricula, processes, programs and educational outcomes have to be developed at all levels of education, but at the same time they will be further strengthened by implementing non-formal and informal forms of lifelong learning.

Rapid changes in the labor market, an aging population and increasing global competition indicate the need to use all available knowledge and skills - regardless of where and how an individual acquired them.

Evaluating the outcomes of non-formal and informal learning opens new opportunities for individuals who have acquired certain knowledge and skills during their lives to receive formal certificates and through them become better employable and / or create preconditions for continuing their education.

The system and processes of evaluation of non-formal and informal learning in Croatia have not yet been developed. European trends, examples of good practice and starting points are the establishment of a similar system in Croatia.

Literacy is much more than reading and writing, it is a way of communication, acquiring knowledge, learning a language, developing culture. Literacy is seen in many forms: on paper, computer, TV and other media. In addition to elementary or primary literacy, ie knowledge of reading

and writing as basic skills, today we use the terms secondary or functional literacy (understanding written instructions in everyday life, eg when using certain products, filling out contracts or forms, orientation in trade, traffic, public institutions, etc.) as well as tertiary (information, computer, Internet, SMS) literacy. It is from these last two forms of literacy or communication that most people are excluded. (Nadriljanski, 2006).

The reasons why literacy is so important are the growing mass communication, the proliferation of communication channels, the progressive technologicalization of the world, the loss of communication limitations, differences between cultures and many others. So the definition of literacy is much more complex and dynamic - it must be constantly updated along with the progressive progress of humanity.

The technological demands that are a prerequisite for employment are growing faster today than could have been imagined thirty years ago. Once acquired, knowledge is not enough for the entire working life, the concept of lifelong learning has been imposed. Today, different types of functional literacy are needed: informational, computer, graphic, literacy in the field of writing scientific reports or that required for business presentations. Hence the notion of functional illiteracy: by this is meant such a level of literacy that it is not enough for a person to be effective not only in his workplace but also to take an active part in the life of the community. It is also important to be politically literate in order to be able to participate in the process that takes place in the social community, to understand the political and economic issues related to everyday life.

The problem of functional illiteracy affects all countries of the world, and attention to this problem began to be paid in the 1960s, although it was discovered in the USA in the late 1940s by soldiers, although they were alphabetically literate and did not understand written instructions for handling weapons.

This problem is best researched in developed industrial countries, although they also saw this problem as sporadic examples, ie that it refers to only some groups of the population (immigrants from underdeveloped countries, etc.). Functional illiteracy was considered to be something that only applies to underdeveloped and developing countries due to an underdeveloped school system.

The problem of functional (illiteracy) becomes particularly pronounced at a time when world industrial production is shifting to post-industrial (computer-driven) which has left behind a large number of unemployed. The least educated were the worst, they lost their social status because they were the least able to cope with the new situation on their own: they were narrowly educated to work on a machine, they could hardly adapt to the adoption of new technology, they could not do the job. required independence and innovation, often times they cannot find a new job on their own because

they do not know how to write an application, etc. And finally the very important fact that a large number of functionally illiterate people also means a great loss for the society in which they live.

The causes of functional illiteracy can be different, from an inappropriate economic and cultural environment (inaccessibility of cultural events), inadequate school system that does not provide the necessary knowledge, but the causes also relate to the characteristics of functionally illiterate people (whether it is a bad experience from school, undeveloped learning habits, restraint, the need to be anonymous in the environment in which he lives, insufficient motivation to progress, etc.).

In Croatia, great attention was paid to functional literacy during the 1970s. The Andragogy Society in Zagreb also organized several colloquia on this topic, and collections of papers were published.

The questions are almost identical to which we are looking for answers today- how to organize a functional education whose goal is not only to formally educate the illiterate population but to get functionally literate people who will be able to act in society.

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2.2. Functional illiteracy in Greece

Definitions of functional illiteracy

When one thinks of "funtional illiteracy", one could start with taking into consideration what it involves being quite the opposite, that is literate, via the definition provided by UNESCO (1978): "*A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development*.". In this sense, literacy is treated as means of communication, which focuses on communicative action rather than the acquisition and use of skills out of context (Maybin in Katsarou).

Literacy has also been defined by the Organisation for Economic Coopearation and Developement (OECD) "*... as the ability to understand, evaluate, use, and engage with written texts to participate in society, achieve one's goals, and develop one's knowledge and potential* (OECD, 2013, p. 59).". Drawing upon this definition it is obvious that it is synonymous to one's well being once part of society and than should one lack these characteristics one is not to exploit their full potential when interacting with others.

Accoding to Harman (1971), it was during the Second World that the limitations of people being illiterate were first noticed by the US army describing them as *¨incapable of understanding the kinds of written instructions that are needed for carrying out basic military functions or tasks*". Once the war was over, UNESCO identified the need for basic education entailing the need to advance literacy. As stated by Bulajić et al (2019), the concepts of functional literacy and functional illiteracy (FI) emerged in the second half of the 20th century as the circumstances for industrial progress were right while at the same time there came about the realisation that basic education would fail to provide the level required for socioeconomic development.

It was really what someone could or cound not do within society that drew the line between Literacy and Functional Ililteracy,"A person is functionally illiterate who cannot engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing, and calculation for his own and the community's development" (UNESCO, 1978, p.183)."

Edukacyjnych sheds light on the issue substituting the term "modern illiterate' for "functionally illiterate" while maintaining that these individuals have grown up amidst literacy and

have indeed the ability to read and write; they, however, fail to comprehend complex sentences and write thus drawing the researcher's attention to people's level of literacy.

When thinking of functional illiteracy, one should not disregard functional numeracy, the latter pertaining to the inability to use mathematics at the level required for one's functioning in society through work or other fields.

Signs of functional illiteracy

An illitearate person is more often than not likely to feign ignorance and pretend that there is no reason for concern. They will also tend to be emabarassed of their condition while believing they are the only ones who experience such problems. This will unavoidably lead to low self-esteem and quite often they may become aggressive. Their behaviour works as a smoke-screen aiming to distract their interlocutors from realising the problem. Illiterate people have often been known to behave on the submissive side of the spectrum as they often believe they do not deserve being appreciated. In both these situations, the try to hide their vulnerability behind challenging behaviour. Quite often, they will resort to a facade which has become part of their routine to hide their difficulties. Their vocabulary will also be limited and they will encounter problems when expressing their emotions. They have also been known to perceive time and space inaccurately.

Quite often, adults exhibiting functional illiteracy signs resort to excuses such as " I am afraid I have forgotten my glasses". If their occupation involves counting as in listing process, they fail to show up on that particular day because they have poor numeracy skills. It has also been observed that they fail to comprehend their employers' instructions and they pay their colleagues to explain what is expected of them. Functionally illiterate people will also tend to ask simplistic, naive questions.

When at school, they fail to comprehend a text, let alone summarise it, even if they can read it. It goes without saying that they also have problems with Maths and they are often absent from classes to avoid being tested.

Evaluation instuments of functional illiteracy, on national level

Concerning numbers in Europe, functional illiterates have been estimated to be about 80 million; the lowest percentage was recorded in Sweden with 8% and the highest in Portugal with 40% (e.g., in Eme, 2011; Grotlüschen and Riekmann, 2011a). Different definitions and different diagnostic assessment standards have been used and a word of caution is in order here; not employing a common

tool worldwide to gauge illiteracy numbers can lead to fundamentally different epidemiological estimations, so any estimations of functional illiteracy rates may be unreliable. For the purposes of this research the results drawn by ADIPPDE (*Authority for the Quality Assurance of Education in Primary and Secondary Education*) will be used here as the work in question lasted for three years and was thoroughly explained in their Annual Report (2019). It should also be mentioned that there is no official tool implemented by the Hellenic (Greek) Ministry of Education to gauge functional illiteracy so this research is the closest to the objective in question.

According to the census of 2001 in Greece, tertiary education graduates reached the record number of 1,265,168. Still, however, 4 million people aged 16 and over, in short one in two, did not complete the compulsory 9-year school education (Primary and Junior High School).

Almost twenty years later, the results published in 2019 in the annual report of *Authority for the Quality Assurance of Education in Primary and Secondary Education* (ΑΔΙΠΠΔΕ/ ADIPPDE) regarding (il)literacy rates in Greece are quite disheartening. At this point, it should be mentioned that the University Entrance Exams in the country are very competitive and every year students are called to ¨outdo¨ their peers. The choice of the word ¨outdo¨ might strike one as being too harsh but teachers or parents of graduates in Greece are indeed aware that this is not an overstatement.

It is true that the ones who excel are bound to further their studies but in actual fact there are quite a few who will lag behind on literacy. Although the problem is more often than not depicted in the final years of Senior High School, it has undoubtedly originated much earlier, that is during students' attendance of Primary School but was not treated accordingly. Unfortunately, it is a given that many young people will leave school before having been armed with the essential functional literacy, the latter being different from illiteracy *per se* and, as such, it is harder to identify. A word of caution might be in order here; functional illiteracy can be claimed to be even more dangerous than illiteracy as the former may lead to reaching false conclusions as to one's effectiveness in society. An illiterate person has realized their ignorance and might strive to rectify the problem via self-development, which is untrue of a functionally illiterate person who may have even obtained school certificates.

ADIPPDE, after having been granted permission, accessed the information system *My School* operated by the Ministry of Education, where all the data concerning students and teachers and the daily operation of all school units are registered. The data ranges from the number of absences of every student to the grades they score per term and in the final exams on every subject. More specifically, the Authority analyzed the collected data for the years 2015-2018, which involved.

1. Data on the grades of all the students of the country during their three-year study in the 6th Elementary School (2015-16), in the 1st grade of Junior High School (2016-17) and in the 2nd Year of Junior High School (2017-18) .2.
2. Data on the grades of all students in the country during their three-year study in the 3rd year of Junior High School
3. or High School (2015-16), in the 1st year of Senior High School (2016-17), in the 2nd year of Senior High School (2017-18) and in the 3rd year of Senior High School (2017-18).

The database provided the Authority with the opportunity to research the distributions of grades in Elementary, Junior High School and High School (both of the General (GEL) and the Vocational type (EPAL)) and to assess any differences between courses, levels of education, types of High School (GEL and EPAL) and gender. An important element for the configuration of the two databases was the psychological parameter of the school transition from an educational level to another level, experienced by students as a stressful situation and affects their learning and social behavior negatively.

At the time. evaluation in Greece stated in the Government Gazette (4358, Volume B) was described as follows: “Student evaluation [or assessment] is the continuous pedagogical process by which the course of learning is monitored, the final results are determined and at the same time other characteristics related to the project are evaluated. The first goal is to improve teaching but also to inform teachers and effectiveness of the results of their efforts, in order to achieve the best possible results ".

As for the assessment procedures, they are differentiated in the Primary school by grades as follows: In grades A B and B there is only oral descriptive assessment, which is accompanied by informing the parents by the teacher about the student's progress at the end of the term. Students are either "Promoted" or they have to take the class again. Grading scale consisting of the symbols of characteristics: Excellent (A), Very good (B), Good (C), Quite good (D). The grade is recorded in the Student's Register and Progress Book in their report cards. When publishing the results, only the word "Promoted" is written in the Register and Progress Book. In grades C 'and D' there is a descriptive evaluation in combination with a rating scale consisting of the symbols of verbal characteristics: Excellent (A), Very good (B), Good (C), Almost good (D). The grade is recorded in the Student's Register and Progress Book and is kept in their report cards. When publishing the results, only the word "Promoted" is written in the Register and Progress Book.

In the 5th and 6th grades of Primary School, a descriptive evaluation is provided in combination with a Grade scale that is verbal and arithmetic, as follows: Excellent (9-10), Very good

(7-8), Good (5-6) and Almost good (<5). The score is recorded in the Register and Progress book with numerical symbols. At the end of the year, the average of the student's annual performance per lesson is gauged as a whole unit, as well as the general average of their performance in all courses.

The results of students' performance in the evaluation criteria, which are an integral part of the school curriculum and are included in the teaching material. More complex questions can be added to the criteria addressing the students of the two upper forms while also taking into account the results of the homework that the student does at school or at home.

The table below is a depiction of the students' percentage obtaining a grade lower than 7 out of ten in the final year of Primary School. They are most in danger of being functionally illiterate in the future.

6th Year (Final Year) of Primary School (2015-16)	
Course	Mark (Grade) ≤7
Language	7.0 %
Mathematics	8.7 %
(Introduction to) Physics	5.5 %
History	9.4 %
ICT	0.8 %

(http://www.adippde.gr/images/data/ektheseis/ekth2019.pdf)

Analyzing students' grades in order to identify correlation between courses showed that there is a statistically significant correlation ranging from 74.8% to 78.2% between Language, Mathematics, Physics and History, which means that in these courses there is a great correlation as to the students' grades. At the other end of the spectrum, in ICT the correlation decreases significantly compared to the other courses and ranges from 36.4% to 37.1%

As to Junior High School, evaluation is described as "the continuous pedagogical process, based on which the learning process is monitored, its final results are determined and, at the same time, various characteristics of the student's personality related to the project are assessed". Assessment, as an individual assessment of student performance, is not an end in itself and in no way does it assume a competitive or selective character for high school students. It refers not only to their performance in courses, but also to other characteristics, such as the effort students make, the interest

they exhibit, the initiatives they develop, their creativity, their cooperation with other people and their appreciation of school.

Assessing the written and oral performance of students in Junior High School is done with integer grades in the scale 1-20, with 10 out 20 being the lower grade of promotion (PD 465, FEK 129 A '/ 15-05-1981). The general grade point average of the student is the average of the grades of all the courses, recorded in the official Register and titles with its fractional part. This grade is indicated as: "insufficient", "moderate", "good", "very good", "excellent". The range is defined as follows: a) "Insufficient" 01-9.5, b) "Moderate" 10 –12, c) “Good” 12.5 –15, d) “Very good” 15.5 –18, and e) “Excellent” 18.5 –20. In the courses of Modern Greek Language and Literature (Language Teaching and Modern Greek Literature), Mathematics, Physics and History, the annual performance of the students is one third of the sum of the grades of the first term, the second term and of the written summative test taken at the end of the year. In the courses Ancient Greek Language and Secretariat (Ancient Greek Language, Translated Ancient Greek Texts), Chemistry, Biology, Geology-Geography, Social and Civil Rights, Religious Education, English, Second Foreign Language and Home Economics, Technology -Informatics, Music -Artistic and Physical Education, the grade of the annual performance of the students is the average of the grades of the first and the second terms (PD 126, FEK211 A '/ 11-11-2016).

Data collection on a national level depicts that during the school year 2016-17, 10 out of 20 was the Modal Value (the value with the highest frequency) for Mathematics, 17 for Language, 19 for History and Physics, and 20 for Biology, Geography and Informatics.

The following table depicts the Measures of central tendency and measures of dispersal of the total score of Junior A΄ class students (2015-2016, cited from **http://www.adippde.gr/images/data/ektheseis/ekth2019.pdf).**

Courses	Number of students	Central tendency	Median	Modal value	Variance	Standard deviation	Variation range
Language	96,0325	15.03	15	17	8.493	2.914	19
Maths	96,315	14.74	15	10	11.769	3.431	19
Physics	96,538	15.43	16	19	10.131	3.183	19
Biology	96,504	16.09	17	20	9.940	3.153	19

Geography	96,539	16.23	17	20	9.852	3.139	19
ICT	95,998	17.85	19	20	5.685	2,384	19
History	96,560	15.19	16	19	11.435	3,382	19

The table below depicts marks below 9 or 10 out of 20 obtained by 3rd year Junior High School students (2015-2016) and the percentage of students most likely to be functionally illiterate in the future.

3rd Class of Junior High School		
Course	**Mark ≤ 9**	**Mark ≤ 10**
Language	**1.7%**	**9.4%**
Mathematics	**1.1%**	**20.7%**
Physics	**0.5%**	**15.7%**
Biology	**0.3%**	**12.1%**
Chemistry	**0.3%**	**13.2%**
History	**0.4%**	**13.1%**
ICT	**0.3%**	**2.1%**

(http://www.adippde.gr/images/data/ektheseis/ekth2019.pdf)

Senior High School students are evaluated twice a school year and when taking the final exams. Teachers consider the following criteria: “a. [Students’] participation in the learning process. b. Their diligence and interest in the course. c. Students’ performance in the written tests. d. Via classwork or homework. e. The record of performance and activities of the student "(article 7, par. 1, as amended by article 34, par. 4 of Law 4521/2018, valid from 2/3/2018)." The score scale, on the basis of which the grades of students in all subjects are calculated, is 0 - 20 and is verbally determined by the characteristics: a) Poorly 0 –5, b) Insufficiently 5.1 –9.4, c) Almost good 9.5 –13, d) Good 13.1 –16, e) Very good 16.1 –18 and f) Excellent 18.1 –20 "(article 5, par. 1)." In the first and 2nd grade of Day High School and in the 1st, 2nd and 3rd grades of Evening General High School: (i) The course

of the Greek Language is divided into the following subjects: a) Ancient Greek Language and Literature, b) Modern Greek Language, c) Modern Greek Literature, (ii). The subject of Mathematics is divided into the following sub-courses: a) Algebra, b) Geometry, (iii). The course of Science is divided into the following sub-courses: a) Physics, b) Chemistry, c) Biology. Each branch is scored separately. The final grade for each course with branches is the average of the final grades of its branches with an approach of one tenth "(article 4, par. 1). −100 with only integers and the final grade of the written essay is reduced to the scale 0−20 and is written as a decimal, where required, with a tenth approximation. Students' oral grades are given in whole numbers. The Average of the oral grades of the two four months is the annual oral grade of the student in each course and is given with an approximation of a decimal number.

The marking system in Greece has lately been employing the formative assessment kind too, which is pertinent to constructivism taking into consideration the overall students' performance and not just their performance in written tests. Although the criteria may differ when it comes to teacher's personal evaluation, it is obvious from the results below that some students are in danger of being functionally illiterate.

The table below depicts the percentage of Senior High School sophomore students (2017-18) who attained a grade lower than 9 out of 10 or 10 in particular subjects. These students run the risk of being functionally illiterate in the future.

2nd grade Senior High (2017-18)		
Course	**Mark ≤9**	**Mark ≤9**
Modern Greek	**3.3 %**	**7.1 %**
Algebra	**30.5 %**	**38.9 %**
Geometry	**33.4%**	**44.2%**
Physics	**39.2 %**	**48.4%**
Biology	**12.6%**	**21.5%**
Chemistry	**23.8%**	**35.1%**
History	**11.2%**	**18.9%**

Introduction to the Principles of Computer Science	**9.4%**	**16.9%**

Recent studies on Functional illiteracy (on National and International level)

http://www.adippde.gr/images/data/ektheseis/ekth2019.pdf
https://www.oecd.org/pisa/Well-being-Infographics.pdf
https://www.oecd.org/skills/piaac/Skills-Matter-Greece.pdf
https://www.ekathimerini.com/opinion/244529/the-black-hole-of-education/
https://link.springer.com/content/pdf/10.1007/s41809-021-00074-9.pdf
https://www.researchgate.net/publication/333470256_Understanding_functional_illiteracy_from_a_policy_adult_education_and_cognition_point_of_view_Towards_a_joint_referent_framework/link/5d665b8092851c70c4c3a380/download
https://psycnet.apa.org/record/2016-59882-001
https://epale.ec.europa.eu/en/resource-centre/content/relationship-between-functional-illiteracy-and-poverty
https://readingpartners.org/blog/problem-illiteracy-affects-us/
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5102880/
Katsarou, Literacy T eaching in the L1 Curriculum of Greek Secondary Education
http://ww2.fks.uoc.gr/english/cvs/Katsarou/Katsarou,%20literacy%20teaching.pdf
A Review about Functional Illiteracy: Definition, Cognitive, Linguistic, and Numerical Aspects, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5102880/
Education for all Global Monitoring Report, https://eclass.upatras.gr/modules/document/file.php/PN1582/Understandings%20of%20Literacy%20UNESCO%202006.pdf
Przybylska, E., The Phenomenon of Functional Illiteracy in the Light of Empirical Studies

Functional Illiteracy in Greece

Only a few years after the Modern Greek state was established in 1830, obligatory school attendance for all Greek childern was enacted by the Government. It is a sad fact that almost 200 years later the problem persists with the more vulnerable groups of people in danger of illiteracy being minorities, Roma and migrants.

In Greece, one is officially considered illiterate if one has failed to obtain the Primary School certificate, that is after attending school for six years. Unfortunately, the issue of functional illiteracy remains obscure since it is harder to identify and officially record.

Back in 2008, when recession was looming, according to data recorded by the National Statistical Service of Greece, the illiterate population was estimated at 3.6%. The country, at the time, was ranked 35th in the world based on the literacy levels of its adult citizens. But the latest figures,

from 2013 onwards, are still disappointing as around 5,000 to 7,000 children drop out of school each year. On a brighter note, according to UNICEF, early retirement from education and training in Greece between 2008 and 2013 decreased by 4.6 percentage points, reaching 10.2% in 2013.

From 1st April 2014 to 31st March 2015 a survey of adult skills was conducted in Greece in which 4,925 adults aged 16-65 were surveyed; once the results were interpreted, they depicted that the number of adults in Greece who achieved a high score of proficiency in literacy and numeracy was considerably lower than the OECD average while adults who obtained a low score depicting poor skills in literacy and numeracy was much higher than average. Also, 25-34 years old adults in Greece obtained similar scores to 55-65 year olds.

Still, the details are alarming; out of the adult population in Greece, as stated by this very survey, only one in 20 adults in Greece "attain the highest level of proficiency (Level 4 or 5, out of six set levels) in literacy, when compared to other OECD survey participants. According to the same survey a larger than average number of adults in Greece exhibit poor literacy and numeracy skills.

On a brighter note, Greece is one of the few countries where women outperformed men in the aforementioned fields, i.e., literacy and numeracy.

It is still disappointing, however, that although workers in Greece use their numeracy and problem-solving skills as often as their counterparts in other countries do, they are not rewarded in terms of pay as highly, which could act as a deterrent from their trying to improve these skills of theirs in their life-time, thus cancelling out *post-literacy*.

Lately, the overall literacy rate in Greece amounts to 97.369% (data retrieved via the Application Programming Interface of the World Bank in March 2019). Although the rate seems to be quite high, the burning question of the ways it is measured, it is pertinent as to how the data itself is collected in different parts of the world. As more often than not there is not a common tool used, the data *per se* can be misleading; in certain cases, self-reporting questionnaires have been used.

The report of the Authority for the Quality Assurance of Education in Primary and Secondary Education (2019) maintains that 7.1% of students attending senior high school failed to acquire a pass grade in Modern Greek for the school year 2017-2018, which gives a warning sign of their potential inability to function effectively in society. The situation is much worse in Physics, in which one out of two students (48.4%) scored below pass mark. Also, the picture of performance in Mathematics is far from encouraging; in Algebra 38.9% was below pass mark and in Geometry 44.2% scored below pass mark.

The performance of the students of the 2nd Grade of vocational high schools is even more alarming. One out of five students (20.4%) got below pass mark in Modern Greek and more than half

in Mathematics (52.7% in Algebra and 51.3% in Geometry). In Physics and Chemistry, the percentages are lower, but also high (41% and 40.8%, respectively). It should also be mentioned that lately the grading system in Greece has not been particularly strict, especially when the student is on the verge of achieving the pass mark.

The aforementioned study also states that identifying the problem from an early age is crucial to treating it and it is in this vein that there is a call for a change as to the state's intervention. It has been argued that during Primary School and the first years of Junior High School the said intervention should have a preventive nature. (Matsagouras).

Causes of functional illiteracy

As early as 1990 Fox maintained that the family background and the language patterns used at home along with the emphasis given by the family iteslf on literacy all play a pivotal role on the acquisiton of literacy. More specifically, the causes of functional illiteracy have been identfied as follows:

- Striving for bare necessities is more often than not synonymous to the inability to focus on education when at a young age, especially when one lives in a rural area.

- "Dysfunctional contexts" especially when one lives in a "depressing social and economic situation" (Egloff 1997).

Edukacyjnych draws attention to five forms of poverty, namely "economic poverty, social poverty, communication poverty, educational poverty and political poverty". Examples of the aforementioned types are provided below:

- Unfree and anti-democratic regimes are supported when low-educated citizens are exploited and politically manipulated;

- The state's indifference as to establishing special schools for people with severe learning disabilities who are unable to follow the pace of learning provided in other schools;

- The state not establishing adequate and comprehensive education programs;

- Prejudice, stereotypes, social and racial racism;

- Domestic violence;

- Parent's indifference to children's schooling;

- Children burdened with responsibilies at home, such as taking care of their younger siblings;

- Lack of reading materials at home;

- Abandonment of basic studies before their completion;

- Rapid integration of young people into the productive process / abandoning education leads to knowledge being inactive or forgotten knowledge;

- The complexity of modern living conditions and their rapid development;

- People being bombarded with information on the media while being unable to assimilate it;

- Over-specialization leading to intellectual partiality and thus to lack of general knowledge;

- The use of modern technology introducing elements of automation in everyday life exacerbates the problem of illiteracy;

- Lack of motivation to enhance one's cognitive skills;

- Large number of students in classes;

- Low school attendance;

- Fear of failure on the part of the students to meet teacher's expectations and requirements;

- Students been forced to repeat a year or change school envrironment as a disciplinary method;

- Social inequalities; children from marginalized families tend to be facing learning difficulties due to low living standards;

- School literacy is often promoted along the lines of rote memorization on the part of the students, who are often asked to read short passages and provide non-interpretative answers to teacher's questions (Resnick (1990);

Although not a cause of (functional)illiteracy *per se*, the transition from Primary to Junior High School affects students' self-confidence because of frequent alternation of short-term educational courses not allowing the student to develop relationships with their teachers. A high number of unknown classmates in crowded classrooms, the way of teaching and the degree of difficulty of the lesson can also be detrimental to one's performance.

Threats

The worst-case scenario resulting from students' struggling with school is early school leaving. When weaker students continue their studies, they will often tend to be absent from classes making use of the highest number of aggregated absences they are allowed in Senior High School, which is 114. ADIPPDE has voiced concerns at to students wrongly exploiting this right of theirs; it almost seems as they will ensure they will reach that number at the end of the school year irrespectively of whether they have experienced any health problems (before COVID times). It is often

the case that there is a correlation between the high number of absences and the poor academic performance; ADIPPDE draws attention to the fact that absences should be a matter of the utmost concern for families, educators and the state alike, as their high number will unavoidably lead to students even exhibiting even poorer academic performance as well as schools facing problems as to their very operation.

Apart from the problems students face while at school and their potential implications, it is also true that once adults, functionally illiterate people will be hesitant to be involved in the political process in the country's affairs (political literacy); it has also been noted that in Greece the link between literacy and political literacy are very strong.

In everyday life, functionally illiterate people will most likely have problems even when browsing around a shop, always relying on others for help.

Namely, on a personal level, illiterate people will most likely have difficulty in:

- finding work as there are very few fields not requiring specialised knowledge;

- maintaining decent living standards;

- using critical thinking skills which in turn will result in a high likelihood of their being manipulated and fanaticized;

- appreciating the joy of (newly acquired) knowledge.

Functionally illiterate people experience insecurity, inferiority complexes, fear.

Functional illiteracy on a personal level will also result in:

- impeding the social integration of people falling into this category as participation in social and political events is prevented - illiteracy acts as a deterrent to the development of participatory institutions (such as cooperative organizations);

- being misinformed/ dis informed, for example of political parties' agenda so as to make the right choice. Illiterate people have no clear understanding of individual and social political rights and obligations which makes it difficult for them to be integrated smoothly into society;

- hindering communication with others; illiterate people are unable to express their inner world, thus experiencing isolation, introversion;

- inability to adopt the linguistic code, and therefore the cultural tradition and national identity.

On a social level, functional illiteracy will result in:

- widening the (digital) gap between developed and developing countries as people will fail to take advantage of their skills and aptitudes, thus making post literacy, i.e., one's realization of the social and technological changes occurring in one's lifetime, impossible to perceive;

- promoting phenomena of social exclusion and racism amongst citizens;
- complicating democratic process (illiterates are unable to participate in collective activities);
- totalitarian regimes are supported by the development of social divergence;
- social racism / fostering social inequalities;
- countries with a high illiteracy rate not being able to preserve their culture and uphold their values; cultural alienation of these countries is easier thus projecting an ambiguous image on the international arena;
- peoples of different development opportunities;
- inability to have fruitful contact with other cultures (illiteracy is an obstacle to the mutual enrichment of cultures).

As to women in particular, functional illiteracy is responsible for their difficulty in achieving emancipation and their obtaining equal status with their male counterparts.

Overall, it is self-evident that any given society with a great many functionally illiterate citizens is bound to encounter a multitude of problems and the total outcome might indeed be synonymous to the one stemming from illiteracy which is synonymous to ignorance.

Measures that have been taken so far to combat and prevent functional illiteracy

The International Day for the Elimination of Illiteracy was established on the initiative of UNESCO on September 8, 1965. Illiteracy is a complex problem, social, political, cultural, economic with far-reaching consequences not only for individuals, but for society as a whole.

As early as 1997, the Fifth UNESCO Conference on Adult Education drew the world's attention to the need to ensure that lifelong learning would be a right everybody should enjoy. Although the problem of (functional) illiteracy is still persistent as it is difficult to manage worldwide, there have been efforts on a national and international level to combat it.

In 2010, the European Commission acknowledged that the rate of functional illiteracy amongst young people should have fallen by 15% percent by 2020. While at school, students' well-being is a *sine qua non* for their good performance; to this end, a supportive, disciplined school environment and caring family relationships are conducive to learners being relaxed enabling them to overcome this obstacle. In Greece, save for the University Entrance Exams, there has been an effort to implement alternative assessment, assessment for learning, rather than assessment of learning in the classroom allowing for formative rather than for merely summative assessment.

Teachers in Greece often attend seminars provided by National and International Institutions and participate in projects such as Erasmus+ and eTwinning, both of which allow for non-formal training. They also opt for addressing their students' needs and design their curriculum accordingly to suit daily life needs.

The value of digital educational repositories has lately been acknowledged by educators and students alike. Platforms run by the Institute of Educational Policy in Greece (http://iep.edu.gr/en/) such as *Photodentro* (http://photodentro.edu.gr/aggregator/) and *Aesop* (http://aesop.iep.edu.gr/) have been of great use as to providing free resources created by teachers for teachers and enriching educational material allowing for students' greater involvement in the learning process.

An interesting observation drawn by ADIPPDE is pertinent to the evaluating of the overall educational system of a country through the process of school transition via the preparation and the reception of students in the key transitions: family to Kindergarten, Kindergarten to Primary, Primary to High School, High School to Senior High School, Senior High School to the University, the latter followed by one's integration into the social and professional life.

Adult education enables people who did not have the opportunity to attend school and participate in education programs during their childhood. *Second Chance Schools* fall into this category; they are public adult schools and operate within the framework of Lifelong Learning.

They address citizens aged 18 and over, who have not completed the nine-year compulsory education, that is Primary School (6 years) and Junior High School (3 years). The aforementioned type of school provides adults with the opportunity to obtain a degree equivalent to the General Certificate of Secondary Education (Law 2525/1997), placing emphasis on the acquisition of basic qualifications and the development of personal skills.

Functional illiteracy is still a red-hot issue that needs to be addressed. It is in this vein that Unesco's Agenda has set the goal to"ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. Let's all try to make it a reality so that it will not sound like wishful thinking any longer.

2.3. Functional illiteracy in Italy

Definition of functional illiteracy

The result of the demand was realized at the General Conference of the UNESCO in 1978:

"A person is literate who can with understanding both read and write a short simple statement on his everyday life.

A person is illiterate who cannot with understanding both read and write a short simple statement on his everyday life.

A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing, and calculation for his own and the community's development.

A person is functionally illiterate who cannot engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing, and calculation for his own and the community's development (UNESCO, 1978)."

The difference between literate and illiterate people is explicit here: illiterates had never attended school and are unable to read or write even single words while literates can.

In contrast with literacy and illiteracy, the difference between functional illiteracy, literacy and illiteracy is not obvious enough. Functionality, which is the essence of the difference between these terms, was never operationally defined. Recently, the number of functional illiterates in Europe was estimated to be about 80 million, their proportion is lowest in Sweden with 8% and highest in Portugal with 40%. However, the frequently referred original International Adult Literacy Survey (IALS) report does not imply functional illiteracy (OECD and Statistics Canada,2000). Different definitions and different diagnostic assessment standards can lead to fundamentally different epidemiological estimations, so any estimations of functional illiteracy rates may be unreliable.

Functional illiteracy consists of reading and writing skills that are inadequate "to manage daily living and employment tasks that require reading skills beyond a basic level". People who can read and write only in a language other than the predominant language of where they live may also be considered functionally illiterate. Functional illiteracy is contrasted with illiteracy in the strict sense, meaning the inability to read or write simple sentences in any language. (Wikipedia) Functional illiteracy means that a person cannot use reading, writing, and calculation skills for his/her own and the community's development. Functional illiteracy has considerable negative effects not only on personal development, but also in economic and social terms. (Cambridge Vocabulary). So far, we

have talked about literacy. However, many people do not achieve literacy because of inadequate schooling or even despite adequate schooling. On 1949, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) set the generalized functionality of literacy. The acquisition of reading and writing was regarded as basic rights: people should be enabled to become functionally literate in their own culture (Bhola, 1995). A need for a standard and a workable definition materialized to differentiate between literates and non-literates (illiterates) and also to distinguish various levels in between.

Signs of functional illiteracy

Early childhood, middle childhood, and early adolescence determinants of functional literacy in adulthood are investigated, using 20-year longitudinal data from a sample of black children of teenaged mothers from the Baltimore metropolitan area. Document literacy was assessed by a test that consisted of a subset of items of the National Assessment of Educational Progress (NAEP) adult literacy test. The Baltimore sample is compared to the NAEP sample. Family environmental factors, early childhood developmental level, and educational career factors were considered as predictors of young adulthood literacy. Preschool cognitive and behavioral functioning is highly predictive of literacy in young adulthood, even when the effects of family environmental characteristics, including living arrangements, the quality of the home environment, maternal education, and income, are controlled. Grade failure in elementary school is also associated with literacy, but this effect disappears when the measure of preschool abilities is controlled. Family environmental factors that are predictive of literacy include maternal education, family size in early childhood, maternal marital status, and income in middle childhood and early adolescence. Policy implications of these findings are discussed. Illiteracy in individuals stems from different, generally inter-related causes which, together, create a series of often insurmountable barriers for those concerned. For instance, for someone born into an underprivileged milieu to parents with little formal schooling, the likelihood of being illiterate or experiencing serious learning difficulties will be higher. This is known as intergenerational transmission of illiteracy.

Causes

The causes of illiteracy are many and varied. The fact that it is frequently linked with poverty suggests that some of the causes could be the inadequate provision of schools, an inadequate number

of properly trained teachers and the economic situation of families that make education for their children a low priority.

The following are the most frequent causes of illiteracy:

- Parents with little schooling;
- Lack of books at home and lack of stimulation as to the importance of reading;
- Doing badly at or dropping out of school—many have not completed high school;
- Difficult living conditions, including poverty;
- Learning disabilities, such as dyslexia, dis-orthography, etc.

Adults aged 45 and over with low literacy skills have the distinction of belonging to generations for whom there were attractive job opportunities despite a lower level of schooling. A very large number of them have always worked in the same field, founding their families, and thus have never felt the need to go back to school. Owing to the closing of many companies over the past few years, especially in the manufacturing and primary sectors, these people have found themselves out of work, and are often unable to find a new job, because they have difficulty reading and writing. Also, they lack the necessary skills to meet current market requirements or to register in training that would allow them to requalify. Many methods have been used to identify functional illiterates, but none of these methods are yet standardized and systematically diagnostically evaluated in a representative sample of functional illiterates and adults. Therefore, they cannot be considered adequate for measuring and identifying functional illiterates on the basis of the current data.

In sum, functional illiterates seem to have linguistic deficits in several domains, including phonological, orthographic and lexical processing, oral and reading comprehension, and verbal fluency. However, these deficits may not be homogeneous. It is important to note that correlated or co-morbid deficits are not necessarily functionally causal. What is more, they do not necessarily add unique variance to the diagnostic assessment. Finally, we do not know whether the linguistic inabilities described above are their main difficulties or whether these are due to or influenced by other more general cognitive factors (Supplementary Table S1).

We propose four different social and cognitive aspects that can lead to functional illiteracy in itself or together:

(1) Cognitive aspect: weak cognitive skills cause the inability to acquire proper basic literacy skills;

(2) Educational aspect: primary and secondary school teachers have no opportunity to take care the individual level of each student, therefore the children with feeble abilities or low motivation fall behind in long-term;

(3) Social aspect: the lack of an encouraging and motivating model in a child's family for acquiring new skills, having new experiences, can lead to an unmotivated learning style in school;

(4) Competency loss aspect: loss of competencies in adulthood caused by a decrease of cognitive demands (Q4).

The focus on cognitive and social aspects does not preclude that some of them (e.g., the cognitive aspects) are neuro-biologically routed.

Further characteristics that describe functional illiterates:

– impaired oral language comprehension,

– impaired writing skills,

– impaired arithmetic skills,

– difficulties in functioning in society: problems with active, independent functioning in daily life.

Evaluation instruments of functional illiteracy, on national level

Functionally illiterate users, that means those lacking reading, writing, calculation and science skills, are potential Internet users, so technological solutions must ensure that content is intelligible to them.

The interface design guided by accessibility norms and may improve accessibility but considering accessibility evaluations is an essential part of this process. Evaluation can be automatic, performed by specialists or performed with the participation of users. Some barriers are only detected with user tests.

Usually, usability tests are adapted and performed with the purpose of evaluating accessibility, but most of works in this area dealt with persons with visual impairment. This paper aimed to research the behavior of functionally illiterate users, identifying important characteristics that the evaluators and specialists should consider in the performance of an evaluation of accessibility with this audience.

As a result, was generated a list of important characteristics that contribute to the adaptation of usability evaluation methods with functionally illiterate users. Besides that, it was elaborated a list of best strategies that the specialists and researchers should consider in accessibility evaluation with the audience under examination.

Diagnostics of Functional Illiteracy: Different Approaches

As there is no explicit assessment for functional illiteracy, researchers had to find other techniques to assess the number of functional illiterates or to identify functional illiterates for experimental studies. The UNESCO, the OECD and the IEA (International Association for the Evaluation of Educational Achievement) measure literacy and other key knowledge skills of children, young adults, and adults a large-scale, international assessment about strengths and weaknesses in different countries. Research such as the IALS and the Adult Literacy and Life Skills Survey (ALL) build on each other (Thorn, 2009; UNESCO, 2009). These kinds of international tests generally measure literacy and numeracy skills in various ways, including mapping the whole literacy spectrum and grouping the performance and the abilities into discrete levels. The international, supranational and national political actors are first interested in large-scale assessments, not in individual diagnostics. Against this background, it is understandable (but nevertheless at least unfortunate) that the diagnostic materials lack test criteria (reliability, construct validity, criterion validity), which are demanded in standard individual diagnostic tests.

Functional illiteracy rate in Italy

Italy participated in IEA's PIRLS (4th graders reading comprehension) in 2001, 2006 and 2011, in OECD's PISA (15 year-olds' reading literacy) since 2000, and in OECD's PIAAC (adults' reading literacy) in 2012. This means it is possible to describe the changes over time in average reading proficiency, according to different characteristics of the readers, and to compare relative reading levels of proficiencies for different age groups.

Italy performed above the EU average in PIRLS 2011 (541 vs 535 EU-average) and very close to the EU mean in PISA 2012 (490 vs 489 EU average). In PISA, the overall reading score is also very close to the average for European countries on average. In PIRLS, a limited proportion of pupils (15%) resulted as low-performing readers. This is slightly less than in EU countries on average (20%).

These students can read simple texts, retrieve explicit information, or make straightforward inferences, but they are not able to deal with longer or more complex texts, and are unable to interpret beyond what is explicitly stated in the text.

The proportion of low performers decreased between 2001 and 2011 in PIRLS. In PISA 2012, the proportion of low performers was very close to EU average and rather stable over time: among boys, a slight increase was observed (+1.3%), while among girls no change was observed. The proportion of top-performing readers was 10% in PIRLS (vs 9% in the EU). In PISA 2012, the percentage of both low and top performing readers was also very close to the EU average of around 7%. The gap according to the pupils' socioeconomic background was considerably lower than the EU average in PIRLS (59 vs 76 on average) and almost the same in PISA (84 vs 89).

The difference may be due to the fact that the indices of socioeconomic background are not the same in PIRLS and PISA. In PISA 2009, the gap between native students and students with a migrant background was much higher than in EU countries on average (72 vs 38 EU-average), the equivalent of about two years of schooling.

Similarly, in PIRLS, the mean score difference between those who always spoke the language of the test at home, and those who sometimes or never did so was higher than in EU countries (31 vs 26). In PISA, too, this gap according to the language spoken at home was higher than the EU average (62 vs 54). Girls' and boys' performances were very close, the gender gap (in favour of girls) was then lower than the corresponding EU average differences in PIRLS (3 vs 12), and slightly higher in PISA (46 vs 44). The gender difference in Italy was higher in the two first cycles of PIRLS (8 and 9 points) but always below the EU average. In PISA, the reading performance observed between 2000 and 2012 was similar for girls (+ 3 score points) and boys (+ 2 score points).

The trend was slightly different in EU countries on average: between 2000 and 2012 the girls' performance increased by 5 score points while the boys' decreased by the same value. Unsurprisingly, students in Italy in the top quarter of the Confidence in Reading scale achieved a mean score (569) that was some 57 points higher than students in the bottom quarter (513). The average difference across the EU-24 was 80 points, indicating a relatively weaker relationship between Confidence and performance in Italy.

In conclusion, Italy performed above the EU average in PIRLS and very close in PISA. Results seem stable over time, since PIRLS in 2001 and 2011 show the same scores. The pattern by level of performance is very close to European countries on average in both PISA and in PIRLS except as for the proportion of low-performers which has decreased and is now lower than the EU on average.

The gap between low and top-performing readers is smaller in Italy than in the EU on average, and the gap according to socioeconomic status also tends to be smaller than in the EU on

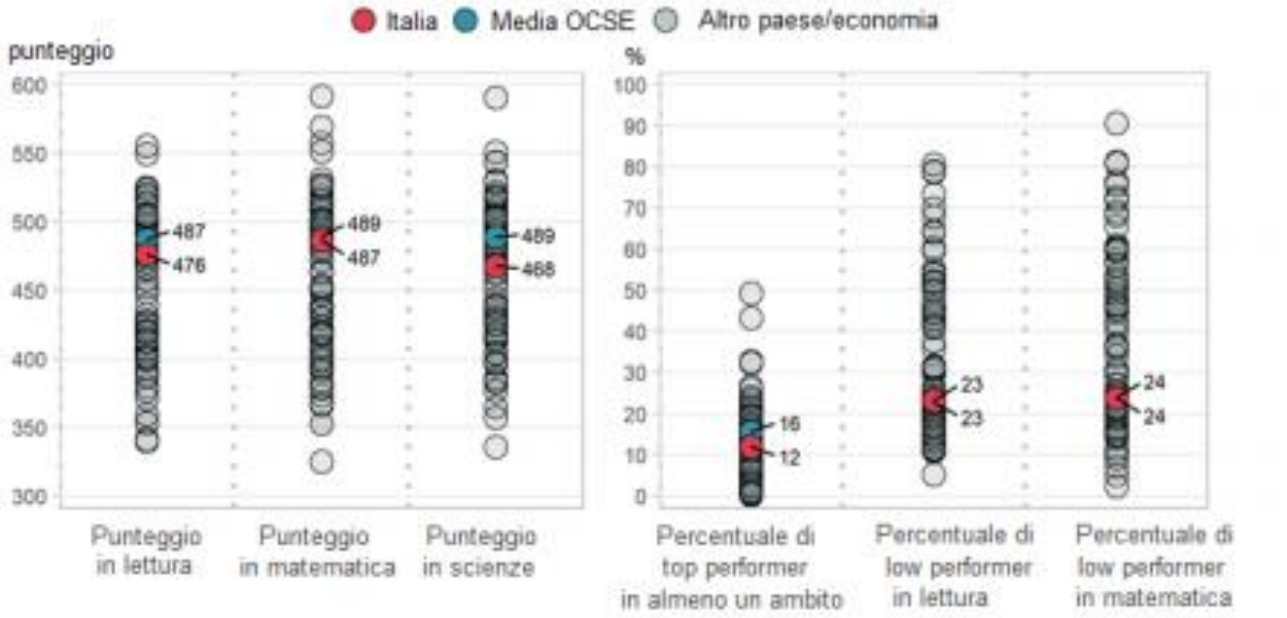
average. On the contrary, the gap according to language spoken at home is greater. As far as adults are concerned, Italy performed below the EU in PIAAC (250 vs 271).

The spread of achievement – namely the gap between top and bottom performers - is somewhat lower in Italy than the EU-17-Average (114 vs 117 on average). The proportion of adults performing at or below level 1 in Italy is 28%, much higher than the EU-17 average (16.4%).

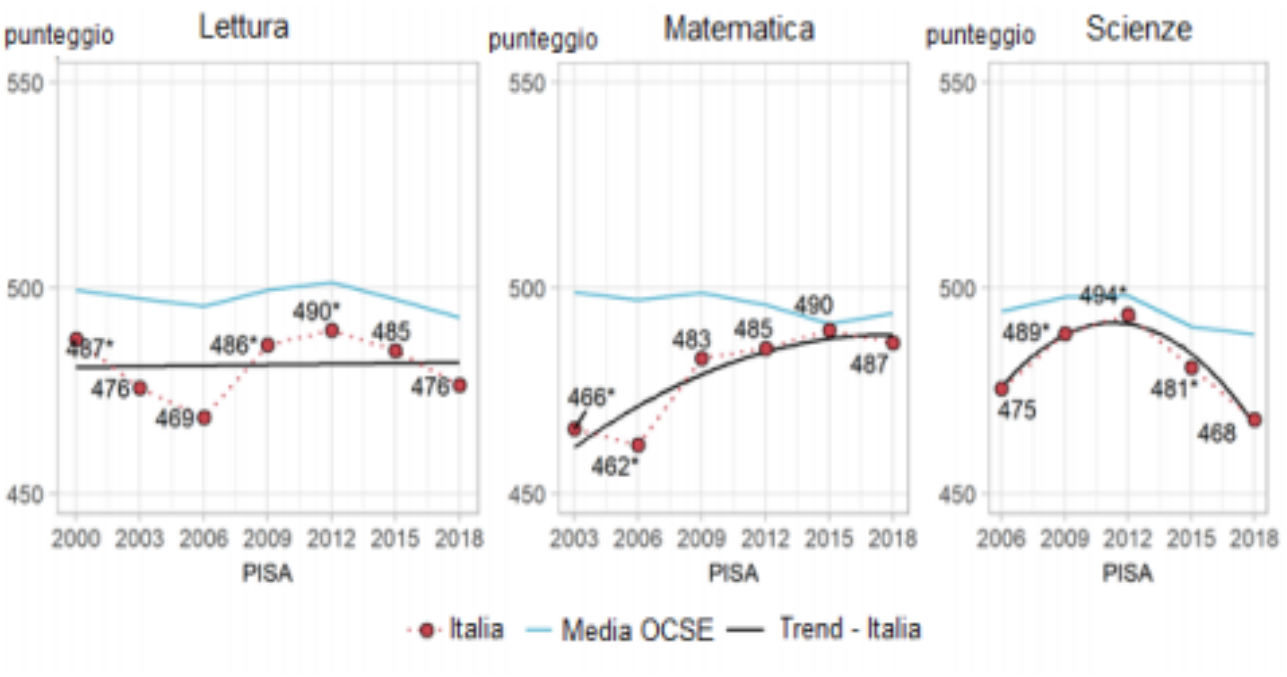
Females and males performance are very similar (251 vs 250), both well below the EU average (271). The gender gap in favor of females was very low (in EU on average it is 2 score points in favor of males), which is in contrast with what is observed among 15 years-old both in Italy and at EU level: a high gender difference in reading equivalent to about one year of schooling.

The gap according to parents' level of education was somewhat lower than in the EU countries on average (39 vs 41), reflecting the same trend as in PIRLS and PISA. The same was observed for the gap according to the language spoken at home: the gap between native and not-native speakers was smaller than the EU-17-average (25 vs 28) and much smaller among adults than among children and adolescents, showing that the gap is growing in Italy due to the increased migration over the last two decades.

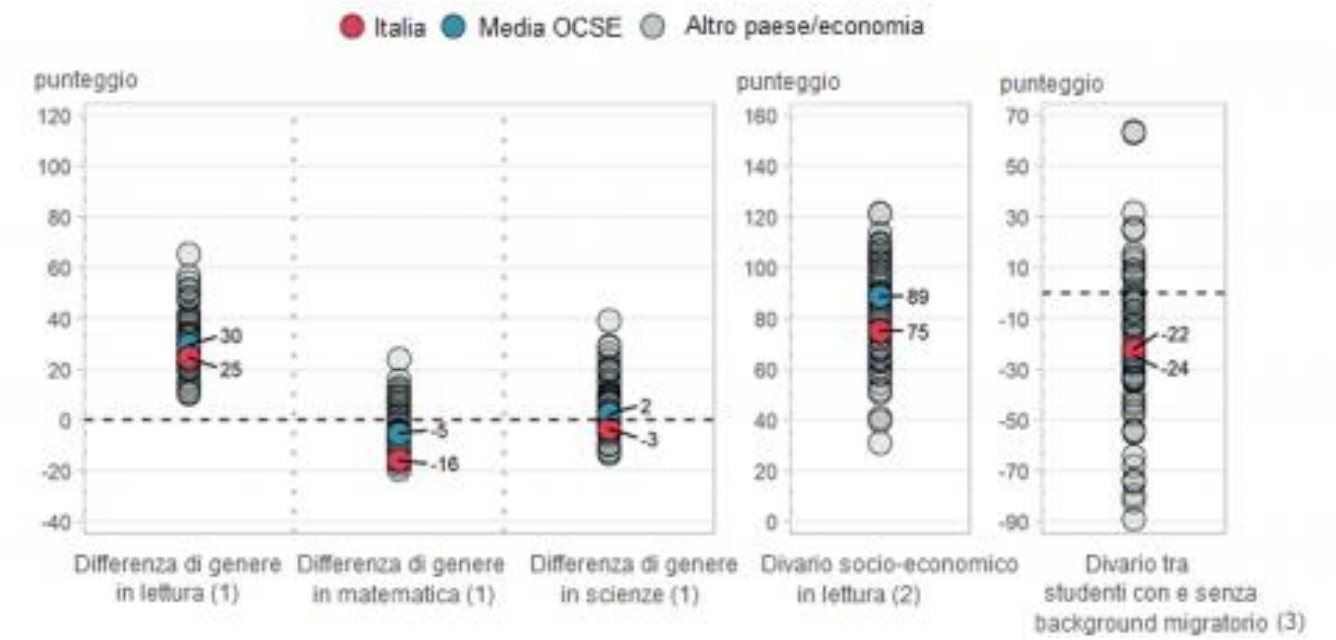
Snapshot of reading, math and scientist performance



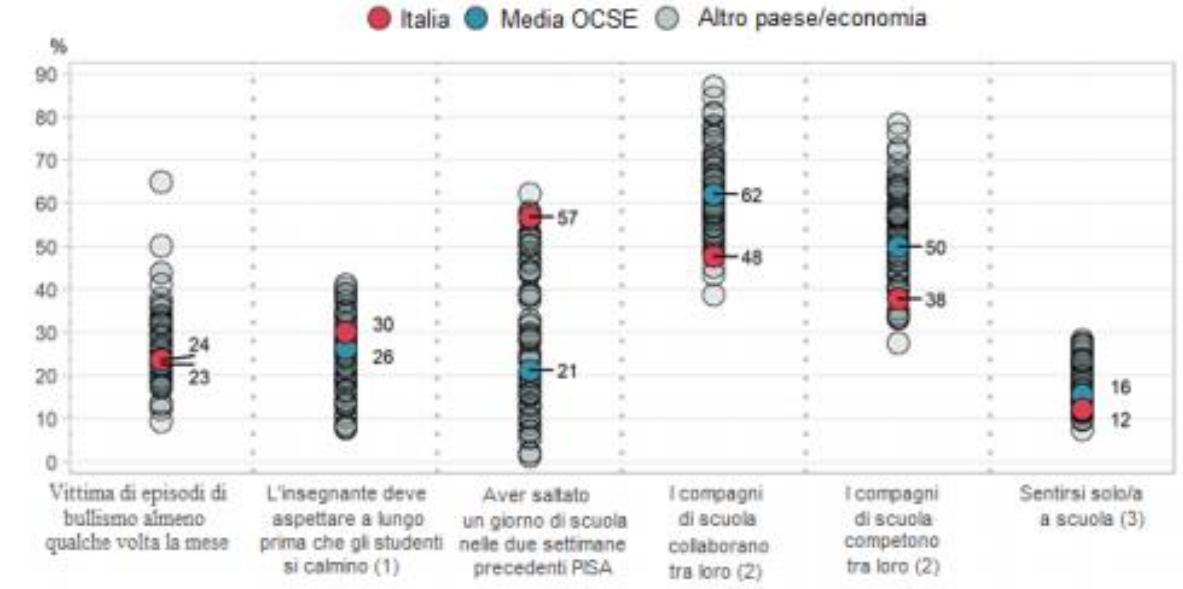
Trend in performance in reading, math and sciences.

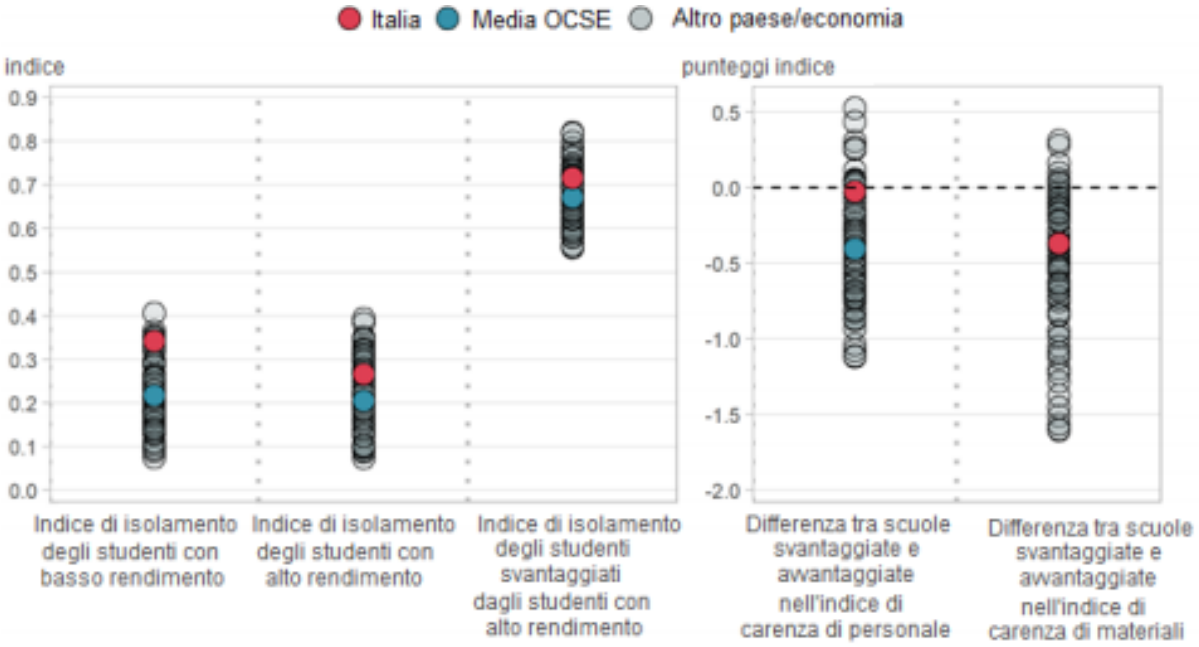


Differences in performance and expectations related to personal characteristics



School segregation and the gap in material and staff shortages between schools advantaged and disadvantaged





Measures to combat and prevent functional illiteracy

This social problem, as deep-rooted as it is deleterious, concerns Italians very closely, given that. Our country is among the first in the world for the percentage of functional illiterates.

One fact that should be a warning is that, in most cases, functional illiterates grew up in families with a limited number of books. Among the data from the 2014 OECD-PIAAC national survey "this figure is particularly accentuated in our country where 73 percent of functional illiterate s grew up in families with fewer than 25 books". Not surprisingly, "the absence of a basic level of skills - continues, in the report of the OECD-PIAAC survey, Simona Mineo - makes further learning activities difficult", so much so as to bring the skills of young people with fragile backgrounds to "grow old and deteriorate over time ", making it almost completely impossible for them to" access any form of real learning ".

In these conditions, that is, starting from not very solid foundations and remaining devoid of stimuli, as explained by Friedrich Huebler, leading literacy expert for the UNESCO Institute of Statistics, in an interview with Espresso, "without practice, the skills linked literacy can be lost year after year". The seriousness and extent of the problem have needed urgent countermeasures. To stem the phenomenon of functional illiteracy, in Italy it has been restored the right value to two fundamental actors: the family and the school. It is within these two dimensions that the most important Italian actions to combat functional illiteracy have been implemented in our country. And the strongest ally is undoubtedly reading. A very useful first step has been to carry out an analysis of one's habits and those connected to one's family unit. A few simple questions, whose answers gave a first picture of the situation: do we spend time reading? Do we read enough? Are we educating our children to read? Leaving the right space in the house for books is essential.

A very useful first step has been to carry out an analysis of one's habits and those connected to one's family unit. A few simple questions, whose answers gave a first picture of the situation: do we spend time reading? Do we read enough? Are we educating our children to read? Leaving the right space in the house for books is essential.

The school is the place where functional illiteracy manifests itself in a massive and evident way. Many professors complain about the impossibility of carrying out the lessons adequately because of the difficulties of understanding that the students have. In fact, when the ability to reconstruct the meaning of a text is lacking, through the contribution and union of what are the information and notions already present in memory, it becomes difficult even to understand the trace of a school theme or question of a problem. Fortunately, however, teaching in Italy has a thousand resources that make it

possible to combat the phenomenon of functional illiteracy. The right mix is a balanced combination of classic and more innovative methodologies. From the traditional school baggage, for example, it is worthwhile to withdraw from time to time old habits such as summaries and summaries, which help the child to select information, to understand it fully and then to put it back together in a new text. On the other hand, digital tools have also provided valuable support to teachers. Through elements such as the IWB and tablets, in fact, it has been possible to build interactive lessons that stimulate children in a new way. In this way, teaching expands, conquers new spaces, becomes interactive, relational, social.

One of the main causes of the spread of functional illiteracy, therefore, is the disaffection with culture and education, a characteristic which, unfortunately, is typical of almost the entire population of our country. For this reason, in fact, the Italian social fabric presents aspects that encourage the spread of functional illiteracy, such as the high rate of early school leaving, young people who do not work or live in conditions of illegal and precarious work, or lack of information.

Getting young people used to reading and making them passionate about culture as a whole is therefore essential.

Not educating them adequately in this sense represents a lack that can lead young people - as is happening, moreover, already to the new generations - to fall into a cruel vicious circle that leads them to serious forms of not only functional but also emotional illiteracy.

Functional illiteracy can emerge through a relegation process if constant mental training is not carried out. The skills acquired must be continuously solicited by means of reading and information, allowing the individual to develop critical thinking. Maintaining or even developing one's knowledge allows to counteract this phenomenon and the various learning activities should be supported even in adulthood.

Resigning oneself and abandoning people with functional illiteracy to banality and stereotyping is certainly not a solution. A remedy in Italy is represented by various learning paths that include the analysis of different documents and texts, the verification of the acquisition of contents and the ability to use the information included, to then comment and argue them in a personal and critical way. Another remedy against functional is represented by the presence of various tutors within education for training, development and updating of their skills. This has positively influenced the total assimilation of reading, listening, elaboration, synthesis and deepening skills.

Furthermore, the sharing of knowledge and skills, going beyond traditional teaching, can lead students towards a better development of their skills. It is essential to make inclusion in training within everyone's reach, both in school and at work, in order to allow greater dissemination of skills and competences functional to interpersonal relationships.

The improvement of knowledge remains of great importance especially in involving a greater number of people, starting from the local area up to an international level.

The Threats

The prevalence of functionally illiterate individuals in our society is a worrisome and rising phenomenon. For example, although a functional illiterate can read, he or she cannot fill out an application, understand a tweet or written instructions, or "compare the cost of two items to choose the item that offers the best value." Society needs real skills, not illusive ones. The Danger of Illusive Skills in the Digital Age. Considering the huge amount of information available nowadays, especially in video format, the illusion of skill acquisition is spreading fast. As a result, people are speaking out, developing stronger opinions, and giving speeches—even classes—on subjects they have interacted only superficially with. What was once just bar chitchat or small talk is now online and being taken as a source of information. The threats of illiteracy are many and harmful in several respects. As well as affecting illiterate individuals themselves in their daily lives and often jeopardizing their future, this scourge has a significant effect on society, both socially and economically. The consequences of illiteracy on individuals and society include the following:

For individuals

Limited ability to obtain and understand essential information; Unemployment: The unemployment rate is 2-4 times higher among those with little schooling than among those with Bachelor's degrees; Lower income; Lower-quality jobs; Reduced access to lifelong learning and professional development; Precarious financial position; Little value is given to education and reading within the family, and this often leads to intergenerational transmission of illiteracy; Low self-esteem, which can lead to isolation; Impact on health: Illiterate individuals have more workplace accidents, take longer to recover and more often misuse medication through ignorance of health care resources and because they have trouble reading and understanding the relevant information (warnings, dosage, contraindications, etc.)

For society

Since literacy is an essential tool for individuals and states to be competitive in the new global knowledge economy, many positions remain vacant for lack of personnel adequately trained to hold them; The higher the proportion of adults with low literacy proficiency is, the slower the overall long-term GDP growth rate is; The difficulty understanding societal issues lowers the level of community involvement and civic participation. Without the basic tools necessary for achieving their

goals, individuals without an adequate level of literacy cannot be involved fully and on a completely equal basis in social and political discourse.

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2.4. Functional illiteracy in Lithuania

Definitions of functional illiteracy

Formally, availability of education for children has increased around the world over the last decades. However, despite having a successful formal education career, students can become functional illiterates. Functional illiteracy means that a person cannot use reading, writing, and calculation skills for his/her own and the community's development. Functional illiteracy has considerable negative effects not only on personal development, but also in economic and social terms. Although functional illiteracy has been highly publicized in mass media in the recent years, there is limited scientific knowledge about the people termed functional illiterates; definition, assessment, and differential diagnoses with respect to related numerical and linguistic impairments are rarely studied and controversial.

Signs of functional illiteracy

There are some main features of functional illiteracy:

1. Functionally illiterate students avoid more complicated tasks believing in future failure, they repeat the same mistakes;

2. Such students avoid intellectual tasks finding excuses like lack of time, tiredness and others;

3. They are honest to admit that they do not like reading;

4. They ask other students to explain them the message of a text or an algorithm of a task;

5. Reading causes frustration, desire to do something more important and psychosomatic disorders like headache or sore eyes;

6. Functionally illiterate usually read aloud;

7. They have difficulties understanding the instructions from weight loss exercises to repair of nuclear reactor;

8. Having read the text, they are not able to form a question;

9. There appears a different comprehension between the heard and read texts;

10. If there is a problem caused by their misunderstanding, they react with the learned impotence or blaming others still not understanding who is guilty and who is right.

Functionally illiterate students recognize words, however they do not decode the language, can not recognize the fictional meaning or technical, practical interest or advantage. Such students are

poor readers and viewers, they prefer rough and simple pop culture. Some researches claim that functional illiteracy is more harmful than overall illiteracy as it indicates worse cognitive performance.

The number of functionally illiterate people causes the simplification of everyday texts presenting the ideas in a manner of childish simplicity. Advertisements in social media are shortened to 140 letters. There appear less and less long-reads in newspapers or new portals. Journalists having ability to write coherent texts are in high demand because they have no contenders in the field. The citizens communicate texting messages more frequently than speaking.

Evaluation instruments of functional illiteracy, on national level

Lithuania's education system is more decentralized than centralized. National institutions, municipalities and educational institutions all share responsibility for the quality of the education provided. The Seimas (Parliament) forms education policy at the national level. It adopts laws and declarations on policy changes. The Government in corpore and the Ministry of Education, Science and Sport (and other related ministries) also formulate and implement education policy and adopt and implement legal acts other than laws and declarations.

The Seimas adopts the main laws and legal acts regulating the system of education and science. These are applicable at the national level. The Ministry of Education, Science and Sport or the Government adopts other legal acts applicable at the national level such as the Description of the Primary, Lower Secondary and Upper Secondary Curriculum. The municipalities set and implement their own strategic education plans that are in accordance with the national documents. The municipalities are responsible for ensuring formal education up until the age of 16, organizing non-formal education, transportation to educational institutions and other aspects. The school organizes the education process – for example, teachers are able to adapt the core curriculum to children's individual needs. Formal education is typically provided by public entities. However, private sector education providers are recognised and regulated by national legal acts.

Organization and structures

A child must start attending pre-primary education on turning 6 years of age during the calendar year (pre-primary education is obligatory). Education is compulsory until the age of 16, meaning that primary and lower secondary education is mandatory. Students' progress and achievements are measured through standardized testing in the 2nd, 4th, 6th and 8th grades. The

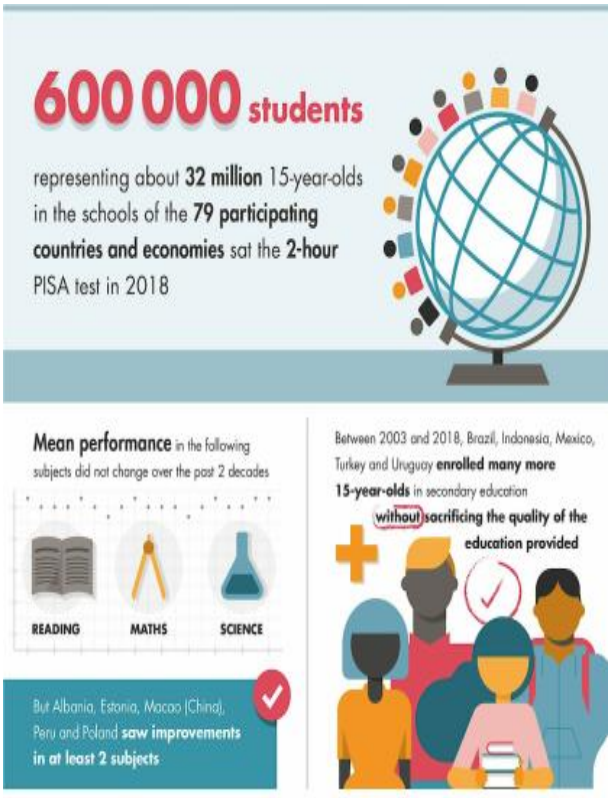
standardized testing is not compulsory. It can be initiated by schools or municipalities. The development of test items, assessment instructions and recommendations on how to interpret the results of the standardized tests are centralized. Schools are responsible for test administration and assessment procedures. The assessment of lower secondary education achievements in grade 10 (grade II in gymnasium schools) is mandatory. Upper secondary education is concluded by mandatory Matura examinations, which are used both to evaluate pupils' achievements and to enter higher education institutions. Learners are granted some freedom in choosing study subjects in the two final years of their lower secondary education. This is expanded on greatly in upper secondary education and tertiary education.

A common way of diagnosing functional illiterates is based on the years of schooling. However, the standard seems to vary among cultures. Therefore, we cannot consider compulsory education as the only diagnostic attribute of functional illiteracy.

Another common diagnostic practice is using grade-equivalent scores and reading-level match designs. This concept is concrete, easy to understand, and it does not require a new specific test because the researchers use general standardized assessments.

Recent studies on functional illiteracy

International and National Student Assessment results



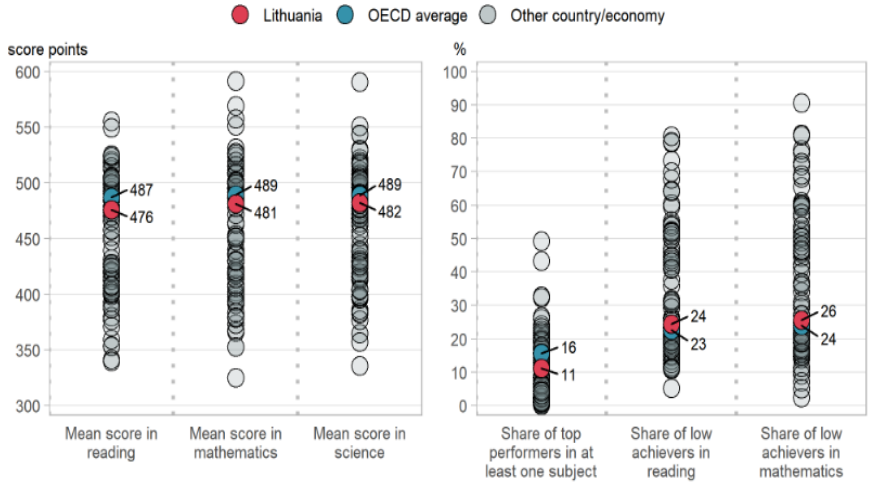
The OECD Programme for International Student Assessment (PISA) examines what students know in reading, mathematics and science, and what they can do with what they know. It provides the most comprehensive and rigorous international assessment of student learning outcomes to date. Results from PISA indicate the quality and equity of learning outcomes attained around the world, and allow educators and policy makers to learn from the policies and practices applied in other countries. This is one of six volumes that present the results of the PISA 2018 survey, the seventh round of the triennial assessment. Volume I, What Students Know and Can Do, provides a detailed examination of student

performance in reading, mathematics and science, and describes how performance has changed since previous PISA assessments.

What 15-year-old students in Lithuania know and can do

Students in Lithuania scored lower than the OECD average in reading, mathematics and science. Compared to the OECD average, a smaller proportion of students in Lithuania performed at the highest levels of proficiency (Level 5 or 6) in at least one subject; while a similar proportion of students achieved a minimum level of proficiency (Level 2 or higher) in at least one subject.

Figure 1. Snapshot of performance in reading, mathematics and science



Note: Only countries and economies with available data are shown.
Source: OECD, PISA 2018 Database, Tables I.1 and I.10.1.

What students know and can do in reading

In Lithuania, 76% of students attained at least Level 2 proficiency in reading (OECD average: 77%). At a minimum, these students can identify the main idea in a text of moderate length, find information based on explicit, though sometimes complex criteria, and can reflect on the purpose and form of texts when explicitly directed to do so. Some 5% of students in Lithuania were top performers in reading, meaning that they attained Level 5 or 6 in the PISA reading test (OECD average: 9%). At these levels, students can comprehend lengthy texts, deal with concepts that are abstract or counterintuitive, and establish distinctions between fact and opinion, based on implicit cues pertaining to the content or source of the information. In 20 education systems, including those of 15 OECD countries, more than 10% of 15-year-old students were top performers.

What students know and can do in mathematics

Some 74% of students in Lithuania attained Level 2 or higher in mathematics (OECD average: 76%). At a minimum, these students can interpret and recognise, without direct instructions, how a (simple) situation can be represented mathematically (e.g. comparing the total distance across two alternative routes, or converting prices into a different currency). The share of 15-year-old students who attained minimum levels of proficiency in mathematics (Level 2 or higher) varied widely – from 98% in Beijing, Shanghai, Jiangsu and Zhejiang (China) to 2% in Zambia, which participated in the PISA for Development assessment in 2017.

On average across OECD countries, 76% of students attained at least Level 2 proficiency in mathematics. In Lithuania, 8% of students scored at Level 5 or higher in mathematics (OECD average: 11%). Six Asian countries and economies had the largest shares of students who did so: Beijing, Shanghai, Jiangsu and Zhejiang (China) (44%), Singapore (37%), Hong Kong (China) (29%), Macao (China) (28%), Chinese Taipei (23%) and Korea (21%). These students can model complex situations mathematically, and can select, compare and evaluate appropriate problem-solving strategies for dealing with them.

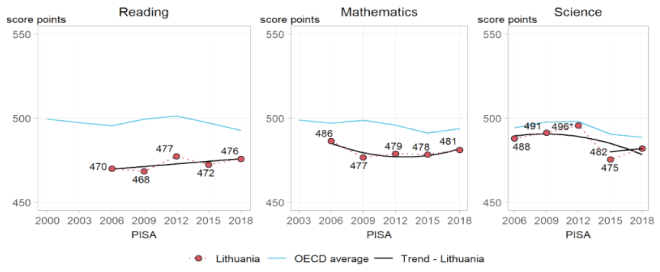
What students know and can do in science

Some 78% of students in Lithuania attained Level 2 or higher in science (OECD average: 78%). At a minimum, these students can recognise the correct explanation for familiar scientific phenomena and can use such knowledge to identify, in simple cases, whether a conclusion is valid based on the data provided.

In Lithuania, 4% of students were top performers in science, meaning that they were proficient at Level 5 or 6 (OECD average: 7%). These students can creatively and autonomously apply their knowledge of and about science to a wide variety of situations, including unfamiliar ones.

Performance trends

Figure 2. Trends in performance in reading, mathematics and science



Notes:*indicates mean-performance estimates that are statistically significantly above or below PISA 2018 estimates for Lithuania.
The blue line indicates the average mean performance across OECD countries with valid data in all PISA assessments. The red dotted line indicates mean performance in Lithuania. The black line represents a trend line for Lithuania (line of best fit).
Source: OECD, PISA 2018 Database, Tables I. B1.10, I. B1.11 and I. B1.12.

In Lithuania, mean reading and mathematics performance in 2018 were close to the levels observed in every previous assesments since 2006, when the country first participated in PISA, and no clear direction of change could be determined. Mean science

performance in 2018 was significantly above the level observed in 2015, but below the PISA 2012 mean; overall, science results appeared to fluctuate somewhat more than reading or mathematics results, around a declining trend. Despite overall stable results in reading, the proportion of top-performing students increased by 2.1 percentage point between 2009 and 2018.

Functional illiteracy rate in Lithuania

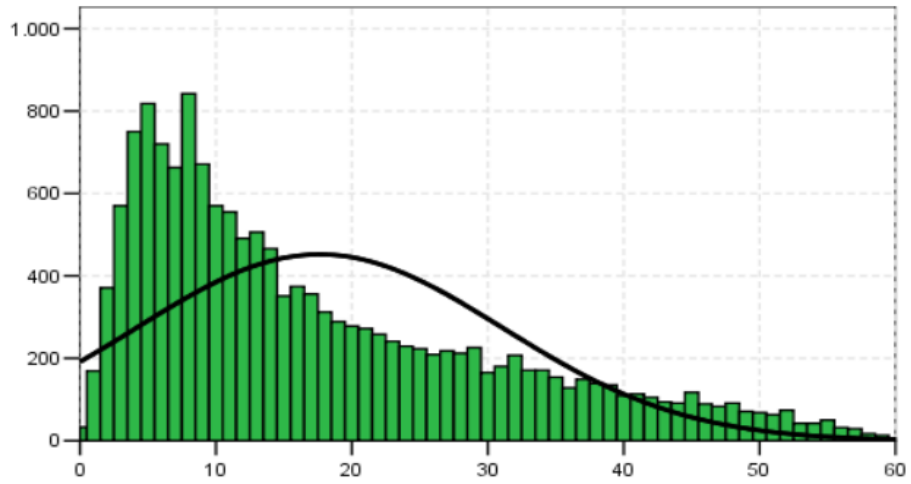
One third of school-leavers received a negative evaluation of grammar and vocabulary accuracy at Lithuanian (mother-tongue) examination in 2012. The results were presented at Education, Science and Culture Committee in the Parliament. The linguists and politicians agreed that illiteracy had become a national issue which should be solved immediately.

Based on Programme for International Student Assessment (PISA) data delivered by the Organization for Economic and Social Cooperation and Development (OECD), pupils' reading skills, nature science and mathematics achievements are lower than the EU average. These results are not getting any better when analysing several studies in a row. National research reveals a vast difference in pupils' achievements between separate municipalities, between schools in cities and villages, even between schools in the same cities.

Lithuania falls behind in statistics of inclusion in preschool education and adult lifelong learning. Social exclusion risk groups, especially young people, do not have equal opportunities to participate in society and have difficulties integrating into the labour market. There is also a lack of attention to the most talented.

Matura examination results of Mathematics and Lithuanian language and literature

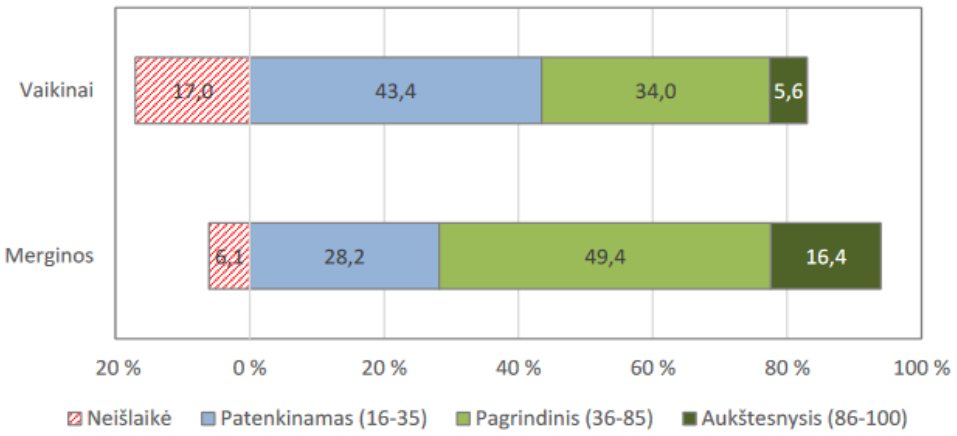
In 2020 15244 candidates took part in the National Matura examination in mathematics. The maximum amount of points that can be collected by those who pass the exam is 60 points. The minimum limit for the sum of passing the exam was -9 points. That was 15 percent of all possible points. 4936 (32.4%) candidates who did not pass the national Matura exam in mathematics, scored from 0 to 8 task points.



The statistical analysis presented above is based on the results of those who passed and received the assessment of the National Matura Exam in Mathematics in the main session in 2020. This year, a maximum of 60 points were collected. In 2020 16,970 candidates took part in National Matura examination of the Lithuanian language and literature and received the assessment.

The maximum amount of points that could be collected by those who pass the exam was 100 points. The minimum pass mark was 30 percentage points. 1816 (10.7%) candidates did not pass the exam, these candidates scored from 0 to 29 percentage points of the task. All candidates were assigned to one of three levels of achievement - satisfactory, basic or higher. The highest level of achievement was reached by 11.8% candidates, the basic level of achievement was 42.9%, and the satisfactory level was 34.6%. The graph represents the distribution of girls (the bottom graph) and boys who passed the National Matura exam in Lithuanian language and literature by levels of achievement.

2018 results of standartised testing/ national Examination of students achievements in the 2nd, 4th, 6th and 8th grades



In 2018, 28,636th graders (from 1625 classes), 25,533 fourth graders (from 1506 classes), 24,788 sixth graders (from 1294 classes) and 24,801 eighth graders (from 1286 classes) participated in this exam.

At the end of 2017–2018, the 2nd grade students had to complete mathematics and Lithuanian language tasks of various complexity and difficulty, which allowed assessing the knowledge and skills acquired by each student and objectively determine whether they correspond to the learning achievements, described in the General Curriculum, overcome by providing appropriate support to the student.

In 2014–2018, the changes in student achievements recorded in the NESA allowed raising the hypothesis that the learning achievements of students grades 4-8 in mathematics, reading, writing, as well as natural sciences and social sciences in grade 8 were improving.

The progress has been made in the fields of mathematics in the fourth grade, writing and world cognition, sixth grade reading and eighth grade reading, science and social science. Insufficiently high achievement in fourth-grade reading, six-grade writing and eighth-grade math and writing remained a major concern.

NESA data helped to identify groups of second-graders with various learning difficulties. Due to the difficulties encountered in developing reading, writing, numeracy and thinking skills, the risk of their further learning failures was quite high.

Causes of functional illiteracy

- Prolonged reform of educational system.

- Simplification of the teaching content regarding difficulties faced by students.

- Closure of rural schools centralizing and narrowing the national school network does not suggest the quality of education. A prolonged distance to educational institution does not strengthen the motivation.

- The first signs of functional illiteracy are related to the establishment of informational society and digital media.

- There is no need to put effort in finding entertainment. It is only a matter of pushing a button and entering a desired word.

- Games no longer perform a function of education or practice of vital and relevant habits.

- Commercialized attitude and encouragement of consumption need functionally illiterate people who usually earn little wages but a high number of them and their vulnerability to manipulation provide huge financial benefits to the market.

- Poor education prospects from generation to generation. Uneducated parents often do not evaluate the need of education and do not encourage their children to seek one.

- Disinterest in quality fiction reading and inconsistent teaching of literature at schools cause higher rate of functional illiteracy.

- Technologies encourage the usage of foreign words instead of natives, that way the mother tongue vocabulary becomes poorer.

Factors Contributing to Functional Illiteracy – The Scientific Aspect

1. Language-Related Deficits

Functional illiterates seem to have linguistic deficits in several domains, including phonological, orthographic and lexical processing, oral and reading comprehension, and verbal fluency. However, these deficits may not be homogeneous. It is important to note that correlated or co-morbid deficits are not necessarily functionally causal. What is more, they do not necessarily add unique variance to the diagnostic assessment. Finally, it is not known whether the linguistic inabilities are their main difficulties or whether these are due to or influenced by other more general cognitive factors.

2. Cognitive Deficits

Cognitive deficits of functional illiterates have also been reported. Van Linden and Cremers (2008) showed that functional illiterates performed significantly worse than literates not only in language processing, but also in all cognitive tasks such as in copying and recalling the Rey Complex Figure, visual organizational, and visual memory, mental spatial orientation as well sustained or split attention tasks.

3. Deficits Related to Numerical Abilities and Dyscalculia

Although numerical abilities are measured as one of the basic skills and are considered as part of functional illiteracy (e.g., in IALS as quantitative literacy, Thorn, 2009; in ALL and in PIAAC as numeracy, Statistics Canada and OECD, 2005; OECD, 2013), research on numerical deficits in functional illiteracy has largely been neglected. Therefore, further experimental studies are needed to answer the question whether functional illiterates have numerical difficulties or not.

Threats

Based on Programme for International Student Assessment (PISA) data delivered by the Organization for Economic and Social Cooperation and Development (OECD), pupils' reading skills, nature science and mathematics achievements are lower than the EU average. These results are not getting any better when analysing several studies in a row. National research reveals a vast difference in pupils' achievements between separate municipalities, between schools in cities and villages, even between schools in the same cities.

Lithuania falls behind in statistics of inclusion in preschool education and adult lifelong learning. Social exclusion risk groups, especially young people, do not have equal opportunities to participate in society and have difficulties integrating into the labour market. There is also a lack of attention to the most talented.

Illiterate employers struggle with professional duties, which can lead to less qualified service provided to the customers. Studies have revealed that even though people can read and write, they are not fully able to comprehend the essence of the text or instruction they have read, they are not able to write a logical, coherent text themselves. That way safety rules might be neglected.

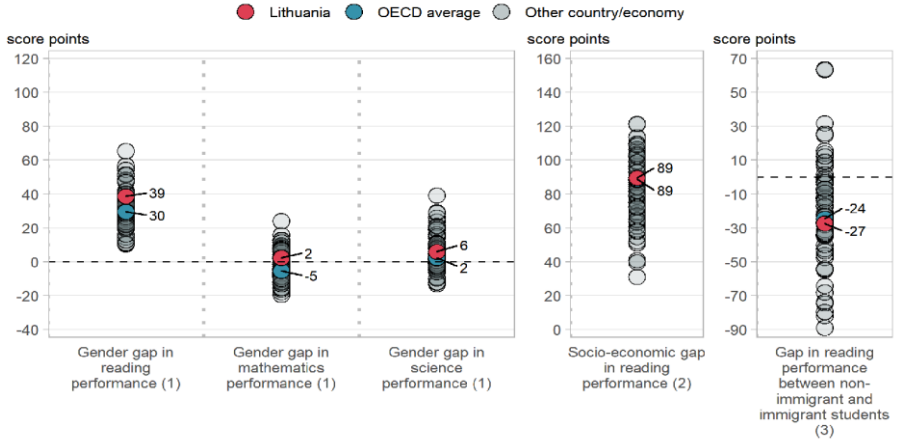
In business functional illiteracy leads not only to poor image but also to financial damage of a company. Functionally illiterate people do not understand the contracts they sign which leads to the unbearable debts of instant personal loans, adverse employment actions

Equity related to socio-economic status

In Lithuania, socio-economically advantaged students outperformed disadvantaged students in reading by 89 score points in PISA 2018. This is not significantly different from the average difference between the two groups (89 score points) across OECD countries. In PISA 2009, the performance gap related to socio-economic status was 84 score points in Lithuania (and 87 score points on average across OECD countries). Some 11% of advantaged students in Lithuania, but 1% of disadvantaged students, were top performers in reading in PISA 2018. On average across OECD countries, 17% of advantaged students, and 3% of disadvantaged students, were top performers in reading.

Socio-economic status was a strong predictor of performance in mathematics and science in all PISA participating countries. It explained 14% of the variation in mathematics performance in PISA 2018 in Lithuania (compared to 14% on average across OECD countries), and 13% of the variation in science performance (compared to the OECD average of 13% of the variation).

Some 11% of disadvantaged students in Lithuania were able to score in the top quarter of reading performance within Lithuania, indicating that disadvantage is not destiny. On average across OECD countries, 11% of disadvantaged students scored amongst the highest performers in reading in their countries. In Lithuania, low- and high-performing students are clustered in the same schools more often than the OECD average.



Notes: Only countries and economies with available data are shown. (1) Girls' minus boys' performance; (2) Advantaged minus disadvantaged students' performance; (3) Immigrants' minus non-immigrants' performance in reading; After accounting for students' and schools' socio-economic profile.

Source: OECD, PISA 2018 Database, Tables II.B1.2.3, II.B1.7.1, II.B1.7.3, II.B1.7.5 and II.B1.9.3.

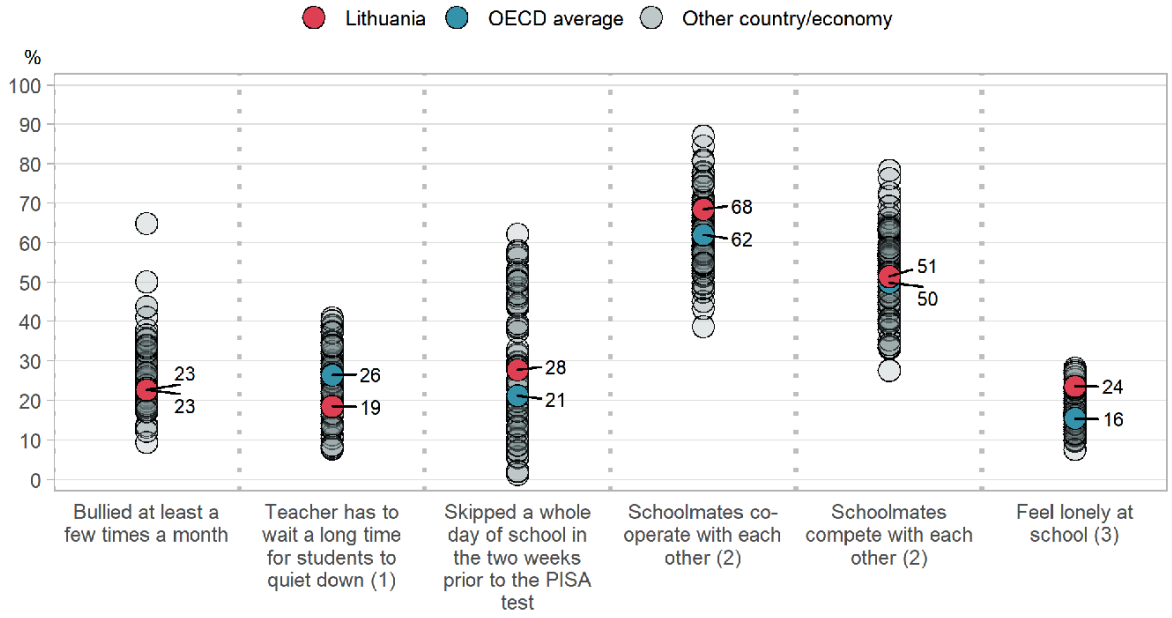
What School Life Means for Students' Lives

In Lithuania, 23% of students reported being bullied at least a few times a month, compared to 23% on average across OECD countries. At the same time, 79% of students in Lithuania (and 88% of students on average across OECD countries) agreed or strongly agreed that it is a good thing to help students who cannot defend themselves.

Some 19% of students in Lithuania (OECD average: 26%) reported that, in every or most language-of-instruction lessons, their teacher has to wait a long time for students to quiet down. In Lithuania, students who reported that, in every or most lessons, the teacher has to wait a long time for students to quiet down scored 21 score points lower in reading than students who reported that this never happens or happens only in some lessons, after accounting for socio-economic status.

On average across OECD countries, 21% of students had skipped a day of school and 48% of students had arrived late for school in the two weeks prior to the PISA test. In Lithuania, 28% of students had skipped a day of school and 50% of students had arrived late for school during that period. In most countries and economies, frequently bullied students were more likely to have skipped

school, whereas students who valued school, enjoyed a better disciplinary climate and received greater emotional support from parents were less likely to have skipped school.



Notes: Only countries and economies with available data are shown. (1) In every or most language-of-instruction lessons; (2) Very or extremely true; (3) Agreed or strongly agreed.
Source: OECD, PISA 2018 Database, Tables III.B1.2.1, III.B1.3.1, III.B1.4.1, III.B1.8.1, III.B1.8.2 and III.B1.9.1

Some 70% of students in Lithuania (OECD average: 74%) agreed or strongly agreed that their teacher shows enjoyment in teaching. In most countries and economies, including in Lithuania, students scored higher in reading when they perceived their teacher as more enthusiastic, especially when students said their teachers are interested in the subject.

In Lithuania, 68% of students reported that their schoolmates co-operate with each other (OECD average: 62%) and 51% reported that they compete with each other (OECD average: 50%).

Some 24% of students in Lithuania (OECD average: 16%) agreed or strongly agreed that they feel lonely at school.

Level of achievements at international level.

PISA 2018 results revealed that the achievements of 15-year-olds in Lithuania are still below the average among OECD countries' results. Comparing them with the PISA 2015 results, it is clear that the level of achievements has increased only by a little.

Level of achievements at national level.

Almost a third of Lithuanian school graduates who took the national mathematics exam in 2020 failed it, highlighting the deteriorating standards of science teaching in the country.

Over 15,000 school leavers took the math exam this year and 67.6 percent cleared the minimal score required to pass it, the national graduation examination results announced on Wednesday show. Eighty-two percent of math exam takers passed it last year. Fewer than 1 percent got the top mark this year, compared to 1.5 percent in 2019.

While the academic year was interrupted by school closures due to the coronavirus pandemic, examiners say the passing score was lowered this year to accommodate it. Moreover, the results of other graduation exams do not show any drop in students' performance.

Rūta Krasauskienė, the director of the National Agency for Education said ‘‘education authorities started updating school curricula and “we are all looking forward to the changes”.

“The logical, critical thinking is very much lacking in our curricula. Mathematics is a difficult subject, just like physics, computer science, where you have to know a lot of things, general competences are not enough. [...] Consistent work has to start in primary school.‘‘

Meanwhile English was the subject where Lithuanian students performed best. Ninety-nine percent of the 18,000 takers passed the exam and 9 percent received the top score.

The poor exam results have highlighted the need for systemic change in general education and greater assistance for students, Education Algirdas Monkevičius said. According to the minister, updated general education curricula had be rolled out in some schools this September and would eventually be introduced nationwide. But it is still in progress.

Network of educational institutions

One more challenge is the large network of educational institutions – it does not reflect the demographic decline of recent years. For example, there were more than 563,000 students in the 2004-2005 academic year and approximately 322,000 students in 2018-2019. The network of general education institutions is shrinking. The network of state universities is being optimized.

A teacher – a (low) prestige profession

Another challenge is a teaching community that is aging and not easily renewed with younger teachers. Some 40% of teachers are between the ages of 50 and 59, around 30% are between 40 and 49 and only 3% to 5% of teachers are younger than 30. The main reasons why the teaching profession is not attractive are the salaries (among the lowest in the EU), a limited possibility to upgrade professional qualifications and the unattractive image of the teacher’s profession in society. On 1

September 2018, a full-time payment system was introduced. After some flaws were noticed it was updated and will be updated again if there is such a need.

Leadership in educational institutions

Reform among educational institutions' heads (principals) has shown that it is difficult to attract new and motivated school heads to educational institutions. Low salaries, great responsibilities, administrative burdens, difficult competition when applying for the position and fixed-term contracts do not motivate people to apply for a managerial position. A working group set up by the Ministry on Education, Science and Sport is preparing a set of measures to encourage school heads to apply and to renew the corps of school principals.

Measures that have been taken so far to combat and prevent functional illiteracy

After the analysis of the Lithuanian exam results during 2010-2012 the Ministry of Education and Science prepared and presented The Plan of Measures of General and Cultural Literacy Improvement for 2013-2016. It was proposed to initiate a test of functional literacy after 8th grade, update primary and middle-school curriculum, provide rural schools with children literature, encourage parents to read together with their children, establish the pre-school education as compulsory for children from socially risky families. Moreover, the linguists proposed evaluating the written works in universities consider the accuracy as well as the contents.

Key features related to the teaching profession

On 14 September 2017, a new Teacher Training Model (Model) (Pedagogų rengimo modelis) was approved. This model seeks to modernize the initial stage of teacher training. Firstly, it is aimed at attracting truly motivated future teachers to pedagogical studies. It has started to use a complex admission system, assessing the candidates' learning achievements, values, motivations and personal characteristics. During the studies, students' suitability for the profession must also be re-evaluated.

The initial stage of teacher training is still organised using consecutive and concurrent models. Teaching qualifications can also be obtained after completing professional studies and in alternative ways, for example through programmes such as 'I Choose to Teach!' (Renkuosi mokyti!).

According to the legal acts, teachers are provided with conditions for continuing their professional development. Until the adoption of the new Model, it was and is indicated in the Law on Education that teachers must upgrade their professional qualifications. Teachers are entitled to at least

five days a year for attending in-service training (professional development) events. The new Model is intended to encourage teachers to obtain additional qualifications in a subject or a pedagogical specialization. An employed teacher can also pursue a higher level of competence. Participation in continuing professional development leads to salary increases and career benefits. In the Model, a new pedagogical training phase – a one-year pedagogical internship – has been established for the first time. It will be compulsory for beginner teachers.

In 2010, the Ministry of Education and Science launched preparations for the development of a new strategy. Discussions with the public started and lasted for a couple of years. Different topics were covered, starting from discussions on factors affecting the policy of education and moving on to answering the concerns of specific communities. In 2011, the ministry initiated a competition of educational scenarios, and in 2012 strategy directions were discussed in schools and municipalities. In September 2012, a new Education Strategy concept was delivered to the Seimas, and in December 2012 the first Strategy project was registered. A year later, in December 2013, the National Education Strategy for 2013-2022 (further in the text: the Strategy) (Valstybinė švietimo 2013-2022 m. strategija) was adopted. During a year of review by the Seimas, the strategy project was presented to the Lithuanian Education Council. The then Committee of Education, Science and Culture prepared hearings with the education community.

The National Education Strategy for 2013-2022 reflects the State's main needs. These are named in the State Progress Strategy "Lithuanian Progress Strategy 'Lithuania 2030'" (Lietuva 2030), which sets out a vision for a smart Lithuania. Society has to become active, solidary and continuously educated. Each person must be open to change, creative and responsible. That is why education policy and the provided directions for changes in education must bring together the education society and all of the people of Lithuania (solidarity) to constantly and continuously develop (education) in seeking individual and national success (activeness) ensuring equal opportunities.

Weaknesses that prevailed in Lithuanian education until 2013 are identified in the strategy. Lithuanian general education, vocational education and training, higher and informal education schools insufficiently use the existing potential seeking better quality. Self-evaluation, strategic planning, social partnership and networking elements in school management have not become part of the traditional school culture. No Lithuanian schools are embedded at the top of the global rankings. Higher education institutions have little involvement from social partners in various types of activities. They have a low usage of modern quality management practices. The planning of future specialists' needs and a rational study and education distribution between universities, colleges and professional schools is poorly executed.

Another challenge is with the educators – a barely changing and ageing community of teachers, especially high expectations for teachers in society, teachers' changing roles in school. All this requires teacher training and professional development systems to be reconsidered, and the prestige of pedagogic professions to increase through a variety of means.

Funding also has to become one of the challenges. The international organizations UNESCO and OECD recommend allocating no less than 6% of gross domestic product (GDP) for education, but Lithuania's allocated funds for education are within the 5% margin.

Strategy Targets and the Direction of Educational Change

The main aim of the Strategy is to make Lithuanian education a stable basis for the rise of the State's welfare, and to foster the independent and active mindset of citizens who can responsibly create goods for themselves and other individuals.

The vision of the education sector for the year 2022 is the following: "Every child, youth and grown-up person should want to learn and should be able to easily find ways to increase their competences. The system of education consists of governmental, municipal and non-governmental institutions that constantly improve their activities and have strong bonds with stakeholders, society and other educational institutions. The employees of such institutions will be respected in society and will maintain an ongoing public discussion about the enhancement of education, the development of Lithuanian culture and the economy, taking into account sustainable urban and rural development."

In order to implement the vision and main aim, the strategy sets four main targets:

To achieve a level of education in the community where professional teachers and lecturers are reflective, constantly developing and working effectively.

To develop a data analysis and self-evaluation-driven education culture, ensuring effective interaction among institutions of self-governance, social partners and the management of education institutions. The strategy aims at strengthening the power of education institutions in decision-making. Schools will be encouraged to make a greater effort to involve pupils, parents and social partners in building a strong school community and to start developing the rudiments of solidarity and social behaviour right from the school days.

To ensure that pupils, students and young people have the best opportunities to realise their full individual potential by ensuring accessibility of education and equal opportunities, enhancing the scope of education providers available to children and youth, and to provide effective pedagogical and psychological aid to pupils experiencing learning difficulties.

To establish a system of incentives and equal conditions for lifelong learning that would include support for individuals to recognize their skills and aspirations, to enable them to choose the right career. Also to combine individual choice with the needs of the State.

The Ministry of Education and Science implements the strategy according to set objectives. The ministry evaluates how the strategy is implemented based on set indicators. These indicators include the results of PISA; the number of higher education institutions that make it into the top 500 of the Academic Ranking of World Universities; education and employment rates in society; funding indicators; indices of change in the pedagogic sector, etc.

These indicators are presented in the Education Management Information System, Statistics Lithuania, the Eurostat database and also in overviews on the state of education prepared by the Lithuanian Ministry of Education and Science.

The Link between the Strategy and EU Education Policy

The strategy is developed based on the European Commission policy document (March 2010) Europe 2020: Strategy for Smart, Sustainable and Inclusive Growth, and other European Union education-related legislation.

Indicators identified in the National Education Strategy are in line with EU-imposed targets: to increase the percentage of people who attain a higher education, to reduce early school leaving, and to increase both the number of children attending pre-school educational institutions and the level of lifelong learning.

Strategy Coordination and Implementation

The institution in charge of implementing the National Education Strategy for 2013-2022 is the Ministry of Education and Science. In pursuit of achieving the set goals and objectives, the Ministry of Education and Science prepares legal acts for the implementation of the strategy and performs ongoing strategy practice monitoring. The ministry brings together other states, municipal institutions and social partners to implement the strategy. A separate institution for strategy implementation has not been created or appointed.

The monitoring of strategy implementation is also performed by other institutions. The Seimas is evaluating the strategy mid-term, while the Lithuanian Education Council – the public authority for education – conducts an annual analysis.

In order to accelerate the implementation of the strategy and to specify some of the goals set in the strategy, the Seimas adopted the Guidelines for Change in General Education Schools (Bendrojo ugdymo mokyklos kaitos gairės). More on these guidelines can be found in the section Fundamental Principles and National Policies in sub-section 2.6. Guidelines for Change in General Education Schools.

Strategy Initiated Educational Change

In order to achieve the main aim of the strategy, the education curriculum has been updated. The 2015 Description of the Achievements of Pre-school Children (Ikimokyklinio amžiaus vaikų pasiekimų aprašas) was prepared in order to renew and improve pre-school education and its curricula. The description should help educators, parents and educational aid specialists to understand what achievements children can obtain during the first six years of their lives. Pre-school education is evaluated in this methodical tool from the perspective of children.

In this description, each child is considered as a separate personality who has his/her needs and interests and who can learn and accumulate experience. At the end of December 2015, the Description of Primary, Lower Secondary and Upper Secondary Curricula (Pradinio, pagrindinio ir vidurinio ugdymo programų aprašas) was approved. It sets out general education goals and principles, explains the use of general curricula and describes learning results. It outlines the structure and content of general curricula. It also includes the main learning process features, involves the learning environment, contains pupils' progress and result evaluation, and sets out quality assurance for general curricula. At the end of November 2018, the main directions of the General Curriculum were presented to the education community. This is intended to change the overall curricula over the coming years, starting with the General Curricula: methods, pupils' achievement and progress evaluation methods, and educational materials.

In order to strengthen the sector of higher education, an optimization of national universities was initiated. This is not just a mechanical connection for universities. By merging universities the duplication of study programmes is reduced, research capacities are concentrated and opportunities for cross-curricular studies and research are enhanced. In order to improve quality, investments are planned in updating the study programmes, in improving the skills of teachers and in research. More on the connection of universities can be found in section 14.4: National Reforms in Higher Education.

The first target in the strategy is aimed at the professional competence development of teachers and lecturers. The problem was viewed from all angles: teacher training, qualification development and possibilities to attract young teachers to schools were evaluated. Teacher training

was revised in essence – three new national pedagogic training centres are being established. The acceptance of educational studies is being enhanced. New possibilities are being created to obtain an academic profession in more diverse ways. A one-year pedagogical internship is being developed for trainee teachers. The possibility is being provided for teachers to develop skills and qualifications in other fields. A new payment model for teachers is being established. More on changes in teachers' development can be found in sections 9.1 Initial Education for Teachers Working in Early Childhood and School Education, and 14.2: National Reforms in School Education.

From 1st January 2018, a 5-year term of office for the heads of schools was introduced in order to improve the teaching quality culture. The school head has to prepare a yearly activity report. The school council is empowered to demand that there is a qualitative change in the school head. If the council does not approve the school head's yearly activity report in two subsequent years, he/she may be dismissed by the school founder. More on the functions of the school head and school council can be found in section 2.7. Administration and Governance at the Local and/or Institutional Level. More on the establishment of the term of office for the head of school is in section 14.2: National Reforms in School Education.

A maturity thesis is introduced from 2017/2018. This can be done during the last year of upper secondary school. The maturity thesis may be comprised of one or several subjects and is the equivalent to the School Matura examination. More about the maturity thesis can be found in section 6.9: Assessment in General Upper Secondary Education.

In order to expand learning accessibility and equal opportunities, from 1st September 2018 pre-school education became mandatory. During a two-year period, the step was taken towards starting pre-school education from an even earlier age. From 1st September 2018, a 5-year-old can begin pre-school education. No specific certificate is required to prove the child's maturity to start pre-school learning earlier.

Funding for non-formal children's education was established in 2015. It is a specific amount of funds distributed to each child by the State. The Ministry of Science and Education recommends that the budget is 15 euros (from 10 to 20 euros). The child can use these funds for a selected non-formal educational activity. General education schools are not eligible for such funding. In the interests of strengthening the quality of non-formal children's education, in the first half of 2018 quality assurance methodology was tested. More on the methodology can be found in section 14.2: National Reforms in School Education.

Since September 2017, multiple prevention programs including a program for bullying and violence have been initiated. Each school must carry out at least one long-term violence prevention

program (which also encompasses the prevention of addictive behaviour). Violence against any member of the school community is prohibited in all educational institutions. Since 1st September 2017, all the necessary support needed for children and their parents has been provided in a coordinated matter in cooperation with educational, social and health institutions. It is overseen by the interinstitutional partnership coordinator, and a coordinator's post in each municipality was put into operation from September. Support will be provided more easily, in the principle of a Single Window. To read more about these innovations, refer to section 14.2: National Reforms in School Education.

During the 2018/2019 school year, 40 general education schools in different municipalities are piloting All-Day School models. The aim is to create conditions for a high-quality, inclusive, socially fair and equal-opportunity-ensuring education for children in a safe environment throughout the day. More on the All-Day School concept and models can be found in section 14.2: National Reforms in School Education.

In order to promote life-long learning, the Law on Vocational Education and Training (VET) (Profesinio mokymo įstatymas) has been renewed. Step by step, the education system is being renewed, the management and funding of the VET Centres is being rearranged, and new qualitative requirements for education are being introduced

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2.5. Functional illiteracy in Macedonia

Definitions of functional illiteracy

Functional illiteracy means that a person can read, write and speak with limited and basic skills, and that he does not have a basic knowledge of working on a computer, as well as colloquial knowledge of one of the world languages.

Today, about 20 percent of the total population is still illiterate, or about 780 million people, and 75 million children do not attend school and education is unavailable to them, which is a global problem.

In Europe these figures are smaller and the situation with illiteracy is somewhat better, but far from as good as would be expected. In the European Union, illiteracy is around 1%, but the fact that up to 20% of the population has difficulty reading and writing is very concerning. This situation in our region is more alarming, and according to the data of UNESCO in 2012, the number of illiterate people in Serbia is 165,000, but up to 850,000 never attended school or completed only a few years of elementary school, in BiH illiteracy is 15%, in Montenegro 8,000, while in North Macedonia the number of illiterate people is 43,000 that are older than 15 years of age.

Functional literacy is defined as a concept that includes knowledge, skills and values that enable the individual to control his / her own life in a quality manner, performing basic civic duties and solving various problems at the workplace, in the family and in social life in general.

Signs of functional illiteracy

In the field of education, there is no document – law, strategy, educational development programme – that incorporates media literacy, despite the numerous reforms in the educational programmes and the study subjects and in their contents, in primary and in secondary schools alike. Hence, modern educational practices specifically point out the importance of using information-communication technology in the educational process as a long-term, continuous strategic move. In this context, ‘computer literacy’ is used as an essential part of the competences both for young people and adults, and as a condition for their inclusion in the workforce and in social-political life; or ‘digital literacy’ is said to be necessary for reducing the digital gap and creating an inclusive information society for all citizens. This specifically results in many projects for digitizing the educational process through computerization, introducing internet in the schools in Macedonia, new study subjects and curricula.

The teachers also only partially recognize the importance of media literacy and they integrate it within 'language literacy of the media and media contents'. Secondary school students, on the other hand, most often relate media literacy to the media and their work and they define it as 'awareness about current events', 'media culture', 'ability to tell apart the truth by becoming informed through several media outlets', 'awareness of the importance of media', 'ability of the media to communicate correct and reliable information'.

Formal education nearly closes its doors for media literacy and instead operates with the concept of 'media culture', which can be found in the contents of several study subjects (Sociology, Civil Education, Information Science), and primarily in the study subjects of the mother language and literature, however with a small number of lessons as part of it (they concern the role of mass media in democracy, media globalization, the development and functioning of the internet). Here elective project activities are also included (such as literary clubs, drama sections, photography and design sections, etc.) and extracurricular activities that serve as a way for individual interests to be met as well as the wishes of the students in various fields. However, it seems that, it is precisely these extracurricular activities, which are neither credited nor evaluated, have an increasing impact on the process of educating about media literacy. This is the standpoint of the civil sector too, mostly because of the inertness of formal education in accepting and adapting to modern societal occurrences. For secondary school students this is an excellent 'model' that requires dedication and time, however it is insufficiently motivating because of the activities required by regular lessons.

For the teachers it is an additional personal effort, more hours spent after classes and during weekends. Of course, with the computerization of schools and the use of internet in the teaching process, the legal requirement (Law on Secondary Education) for mandatory use of information-communication technologies in the schools (computers, LCD projectors, smart boards, etc.) implementing the educational process is 'met' for. However, due to the inadequate technical conditions of the schools, and because of the 'belated' trainings and seminars for the teachers on what ICT use in education implies, the process is difficult to sustain and it provides no specific benefits. Although, it is precisely the use of information technology that drives up the need for integrating contents for media literacy in the educational programms.

Evaluation instuments of functional illiteracy, on national level

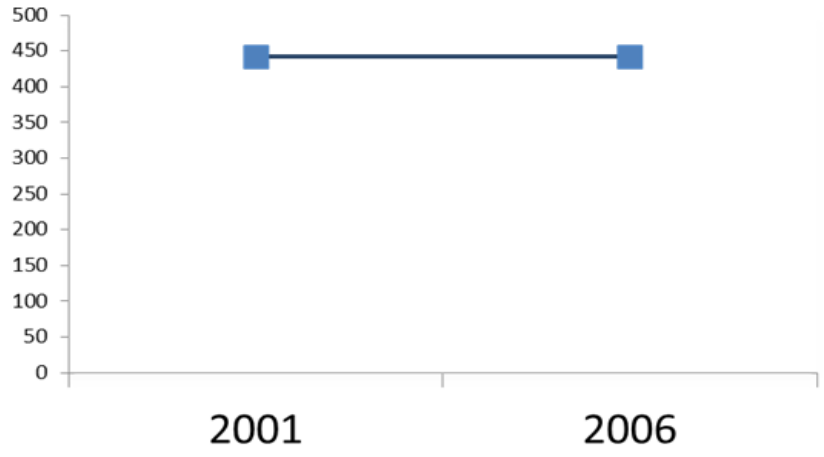
PIRLS (Progress in International Reading Literacy Study) is an international comparative study of the capability for reading of nine and ten-year-old pupils. It focuses on three aspects in reference to reading:

- the process of comprehension;
- the reading aims;
- the reading habits and attitudes towards reading.

From the questionnaires for the students, the parents, the teachers and the directors, we receive information on how the cultural background, the teaching praxis, the aims outlined in the subject curricula, as well as the educational management, influence students' achievement.

The International Association for Educational Assessment manages the organization and realization of this study.The expertise and management of this study is carried out by the International Study Centre (ISC) in Boston College. ISC works together with the IEA Secretariat in the Netherlands, the IEA Centre for research and processing data in Germany, the Statistics Centre in Canada, the National Foundation for Educational Research in England and Wales (NFER) and Educational Testing Service from the United States of America. The Republic of Macedonia has participated in: PIRLS 2001 and PIRLS 2006.

PIRLS (Progress in International Reading Literacy Study)



TIMSS

Primary and secondary education in the Republic of North Macedonia is compulsory for all students. It is free and equally accessible to everyone. The Constitution (Article 45 from 17.11.1991) allows citizens to establish private education institutions at all levels except elementary. The Ministry of Education and Science is responsible for national education policy, including finance decisions, administration of state institutions, and establishing and monitoring education laws and regulations. Within the Ministry of Education and Science, several entities carry out the duties of the Ministry.

One of them is the Bureau for Development of Education (BDE), an organization in charge of the curricula and the scheme of work development for primary schools as well as general subjects in secondary schools. The BDE also provides professional support for school improvement, professional development of school staff, and accreditation of teacher training providers. The Vocational Education and Training Center is responsible for developing the curriculum for vocational schools. The National Examination Centre is responsible for the external assessment of student achievement in elementary and secondary education, as well as training and certification examsfor school directors and a credentialing exam for primary and secondary school teachers.

The State Educational Inspectorate supervises legal and regulatory matters at all levels of education and monitors and evaluates the quality of schools. The Pedagogical Service inspects and approves the curricula, textbooks, and projects implemented in elementary and secondary education. As a country in transition, the Republic of North Macedonia has been working toward decentralizing its education system and improving its quality, equality of opportunities, and efficiency. The purpose of decentralization is to transfer responsibility for teacher employment, salary decisions, and school maintenance to municipalities. The education system in North Macedonia comprises preschool, primary, secondary, and higher education. Primary and secondary education are compulsory. Preschool education is optional and intended for children from 7 months to 5 years old. Children start school roughly at the age of 5 1/2. Primary education last nine years and is for students ages 6 to 15. Elementary education includes general education for Grades 1 to 5 and subject teaching for Grades 6 to 9. Secondary education includes general academic schools; two, three, and four year vocational schools; and four year art schools (in art, music, or ballet). Students who choose four year secondary education usually take the state Matura exams and continue their education at a university. The official language in the Republic of North Macedonia is Macedonian. However, all national groups in Macedonia are entitled to primary and secondary education in their mother tongue. In primary schools, instructions are provided in Macedonian, Albanian, Turkish and Serbian, while in secondary schools, they are in Macedonian, Albanian, and Turkish. Ethnic Albanian students also have the right to education in Albanian in some departments at the university level.

Use and Impact of TIMSS Participation in TIMSS had the following effects on education in North Macedonia:

• Awareness of Macedonian students' low results in mathematics, science, and language literacy;

• Awareness of need for external evaluation of student achievement;

• Start of compulsory education at age 6 and language curriculum for the first grade;

• Introduction of a new science subject, natural sciences, which is compulsory for Grades 1 to 6;

• Implementation of the Cambridge Curriculum for mathematics, chemistry, physics, biology, and natural sciences in primary education;

• More emphasis in geography on physical geography versus economics;

• Introduction of a project based learning approach;

• Development of assessment standards and grading criteria.

The Mathematics Curriculum in Primary and Lower Secondary Grades The mathematics curriculum for Grades 1 to 9 was formed from 2014 to 2016. The Republic of North Macedonia is using the Cambridge International Assessment Curriculum adapted for Macedonian learners by the Bureau for the Development of Education. This curricular framework provides a comprehensive set of progressive learning objectives for mathematics for Grades 1 to 9. The objectives detail what the students should know or be able to do in each grade. They provide a structure for teaching and learning as well as a reference against which students' ability and understanding can be checked. In primary schools, mathematics is taught 5 hours per week, or 180 hours per year, for Grades 1 to 6. 1 For Grades 7 to 9, it is taught for 4 hours per week, or 144 hours per year. Mathematics instruction makes up 13 to 21 percent of total instructional time, depending on grade.

The Cambridge Curriculum is founded on the values of the University of Cambridge and best practices in schools. It is dedicated to developing learners who are confident, responsible, innovative, and engaged. Each curriculum framework is designed to engage students in an active and creative learning journey.

The Science Curriculum in Primary and Lower Secondary Grades The science curriculum has not been integrated into primary education but is presented through a separate program of natural sciences, with 2 hours of instruction per week, or 72 hours per year, in Grades 1 to 6 of primary school (about 10 percent of the total instructional time). Exhibit 1 lists the allocation of instructional hours for science in Grades 6 to 9 of primary school.

Recent studies on functional illiteracy

Education should produce young people who their involvement in society, will build on knowledge and skills and will be competitive in the market labor in our country and in the world. They need to be prepared for life in a modern society, using applicable knowledge and acquired skills, so reading competencies and information exchange. More than young people in the modern way of life

expects readiness to solve challenges in new and unfamiliar situations, as opposed to simple reproduction facto-graphic memorized knowledge. The generations that are now being educated will be citizens of EU and that is why it is important to know who the world ones are trends and the extent to which young people are educated preparation for the future

Indicates the extent to which the education system supports the development of the economy and society. Present a reference report on the quality of education. They are an official instrument for measuring some EU indicators.

Functional illiteracy rate in North Macedonia

PISA 2015

The PISA 2015 survey focused on science, with reading, mathematics and collaborative problem solving as minor areas of assessment. PISA 2015 also included an assessment of young people's financial literacy, which was optional for countries and economies.

At PISA 2000, out of 41 participating countries in the study, in reading comprehension and in mathematical literacy, we were on the 38th position, and in literacy in the sciences 36th position. At PISA 2015, from 72 countries participating in the study for reading comprehension and literacy in the natural sciences we were 69th, and in mathematical literacy Macedonia ranked 68th. These results are devastating and such a rating is even worse and makes the situation catastrophic when the results are compared with other countries. These results show that the educational system, with which it has been experimenting for a long time, has not only failed to improve the educational process, but it has also regressed, and the results compared to 2000 show only a decline in the quality of education which as a product gives functionally illiterate students who further become functionally illiterate citizens of this society.

In addition to all these results and indices that are devastating, it is necessary to mention that in Macedonia we have a number of 7,000 regular readers. This shows that only a small number of the population in our country has the habit of reading and finish a book, and that most of them, or the other two million citizens have not read a book since they left their school desks, nor by their example and behavior contribute to the correct upbringing and education of their children. If this is added to the fact that in almost all cities in Macedonia, with the exception of Skopje, there is not one bookstore in which you can buy fiction or other literature, the situation becomes extremely bad.

According to the estimates of the PISA study, the students from Macedonia are about three school years behind their peers from OECD countries. A regular 30 points on the PISA scale

corresponds to education of students from one school year. According to the capabilities, the layout of this part of the Balkans is as follows:

Mathematical literacy: Slovenia is on the 14th place on the scale, Croatia on the 41st place, Montenegro at 54, Macedonia at 69, and Kosovo at 71; (Literacy: Slovenia is 14th on the scale, Croatia on 31st place, Montenegro at 55th, North Macedonia at 70th, and Kosovo at 72nd;

Scientific literacy: Slovenia is on the 13th place on the scale, Croatia on the 37th place, Montenegro on 62nd place, North Macedonia on 70th, and Kosovo on 71st place.

The achievements of the students from the Republic of Macedonia at PISA 2015 in all three areas are lower than PISA 2000. The following table shows the students' results from our country in the two measurement cycles in which we have participated so far.

Table 2: Average achievements of students from the Republic of North Macedonia per measurement cycle

	Science	Reading	Mathematics
PISA 2000	401	373	381
PISA 2015	384	352	371
difference between	-14	-21	-10

The average achievement of the students from our country in science at PISA 2015 from the schools located in the cities is 382, and in the villages 370. The achievements of the girls in science are 394 and are higher than the boys, who amount to 374. The students who attended kindergarten for more than two years achieved higher achievements than those who did not attended kindergarten or attended only one year.

The achievements of the students in the PISA 2015 test are measured according to the set six levels of matter proficiency (where level 1 is the lowest and level 6 is the highest), as well as in previous PISA tests.

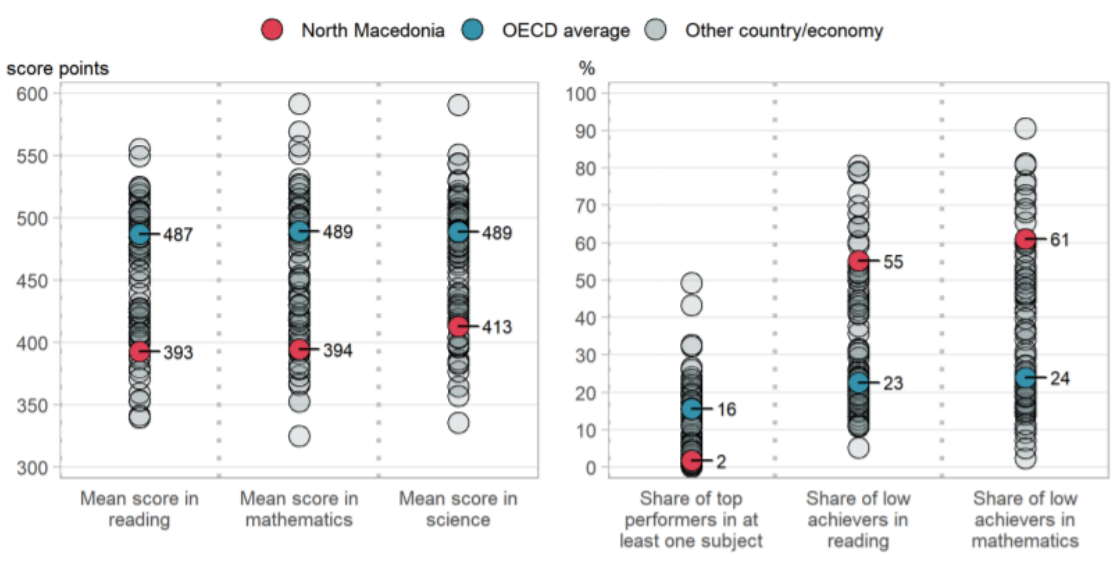
Table 3: Achievements of students from the Republic of North Macedonia by levels and by areas

Level	Achievements Science %		Achievements Mathematics %		Achievements Reading %	
	OECD average	N. Macedonia	OECD average	N. Macedonia	OECD average	N. Macedonia
6	1.1	0	2.3	0.2	1.1	0
5	6.7	0.2	8.4	0.7	7.2	0.2
4	19	2	18.6	3.1	20.5	1.7
3	27.2	10.3	24.8	8.6	27.9	8.1
2	24.8	24.2	22.5	17.3	23.2	19.3
1	21.2	62.9	23.4	70.2	20.1	70.7

The largest percentage of students from our country are below or at level 1. As much as 62.9% of students from our country in Science are below or at level 1, and in Mathematics and Reading he percentage is also higher (about 70%). While the OECD average in all three areas is high lower, ie it is about 20%. Levels 5 and 6 in the Science area and in the Reading area reached only 0.2% of students from our country, and in the area of Mathematics 0.9%. OECD the average is much higher, so for Science it is 7.7%, for Reading 8.3%, and for Mathematics 10.7%. Furthermore, the Report for each area describes in more detail what it means and what it covers.

PISA 2018

The Programme for International Student Assessment (PISA) is a triennial survey of 15-year-old students that assesses the extent to which they have acquired the key knowledge and skills essential for full participation in society. The assessment focuses on proficiency in reading, mathematics, science and an innovative domain (in 2018, the innovative domain was global competence), and on students' well-being.



Students in North Macedonia scored lower than the OECD average in reading, mathematics and science. • Compared to the OECD average, a smaller proportion of students in North Macedonia performed at the highest levels of proficiency (Level 5 or 6) in at least one subject; at the same time a smaller proportion of students achieved a minimum level of proficiency (Level 2 or higher) in at least one subject.

What students know and can do in reading:

• In North Macedonia, 45% of students attained at least Level 2 proficiency in reading (OECD average: 77%). At a minimum, these students can identify the main idea in a text of moderate length, find information based on explicit, though sometimes complex criteria, and can reflect on the purpose and form of texts when explicitly directed to do so.

• Some a negligible percentage of students in North Macedonia were top performers in reading, meaning that they attained Level 5 or 6 in the PISA reading test (OECD average: 9%). At these levels, students can form a full and detailed understanding of a text whose content or form is unfamiliar, and deal with concepts that are contrary to expectations. In 20 education systems, including those of 15 OECD countries, more than 10% of 15-year-old students were top performers.

What students know and can do in mathematics:

• Some 39% of students in North Macedonia attained Level 2 or higher in mathematics (OECD average: 76%). At a minimum, these students can interpret and recognise, without direct instructions, how a (simple) situation can be represented mathematically (e.g. comparing the total distance across two alternative routes, or converting prices into a different currency). The share of 15-year-old students who attained minimum levels of proficiency in mathematics (Level 2 or higher) varied widely – from 98% in Beijing, Shanghai, Jiangsu and Zhejiang (China) to 2% in Zambia, which participated in the PISA for Development assessment in 2017. On average across OECD countries, 76% of students attained at least Level 2 proficiency in mathematics.

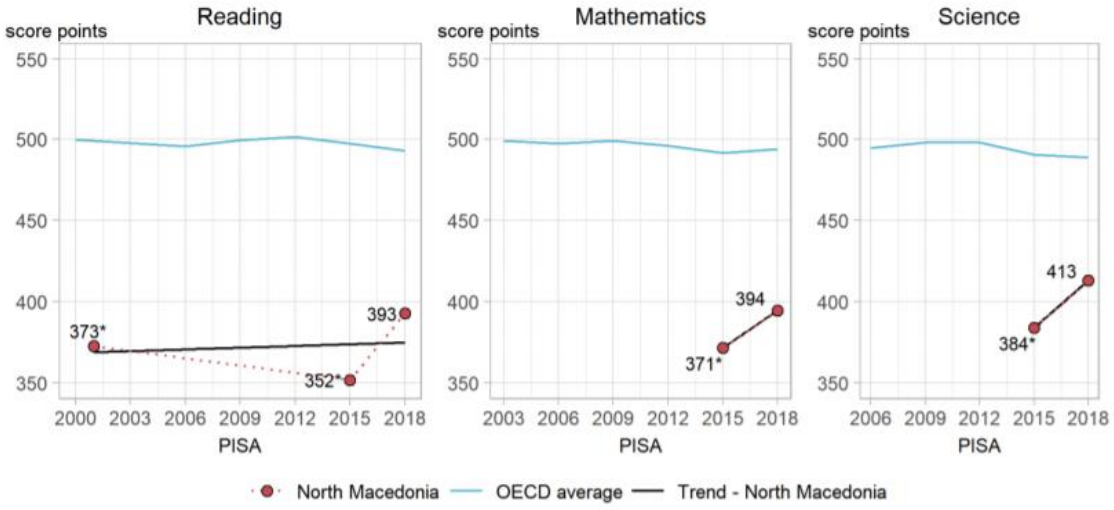
• In North Macedonia, 1% of students scored at Level 5 or higher in mathematics (OECD average: 11%). Six Asian countries and economies had the largest shares of students who did so: Beijing, Shanghai, Jiangsu and Zhejiang (China) (44%), Singapore (37%), Hong Kong (China) (29%), Macao (China) (28%), Chinese Taipei (23%) and Korea (21%). These students can model complex situations mathematically, and can select, compare and evaluate appropriate problem-solving strategies for dealing with them.

What students know and can do in science:

• Some 51% of students in North Macedonia attained Level 2 or higher in science (OECD average: 78%). At a minimum, these students can provide possible explanations in familiar contexts or

draw conclusions based on simple investigations. • In North Macedonia, 1% of students were top performers in science, meaning that they were proficient at Level 5 or 6 (OECD average: 7%). These students can creatively and autonomously apply their knowledge of and about science to a wide variety of situations, including unfamiliar ones.

Figure 2. Trends in performance in reading, mathematics and science



• Students in the Republic of North Macedonia improved significantly in all three subjects since 2015. While performance is still significantly below the OECD average in reading, mathematics and science, the percentage of low performers in each subject shrank by at least nine percentage points. Improvements were observed throughout the performance distribution, as the lowest- and highestachieving students improved their proficiency between 2015 and 2018. The highest- and lowestperforming students in mathematics saw similar improvements in performance, while the highestperforming students in science improved significantly more than the lowest-performing students.

• North Macedonia also participated in t he reading assessment in PISA 2000; if these results were taken into account, mean reading performance in North Macedonia would be classified as stable.

Figure 3. Differences in performance related to personal characteristics

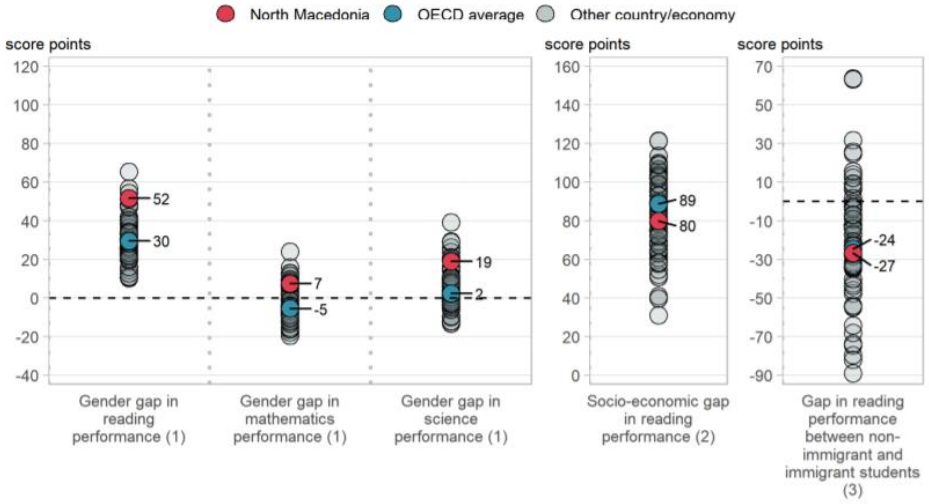
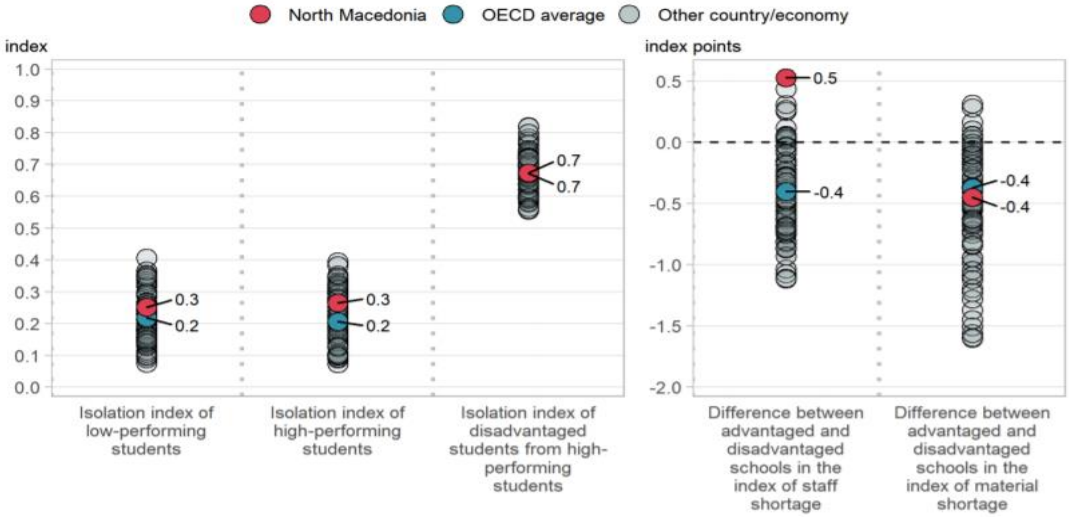


Figure 4. School segregation, and gap in material and staff shortage between advantaged and disadvantaged schools



School principals in North Macedonia reported less staff shortage and more material shortage than the OECD average; and school principals of disadvantaged schools reported less often staff shortage than principals of advantaged schools. In North Macedonia, 2% of students enrolled in a disadvantaged school and 5% of students enrolled in an advantaged school attend a school whose principal reported that the capacity of the school to provide instruction is hindered at least to some extent by a lack of teaching staff. On average across OECD countries, 34% of students in disadvantaged schools and 18% of students in advantaged schools attend such a school.

• According to school principals in North Macedonia, 39% of teachers in advantaged schools and 68% of teachers in disadvantaged schools are “fully certified”. The proportions of teachers with at least a master’s degree are larger in advantaged schools than in disadvantaged schools.

• Many students, especially disadvantaged students, hold lower ambitions than would be expected given their academic achievement. In North Macedonia, about one in seven high-achieving disadvantaged students – but 1 in 20 high-achieving advantaged students – do not expect to complete tertiary education. Equity related to gender

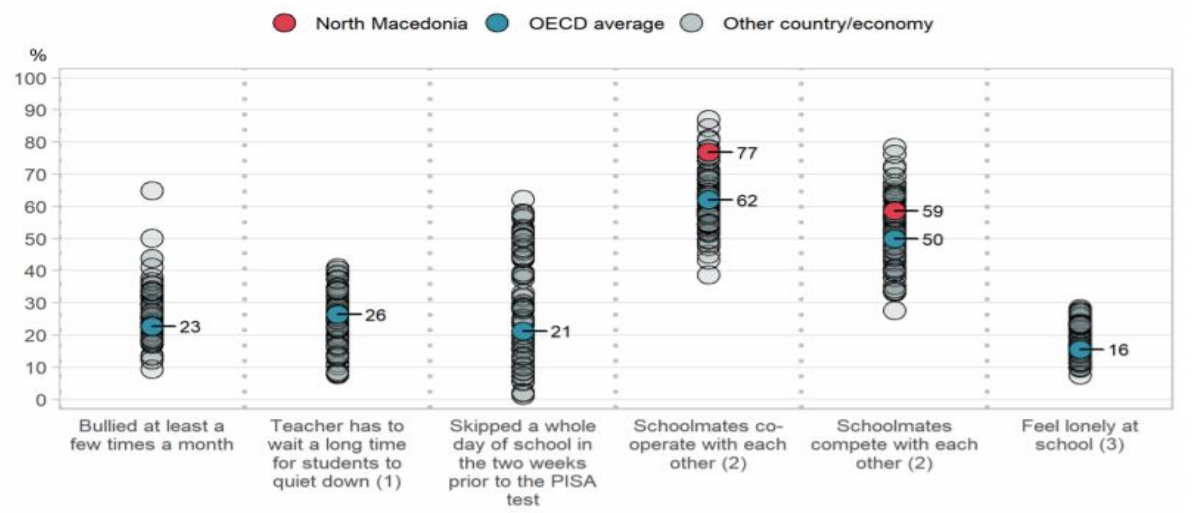
• In North Macedonia, girls scored higher than boys in mathematics by seven score points. Across OECD countries, boys outperformed girls by five score points. While girls slightly outperformed boys in science (by two score points) on average across OECD countries in PISA 2018, in North Macedonia girls outperformed boys in science by 19 score points.

Amongst high-performing students in mathematics or science, one in seven boys in North Macedonia expect to work as an engineer or science professional at the age of 30, while one in five girls expects to do so (the difference is not statistically significant). One in seven high-performing girls expect to work in health-related professions, while fewer than one in ten high-performing boys expect to do so (the difference is not statistically significant). Some 10% of boys and 3% of girls in North Macedonia expect to work in ICT-related professions.

How is the school climate in North Macedonia?

• In North Macedonia, 77% of students reported that their schoolmates co-operate with each other (OECD average: 62%) and 59% reported that they compete with each other (OECD average: 50%).

Figure 5. School climate



How do students in North Macedonia feel about their lives and learning?

• In North Macedonia, 81% of students (OECD average: 67%) reported that they are satisfied with their lives (students who reported between 7 and 10 on the 10-point life-satisfaction scale).

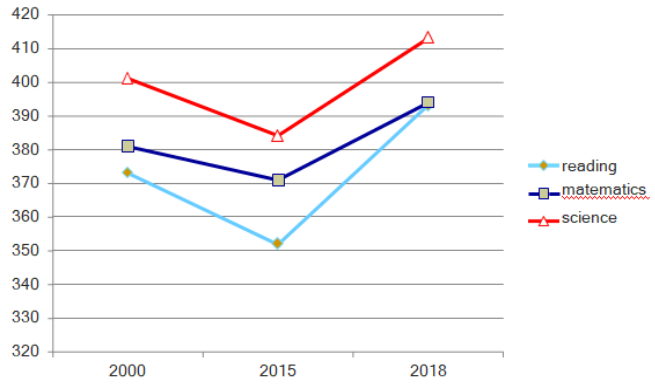
• Some 94% of students in North Macedonia reported sometimes or always feeling happy and about 4% of students reported always feeling sad. In most countries and economies, students were more likely to report positive feelings when they reported a stronger sense of belonging at school and greater student co-operation, and were more likely to express sadness when they were bullied more frequently.

• In North Macedonia, 90% of students agreed or strongly agreed that they can usually find a way out of difficult situations (OECD average: 84%), and 51% agreed or strongly agreed that, when they fail, they worry about what others think of them (OECD average: 56% of students). In almost every education system, including North Macedonia, girls expressed greater fear of failure than boys, and this gender gap was considerably wider amongst top-performing students.

• A majority of students across OECD countries holds a growth mindset (they disagreed or strongly disagreed with the statement "Your intelligence is something about you that you can't change very much"). In North Macedonia, 24% of students hold a growth mindset.

PISA (Programe for International Studen Assessment)

PISA Plus2000
PISA 2015
PISA 2018
PISA 2021



Causes of functional illiteracy

The country has so far implemented many approaches to teacher professional development, but there is limited data about their effectiveness. By law, the Bureau for Education Development is responsible for in-service training. The BED has a mandate to assess teacher needs for training, organize and deliver teacher training. In adition they provide on-going monitoring and support to implementation of reforms in schools.

The capacities and the budget for this type of support are limited in terms of limited number of staff and funding allocated by the Ministry. Such activities are therefore to a large extent supported by donors. The recent reform supported by the World Bank Education Modernization Project introduced a model of in-service training that separated this function from the BED and outsourced it to private providers. BED was given a mandate to support schools in assessing training needs as part of the school self-evaluation process and that based on these needs organize outsourcing of training institutions. Reports and evaluations of this model highlight challenges related to the weak capacity of the providers to provide quality training and the process of self-evaluation of teachers that is geared towards their own professional needs that do not necessarily match the needs of the country for improving quality of education (e.g. teachers often choose IT or English classes).

To address this gap the BED still kept a responsibility for mandatory national training which are defined and decided by the Ministry of Education and Science and in line with country's need for improving quality of education. There is no system of measuring of effectiveness of these trainings, or linking it with the results from national, external or international assessments (TIMSS, PIRLS and PISA). BED has also regional units with mandate to provide support to schools in their respective regions. Some regions and some languages are not adequately covered resulting in lack of any support to teachers in these regions.

Threats

When you depict or translate such results and conditions into the definition of functional literacy or illiteracy, the present in our society and the social processes that are unfolding become clear, as well as some of the reasons that lead to them. To repeat once again, functional literacy is defined as a concept that implies knowledge, skills and values that enable the individual to control his / her own life in a quality manner, to perform basic civic duties and to solve various problems at the workplace, in the family and in social life in general.

If all the results show that functional illiteracy in Macedonia covers almost 75 percent of students, if 99 percent of the population does not read and does not improve its skills, and media illiteracy is high and is in the same rank with Turkey, that means that the individual, ie the largest number of citizens Macedonia has no knowledge, skills or values that allow them to control their own lives in a quality manner, in other words – they can be easily manipulated, exploited and marginalized. This state of the population is one of the reasons for the situation in the society that has divided it in the past twenty years.

This is precisely the situation in which the majority of the population does not have the necessary knowledge, skills and values to control their lives and give their lives the necessary quality, and in doing so to fulfill the basic civic duties, but also to use the basic civil rights has led to such a condition in which the state is considered to be the property of the political party in power, and the state of the institutions that are captured for a normal one. Only in a society in which people are functionally illiterate there is a lack of interest in situations that are far from normal and abnormal slowly but surely becomes normal. Only in such societies, in which the literate are actually illiterate, it is possible to create totalitarian systems and one person to create a future for all in a society in which only a few benefit and gain a comfortable and normal life, and everyone else is a machinery for voting or protesting.

If all of this is added to the last part of the definition of functional literacy, that is, illiteracy in our case, and that is the knowledge and the ability to solve various problems at the workplace, family, or society in general, the causes become clearer, or part of them, why it is possible for individuals, which consider the state and institutions to be their own, to emerge for their interests and richness, without having a reaction on the part of the society, and such a situation will last for decades.

This state of functional illiteracy allows people to experience apathy, disinterest, fear, which in turn creates servants and flatterers, an effect of so-called sunflowers in general, in every sphere of social life. The saying “Illiterate people make a powerful country” was not at all pointless.

Measures that have been taken so far to combat and prevent functional illiteracy

In 2008, the Macedonian Ministry of Education and Science (MoES) started to address the problem of low student results in international assessments. A thorough analysis of possible influencing factors such as curriculum review and review of teaching practise was undertaken, and deficiencies were found in both areas. At the same time, the MoES with the support of donors was trying to define a national system of inservice teacher training. Few different models had been implemented with limited evidence of effectiveness (impact on student outcomes). The decision was to start with a new teacher education programme tailored to include aspects of numeracy and literacy instruction that address deficiencies found in country’s PIRLS and TIMSS results and national curriculum, and effective approaches that help teachers acquire necessary knowledge and skills, resulting in change of teacher instruction and improved student learning. Priority was given to teachers in the first cycle of primary education (1-3 grades).

- The aims of the new Teacher Education Programe were:

- To deepen teacher understanding of quality teacher instruction in numeracy and literacy;

- To support teachers in acquiring knowledge and skills for implementation of quality mathematics instruction and quality literacy instruction and establish effective and sustainable approaches to teacher professional development;

- To improve student outcomes in early numeracy and literacy;

- To improve student results in future international assessments (TIMSS and PIRLS).

The new Teacher Education Programme is grounded in the research about educational reform that requires enhanced skills and capacity of both teachers and the educational system. The main strategy of the Programme is therefore focused on building capacity from the bottom to stimulate system change over the long term by changing teacher practice, and from the top through MoES decisions to adopt a different professional development model, train all teachers in the country in the new programme, and equip BED advisors to support the training and the implementation of the new teacher education programme. The strategy is based on the model of change according to which teachers define their success in terms of their students' learning :

- Teachers are provided with training opportunities to acquire new knowledge and skills and change teacher instruction;

- Focus is on the application of the newly acquired knowledge and skills as the key prerequisite for initiating the process of continuous improvement;

- Only when/if teachers see change in student learning and outcomes this translates into change in their attitudes and beliefs. The strategy was pursued through the following activities:

I. Preparation phase (2008-2009): focused on gaining a better understanding of influencing factors:

- Review of national curricula in mathematics and literacy 5 and review of teaching practice;

- Identifying international best practices of teacher education programmes in two subjects: mathematics and language. The „Thinking Mathematics in Early Grades"– developed by the American Federation of Teachers (AFT) was selected as the most appropriate for use in the country; and for language, the teacher education programme was developed by Nancy Clair, Jan Westrick, Miske Witts & Associates8;

- Development of teacher manuals- teacher manuals for both mathematics and literacy were developed and distributed to all trained teachers;

- Baseline studies-based on the principles and content of the new numeracy and literacy teacher education programmes were conducted to measure the initial situation of both early grade teachers knowledge and student outcomes in grade 4;

II. Implementation phase (2009- on-going) or the actual teacher training, and developing a model of teacher professional development and support.

1. Selection of national trainers (NT) – through public announcement BED selected 50 national trainers for each numeracy and literacy component. The goals were to select motivated and experienced teachers from around the country, and ensure regional and language (Macedonian and Albanian) representation. 15 BED advisors were assigned to each component;

2. Training of national trainers and BED advisors;

3. Dissemination of teacher training in all primary schools:

Phase 1- National Trainers trained all early grade teachers within their schools in both numeracy and literacy.

Phase 2- National Trainers trained all early grade teachers in one neighbouring school in both numeracy and literacy.

Phase 3- National Trainers trained teachers (school trainers 10) in 60 new primary schools in regions that were not previously covered with training. Cascade model- In this phase, for the purpose of ensuring more efficient and quality support to teachers and disseminating the training to more schools and teachers, the cascade model of teacher training was introduced. Two teachers in each of these 60 primary schools were trained as school trainers, and then with the support of BED advisors disseminated the training to all other teachers within their schools.

Phase 4- NT trained school trainers in 64 primary schools and then the school trainers trained all other teachers within their schools. In each phase, the trained teachers receive continuous support and feedback on the quality of applied new concepts from the national trainers, the school trainers and the BED advisors.

4. Teacher Certification- was seen as an important step for ensuring meaningful application of the Programme. While previously certification was based on completion of training, this programme expanded the scope by introducing criteria for providing evidence of application (see annex B).

5. Training of BED advisors for providing quality support to teachers and monitor implementation of the Programme- the international consultants developed a fidelity tool and BED advisors were trained on its use.

6. Training of University Professors from four teacher training faculties and incorporation of the new programmes in their studies. It does not matter where we are today, but how we can be better tomorrow. Reforms in primary education to encourage students to think critically, to solve problems, to apply knowledge in real situations, to strengthen extracurricular activities, students to spend more time in school, to focus on learning fewer subjects and of course to provide inclusive education.

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2.6. Functional illiteracy in Romania

Definitions of functional illiteracy

„A person is illiterate if he or she can't write and read and if he or she can't understand a simple text which is about everyday life". (UNESCO 1958)

By functional illiteracy (FI) we refer to „a person without basic learning skills needed to engage in activities meant to ensure a normal funcition in his or her group or community with the goal of personal and social development". (UNESCO 1978)

The Organization for Economic Co-operation and Development (OECD) has define, in 1984, functional illiteracy. A person is functional illiterate if he or she can't engage in all the activities in which is required a certain degree of education and knowledge for his/her normal functioning in a group or a community and also for him/her to have the opportunity to use reading, writing and counting to develop the community.

The international Day of Literacy has been established in 1996, by the UNESCO and the day of 8 September with the purpose of promoting literacy as a instrument of development. Since then, about 15% of the world population still doesn't know how to read and write, and the women represent two-thirds of the illiterate population.

In 2017, The international Day of Literacy was celebrated by UNESCO dedicating the theme of „Literacy in a digital world" with the purpose of analizing the most efficient methods of litercy in a digital society.

The concept was promoted in Romania since 2016, generated by a conference were the study „Decrease of functional literacy. A potential strategic priority in education.", designed by the Educational Analysis and Evaluation Center (CEAE).

Acording to the authors of the study (Cristi Hatu şi Andreea Eşanu), functional illiteracy represents *„the capacity to read, but without understanding the concepts. This can have three diferent stages: mathematical, scientific and reading-understanding a text. The functional illiterate don't know how to apply things learned in concrete situation, can't understand causal relation and don't have learning mecanisms. Regarding mathematical illiteracy, a student knows how to count, the addition and subtraction operation, but doesn't know how to use these things in real situation. They are people that doesn't know how to do rational elementary processes."*

The term of „functional illiteracy" means the deplorable state of the national education system, considering as an indicator only one variable, the capacity of students to do basic reasoning

and to select the relevant information form a text. In PISA evaluation, made by OECD, Romania occupied one of the last places in the ranking. Almost 40% of the 15 years old students are „functional illiterate".

In general, functional illiteracy was assimilate just to a narrow understand of the term, the capacity to understand a literary text. Likewise, important are the capacity of a student to understand elementary subjects on science or to follow mathematical connection accordingly to his level.

When the main studiyng method of the students is memorize, to the detriment of understanding concepts, mechanisms, contexts, etc. than, those children stop connecting, thinking, beeing active in relation with what they are reading. They aren't making the connection between biology learned in the classroom and the real one (only if they have a teacher support to help them, to take them into a park and to ask them to indetify plants or animals).

A person is considerd a „functional illiterate„ if it isn't able to access and process information in real life situation. For example, functional illiteracy reffers to incapacity of a person to understand the instruction on how to use a product, to read products labels, to memorize and apply the condition of use, safe keeping and recycle of products. A functional illiterate has difficulty on filling out a form, he/she reads with difficulty newspapers, doesn't understand traffic signs and has a hard time in consulting a dictionary or a travel schedule.

Signs of functional illiteracy:

The main symptom of illiteracy is found in various form at different ages, as a reduction of readind different texts or even functional styles. The image replaces more frequent the text, and from this emerges the growth of audio-visual and the reduction of newspapers and books industry. The misunderstanding of a word or a notion is replaced by a summary of those. In this procces resides the difficulty on accesing a meaning, on reformulating an idea, on memorizing information and on placing this information in a functional system.

Our days students are automatically memorizing words and linguistic structures, without been use to reflect on their meaning, to search for different nuancesor even different meanings. The causes of this resides in our educational path. School content is designed and applied, in such manner that students ar accostumed with words and lingustical structures, without reflecting on real situation were the things they've learned can apply. Repeting over and over the teached structure, the student thinks that he understands, but if he is put to apply outside the context he will fail.

Functional illiterates are, in general, dogmatical persons, with a tribal education and can adapt with difficulty to large communities. They are conservative regarding simple, traditional values in the form they've learned in childhood. Shift changing are simply making the crazy. The change of the comunist order, an ideology wich had transformed meritocracy in worthless speech, had confused an entire generation of functional illiterate, wich were use to work just by reading simple speeches.

Functional illiterates are suspicious on everyting, and they tend to belive antithing. They are unable to climb on the second stept of Maslow pyramid. Pshycological needs are seldom manifested, and when it happens it's made with difficuty. Functional illiterate are the main victims of manipulation. And they take decision for us.

The proofs indicate that there are numerous bad consequences of functional illiteracy and of the low level of basic education. Persons struggling with functional illiteracy are offten marginalized in society, and they present a high unemployment risk.

Evaluation instuments of functional illiteracy, on national level

Strating from 2014-2015, on a national level, there are applied evaluation tests (aproved by the Order of the ministry of education no. 3418/19.03.2013)with a unique type of subject, on the finalization of the II-nd, IV-th and VI-th grade.

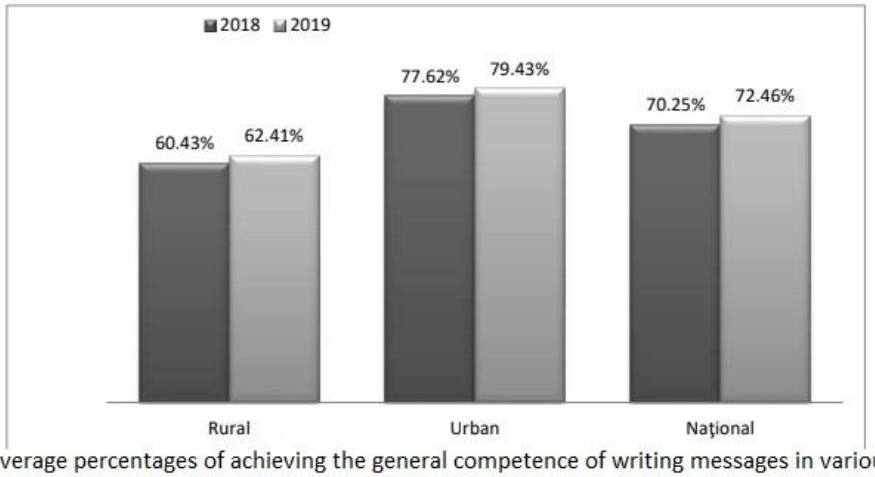
The tests have a medium level of difficulty and they use, as a guiding line, international test IEA-TIMSS and IEA-PIRLS, accordingly to the law, and they are used in subjects such as mathematics and the study of romanian language. Their purpose is to oversee the process of organization, implementation and improvement of evaluation, on the fundation of notifications from the teachers and other educational institution.

On the foresight of the Law of National Education no.1/2011, with the subsequent modifications, and accordingly to the steps overseen in different studies of the teory of evaluation, the National Evaluation were managed, for starters, as a pilot project, in 2012-2013 and 2013-2014.

National Evaluation (NE) in the Second Grade

Starting with 2014-2015, evaluation of the basic competences on the finalization of the II-nd Grade became a national objectivand it was organized for all the students in the Second Grade. Evaluarea competențelor fundamentale la finalul clasei a II-a a căpătat un caracter național, fiind organizată pentru toți elevii clasei a II-a din unitățile de învățământ. The design of this test was made,

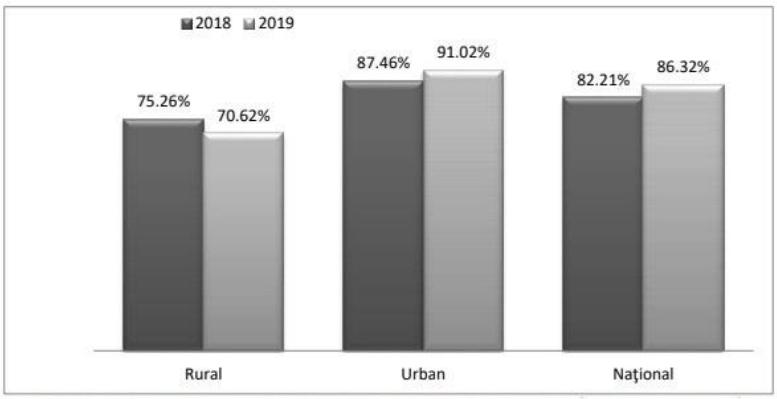
from staters, usig the model of international evaluation: IEA-PIRLS, IEA-TIMSS and OECD-PISA. Therefor , NE for the II-nd has 3 sections: writing, reading and math.



Average percentages of achieving the general competence of writing messages in various communication situations, depending on the environment in which the school is located (National assessment in the second grade 2018 and 2019)

Analizing the result obtained at the NE II-2019, in comparison to NE II-2018, the graphic above depicts that at a national level, in the **„writing"** section, the procent of the students that have manage to be succesfull in writing messages according to different comunication situation improved from 70,25%, in 2018, to 72,46% in 2019. This improvement is obvious including for students from different enviroments. In the rural enviroment the procent register grew to 62,41% in 2019 to 60,43% in 2018, while in urban enviroment the procent grew from 77,62% in 2018 to 79,43% in 2019.

On **„reading"**, we can notice a decrease of the procentfrom 75,26%, at NE II-2018, to 70,62%, at EN II-2019. The difference between urban and rural enviroment grew from 12,2% in NE II-2018 to 20,4% in NE II-2019, beeing obvious a quality decrease from the students from rural enviroment.

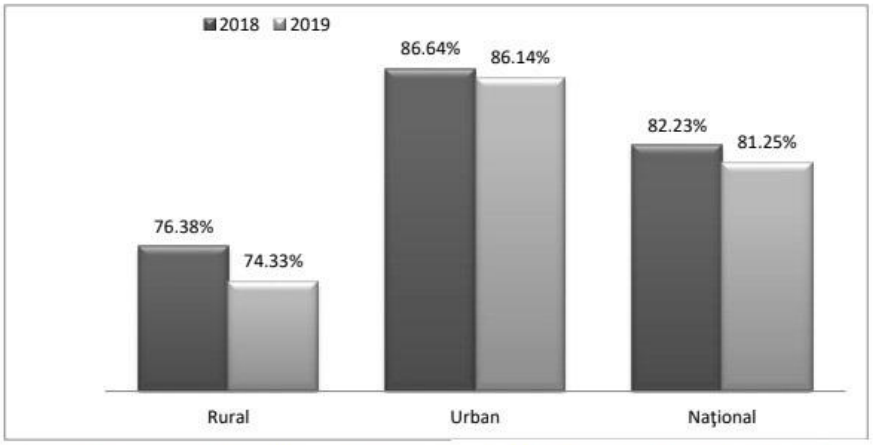


Average percentages of achieving the general competence of receiving a variety of written messages, in known communication contexts, depending on the environments in which the school is located, in the Reading section (National assessment in the second grade 2018 and 2019)

The goal of froming these two competences, was targeted by three learning activities: creating questions and answers based on a read text, expressing with students own words the meaning of a text and creating questions about the text. The results were:

- NE II-2019: 86,32%;
- NE II-2018: 83,01%;
- NE II-2017: 85,06%;
- NE II-2016: 87,65%;
- NE II-2015: 88,04%.

On **mathematics**, the results shown differences in reaching the general competence of using some conventional patterns for measuring and estimating. Therefore, accordingly to the students living enviroment, we can observe a decrease of the scoring register at the NE II – 2019 comparison to the ones register at NE II – 2018, the most obvious decrease was aknowledged in the rural area, from 76,38%, in 2018, to 74,33%, in 2019.



Average percentages of achieving the general competence to use conventional standards for measurements and estimates, depending on the environments in which the school is located, in the Mathematics section (National assessment in the second grade 2018 and 2019)

The National Evaluation Report regardin NE in the Second Grade, shows that in mathematics, according to the competence targeted, the results were:

1. the ability to use numbers in basic calculation: 2015: 85,87%; 2016: 76,59%; 2017: 75,89%; 2018: 67,14%; 2019: 75,06%.

2. identifing some phemnomena/relation/structures from surruondings: 2015: 84,32%; 2016: 65,88%; 2017: competence not targeted in NE; 2018: 71,28%; 2019: competence not targeted in NE.

3. emphasis of geometrical characteristics af some objects: 2015: 85,02%; 2016: 80,14%; 2017: 79,09%; 2018: 79,17%; 2019: 90,04%.

4. using conventional standards to measure and estimate: 2015: 81,01%; 2016: 78,43%; 2017: competence not targeted in NE; 2018: 82,23%; 2019: 81,25%.

National Evalution at the IV-th Grade is targeting some areas of content for each studied subject:

For the subject „Language and comunication"

-Content area D1 : Extraction of explicitly formulated information (89,22% in 2016, 89,20% in 2017, 90,06% in 2018 and 90,16% in 2019).

- Content area D2: Operating with the main ideas of a text, wich presume the first lecture of a text area cu ideile principale ale unui text, identyifing and arranging the main ideas (82,72% in 2016, 81,90% in 2017, 82,93,06% in 2018 and 83,06% in 2019).

- Content area D3: The statment of direct conclusion, for measuring students capacity to understand and write messages in various comunication situation, based on the lecture of literary texts and by association of elements found in the read text with personal experience (77,30% in 2016, 75,59% in 2017, 76,90% in 2018 and 88,01% in 2019).

- Content area D4: Interpretation and integration of ideas and informations, regarding elements found in the text, rational argumentation of the ideas (67,38% in 2016, 68,49% in 2017, 71,33% in 2018 and 65,84% in 2019).

For the subject „Mathematics"

- Content area D1: Natural numbers (76,06% in 2016, 64,03% in 2017, 62,22% in 2018 șand 65,35% in 2019). Results has shown that the students aren't good at resolving items wich requires a rational process, but to the ones that require knowledge and precatical aplication. Also, it was found insufficient exercices of the items that require resolving problems with natural numbers.

- Content area D2: Geometrical figures, mesurements, fraction (68,60% in 2017, 66,45% in 2018 and 71,53% in 2019).

- Content area D3: Organizing data into tables (73,10% in 2016, 73,07 in 2017, 75,87% in 2018 and 65,84% in 2019).

National Evaluation at the VI-th Grade was organized, starting in 2013- 2014, due to art. 74, (4) of the National Education Law no. 1/2011. The obtained results, the 2013-2019 period, shown:

For the subject „Language and comunication"

- Over 50% of the students in the VI-th grade can fill in a table with simple information, on the point, identify in the romanian text as well as in the native language, or the foreign language studied;

- Over half of the students are able to associate key words with information from the read text;

- Over half of the students can extract requested information from a text read in romanian, in native language and the foreign language studied;

- Over 50% dof the students in the VI-th Grade can identify the correct version of a working task as a short statement in romanian, native language or foreign laguage studied;

- Almost half of the students in VI-th grade can formulate short answers with arguments, for questions stated in romanian, native language or foerign language studied;

- Almost 50% of the students in the VI-th Grade offers answers partially correct or partially complete to simple working tasks (identification level), based on a read text;

- Almost 50% of the students in the VI-th Grade demontrates a global partial understanding of a text read for the very first time in romanian, as well as in the foreign laguage studied;

- Almost 50% of the students from the VI-th Grade demonstrates difficulties regarding expressing personal opinion/arguing based on key issues of the read text in romanian, native language or studied foreign laguage;

- Almost 50% of the students from the VI-th Grade can partial accomplish the working tasks wich requires a basic interpretation of a non-literary text, correlate with the short justification of the students point of view, in romanian;

- Almost 50% of the students from the VI-th Grade have difficulties in resolving working tasks that requires filling in a text with empty spaces in the foreign language studied, and giving partial correct answer;

- The amount of the student that can't accomplish or accomplish partially the working tasks targeting editing of a short text in the studied foreign language is about 50%.

For the subject „Mathematics"

- About 91% of the students had correctly identified quantity and quality information specific to mathematics and science, in a table with three lines and five columns;

- Almost 86% form the students have correctly processed, form a mathematical point of view, the item „... smaler by... then", have identified correctly required information for resolving the requirement and have correctly resolved the subtraction of numbers;

- About 38% from the students have correctly processed information regarding a geometrical figure, information from the requirement text, to calculate the lenght of a cicle;

- About 8% of the students have analyzed the characteristics of a geometrical figure, have correctly express in a specific mathematical language the elements of a circle and the property of triangles in order to determinate the measure of an arch;

- About 19% of the students have correctly resolved a practical item, which uses percentage and reports.

For the subject of „Physics"

- About 80% of the students were able to identify correctly the name of the measurement unit of which its symbol was used in a table;

- About 70% of the students have correctly calculate the variation of a physical unit, based on the read information form a diagram;

- About 70% of the students have correctly used the symbols of electricity in a electrical circuit, while 60% have correctly drawn the scheme of an described electrical circuit;

- About 25% of the students have correctly written the relation between the distance, speed and time (the item hasn't required this explicit relation; but it was needed in order to analyze the situation described, to identify the phenomena and then to use the relation);

- About 25% of the students made correctly the transformation of the required measurment unit;

- About 30% of the students write correctly the relation between the weight of an object, density and volum (and in this case, the item hasn't require the writing of this relation; but it was needed in order to analyze the described situation).

For the subject of „Biology"

- About 25% of the students have partial recognized the morphological and physiological characteristics of some structures, organs, etc., as well as the design of some organs;

- About 35% of the students were able to identify different types of relation;

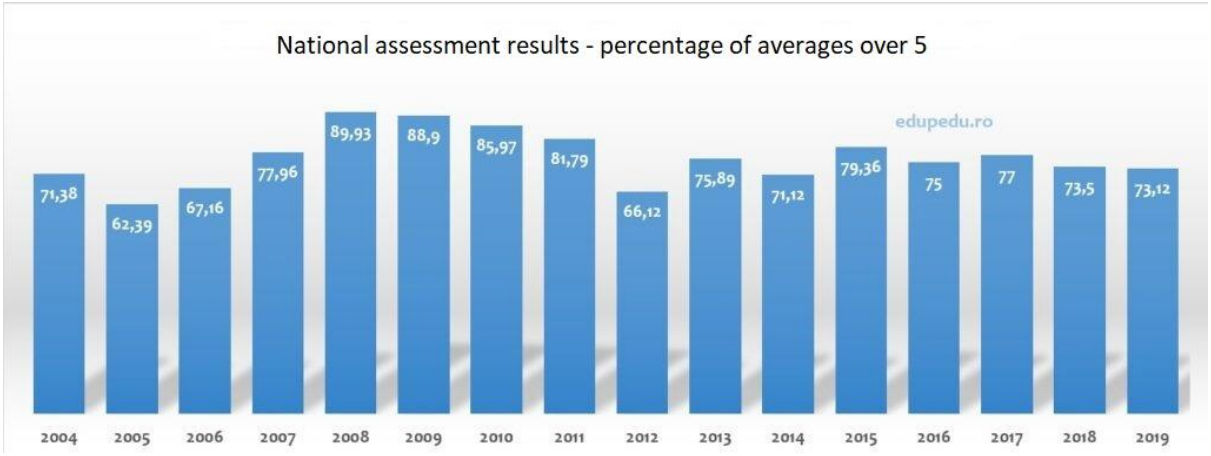
- About 30% of the students have proven, beside knowlwdge, the capacity to understand a fundamental biological concept;

- About 35% of the students were able to demonstrate logical, creative thinking and that they have the ability to analyze and to synthesize for solveing a situation regarding the health of a body, the manifestation of a healthy life style;

- About 20% of the students, although they give correct answers, were unable to argue the answer. A reason might be that the learning process wasn't an active one, the students weren't trained to analyze different situation.

National Evaluation at the VIII-th Grade

Regarding the Report on the Results of the National Evaluation, we are confronted with an unprecedented decline for 18.731 students, who in the IV-th grade, on the National Evaluation test form 2015, had good results and were bearly able to give correct answers to about 50% of the tests items. The results form the National Evaluation had fluctuated, in the last years from the lowest point (62,39% of the students with grades over 5 în 2005, untill the maximal point in 2008 of 89,93% .



Recent studies on functional illiteracy

At national level we have information about functional illiteracy, as a result of Educated Romania, a national project initiated by the President of our country, meant to support the resettlement of society on values, developing a culture of success based on performance, work, talent, honesty and integrity.

Starting with 2016, the Presidential Administration initiated a wide public debate on education in Romania, structured in three stages. Each of these stages is described in detail on the website dedicated to the project: www.romaniaeducata.eu, where you can consult the results of the public debate and find out more about the ways in which you can participate in the debate.

Project stages- brief presentation

The first stage (2016-2017) involved a series of eight consultations on the vision and the country objectives for education (regional debates), the development and dissemination of an online questionnaire, 35 consultation events organized by other people, etc.

The second stage (2017-2018) started from the vision of identified elements in the previous stage, in order to continue the consultation on the strategy for education for 2018-2030.

The Presidential Administration set up seven working groups with the role of developing the conclusions of the first stage in a package of detailed strategies on the following priority topics: teaching career; the equity of the educational system; professional educational management; quality vocational and technical education; autonomy, quality and international profile in higher education; early education accessible to all; evaluation of pupils and students.

The documents prepared by the working groups and the conclusions of the first stage events have been aggregated in a unitary document that you can access here: http://www.romaniaeducata.eu/wp-content/uploads/2019/01/Rapoarte-grupuri-de-lucru-Romania-Educata.pdf

In the third stage (2018-2020), the integrated result of the previous steps was launched in public debate during the event organized on December 5, 2018, at the Cotroceni Palace, being available on the website www.romaniaeducata.eu, in the section "Project results". Furthermore, all those interested are invited to send their opinions to mailto: romaniaeducata@presidency.ro and to participate in the events scheduled for the next period. Also, the Presidential Administration will organize four debates on the following topics: governance in education, funding, curricular architecture and the impact of the digital society on education, and on the other hand those who wish, can continue to register events under the auspices of the project "Educated Romania".

Other studies about functional illiteracy, carried out in Romania:

Dr. Florentina Anghel, Strategies and Models in Functional Literacy;

Marian Staş, Education and National Security;

Elisabeth Stănciulescu, "Say in your own words";

Cristina Ştefan "Functional Analphabetism";

Analphabets with a diploma;

"We are Europe's codas to education";

Dacian Dolean "Functional analphabetism for all";

Do we really know how to read? About functional illiteracy;

Discrimination and Romans;

Unprecedented test: He is almost illiterate, but with 2.15 entered to high school;

Conclusions after baccalaureate;

https://elisabetastanciulescu.ro/2010/02/stim-intr-adevar-sa-citim-despre-analfabetismul-functional/;

https://elisabetastanciulescu.ro/2013/04/analfabetism-functional-in-ministerul-educatiei/;

https://elisabetastanciulescu.ro/2011/07/despre-analfabetism-functional-examene-si-calitatea-invatamantului-romanesc-din-memoriul-meu-de-demisie-august-2008/;

https://books.google.ro/books/about/Strategii_%C5%9Fi_modele_in_alfabetizarea_fu.html?id=Lc64rQEACAAJ&redir_esc=y ;

https://tribunainvatamantului.ro/analfabetismul-functional/ ;

https://republica.ro/cum-recunosti-un-analfabet-functional;

https://www.edupedu.ro/analfabetismul-functional-pe-intelesul-tuturor-explicat-de-cercetatorul-dacian-dolean/.

Functional illiteracy rate in Romania

PISA 2015

According to the international report by the Organisation for Economic Cooperation and Development, following the PISA (Programme for International Student Assessment) tests, in 2015, *places Romania in the penultimate position among the 28 EU states, in the reading performance indicator, with 38.7% - 15 years old students who are below level 2 (less than 407.47 points on the test). Also, in mathematical performance, Romania ranks the antepenultimate position among the 28 EU states, with 39.9% - 15 years old students who are below level 2 (less than 420.7 points on the test). In case of the science performance indicator, Romania ranks in the penultimate position among the 28 EU states with 38.5 % - 15 years old students who are below level 2.*

PISA 2015 results were published on December 6, 2016.

Meanwhile, a new PISA test took place in 2018, which was also attended by Romania with 78 other states, the results of which are not encouraging. Those tests were divided into six skill levels, from the weakest, level 1, to the highest, level 6.

Romania has the worst results in the last 9 years in the 2018 PISA tests. The score obtained is down from the last two tests in which Romania participated (2012 and 2015) in all three fields tested: reading, mathematics and science, according to the PISA 2018 results published by the Education Directorate of the Organisation for Economic Cooperation and Development (OECD). The percent of functional illiteracy is 41%, up from 2015.

Only 1% of students are very good at reading, which means they reach level 5 or 6 in the PISA test, as opposed to the OECD average, which is 9%. At these levels students have a full and complete understanding of a text at first sight. In only 20 education systems (out of 79 participants in the test) more than 10% of 15 years old pupils are top students.

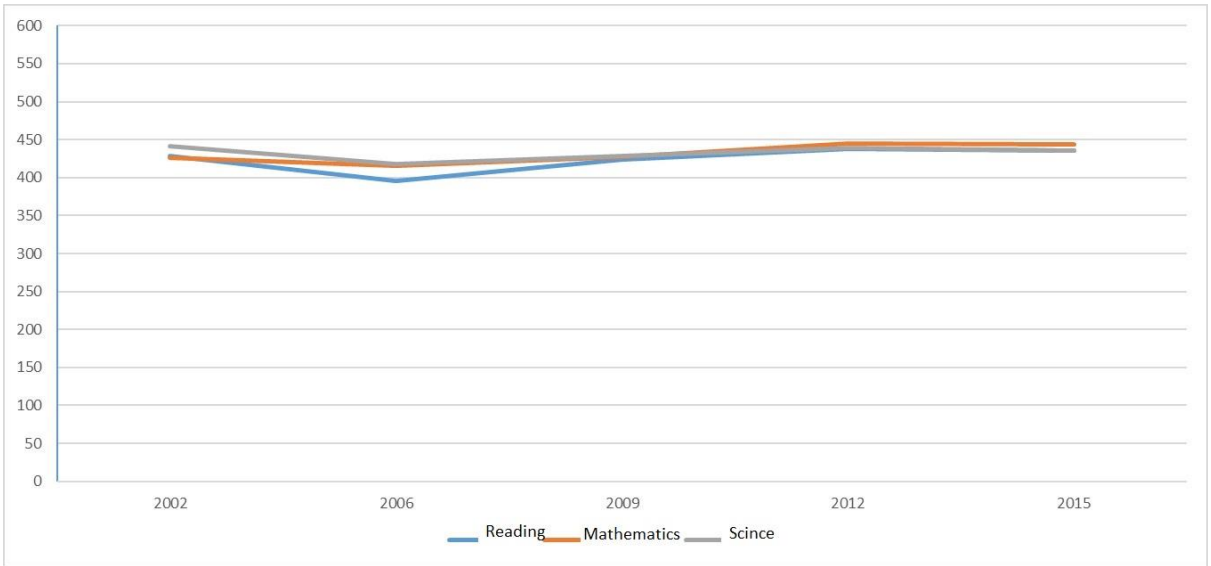
The administration of PISA tests is carried out by an international consortium. The assessment tools of each participating country shall be carried out in cycles of four consecutive years. Stage 2019-2022 is briefly titled PISA 2021, since 2021 then the main testing is carried out.

Testing PISA2021 will be carried out via computers, this is a novelty. This test method is a first for the evaluation of PISA in Romania and is expected to give those who are decision-makers the opportunity to get used to the rigors, but also to the advantages of this modern means of evaluation.

The PISA 2021 programme includes a new field of testing: creative thinking. This will identify the factors that help to develop creativity and the role of different school activities in this regard.

In 2015, the average scores placed Romania in 44th place, with a similar level to: United Arab Emirates, Uruguay, Cyprus, Moldova, Albania and Turkey, below all European Union countries (including Bulgaria, we were tied in 2012).

The Romanian students results in Reading, Mathematics and Sciences had slightly variations over time.



Average scores for Reading, Mathematics and Science in PISA surveys applied in Romania in 2002, 2006, 2009, 2012 and 2015.

PISA 2018

In Romania, PISA 2018 assessment tests were applied in 170 educational institutions. There participated 5081 students from VII-X grades, and were validated and processed 5075 tests.

9th graders (77.9%) had the highest number of participation, then 10th graders (15.1%), 8th grade (6%) 7th grade (0.9%).

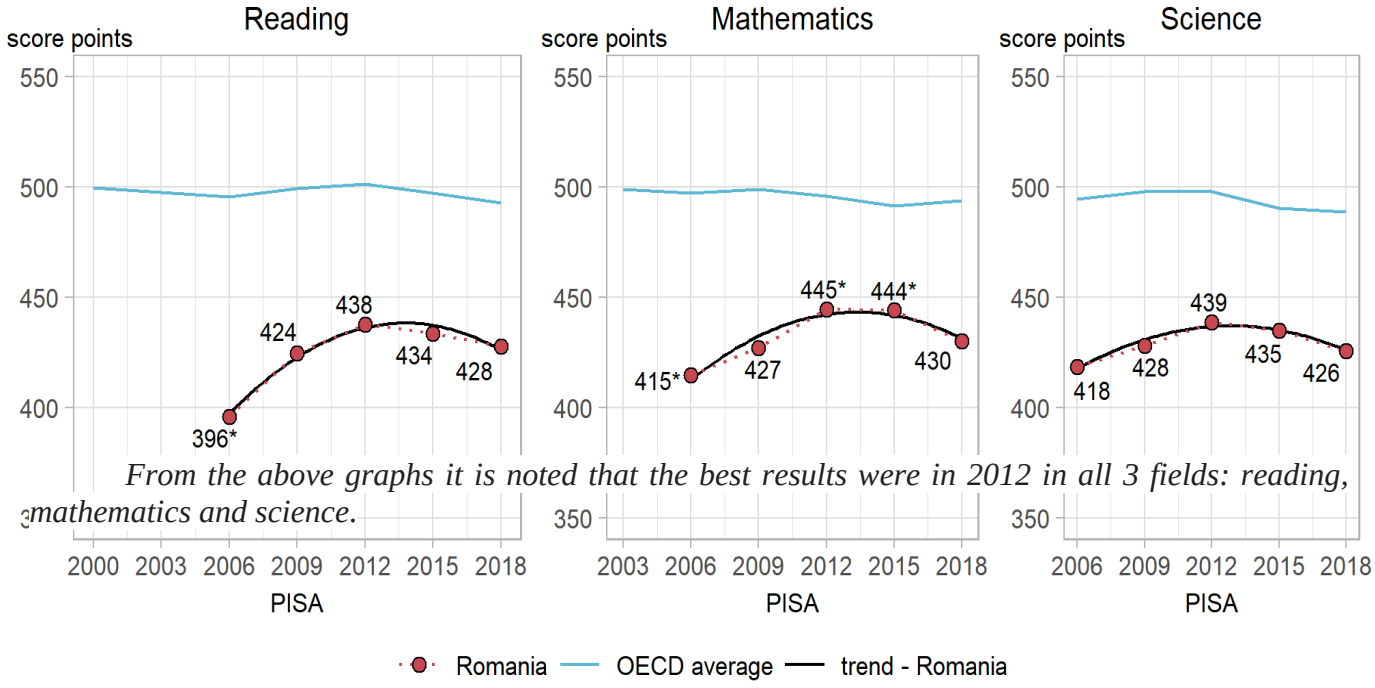
Compared to the previous test cycle - 2015, the international average decreased slightly (reading - 487, compared to 493, mathematics - 489, compared to 490, sciences - 489, compared to 493).

In Romania the trend was the same: reading/reading – 428 (compared to 434 in 2015), mathematics – 430 (compared to 444 in 2015) and science – 426 (versus 435).

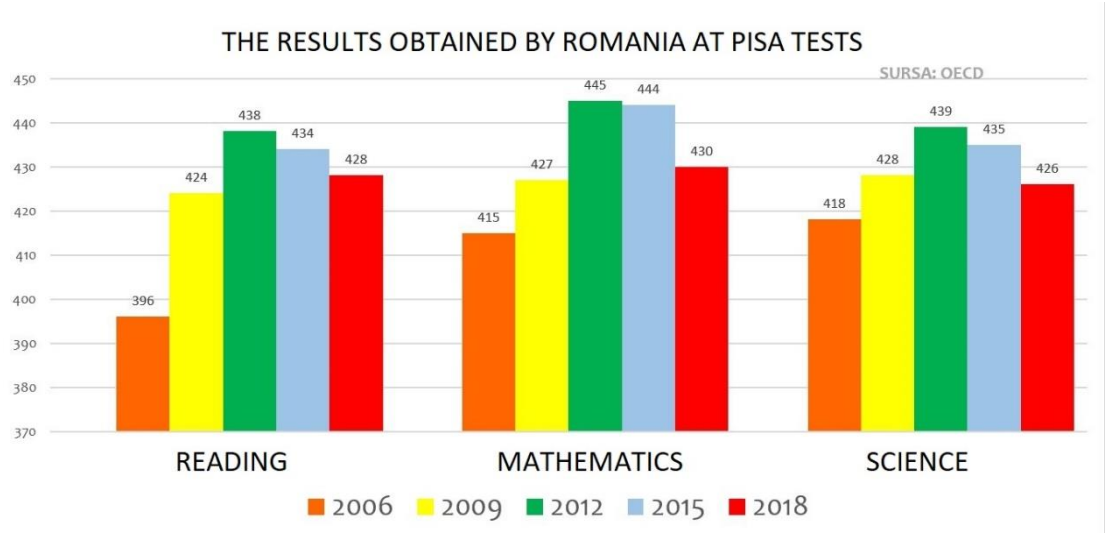
Results in 2018 are higher, compared to 2006 and 2009 results, but slightly lower than in 2015.

According to the OECD Report, the difference in reading and science between 2015 and 2018 is not statistically significant, as opposed to mathematics. Comparing Romania with other states, our student results are placed close to those of students from Moldova, Montenegro, Bulgaria, United Arab Emirates.

The Romanian student results evolution, relative to the OECD (Organisation for Economic Cooperation and Development) average, by evaluation cycles.



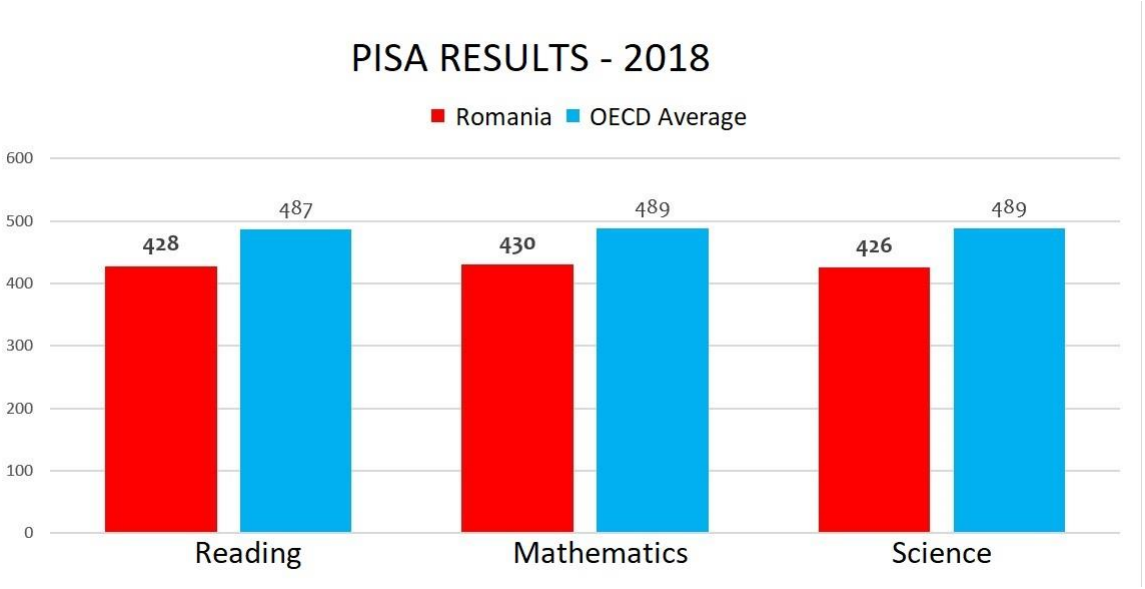
From the above graphs it is noted that the best results were in 2012 in all 3 fields: reading, mathematics and science.



PISA 2018 results in **Reading** indicate that Romania scored 6 points lower than the 2015 PISA test, 10 points less than in PISA 2012 and a score 4 points above PISA 2009.

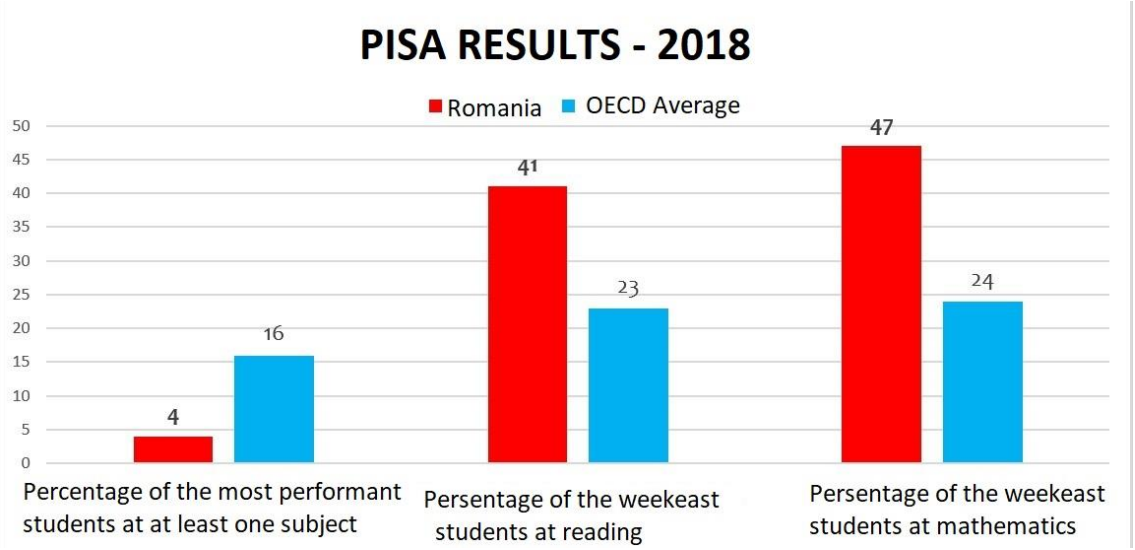
In **Mathematics**, the 2018 PISA results show the biggest decrease compared to previous tests. 14 points less than PISA 2015 and 15 points compared to PISA 2012. PISA 2018 results for Science are also weaker, compared to PISA 2015 being 9 points and compared to 2012 – 12 points.

Comparing the country average results that take part of the Organization for Economic Cooperation and Development and those of Romania, we note that the differences are: 59 reading points, 59 points in mathematics and 63 points in science, according to the report quoted.



In terms of performance indicators, the proportion of those who solved the most difficult problems in at least one of the three fields: reading, mathematics or science – represents **4% of the total,** compared to the **average OECD countries which is 4 times higher (16%).**

The percentage of the weakest students in reading, those who did not solve the low difficulty exercises, is 41 in reading and 47 in mathematics. The OECD average is at 23. In science, 44% of those tested do not reach level 2, i.e. they do not have basic skills and cannot link information they have and real-life knowledge.



Functional illiteracy: 44%

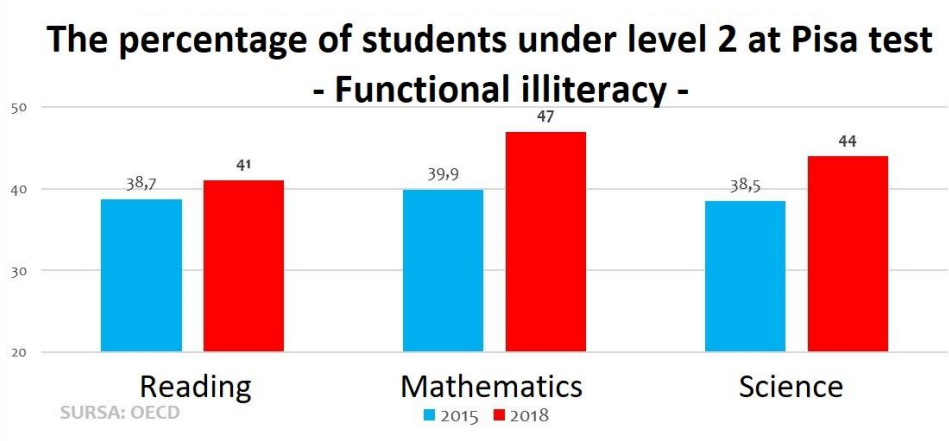
According to the OECD report, 59% of romanian students reached at least level 2 in reading, in addition to the average of 77% in the OECD. So these students can at least find the main idea in a medium-sized text, identify information based on explicit, sometimes complex criteria, and analyze the shape of a text when they need to do so.

41% romanian students cannot reach level 2, which is the level of functional illiteracy in reading. Functional analphabetism defined simply means that a student after read a text cannot explain and understand what that text is about.

In **mathematics**, several students cannot work with basic arithmetic operations, the percentage being 47%, of those who do not reach the level 2 of difficulty in the PISA 2018 tests. Examples: they have not been good at comparing the total distance of two alternative routes or of converting prices from lei into foreign currency.

In the field of **sciences** there is an increase of up to 44% in the proportion of those who cannot make basic connections in this field. Those who fall into this group cannot provide possible explanations in familiar situations or draw conclusions based on simple investigations.

The percentage of functional illiteracy increased from 39% in 2015 to 44% in 2018, with an increase of 5%.



Students who perform

The 2018 PISA tests were divided into six skill levels, from the weakest, level 1, to the highest, level 6.

1% of students are very good at reading, they reach level 5 or 6 in the PISA test, the OECD average being 9%. At these levels students can understand a text very well at first side. In only 20 education systems (out of 79 participants in the test) more than 10% of 15-year-old participants are performing students.

Causes of functional illiteracy

Prof. univ. dr. Nicolae Zamfir, President of the Romanian Physics Society and corresponding member of the Romanian Academy, states that: The great problem of Romanian education is that the student does not understand the usefulness of the subject he must learn. "Functional illiterates" are the result of an educational system in which theory has never been linked with practice.

The specialists opinion is that Romania has this disastrous situation because the main method of romanian students learning is the memorization required by an educational system focused predominantly on memorization to the detriment of concepts understanding presented by the teaching programs. As a result, students do not have the ability to make correlations between the information sequences contained in a text.

The causes of illiteracy are multiple and depend on several factors:

Individual factors: academic performance, student behaviour, attitude towards school, family history, ethnicity, low cognitive skills, low motivation.

Socio-economic factors: residence environment, income level, low level of parental education, poor communication in the family.

School factors: low school results (averages of less than 6), student fixed on completion of an education level (e.g. secondary level), low educational expectations, behavioural problems penalised at least once a semester, parents notifying at least one problem with their child per semester, conflicts with the school/teachers/students.

The causes of functional illiteracy are in a crossroad of individual and social environment (economic, cultural, educational, political environments).

At the educational level, the causes are: learning methods such as memorization, lack of student-centred teaching methods, poor learning strategies, increased level of illiteracy among parents.

At socio-economic level: low economic situation (poverty, unemployment).

At the socio-cultural level: ethnic groups (Roma), value system brakdown, low family support, family conflicts, family dissolution, family violence, etc.

At the individual level: attention disorders, dyslexia, intellectual impairments, socio-emotional impairments, physical/sensory/motor/somatic disabilities, poor motivational system, language disorders, learning difficulties, critical thinking skills and poorly developed problem solving; (Hamminck, 1990; Anghel, 2014).

According to a recent study, *the determinant facts that influence the development of functional illiteracy are*:

Poor educational resources in the family, i.e. romanian children, face an acute shortage of teaching metarials and books compared to children in European countries. For example, 31% of children said they had fewer than 10 books at home.

The low level of parents education (only 14% of children parents who participated in PIRLS research have higher education or more).

Poor educational policies (creating an environment that fosters reading, teachers' resources for teaching reading, libraries or the absence of campaigns that promote reading).

The teaching quality act (the study time allocated for a Romanian student is significantly lower than the European average of 850 hours per year; the teaching time for Romanian language is about 30% less than the time allocated in the European average; Romania does not have a specific curriculum for reading teaching; lack of support for teachers who are not making work progress).

Teacher training and selection (initial and continuous teacher training can be improved, teaching career attractiveness, pedagogical skills are never really assessed).

Decentralisation of education policies to local authorities.

Underfunding and difference funding between urban and rural areas.

Lack of a support system for educational managers.

Lack of coherence and predictability in the education system.

Organizational culture: cultivating the attitude of obedience and hierarchical superiority beyond professional ethics, by reporting higher hierarchical institutions to principals as simply executors. This situation is not encourage proactivity, determination, initiative, personal leadership and critical thinking towards the search for alternative solutions.

Ambiguity in primary and secondary legislation (leaves room for uneven practice and arbitrariness).

Lack of alternative systems of school integration of those who have abandoned.

Threats

The following threats have been identified in relation to an increased or increasing level of functional illiteracy at the national level:

- poor results in national assessments and examinations or on PISA teste;
- increasing absenteeism and dropping out;
- increasing the level of poverty;
- generating significant social and economic costs;
- increasing the unemployment rate;
- lack of involvement in civic activity;
- poor health (tendency to smoking and alcohol consumption);
- decreased productivity at the national level, including P.I.B. (intern budget product);

People with functional illiteracy often manage to hide their problem, but live with a permanent fear that their secret will come to light. It is often difficult for them to start a writing and reading course and to publicly acknowledge their problem.

Functionally illiterates suffer on many levels: professionally, because they fail to advance, participate little in public life, are often tense, depressed and have problems relating to others. They always depend on the help of someone to read their instructions, the train schedule or to help them use an ATM. Those who constantly depend on the help of a third party do not have the opportunity to

learn something on their own, because the limits arise at every step. The vicious circle of low self-esteem and insecurity leads to social isolation.

Measures that have been taken so far to combat and prevent functional illiteracy

The Center for Educational Assessment and Analysis, after a long-term analysis of students' results in National Assessments and PISA tests, proposes a series of steps that can reduce functional illiteracy.

The decline in functional illiteracy ranks second among the European Commission's education priorities. It should be remembered that the average in the countries of the European Union is now 20%, and the target is for functional illiteracy to decrease to 15% by the end of this year - 2020. Although this decrease would be only 5% by the end of this year, it occupies a central place among the priorities of the European Commission. In contrast, in Romania, a country where functional illiteracy exceeds 40%, its reduction is not even among the priorities. However, the reduction of functional illiteracy also requires long-term structural reforms, not just one-off intervention programs. For example, Poland needed almost 10 years to reduce the rate of functional illiteracy in 15-year-olds from 22% to 14%.

From this point of view, The European Comision proposes some concrete reform steps to help reduce functional illiteracy:

- The use of innovative pedagogical approaches focused on the student (such as differentiated training) and a curriculum design aimed at a profile of the compulsory education graduate with the following characteristics: the graduate is creative, thinks critically, solves complex problems in unforeseen situations, etc. Active teaching-learning methods are very effective in this regard.

- Creating an infrastructure for lifelong learning in which teachers can acquire the skills and knowledge needed to train students in basic reading and writing skills, mathematics and science.

- Completion of a framework of teaching skills for teachers, to assess the quality of their work.

- Introduction of standardized national assessments; thus, evaluations from different years can be brought to the same scale. They also have the function of diagnosis for individual school progress, the aim being that each child can be later supported in acquiring basic skills (through pedagogies such as differentiated education).

- Development of assessment tools to allow the most objective estimation of skill levels achieved by students throughout their schooling. One such tool could be Item Response Theory.

- Developing a decentralized school management that stimulates competition between schools and good educational practices.

In order to be able to take these steps, it is, of course, necessary to attract good teachers and managers to the public education system and stimulate them.

Together, these initiatives can shape a program of structural reforms in the education system. A reasonable objective for Romania could be that, in the PISA tests in 2024, the functional illiteracy rate among 15-year-old students should decrease to at least 35%, as a result of this reform package. In the long run, this could mean for Romania an accelerated economic growth and considerably more inclusive than it is today.

Following some analyzes of the students' results, both within the school and at the National Assessment from the second and fourth grade, „Ecaterina Teodoroiu" Gymnasium from Brăila proposes the following measures to combat functional illiteracy:

- Promoting the reading of different texts in various contexts;
- Stimulating the acquisition of new words from the texts read;
- Imposing learning through logical thinking and diminishing reproductive learning;
- Increasing the applicability of teaching acquisitions for better practical functionality;
- Awareness of students about the immediate and long-term usefulness of information acquisition, immediate transfer to the previous system of knowledge and reactivation of information at regular intervals, but not longer than two weeks;
- Teaching certain concepts and contents in front of colleagues and explaining them in a way that they understand the new information.

Also, "Ecaterina Teodoroiu" Gymnasium suggests the following practical applications for preventing and combating illiteracy:

1. Current teaching activities

1.1 Language and literature lesson

It is recommended that, in each lesson, there be a moment of reading, initially in mind, by each student, then frontally, followed by a moment of decoding the text segment, gradually, at least three variants, depending on the intellectual abilities of student.

1.2 Periodic simulations and evaluations

Each test for measuring abilities and skills is indicated to contain a segment for decoding a text, followed by its summary, then the extraction and appropriate formulation of the fundamental idea.

1.3 Homework

One of the weekly topics will consist of a sample text, different from student to student, on which he/she will emphasize the key words, summarize it, and finally extract and formulate the basic idea. And in this case, the IQ and the degree of didactic training will be taken into account.

2. Curriculum at the school's decision

The Romanian teacher will propose and insist that, every school year, 7th and 8th grade students take a didactic approach focused on "how to read a text" and how to decode it. The proposed samples will be selected from all functional styles.

3. School competitions

In the case of both local and those organized by The Ministery of National Education or other institutions, it will be mandatory to include a test of decoding a text or at least 2 texts with similar themes, just to be able to observe the difference in language and even the nuances involved in formulating the fundamental idea.

4. Extracurricular activities

The reading circles will be reactivated, whose theme will no longer be leisure but the decoding of different samples of text in various forms, depending on each student and the degree of difficulty of coding.

5. Local, county, national projects

Forms of training students and teachers of different specializations in text decoding activities will be proposed, including competitive forms, precisely to train the teaching energies in a set of activities focused on the proper understanding of what is read.

6. Reactivation of school libraries

The activities proposed by the school library will also aim at the correct decoding of the compulsory and optional readings in attractive forms and with groups of students that will allow everyone to be involved in the proposed activity. The librarian will be accompanied in his actions by teachers of different specializations, just to teach students how to read (a poem, a problem, a geographical description, a Bible verse, a physical formula, etc.) and how to decode the message contained in these.

Following the debate *„Educated Romania – functional illiteracy*", which took place at "Babeș Bolyai", University in Cluj-Napoca on the 7th of November 2016, the participants established 4 country targets for preventing and combating functional illiteracy:

Objective 1: Support measures for schools and students from disadvantaged backgrounds;

Objective 2: Coherent and continuous system of career guidance and counseling for students and parents;

Objective 3: Initial and continuous professional training of teachers on issues such as: prevention and intervention activities, interdisciplinarity, differentiated learning, active-participatory strategies;

Objective 4: Curriculum change: focus on practical activities and skills, and not necessarily on exam results.

The participants reached the following elements of consensus with privilege to the previously identified objectives:

Objective 1: *Support measures for schools and students from disadvantaged backgrounds*

Consensus was reached on the following actions:

- Introduction of support programs similar to the "School after school" program, according to the methodology, at all levels of education according to the identified needs;

- Full settlement of student transport and use of school minibuses, according to legislation;

- Additional funds offered to schools for extra-curricular activities;

- Correction factors for funding per student, depending on the type of school and the environment of origin;

- Support provided to students from disadvantaged backgrounds for clothing, footwear, etc.

Objective 2: *Coherent and continuous system of career guidance and counseling for students and parents*

Consensus was reached on the following actions:

- Enrolling schools with psychologists / school counselors / speech therapists and decreasing the number of students they enroll for;

- School counseling for all and professional counseling starting with the gymnasium throughout a cycle of education;

- Carrying out parenting activities, especially in schools in disadvantaged areas.

Objective 3: *Initial and continuous professional training of teachers on issues such as: prevention and intervention activities, interdisciplinarity, differentiated learning, active-participatory strategies*

Consensus was reached on the following actions:

- Introduction of the principle of learning through investigation starting with the primary cycle;

- Introduction / deepening in the initial and continuous training of communication and relationship skills with students at risk and with their parents;

- Managing situations with emotional impact in which students who underperform in relation to the expectations of the student / school are involved.

Objective 4: Curriculum change: focus on practical activities and skills, and not necessarily on exam results

Consensus was reached on the following actions:

- Rethinking the national exams according to the National Education Law to evaluate the 8 key competencies;

- Revise the curriculum so that it adapts to social realities.

For preventing and combat functional illiteracy, CJRAE Maramureș proposes certain interventions at specific levels, as follows: at individual level, at social / family group level, at school / class level, at the level of the national educational system:

1. Individual intervention strategies (child / adolescent)

- Increasing self-esteem (creating opportunities for the student to achieve success, volunteer activities, developing a sense of self-efficacy, etc.);

- Development of communication skills, negotiation, problem solving;

- Emotional development strategies through use of SELFKIT;

- Strategies for developing critical thinking / analysis / synthesis (for eg: reading a text at first sight);

- Strategies for making learning more efficient;

- Training / developing reading strategies;

- Development of literacy skills (writing, reading, numerical calculation, etc.);

- Increasing motivation for learning;

- Development / capitalization of the 8 key competences necessary for literacy, with emphasis on the competence “learning to learn”;

- Developing creativity;

- Developing the ability of decision-making.

2. Intervention strategies at social group / family level

Social group level:

- Support group of students who do not have functional illiteracy in order to provide support to students in the category of functional illiterates.

Family level:

- Lectureships with parents about education in terms of positive discipline of children;

- Promoting literacy programs in / for the family by collaborating with the institutions of local public authorities (social assistance, medical assistance, local library, kindergartens, etc.) in order to provide support for families, especially for th vulnerable ones, to improve the family environment (offering books, training program and informing parents about activities they can do at home with their children to ensure a good start in life, etc.).

3. School / class intervention strategies

- Implement or establish curriculums at school desicion, focused on the development of literacy, writing, reading, numerical skills;

- Managing situations with emotional impact in which underperforming students are involved in relation to the expectations of the student / school;

- Including literacy strategies in the teaching process, which will lead to increasing the quality of learning;

- Early identification of students' learning difficulties and finding solutions to remedy them;

- Early identification of students' difficulties in understanding texts and application of appropriate remedial measures;

- Increasing students' motivation to learn, involving students in their one learning process;

- Introduction of activities aimed at increasing literacy skills, in parenting education programs.

4. Strategies / directions of intervention at the level of the national educational system

- Development of students' literacy skills in each school subject;

- Launching a national training program for teachers in the field of functional literacy (literacy, writing, numeracy, etc.);

- Development and implementation of educational policies focused on the compulsory functional literacy of students in compulsory education;

- Introduction in the university curriculum (in psychology) of some courses / seminars regarding the specific aspects of functional illiteracy in children, adolescents and young people: ways of identification, detection, evaluation, adequate teaching and learning methods, etc .;

- Carrying out a psycho-pedagogical screening in the primary classes in order to identify the pre-requisites with which the child enters the gymnasium cycle;

- Support measures for schools and students from disadvantaged backgrounds.

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2.7. Functional illiteracy in Turkey

Definitions of literacy,illeteracy and functional illiteracy

Today, literacy is essential to read the past and write the future. Not knowing how to read and write in our age means not living and disappearing in this world. Therefore, the priority of most of the countries is on literacy. As it is known, illiteracy is one of the most important world problems of our age. It is related to backwardness and poverty to some extent. It is one of the basic conditions of the nations survival and development. Illiteracy is not a destiny. It is a social situation that should be monitored frequently and prevented with radical solutions. If it is not constantly fought with patience, it appears immediately and spreads rapidly. A country giving no importance to literacy has closed its doors to the future.

Developments in fields such as industry, agriculture, health, economy and production are not sufficient alone. Well development cannot be achieved without technology with educated smart people. Technology cannot be produced without a scientific education and well educated people. Literacy is the most important factor for the development of a society. Studies in our world show that literacy has passed through various stages until today, and it is applied in different purposes and forms.

Definition of literacy

Literacy is a term mostly used for young people and adults. Literacy starts with recognizing, reading and understanding written signs of the individual. The one who could read his/her name, write and sign was called literate in the past. However, over time, this limited understanding has changed. Researches in the field of literacy indicate that this term reveals a complex, relative and progressive features. Gradually basic, intermediate and upper literacy skills has come up. Then,along with *functional literacy* it is seen not only reading and writing but also using them in daily life, a way of one's preparation to its social, economic, civic duties and roles. Upon literacy was accepted as a fundamental right, it was argued that everyone should be literate. Then, high-level literacy skills were mentioned as the basic education that people need to fully develop their capacities, raise their living standards, make informed decisions and continue learning. In recent years, a series of concepts such as computer literacy, digital literacy, technological literacy, e-literacy have emerged upon the rapid development of information technologies.

Historical development process of literacy term

Various definitions of the literacy term have been made until today. Some of these definitions address to the terms such as literate, functional literate, functional illiterate. Some of them include traditional, functional, and conscious literacy. In addition to these, there are some which explain the difference between literacy and illiteracy by thinking like two branches of a tree.

In general, literacy and illiteracy must be considered one line with the continuation of each other instead of two opposite poles. The definitions below are the historical development process of these terms.

1950's: The first internationally known definition of literacy was made by UNESCO during a meeting held in 1951. In this definition, the term *"literate"* was defined as " A person who can understand and read and write a simple and short sentence related to his daily life"

Since 1958, UNESCO has recommended member states to use this definition in their education statistics. This definition includes basic skills of reading and writing and is a traditional explanation.

In the 1960s, when the countries where the illiteracy was in the majority gained its independence and started their economic, political and social development movement, UNESCO organized a meeting in Paris in 1962. At this meeting, *"literate"* was defined as "A person who can read, write and calculate at a level, have the skills to perform his duties in the community effectively to contribute to the development of the society in which he lives.

In the same year at the World Conference on Literacy and Society organized by the United Nations in Rome "*literate"*, was defined as "A person who can read daily newspapaer and is as knowledgeable as someone having at least five years of education." (Du Sautoy, 1966, p.19).

The following year the term "*literate"* was defined as "A person who can read and understand daily newspapers, bulletins, letters, understand and fill out tax forms, and write a letter" "

In these definitions, literate is not seen limited with basic skills, but addressed as "a person who is as knowledgeable as a primary school graduate and contribute to the development of himself/herself and society. The traditional concept of literacy based on skills has begun to change. In 1965, the term of *"functional literacy"* came to the fore.

1960's: After 1965 *functional literacy* term came to the fore. This term, different from traditional literacy, was defined as "reading, writing and calculating skills necessary for the development of the society in which we live in". The functional literate was defined as "the person who fulfills the activities expected from him/her in the society he/she lives in". It was stated that the

functional illiterate cannot fulfill the duties which are expected from him/her like reading, writing and calculating skills necessary for the development of the society.

Then, at the World Education Ministers Congress held in Tehran in 1965, the concept of functional literacy was put on the agenda and was unanimously accepted. In the report of the meeting "functional literacy" was explained with these words:

"Teaching literacy should be strictly linked to economic and social priorities as a key element of development, as well as to today's or tomorrow's manpower needs. Therefore, all efforts should be focused on functional teaching literacy. Literacy teaching should not be taken as an aim but as a way of preparing the individual for social, economic and civic duties and roles. Literacy should focus not only on basic and general knowledge, but also on preparing for work, increasing production, participating in daily life more broadly, a better understanding of the world surrounding oneself and human culture" (UNESCO 1976, p. 79).

UNESCO has tried its functional literacy approach in various countries for 10 years since 1965 under the name of the "World Literacy Trial Program".

The functionality of these programs has been harshly criticized for not being well understood. This situation was expressed in the Tokyo conference held in 1972 and it was suggested that this definition should not be used. Thereupon, UNESCO has redefined the term of functional literacy. In this definition, functional literate is defined as "a person who has sufficient knowledge to play an active role in the group he / she lives in and in all his / her activities in the society".

This definition was not considered sufficient by the experts as well. In the following years, the term of functional (functional) literacy was abandoned due to its overwhelming response, discussion and misunderstanding, and the opposite concept of functional (functional) illiteracy was accepted.

UNESCO defined functional (functional) illiteracy in the 20th session of its General Assembly in 1978 as follows: "Functional (functional) illiterate, does not have the necessary literacy and calculation skills for his/her social and individual development, and cannot fulfill his/her literacy tasks in the community and group he/she lives in." (Hamadache ve Martin, 1988, p.4)

This term, which is explained as the opposite of functional literacy, put an end to these discussions.

1970's: Political developments in our world started in the 1970s, influenced the literacy term and brought up new ideas. According to this, literacy should not only be carried out for economic, social and cultural development, but also for the individual to be free". Paulo Freire defined the term

literacy as "developing one's personality and directing his/her life" and indicates that "literacy should provide a great entrance to the world of knowledge with a wide social participation to the individual".

As it is known, illiteracy means being dependent on others. It means seeking for help from others in matters and transactions such as reading letters, writing petitions, applying to institutions. However, literacy provides acting independently. It brings individuals do their own work voluntarily, work and take responsibility. It provides adults set goals, decide what to do, do their own works without any help.

In 1976 at Nairobi Conference it is reported that "Literacy must be beyond reading, writing, calculating and gaining basic knowledge. It must help individuals for a better self-knowledge, more independence and social life, parenting problems.

1980's: One of the views that affect the term of literacy is that it is accepted as a right.

This view was previously considered unreasonable, unscathed, and expensive. But in time, the idea of literacy is the fundamental right of everyone, and no one can be kept away from this right was defended. Thus, the right to read and write came to the fore. This right was accepted in 1985 at Paris Conference. In the report this was explained as:

- *The right to read and write*
- *The right to think and to ask questions*
- *The right to create and dream*
- *The right to write its historical background and learn the environment in which it lives,*
- *The right to access educational resources*
- *The right to develop common and individual talents*

Improving work and living conditions have been added into the term of literacy in the following years

1990's : ın the 1990s it was emphasized that primary education should be expanded in addition to the studies for adults for a radical solution to literacy. 1990'lı yıllarda okumaz yazmazlığın köklü bir

This dual approach, that is, the prevention of illiteracy in both children and adults, has been the most emphasized subject of UNESCO. In 1990 at the conference in Thailand, it is declared that "Each person should benefit from educational opportunities which are designed to meet the basic learning needs of people, children, youth and adults.

2000's : By 2005 UNESCO had moved to a broader understanding of literacy, recognizing that the complexity of the phenomenon meant that any definition could not claim to be universal. As a

working definition and in the context of assessing literacy, a meeting of experts adopted the following formulation:

"Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with various contexts. Literacy involves a continuum

of learning in enabling individuals to achieve his or her goals,"develop his or her knowledge and potential, and participate fully in community and wider society. (UNESCO 2005a:21)

Signs of functional illiteracy:

Functional Illiteracy generally includes basic educational deficiencies. Known shortcomings are related to reading, writing and calculating. Functional illiterates are literally literate but cannot use these skills effectively in daily life. Functional illiterates are people who have learned to read, write and calculate on their own or with the help of their environment but cannot use it effectively in their daily life.

Functional illiterates are unable to use their acquired literacy skills in daily life (UNESCO, 1978), e.g., to read and understand a medicine label or a bank statement, fill out a job application, compare the cost of two items and choose the item that offers the best value.

Functional illiterates have poor language skills (writing, reading, oral communication) (e.g., difficulty understanding a medicine label) as well as poor arithmetic abilities (e.g., inability to compare the price of two products) that generally influence everyday life situations (e.g., get the information from a timetable).

Evaluation instruments of functional illiteracy, on national level

Turkey is working to produce more reliable information on students' academic outcomes. Following a small pilot in 2015, a national assessment of student learning (ABİDE, 2016) was administered to a sample of 38 000 students (grade 8) to provide nationally representative results for the end of lower secondary schooling. A smaller pilot study was also implemented for primary-level students (grade 4) in 2016. In 2018, ABIDE was administered to around 75 000 lower secondary students and around 40 000 primary students. In 2020, the MoNE intends to extend the assessment to include upper secondary students (grade 10), for which a pilot study was administered in 2019. ABIDE assesses progress in Turkish, mathematics, science and social sciences, offering some more innovative test items to assess higher order skills than the multiple choice based assessments

traditionally used in Turkey; background questionnaires for students, teachers and principals are also included.

Analysis of ABIDE 2018

ABIDE Study is similar to PISA (International Student Assessment Program) with its focus on the measurement of skill and it is similar to TIMSS (International Mathematics and Science Trends Survey) in that it is based on the outcomes. PISA and TIMSS monitor across the country and do not provide feedback at the provincial level. In order to monitor the specific situations of each province and to give feedback, a sample at the provincial level is required. With the ABIDE Research, it was aimed to measure students' ability to transfer what they learned in school life to their daily life situations and their ability to solve when they encounter any problem situations.

Table 1.1. Turkish Test Proficiency Levels and Score intervals

Proficiency levels	Score Interval
Belowbasic	below 205,56
Basic	between 205,56- 358,46
Avarage	between 358,46 -506,40
Above avarage	between 506,40 -612,32
Advanced	over 612,32

When Table 1.1 is analyzed, it is seen that a student should get at least 205.56 points in order to be included in the Turkish test at the basic level. However, in order for a student to be in the advanced level, he / she must get at least 612.32 points.

The distribution of students according to their proficiency levels in the Turkish test is shown in Table 1.2 and Figure 1.1.

Table 1.2. Distribution of the number of students according to their level of proficiency

Proficiency level	Number of students	Percentage of students
Belowbasic	536	1,6
Basic	7869	23,5
Avarage	13717	41,0
Above avarage	8959	26,8
Advanced	2406	7,2
Total	33487	100,0

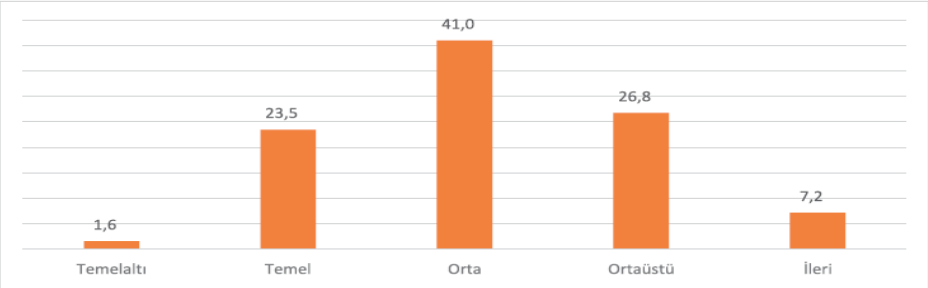


Figure 1.1. Distribution of Students According to their Proficiency Levels of Turkish Test

When Table 1.2 and Figure 1.1 are examined, approximately 25% of the students (N = 8405) for the Turkish test below basic and basic level, 41% (N = 13717) at intermediate level, 34% (N = 11365) at upper intermediate and advanced level.

The proficiency levels of the Turkish test according to the years of application (2016-2018) The comparative distribution is presented in Table 1.3 and Figure 1.2.

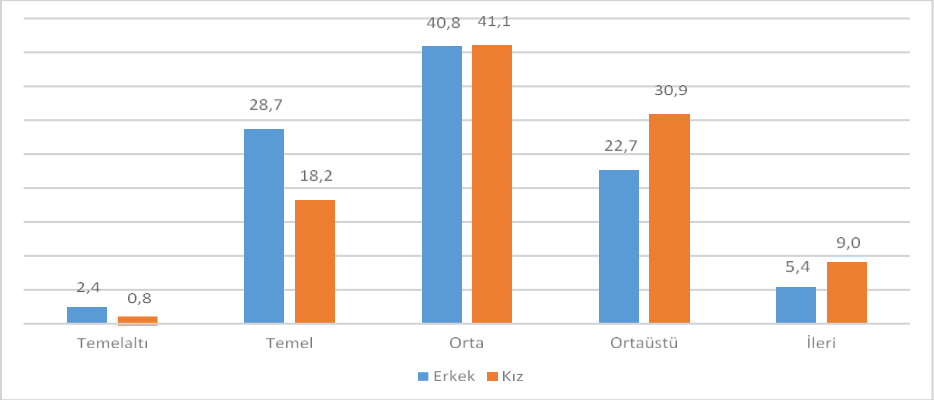


Fig 1.3 Comparative Distribution of Proficiency Levels of Turkish Test According to Gender

When Figure 1.3 is examined, it is found that the percentage of male students is higher at the basic and basic levels; It is seen that the percentage of female students is higher in middle, upper intermediate and advanced levels. Based on this, it can be said that female students 'Turkish academic skills are higher than male students' Turkish academic skills.

When the student averages for the Turkish test are examined according to the mother's education level, the highest score belongs to those whose mothers have Bachelor's Degree education ($\bar{x}$ = 649.89), while the lowest score belongs to students whose mothers are illiterate (never go to school) ($\bar{x}$ = 487,00). In addition, it is found that the average scores of the students regarding the Turkish test differ significantly depending on the education level of the mother. This significant difference can be seen among all groups except associate degree-master's degree, associate degree-doctorate, Bachelor's degree - Master's degree.

Table 1.5. Students' Turkish Test Scores According to the Number of Books in the House

Number of Books	N	%	$\bar{x}$
0-5	3123	9,63	474,54
6-15	9257	28,57	511,61
16-50	10073	31,09	564,16
51-80	4411	13,61	587,02
81 and above	5537	17,09	615,53
Total	32401	100,00	552,40

When the student averages for the Turkish test were examined according to the number of books in the students' homes, the highest score average belonged to students who had 81 or more books at home ($\bar{x}$ = 615.53), the lowest average score belonged to students with 0-5 books at home ($\bar{x}$ = 474,54) is observed. In addition, it was determined that the Turkish test scores of the students significantly differed according to the number of books in the house. This significant difference exists between all binary groups.

When Table 1.6 and Figure 1.4 are examined, 53% (N = 17796) of the students for Mathematics test are below basic and basic level, approximately 33% (N = 11003) are at intermediate level, approximately 14% (N = 4795) are at upper intermediate and at an advanced level.

Table 1.6. Distribution of Students According to the Proficiency Levels of the Mathematics Test

Proficiency level	Number of students	Percentage of student
Belowbasic	5497	16,4
Basic	12299	36,6
Intermediate	11003	32,8
Upper İntermediate	3780	11,3
Advanced	1015	3,0
Total	33594	100,0

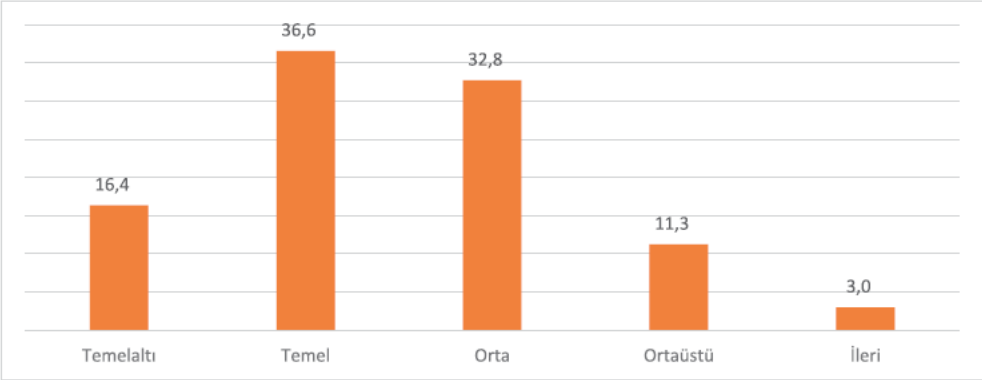


Figure 1.3 Distribution of Students According to the Proficiency Levels of the Mathematics Test

Recent studies on functional illiteracy (national level)

Functional Adult Literacy Programme

Functional adult literacy is particularly important in developing countries such as Turkey where formal education has not reached a significant proportion of the adult population, particularly in the rural areas. The average schooling of the adult population (over 25 years of age) in Turkey has been estimated as 5.6 years (Filiztekin, 2003). In rural Turkey the average schooling

may go down to 4.2 years. This low level of schooling is due in large part to low education among women. Figures from 2003 show that while the adult literacy rate for men is 94.9%, this rate goes down to 80.5% for women (Filiztekin). Gender differences in net enrollment in primary school across different regions are even more striking. In western and mostly urban regions, primary school enrollment rates are 99.1% for men and 96.2 % for women. However, in eastern and mostly rural parts of Turkey these enrollment rates are significantly different between male and female populations: 90.5% for men and 74.1% for women (Filiztekin).

Migrants from less developed and rural areas to the large cities, and especially the metropolitan centers, find themselves increasingly taxed in coping with the demands of urban lifestyles for which they lack the basic educational skills (for a review see Levinger, 1996). Though formal education is of crucial significance for human capacity development of the young generations, it has much less, if any, impact on the adult population. Thus the gross inadequacies in the formal schooling of adults, particularly of rural migrants, can be compensated mainly by nonformal education.

In Turkey, Adult Education Centres under the Directorate of Lifelong Learning of the Ministry of National Education (MoNE) are the responsible institutions delivering the two levels of adult literacy courses. The first level adult literacy programme targets adults with no literacy skills. Conversely, the second level adult literacy programme targets adults who are semi-literate.

FALP is the first adult literacy programme in Turkey developed with a scientific base by a non-governmental organization. , AÇEV developed the Functional Adult Literacy Programme (FALP) in 1995 with a comprehensive assessment of current literacy programme methodologies and implementation strategies. A team of academics and practitioners developed the programme as an effective alternative to available literacy courses to principally target the largest group of non-literates: girls and women. In 1995, AÇEV signed an agreement with the previously established MoNE Directorate of Non Formal Education and Apprenticeship (now the Directorate of Lifelong Learning) where all literacy activities would be conducted under the framework of this partnership. The programme began in Istanbul and has been subsequently implemented in 25 of the 81 provinces of Turkey between 1995 and 2013.

FALP targets women with limited literacy skills aged 15 and older. However, the programme has also benefited a number of men, especially those who have conscripted into the Turkish Military Forces. About *125,000* individuals have benefited from FALP.

FALP aims to develop literacy and arithmetic skills. Additionally, the programme seeks to enhance participants' comprehension, interpretation and critical thinking skills. It is the hope that individuals can utilize literacy in meaningful ways that contribute to their welfare and personal development.

FALP courses have a 120 hour curriculum equivalent to the basic literacy courses of the MoNE. Participants meet in groups for 3 to 4 hours, three times a week, over the course of 3 to 4 months. A distinguishing feature of FALP is its facilitation. The programme is implemented by volunteers who participate in a three week training seminar provided by AÇEV trainers. Upon successful completion, volunteers are officially certified as literacy instructors by AÇEV / MoNE.

Benefits of the programme for participants:

At the social level, participants of FALP had higher social participation (e.g.,on voting, organization membership, donations) after the completion of theprogram.

At the family level, FALP participants had higher participation in decision making in the household after the completion of the program

At the personal level, FALP participants are expected had more positive self-concept and self-efficacy after the completion of the program.

Four-Skill Assessment of Turkish Language Project

'Four-Skill Test in Turkish Language' (FSTTL) project was conducted by the Ministry of National Education to assess the language skills of students as a pilot project and investigates the effects of various variables on language skills.

In the Turkish language teaching program as the native language, there are educational outcomes to improve students' basic four language skills. However, there is no standard measurement method to assess the extent to which students have these basic skills, and no monitoring study is available on this subject. In interstage transition examinations such as LGS and YKS, and periodic monitoring studies as TMF-ÖBA and ABİDE focus only on reading skills. In this context, detailed data on students' listening, writing, and speaking skills are not available. In order to overcome this important deficiency, MoNE developed the Four Skills Turkish Language Test in 2019, and the pilot study is conducted under the coordination of the General Directorate of Measurement, Evaluation, and Examination Service

The results indicate that students performed relatively high in the speaking subtest and relatively low in the writing subtest. It is observed that female students had higher mean scores

than male students in all subtests. It can be stated that this result is consistent with the results of inter-stage examinations and monitoring studies in particular for the reading subtest (MoNE, 2018, MoNE2019b, ÖSYM, 2018).

Findings are also consistent with the PISA 2018 application that female students are performing better than male students in the reading field in the sample of Turkey (MoNE, 2019c). This finding shows that students from different gender groups may have diverse levels of linguistic skills.

It is determined that the mean scores of students attending secondary school and imam hatip secondary school did not show any significant difference in any subtest. In other words, the type of school the student attends does not have a significant effect on students' language skills. These findings are in coherence with that the graduates enrolled in imam hatip secondary school and other secondary schools according to the 2018 LGS central exam results (MoNE, 2018). Similarly, within the scope of 8th grade application of ABİDE 2016, it is determined that mean scores of imam hatip secondary school and secondary school students are quite close (MoNE, 2016). According to the results, students in two school types performed at the same level in their listening, writing, reading, and speaking skills.

It is determined that the students who participated in preschool education show higher performance than the students who did not participate in preschool education in all subtests except speakin.

Another finding is that the increase in parents' education level also increases the mean scores of the students in all subtests. The fact that parents from higher education levels use comparatively higher level of intellectual and complex language in home and read more with their children (Raikes et al, 2006; Rowe, Pan & Ayoub, 2005; Tamis-Lemonda & Rodriguez, 2009) is a possible reason for this significant difference between students. As parents' level of education is one of the components of students' social background, and social background has a significant impact on students' academic achievement (Ozer & Perc, 2020; Schuetz, Ursprung & Woessmann, 2008), it is expected that students' language skills are positively correlated with parents' level of education. It is determined that the effect of mother and father education level on students' listening skills is higher than their gender and participation in preschool education.

The study also examined the relationship between language skills and students' Turkish language, social sciences, mathematics, and science course scores. It has been determined that reading, listening, writing, and speaking skills have a significant relationship between the scores

of four courses in levels ranging from low to medium (=0.24 - =0.66). This finding, which is important information about the validity of the study, also revealed an important implementation regarding the assessment of language skills in classrooms. The relationship between the reading scores and scores of the four courses is quite higher than the other language skills (between r = 0.61 - r = 0.66). One possible reason for this is that reading skills are used intensively in classroom assessments.

The results of the future initial study will provide important feedback for native language teaching. Findings of the pilot study of the 'Four Skills Turkish Language Test' conducted by MoNE for the first time show that the assessment framework and data provide valid and reliable findings as a whole. Based on the data from the pilot study, it will be possible to develop certain levels of exams at the same standards with international qualifications in four skills of Turkish, both to strengthen native language education in schools and to make a more detailed analysis and to enhance educational processes.

The rate of functional iliteracy in Turkey

Pisa Results

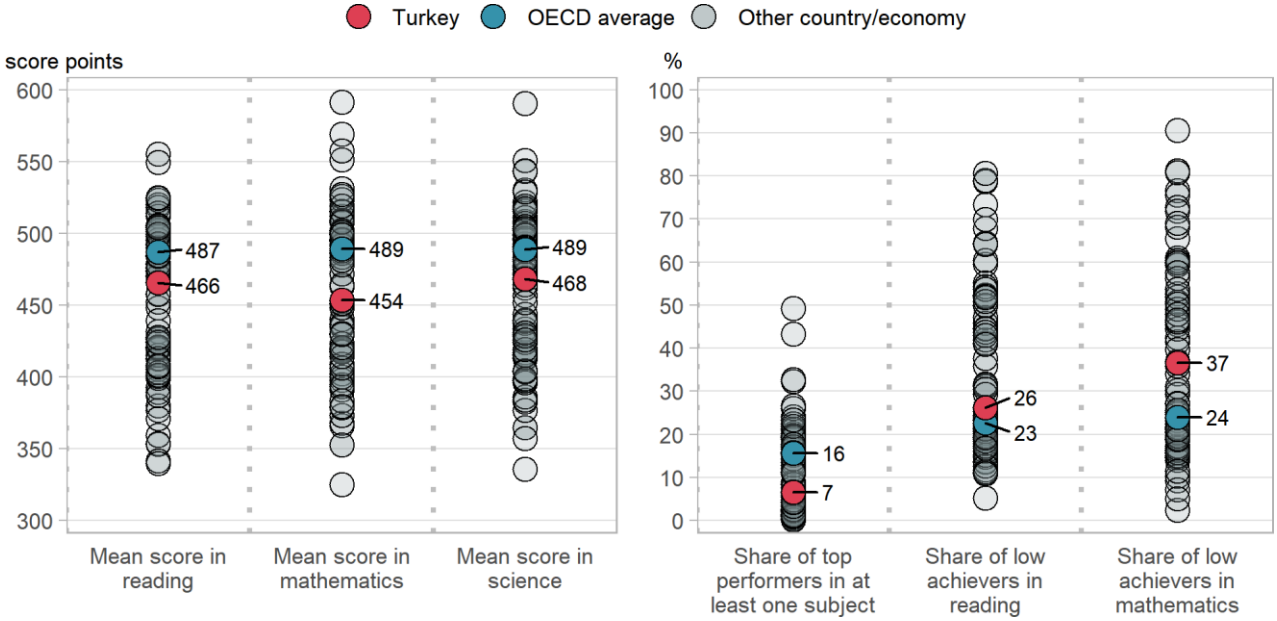
The Programme for International Student Assessment (PISA) is a triennial survey of 15-year-old students that assesses the extent to which they have acquired the key knowledge and skills essential for full participation in society. The assessment focuses on proficiency in reading, mathematics, science and an innovative domain (in 2018, the innovative domain was global competence), and on students' well-being.

Note: Only countries and economies with available data are shown. Source: OECD, PISA 2018 Database, Tables I.1 and I.10.1.

Students in Turkey scored lower than the OECD average in reading, mathematics and science.

- Compared to the OECD average, a smaller proportion of students in Turkey performed at the highest levels of proficiency (Level 5 or 6) in at least one subject; at the same time a smaller proportion of students achieved a minimum level of proficiency (Level 2 or higher) in at least one subject.

Figure 1. Snapshot of performance in reading, mathematics and science



What students know and can do in reading

• In Turkey, 74% of students attained at least Level 2 proficiency in reading (OECD average: 77%). At a minimum, these students can identify the main idea in a text of moderate length, find information based on explicit, though sometimes complex criteria, and can reflect on the purpose and form of texts when explicitly directed to do so.

• Some 3% of students in Turkey were top performers in reading, meaning that they attained Level 5 or 6 in the PISA reading test (OECD average: 9%). At these levels, students can comprehend lengthy texts, deal with concepts that are abstract or counterintuitive, and establish distinctions between fact and opinion, based on implicit cues pertaining to the content or source of the information. In 20 education systems, including those of 15 OECD countries, more than 10% of 15-year-old students were top performers.

What students know and can do in mathematics

• Some 63% of students in Turkey attained Level 2 or higher in mathematics (OECD average: 76%). At a minimum, these students can interpret and recognise, without direct instructions, how a (simple) situation can be represented mathematically (e.g. comparing the total distance across two alternative routes, or converting prices into a different currency). The share of 15-year-old students who attained minimum levels of proficiency in mathematics (Level 2 or

higher) varied widely – from 98% in Beijing, Shanghai, Jiangsu and Zhejiang (China) to 2% in Zambia, which participated in the PISA for Development assessment in 2017. On average across OECD countries, 76% of students attained at least Level 2 proficiency in mathematics.

• In Turkey, 5% of students scored at Level 5 or higher in mathematics (OECD average: 11%). Six Asian countries and economies had the largest shares of students who did so: Beijing, Shanghai, Jiangsu and Zhejiang (China) (44%), Singapore (37%), Hong Kong (China) (29%), Macao (China) (28%), Chinese Taipei (23%) and Korea (21%). These students can model complex situations mathematically, and can select, compare and evaluate appropriate problem-solving strategies for dealing with them.

What students know and can do in science

• Some 75% of students in Turkey attained Level 2 or higher in science (OECD average: 78%). At a minimum, these students can recognise the correct explanation for familiar scientific phenomena and can use such knowledge to identify, in simple cases, whether a conclusion is valid based on the data provided.

• In Turkey, 2% of students were top performers in science, meaning that they were proficient at Level 5 or 6 (OECD average: 7%). These students can creatively and autonomously apply their knowledge of and about science to a wide variety of situations, including unfamiliar ones.

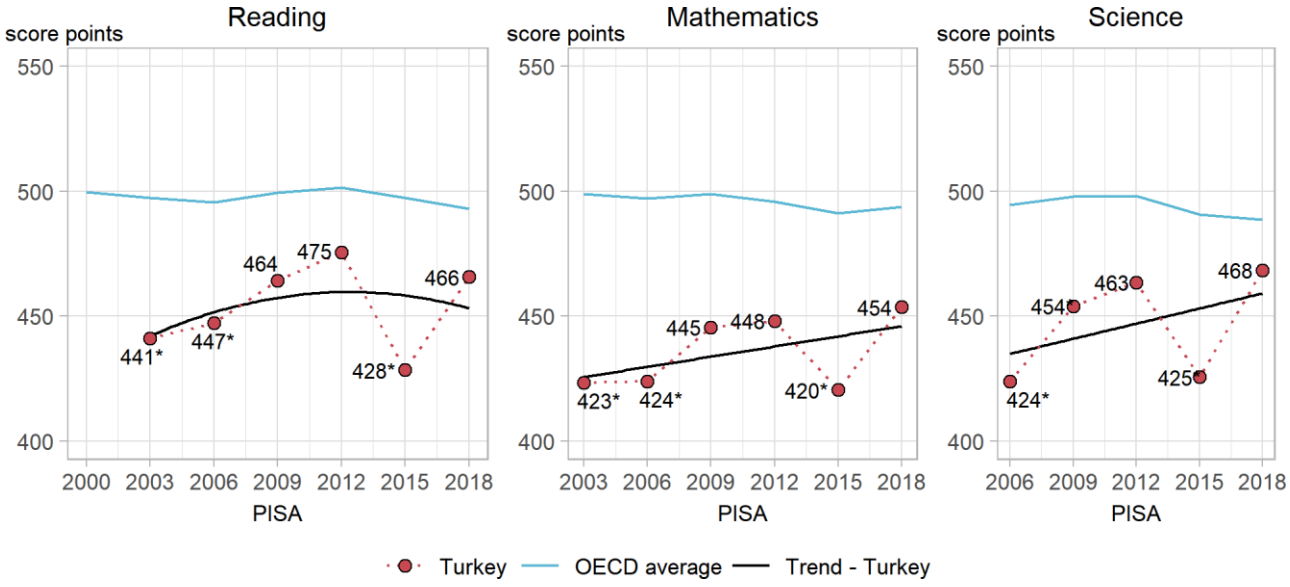
Performance trends

Notes: *indicates mean-performance estimates that are statistically significantly above or below PISA 2018 estimates for Turkey.

The blue line indicates the average mean performance across OECD countries with valid data in all PISA assessments. The red dotted line indicates mean performance in Turkey. The black line represents a trend line for Turkey (line of best fit).

Source: OECD, PISA 2018 Database, Tables I. B1.10, I. B1.11 and I. B1.12.

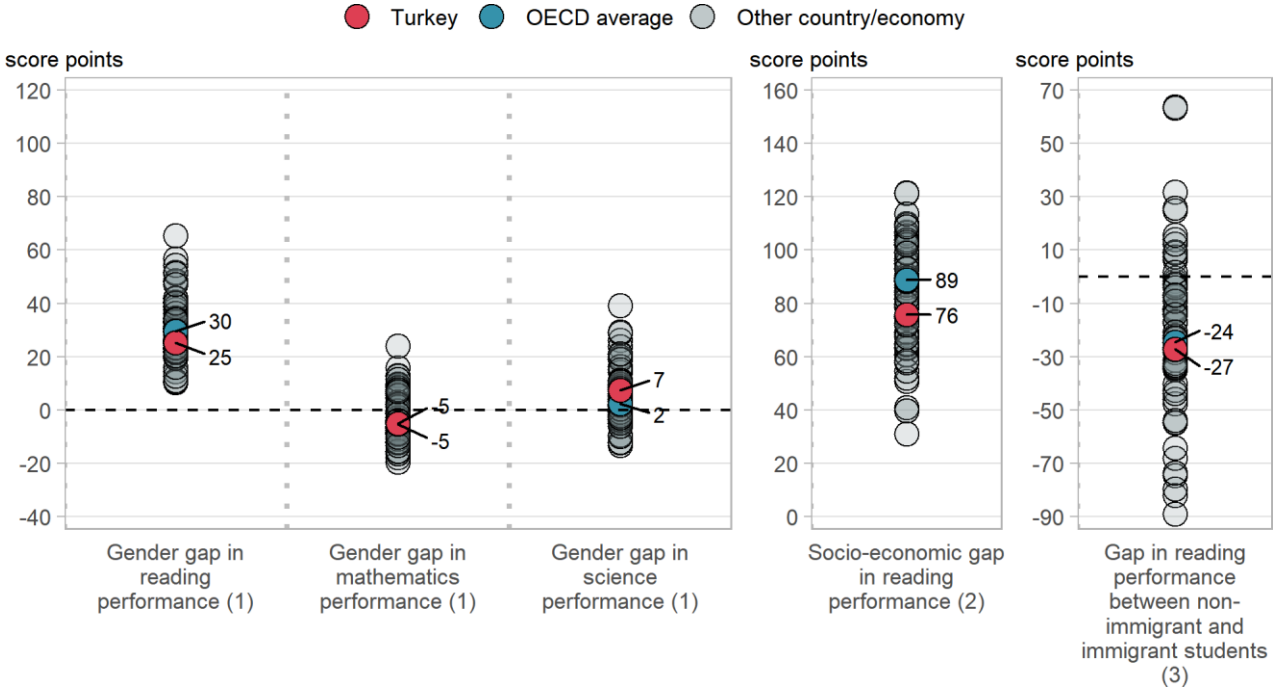
Figure 2. Trends in performance in reading, mathematics and science



Turkey's mean performance in PISA 2018, in all three subjects, was not significantly different from that observed in 2009 or 2012 and was significantly higher than the level observed in 2003 and 2006. When considering results from all years, it is clear that PISA 2015 results – which were considerably lower – were anomalous, and neither the decline between 2012 and 2015, nor the recovery between 2015 and 2018, reflect the long-term trajectory. Overall, this trajectory is clearly positive in mathematics (over the 2003-18 period) and in science (2006-18). In mathematics, improvements were more pronounced at the bottom of the performance distribution, amongst the lowest-achieving students, who caught up to the higher-performing students.

These performance trends were observed over a period of rapid expansion of secondary education. Between 2003 and 2018, Turkey added more than 400 000 students to the total population of 15-year- olds eligible to participate in PISA; the proportion of 15-year-olds who were covered by PISA samples more than doubled, from about 36% in 2003 to 73% in 2018. It is likely that this expansion in education opportunities dampened a more positive underlying trend in student performance. Indeed, a simulation that assumes that the top-scoring 25% of 15-year-olds were eligible to take the test in any given year shows a positive trend amongst this population in mathematics (since 2003) and science (since 2006).

Figure 3. Differences in performance related to personal characteristics



Notes: Only countries and economies with available data are shown. (1) Girls' minus boys' performance; (2) Advantaged minus disadvantaged students' performance; (3) Immigrants' minus non-immigrants' performance in reading; After accounting for students' and schools' socio-economic profile.

Source: OECD, PISA 2018 Database, Tables II.B1.2.3, II.B1.7.1, II.B1.7.3, II.B1.7.5 and II.B1.9.3.

Equity related to socio-economic status

In Turkey, socio-economically advantaged students outperformed disadvantaged students in reading by 76 score points in PISA 2018. This is not significantly different from the average difference between the two groups (89 score points) across OECD countries. In PISA 2009, the performance gap related to socio-economic status was 92 score points in Turkey (and 87 score points on average across OECD countries).

Some 9% of advantaged students in Turkey, but 1% of disadvantaged students, were top performers in reading in PISA 2018. On average across OECD countries, 17% of advantaged students, and 3% of disadvantaged students, were top performers in reading.

Socio-economic status was a strong predictor of performance in mathematics and science in all PISA participating countries. It explained 11% of the variation in mathematics performance in

PISA 2018 in Turkey (compared to 14% on average across OECD countries), and 11% of the variation in science performance (compared to the OECD average of 13% of the variation).

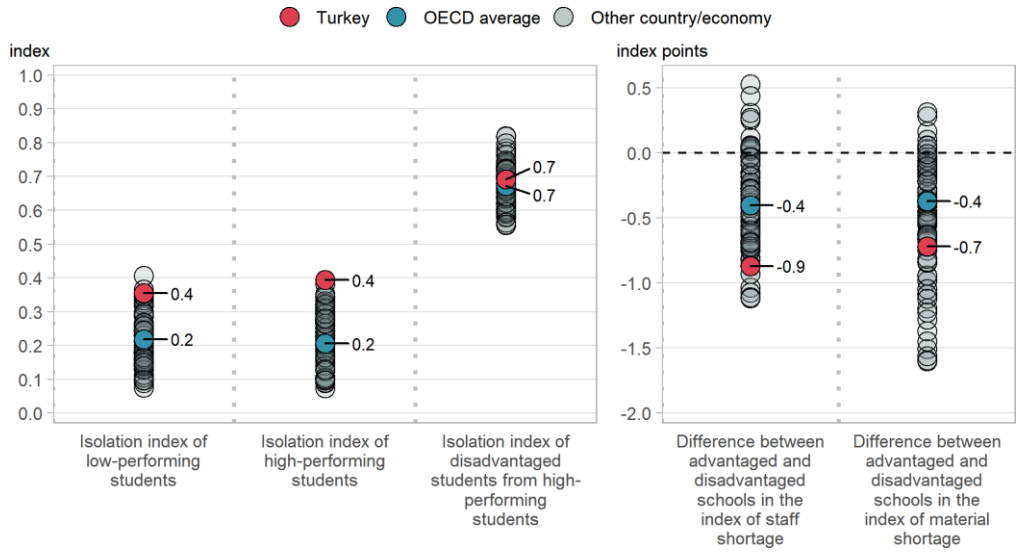
Some 15% of disadvantaged students in Turkey were able to score in the top quarter of reading performance within Turkey, indicating that disadvantage is not destiny. On average across OECD countries, 11% of disadvantaged students scored amongst the highest performers in reading in their countries.

In Turkey, low- and high-performing students are clustered in the same schools more often than the OECD average.

Notes: Only countries and economies with available data are shown. The isolation indices ranging from 0 (no segregation) to 1 (full segregation) measure whether low-/high-performing students or disadvantaged students are more or less concentrated in some schools. See detailed description of the indices in Volume II Chapter 4.

Source: OECD, PISA 2018 Database, Tables II.B1.4.1, II.B1.4.8, II.B1.5.13 and II.B1.5.14.

Figure 4. School segregation, and gap in material and staff shortage between advantaged and disadvantaged schools



School principals in Turkey reported a similar level of staff shortage and less material shortage than the OECD average; and school principals of disadvantaged schools more often reported staff shortage than principals of advantaged schools. In Turkey, 27% of students enrolled in a disadvantaged school and 5% of students enrolled in an advantaged school attend a school whose principal reported that the capacity of the school to provide instruction is hindered

at least to some extent by a lack of teaching staff. On average across OECD countries, 34% of students in disadvantaged schools and 18% of students in advantaged schools attend such a school.

According to school principals in Turkey, 63% of teachers in advantaged schools and 94% of teachers in disadvantaged schools are "fully certified". The proportions of teachers with at least a master's degree are similar in advantaged and disadvantaged schools.

Many students, especially disadvantaged students, hold lower ambitions than would be expected given their academic achievement. In Turkey, 1 in 20 high-achieving disadvantaged students – but 1 in 50 high-achieving advantaged students – do not expect to complete tertiary education.

Equity related to gender

In all countries and economies that participated in PISA 2018, girls significantly outperformed boys in reading – by 30 score points on average across OECD countries. In Turkey, the gender gap in reading (25 score points) was not significantly different from the average gap. The gap was lower than that observed in 2009 (43 score points), and both boys' and girls' performance remained stable over the period.

In Turkey, girls scored similar to boys in mathematics. Across OECD countries, boys outperformed girls by five score points. While girls slightly outperformed boys in science (by two score points) on average across OECD countries in PISA 2018, in Turkey girls outperformed boys in science by seven score points.

Amongst high-performing students in mathematics or science, one in three boys in Turkey expect to work as an engineer or science professional at the age of 30, while about one in five girls expects to do so (the difference is not statistically significant). About one in two high-performing girls expects to work in health-related professions, while about one in four high-performing boys expects to do so. Some 2% of boys and a negligible percentage of girls in Turkey expect to work in ICT-related professions.

How do students in Turkey feel about their lives and learning?

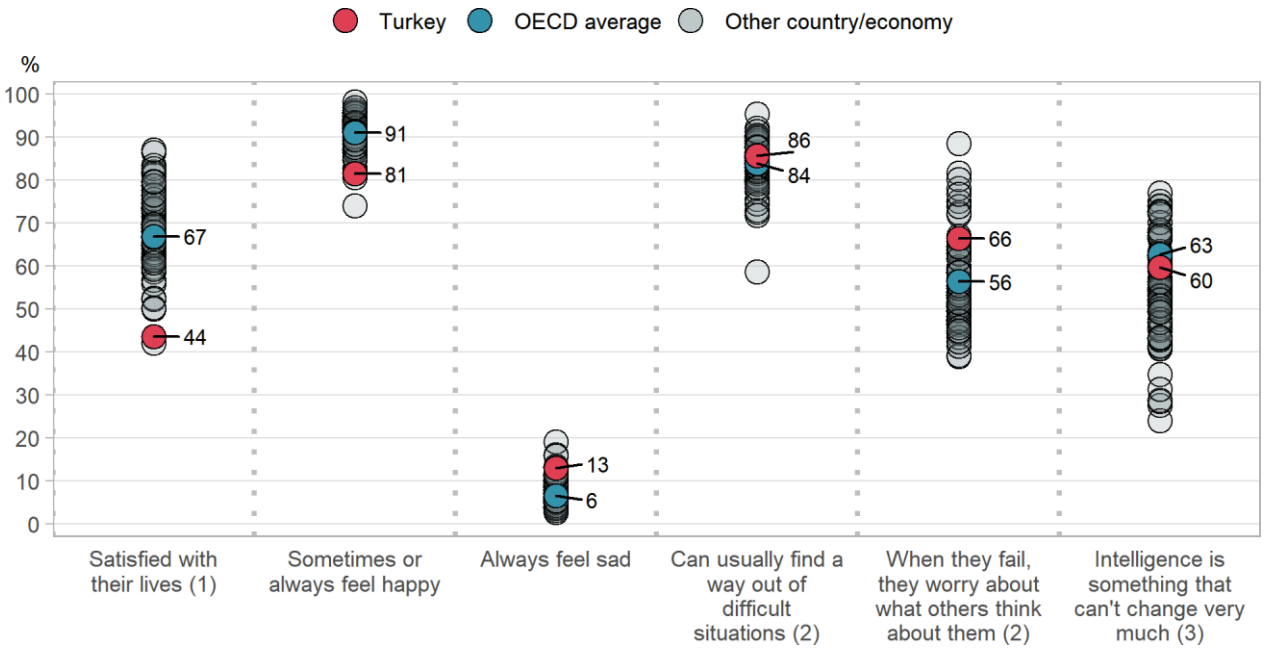
In Turkey, 44% of students (OECD average: 67%) reported that they are satisfied with their lives (students who reported between 7 and 10 on the 10-point life-satisfaction scale).

Some 81% of students in Turkey reported sometimes or always feeling happy and about 13% of students reported always feeling sad. In most countries and economies, students were more likely to report positive feelings when they reported a stronger sense of belonging at school and greater student co-operation, and were more likely to express sadness when they were bullied more frequently.

In Turkey, 86% of students agreed or strongly agreed that they can usually find a way out of difficult situations (OECD average: 84%), and 66% agreed or strongly agreed that, when they fail, they worry about what others think of them (OECD average: 56% of students). In almost every education system, including Turkey, girls expressed greater fear of failure than boys, and this gender gap was considerably wider amongst top-performing students.

A majority of students across OECD countries holds a growth mindset (they disagreed or strongly disagreed with the statement "Your intelligence is something about you that you can't change very much"). In Turkey, 60% of students hold a growth mindset.

Figure 6. Student well-being and growth mindset



Notes: Only countries and economies with available data are shown. (1) Between 7 and 10 on the life-satisfaction scale; (2) Agreed or strongly agreed; (3) Disagreed or strongly disagreed. Source: OECD, PISA 2018 Database, Tables III.B1.11.1, III.B1.12.1, III.B1.12.2, III.B1.13.1, III.B1.13.2 and III.B1.14.1

Causes of functional illiteracy (national level)

Considering the 2015 PISA data, in the field of reading skills it is seen that 50 of Turkey's 72 countries. Similarly, according to UNESCO data rate of Turkey habit of reading books in the world is ranked 86th among the countires in the world. When TURKSTAT data is reviewed, the newspaper and the number of journals bought by people decreased by 7.9% compared to 2015, newspaper and magazine circulation fell 20%. When looking at the distribution of total cultural expenditure, television and television broadcasting expenditures accounted for 28.2%, while book, newspaper and culture expenses such as magazines remained at 12.4%. National Library and the public while the number of books in university libraries increases, their number has decreased.

When we examine the report published by the Ministry of Culture in 2011, a person reads average of 7.2 books a year in Turkey, no publisher preference is made in the selection of books, doesn't need to use public libraries.

According to the data compiled from various sources of information, in Turkey one person spends for 6 hours per day for television, 3 hours on the internet and only 1 minute for the book. Book takes place on the 235 rank on the list of needs. In Turkey, only 4 people out of 100 regularly read books, habit of giving books to children as a gift ranks 140 among 180 countries.

There are several reasons why people don't read in Turkey but the main reason is that people believe they won't be able to gain reputation and respect by reading.

Today an important part of Turkey, answer the question "Why do not read the book?" as "the use of television and mobile phones". Topcuoglu Ünal and Yiğit (2014). A research indicates date while families are trying to bring reading habit their children, computer and television are the most important obstacles preventing children to read.

Researches point out the in particular Turkish language teachers do not have necessary knowledge about children's books and this lead to a misguiding children for the most suitable books for them. Libraries play an important role in the development of reading skills. Almost half (49.7%) of secondary school students do not use libraries. They generally go to the libraries for the purpose of studying and doing homework.

Gender based inequalities

A research named *"Literacy and illiteracy from illiterate Turkish women's perspectives: A phenomenological study"* indicates the reasons of illeteracy from Turkish women's

perspectives. The findings of the study are collected under two main dimensions. The first is "the reasons of illiteracy" and the second is "the perception of literacy".

The reasons for illiteracy was examined in two terms as childhood and adulthood periods which are related to the life processes of the participants. Taken as a whole, the main reason behind the illiteracy of the participants has been determined as "gender perception".

Family is one of the main reasons that prevent participants from being literate in childhood or the society in which there are negative attitudes towards girls' reading has been seen.

All of the participants stated that they did household chores, transport water, they took care of and grazing animals. This situation shows that the social / cultural structure in which they live in is dominant in the gender roles of girls. This traditional structure is affects their role in the society.

Participants are often concerned with transport, health, child education and the family economy. They stated that they had problems with these issues.

The transportation problem is one of the biggest problems that illiterate women faced. They expressed that they had difficulties in which car to get in, where and how to get in and how to get back.

From the interviews, it is understood that women who are illiterate, experience difficulties in such matters like planning the family budget, income and tracking expenses, bank affairs, credit card usage, grocery shopping, discounts etc.

Another area that illiterate women have problems is health issues. They stated that they had difficulties in finding where to be examined, finding the relevant units in the hospital, and performing the procedures regarding documents and a number of examinations

Threats (national level)

Class, regional and gender-based inequalities in education are clearly seen in illiteracy. The rate of illiteracy increases as one moves from urban to rural, from west to east, from high-income groups to lower classes, from men to women, from young to old. The most significant difference is seen in income status. Illiteracy rate is high among the poor who represent the lowest income quintile of the population (DPT, 2001). Therefore, the rate of illiteracy increases as one goes from the rural to the city and from Western Anatolia, where income distribution is high, to the East.

Illiteracy and low schooling have also turned into a gender problem. Since 1995 (Beijing Conference), within the framework of developing educational policies that can respond to the state's gender roles, it aims to "especially encourage girls to education". Instead of gender-based education and literacy program, it is essential to give equal opportunities and responsibilities to both genders. Therefore, female illiteracy and girls' schooling rates have improved, but the gender issue in education continues to be a major problem. The rate of illiterate women, which is 14.5% in urban areas, increases to 30.7% in rural areas. On the other hand, illiteracy problem, which is still ongoing, due to migration from rural to urban and east to west, is being carried to cities. There are serious illiterate women in the metropolitan areas of the receiving cities, especially in the slum areas. One out of every five women in the shantytowns of Ankara seem illiterate. Women illiteracy is tried to be controlled with campaigns aimed at increasing the schooling rates of girls and reducing school dropouts. Various campaigns are carried out in this field in cooperation with NGOs and UNICEF.

One of the reasons preventing the increase of levels of literacy and the promotion of reading culture is that society is still the big impact of oral culture in rural areas. Oral culture offers a wide array of social relationships that allow illiteracy to survive. The need for literacy skills differs between a person living in a rural area, where oral culture is more lively, and a person living in a metropolis. In urban areas that receive heavy migration from rural areas, oral culture functions as a bond of solidarity and enables illiterate people to continue their daily lives. On the other hand, the rapid transition of this mass from oral culture to visual culture has also quenched the need for being literate. Since the early 1990s, mass communication tools, which have been increasing in number rapidly, have offered the whole society an indirect opportunity to participate in culture and society by eliminating spatial distinctions such as rural cities and near distances. The ease of the verbal culture of the urban and rural illiterate population who do not have a functional expectation (employment, job) of being literate has reduced the motivation to become literate due to the opportunities provided by visual culture.

Measures that have been taken so far to combat and prevent functional illiteracy (national level)

With the letter of the Ministry of National Education General Directorate of Lifelong Learning dated 05.02.2018 and numbered 15923718-10.06.01-E.2350838 on literacy campaign,

literacy campaign was started in our country with the circular numbered 2018/4. The right to education included in the Constitution and especially adult literacy education constitute the basis of lifelong learning. According to Turk Stat data, in 2017, 60 million of Turkey's population is 14 years and above. Out of this population, 2,462,613 (4.09%) of those out of the formal education age are still illiterate. For this purpose, the Literacy Campaign was planned to be started.

Literacy Campaign, which was officially launched under the auspices of President Recep Tayyip Erdoğan and his wife First Lady Emine Erdoğan on February 5, 2018 and will continue until all citizens are literate.

Up to now, 855. 353 people learned read and write. 113.828 courses were opened. 50.000 teachers worked in these courses. 85% of the participants were women. 45% of the participants were aged between 24-45.

In order to support Literacy Campaign, a mobile application called READ-WRITE was put into service on the Education Information Network (EBA) by the General Directorate of Innovation and Educational Technologies. Course videos were published on EBA. In this context, educational materials were printed and distributed.

In this campaign, "Intensive Basic Level Reading and Writing Instruction" program was prepared for adults for the first time by the Board of Education in order for the elderly to learn how to read and write more easily and appropriate textbooks were published.

In this campaign language and mental skills related to listening / watching, speaking, literacy, which adults can use lifelong, enabling them to acquire basic mathematical skills with the skills expected to have in daily life of adults, the short course duration were taken into account. The Literacy Campaign continues in public education centers throughout the country, in public schools closest to the citizens.

Suggestions

Monitoring and evaluation studies within the scope of process-oriented evaluation in education needs to be done.

Regarding the measurement of educational outcomes and the factors affecting educational outcomes, providing feedback to stakeholders is important to increase the quality of education. In order to increase the function of preparing the individual for life, which is the most basic purpose of schools, daily life skills must be measured. The texts, which are the main tools of

the Turkish lesson, must have qualifications that develop thinking skills. In the reading process, open-ended questions need to be integrated with the writing process

Students learn their own reading processes to become independent readers. Improvements should be made to gain metacognitive reading strategies to help students manage their own reading processes to become independent readers. School libraries should be updated according to the students' interests. Subjects such as blogging, e-mail, CV writing, which have a place in daily life, should be included and applied in teaching programs

Students should be equipped with the skills of writing business letters, petitions, and complaints, taking into account the real problems they may face in daily life. In order to gain skills such as reading comprehension, interpretation, comparison and conclusion, it should be ensured that the correct texts are included in the teaching programs and they reach a selective reader level with these skills.

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3. Functional illiteracy - compatative study (common causes, effects and threats, difficulties in developing the student`s literacy). Countries of interest: Romania, Croatia, Greece, Italy, Lithuania, North Macedonia, Turkey.

The concept of functional literacy is presented similarly in all partners' diagnostic studies. UNESCO definitions of functional illiteracy were quoted in the diagnostic studies of Romania, Greece, Italy, Turkey and North Macedonia. There they all agree that a functionally illiterate person is "a person without basic learning skills needed to engage in activities meant to ensure a normal function in his or her group or community with the goal of personal and social development." Some of the partner countries elaborate certain aspects of (il)literacy. Italian partner defines illiteracy mainly by quoting UNESCO definitions, but also functional illiteracy is contrasted with illiteracy in the strict sense, meaning the inability to read or write simple sentences in any language.

In the study of functional illiteracy in Croatia, different definitions, studies, and analyses used in the country were elaborately explained. They elaborate the notion that a literate person is "Every person with completed primary school who is compulsory for all citizens of the Republic of Croatia.", and also refer to Croatian Readers' Society distinction between elementary or primary literacy, secondary or functional literacy and tertiary literacy. Added to the previous, clearly and concisely put in the Lithuanian study "Functional illiteracy means that a person cannot use reading, writing, and calculation skills for his/her own and the community's development." In Greece, one is officially considered illiterate if one has failed to obtain the Primary School certificate, which is after attending school for six years. Their study maintains that these individuals have grown up amidst literacy and have indeed the ability to read and write; they, however, fail to comprehend complex sentences and write thus drawing the researcher's attention to people's level of literacy. In the North Macedonian study functional literacy is defined as a concept that includes knowledge, skills and values that enable the individual to control his / her own life in a quality manner, performing basic civic duties and solving various problems at the workplace, in the family and in social life in general. Turkish partner explains that the term literacy is mostly used for young people and adults. Functional literacy is seen not only as reading and writing but also using them in daily life, a way of one's preparation to its social, economic, civic duties and roles.

Clarifying the definition of functional illiteracy, Romanian study defines functional illiteracy as incapacity of a person to understand the instruction on how to use a product, to read

products labels, to memorize and apply the condition of use, safekeeping and recycle of products. A functional illiterate has difficulty on filling out a form; he/she reads with difficulty newspapers, does not understand traffic signs and has a hard time in consulting a dictionary or a travel schedule.

Statistical comparision between the countries of interest for this project

Fig. 1 Overall evolution of the PISA results form 2006 to 2018

Country	PISA results 2006			PISA results 2009		
	Reading	Mathematics	Science	Reading	Mathematics	Science
Croatia	477	467	493	476	460	486
Greece	460	459	460	483	466	470
Italy	469	462	475	486	483	489
Lithuania	470	486	488	468	477	491
North Macedonia	NA	NA	NA	NA	NA	NA
Romania	396	415	418	424	427	428
Turkey	447	424	424	464	445	454

PISA results 2012			PISA results 2015			PISA results 2018		
Reading	Mathematics	Science	Reading	Mathematics	Science	Reading	Mathematics	Science
485	471	491	487	464	475	479	464	472
477	453	467	467	454	455	457	451	452
490	485	494	485	490	481	476	487	468
477	479	496	472	478	475	476	481	481
NA	NA	NA	NA	NA	NA	393	394	413
438	445	439	434	444	435	428	430	426
475	448	463	428	420	425	466	454	468

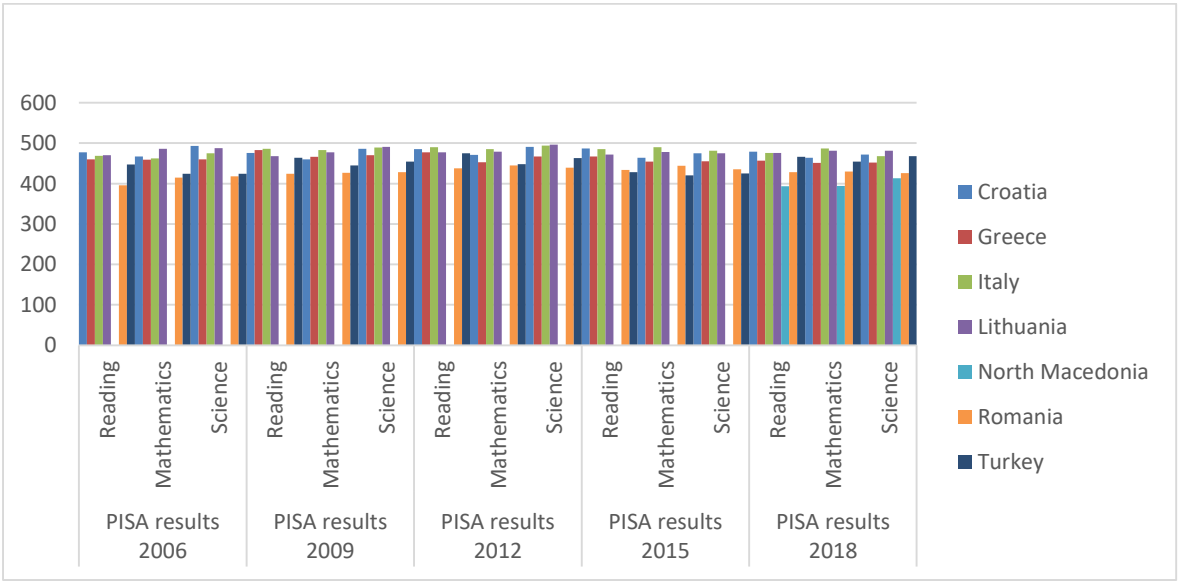
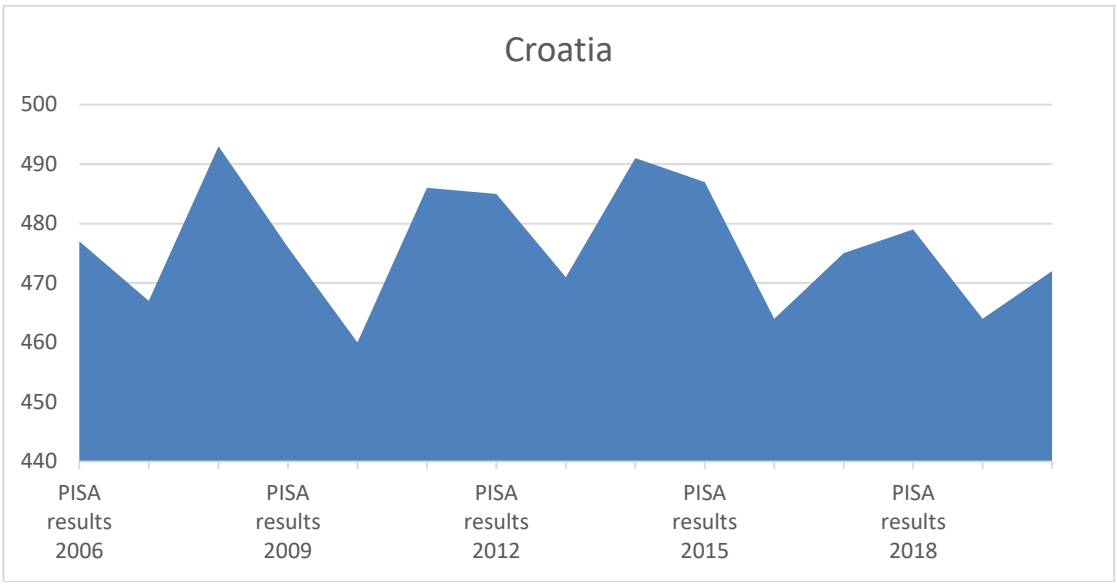
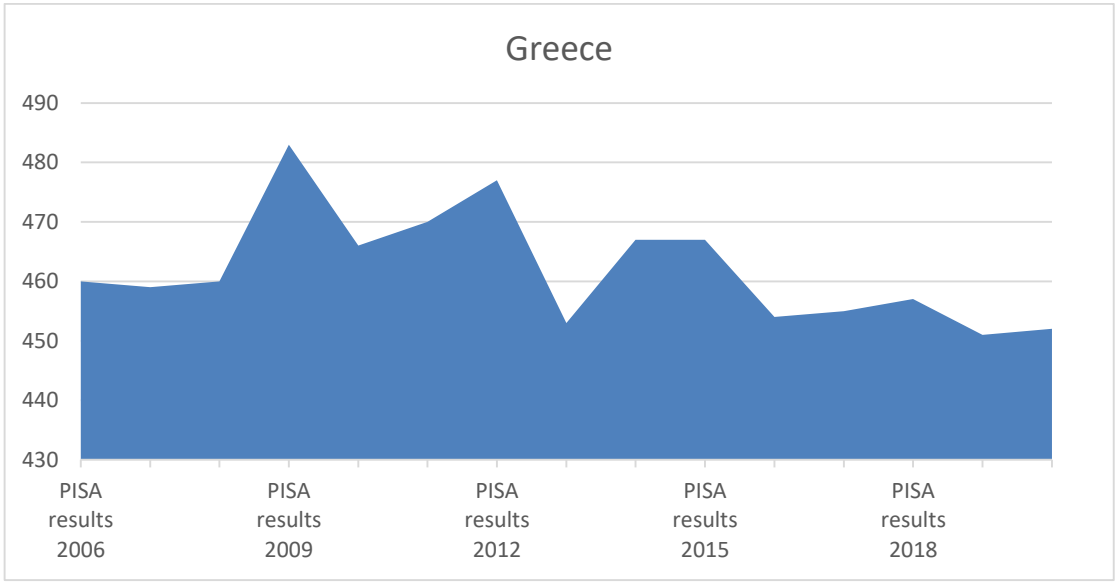


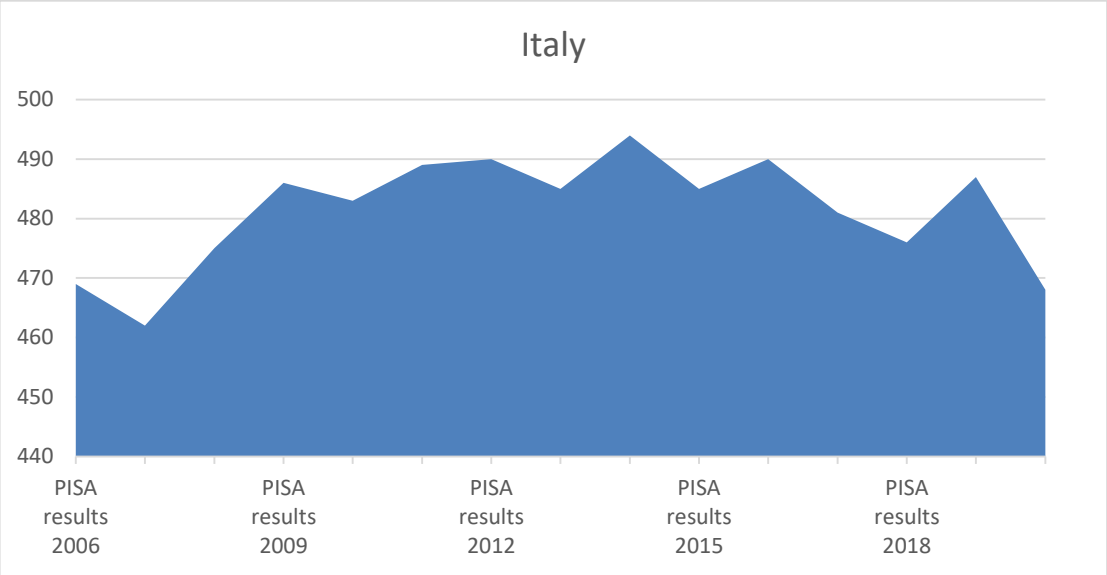
Fig. 2 Evolution of PISA results by country



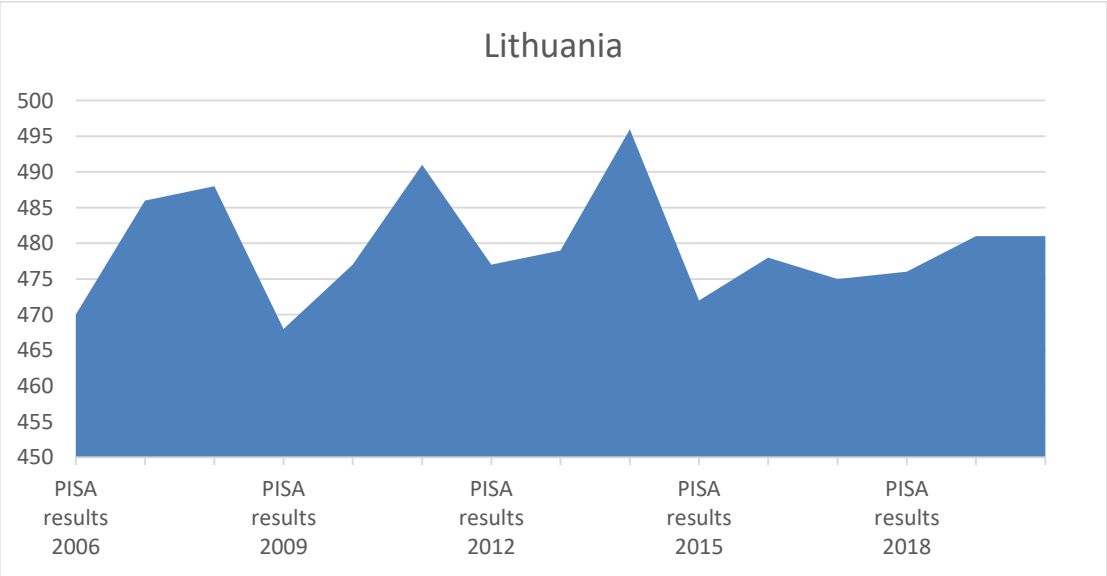
Croatian 15-year-olds achieve average and bellow average results in international knowledge assessments (PISA) in language and mathematics literacy and science. The performance of the students over the past ten years has stagnated at best or, as in the case of science literacy, declined.



Students in Greece scored lower than the OECD average in reading, mathematics and science. Compared to the OECD average, a smaller proportion of students in Greece performed at the highest levels of proficiency (Level 5 or 6) in at least one subject; at the same time a smaller proportion of students achieved a minimum level of proficiency (Level 2 or higher) in at least one subject.

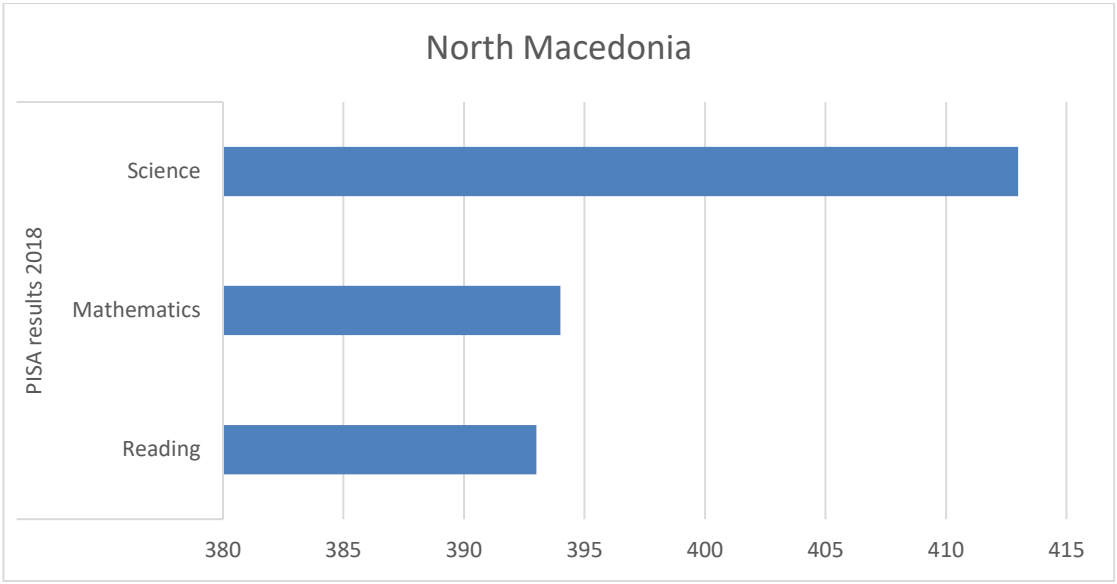


Italy has a more accurate image on the degree of illiterate people, due to the participation on three evaluation programms: PISA, PIRLS and PIAAC. Italy performed above the EU average in PIRLS and very close in PISA. Results seem stable over time, since PIRLS in 2001 and 2011 show the same scores. The pattern by level of performance is very close to European countries on average in both PISA and in PIRLS except as for the proportion of low-performers which has decreased and is now lower than the EU on average.

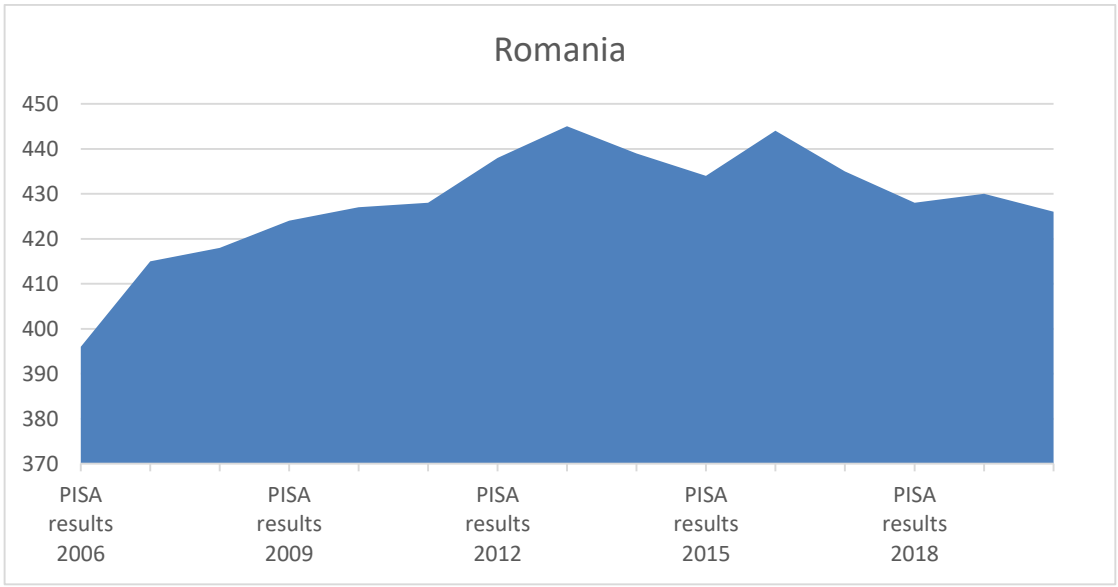


Based on Programme for International Student Assessment (PISA) data delivered by the Organization for Economic and Social Cooperation and Development (OECD), pupils' reading skills, nature science and mathematics achievements are lower than the EU average. PISA 2018 results revealed that the achievements of 15-year-olds in Lithuania are still below the average

among OECD countries' results. Comparing them with the PISA 2015 results, it is clear that the level of achievements has increased only by a little.

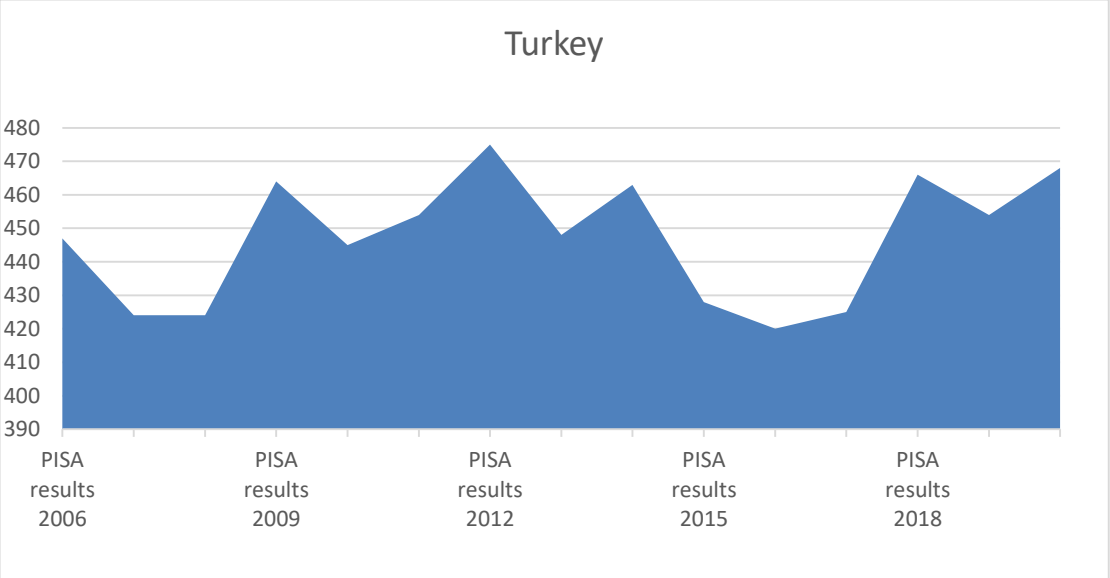


While performance is still significantly below the OECD average in reading, mathematics and science, the percentage of low performers in each subject shrank. Improvements were observed throughout the performance distribution, as the lowest- and highest achieving students improved their proficiency between 2015 and 2018. The highest- and lowest performing students in mathematics saw similar improvements in performance, while the highest performing students in science improved significantly more than the lowest performing students.



According to the international report by the Organisation for Economic Cooperation and Development, following the PISA tests, in 2015, places Romania in the penultimate position

among the 28 EU states, in the reading performance indicator; in mathematical performance, Romania ranks the antepenultimate position among the 28 EU states; in case of the science performance indicator, Romania ranks in the penultimate position among the 28 EU states. Romania has the worst results in the last 9 years in the 2018 PISA tests.



Students in Turkey scored lowerthan the OECD avarage, in reading, mathematics and science. Turkey's mean performance in PISA 2018, in all three subjects, was not significantly different from that observed in 2009 or 2012 and was significantly higher than the level observed in 2003 and 2006. When considering results from all years, it is clear that PISA 2015 results – which were considerably lower – were anomalous, and neither the decline between 2012 and 2015, nor the recovery between 2015 and 2018, reflect the long-term trajectory.

Common causes of functional illiteracy

The causes of functional illiteracy are in a crossroad of individual and social environment (economic, cultural, educational, political environments) in all 7 countries, participating in a project. The causes of illiteracy are multiple and depend on several factors:

Individual factors: academic performance, student behaviour, attitude towards school, family history, ethnicity, low cognitive skills, low motivation. It can be stated that the family background and the language patterns used at home along with the emphasis given by the family iteslf on literacy all play a very important role on the acquisiton of literacy. Family history leads to the inability to focus on education when at a young age, especially when one lives in a rural area. There is a huge lack of students motivation to enhance their cognitive skills. Social inequalities

play an important role as well since children from marginalized families tend to be facing learning difficulties due to low living standards. The lack of an encouraging and motivating model in a child's family for acquiring new skills, having new experiences, can lead to an unmotivated learning style in school.

Socio-economic factors: residence environment, income level, low level of parental education, poor communication in the family. "Dysfunctional contexts" are very important in all the countries, especially when one lives in a "depressing social and economic situation". Parent's indifference to children's schooling leads to functional illiteracy as well. Poor education prospects goes from generation to generation. Uneducated parents often do not evaluate the need of education and do not encourage their children to seek one.The complexity of modern living conditions and their rapid development influence the poor communication in the families.

At the educational level, the causes are: learning methods such as memorization, lack of student-centred teaching methods, poor learning strategies, increased level of illiteracy among parents. The capacities and the budget for this type of support are limited in terms of limited number of staff and funding allocated by the countries government. It can be stated that in all partner countries there is aproblem with national training. There is no working system of measuring of effectiveness of these trainings, or linking it with the results from national, external or international assessments (TIMSS, PIRLS and PISA). Large number of students in classes and low school attendance is a cause of functional illiteracy as well as fear of failure on the part of the students to meet teacher's expectations and requirements. School literacy is often promoted along the lines of rote memorization on the part of the students, who are often asked to read short passages and provide non-interpretative answers to teacher's questions. Primary and secondary school teachers have no opportunity to take care the individual level of each student, therefore the children with feeble abilities or low motivation fall behind in long-term.

At the socio-cultural level: ethnic groups (Roma, migrants), value system brakdown, low family support, family conflicts, family dissolution, family violence. Family is one of the main reasons that prevent participants from being illiterate in childhood. The situation shows that the social / cultural structure in which students live in is dominant.

At the individual level: attention disorders, dyslexia, intellectual impairments, socio-emotional impairments, physical/sensory/motor/somatic disabilities, poor motivational system, language disorders, learning difficulties, critical thinking skills and poorly developed problem solving.

Poor educational policies (creating an environment that fosters reading, teachers' resources for teaching reading, libraries or the absence of campaigns that promote reading) Closure of rural schools centralizing and narrowing the national school network does not suggest the quality of education. A prolonged distance to educational institution does not strengthen the motivation.

Teacher training and selection (initial and continuous teacher training can be improved, teaching career attractiveness, pedagogical skills are never really assessed). The fact that it is frequently linked with poverty suggests that some of the causes could be the inadequate provision of schools, an inadequate number of properly trained teachers and the economic situation of families that make education for their children a low priority.

Lack of coherence and predictability in the education system.

Lack of alternative systems of school integration of those who have abandoned.

Lack of reading materials at home. School students do not use libraries. They generally go to the libraries for the purpose of studying and doing homework. A research in the countries indicates date while families try to bring reading habit their children, computer and television are the most important obstacles preventing children to read. Lack of books at home and lack of stimulation is important for reading.

The establishment of informational society and digital media. There is no need to put effort in finding entertainment. It is only a matter of pushing a button and entering a desired word. Games no longer perform a function of education or practice of vital and relevant habits. Technologies encourage the usage of foreign words instead of natives, that way the mother tongue vocabulary becomes poorer. The use of modern technology introducing elements of automation in everyday life exacerbates the problem of illiteracy.

To sum up, literacy is much more than reading and writing, it is a way of communication, acquiring knowledge, learning a language, developing culture. Literacy is seen in many forms: on paper, computer, TV and other media. In addition to elementary or primary literacy, ie knowledge of reading and writing as basic skills, today we use the terms secondary or functional literacy (understanding written instructions in everyday life, eg when using certain products, filling out contracts or forms, orientation in trade, traffic, public institutions, etc.) as well as tertiary (information, computer, Internet, SMS) literacy. It is from these last two forms of literacy or communication that most people are excluded. (Nadriljanski, 2006).

The reasons why literacy is so important are the growing mass communication, the proliferation of communication channels, the progressive technologicalization of the world, the loss of communication limitations, differences between cultures and many others. So the definition of literacy is much more complex and dynamic - it must be constantly updated along with the progressive progress of humanity.

Effects and threats

No matter the tools used to record functional illiteracy, all partner countries participating in the Erasmus+ project *Overcoming Functional Literacy through ICT to ensure social and professional Integration* agreed that (functional) illiteracy is still a plague in the 21st century, often disguising itself, and preventing people from enjoying even the simplest form of happiness which stems from contributing to the society's wellbeing. The common ground is inability to solve problems be it in the family, the workplace or society in the broader sense. Hiding the problem itself is a major cause of concern.

It comes as no surprise, then, that in most of the countries of interest in this study the issue starts quire early on; there is recorded a high rate of absenteeism from school which, in turn, might lead to dropping out of school altogether as maintained in the **Romanian** study. In **Greece**, students often exceed the absences limit at school, making it harder for them to feel integrated in the school community. The **Turkish** study also connects the problem of functional illiteracy to low school attendance and the **Lithuanian** work states that the country records low levels of inclusion in preschool education and adult lifelong learning. Also presented in the **Croatian** study, the problem of functional illiteracy is evident in the school environment; **Croatian** 15-year-olds achieve below average results in international knowledge assessments (PISA4) in language and mathematics as well as in literacy and science, signposting the need for a change in the teaching practices and the ways knowledge is acquired especially in the Primary School, a concern shared by the **Romanian** partner too. As early as 2008, the **North Macedonian** Ministry of Education identified the problem of low students' results in international assessments. In **Lithuania**, students coming from advantageous financial backgrounds outperformed their economically disadvantaged counterparts in the PISA 2018 test; only 1% of the latter achieved the highest grades in the test.

Once adults, functionally illiterate people face income and material benefits related mishaps, which are to be presented further below. However, on no account should one overlook the psychological problems stemming from functional illiteracy, with isolation and depression

being the most prominent ones. Functionally illiterate people are unable to express their inner world and adopt the linguistic code required to bond with their fellow human beings (**Greek** work). The problem has been recorded in all partner studies, with the **North Macedonian** one describing illiterate people as apathetic or experiencing fear. The feeling of fear is also emphasized in the **Romanian** study, which eloquently states that the ones who suffer are constantly worried about their inefficiency coming to light. In the **Greek** work, fear is closely connected to the inferiority complex that might stem from it.

Except for the psychological health risks, functional illiteracy affects all aspects of one's life, with physical health also threatened. Being unable to comprehend instructions, illiterate people are susceptible to more accidents in the workplace and they often tend to abuse medication, thus taking longer to recover, as interestingly stated in the **Italian** study. Health-wise, the Romanian writer also reported that they are in danger of resorting to substance abuse such as tobacco and alcohol consumption, a point that is definitely worth considering.

Following the 2011 census in **Croatia** and the definition of literacy provided since then, the focus is on technology and the ability one possesses to function efficiently in the technological world. As an illiterate person is unable to compose a handwritten application, let alone an online one, they face the looming risk of unemployment, being unable to work on computers, thus losing their social status, since most employment opportunities are computer related these days.

On a similar note, the **Italian** study drew attention to people's facing literacy problems resulting, for example, in an inability to comprehend a Tweet, which, more often than not, comprises few characters. Therefore, it seems that a world of opportunities escapes them. Interestingly, in the same study it is also mentioned that the unemployment rate is 2 to 4 times higher amongst people who received little schooling as opposed to the ones having received a Bachelor's degree. This problem, in the short and in the long run, means that their income is lower and the jobs undertaken by illiterate people are of a lower status, a common ground with people facing similar problems in **Croatia**. When it comes to technology in particular, the digital divide becomes wider between the developed and the developing world, with the ones who suffer the consequences of functional illiteracy being unable to perceive the changes happening in their own lifetime, thus not taking advantage of their skills and aptitudes (as mentioned in the **Greek** article).

All partner countries have identified the threat of one's facing the danger of being unemployed due to (functional) illiteracy. The **Croatian** study provides an alternative name for it,

namely *secondary illiteracy*. Inability to fill out application forms and handling digital tools efficiently (*tertiary illiteracy*, definition also provided in the **Croatian** study) means that one is excluded from certain parts of society, failing to exploit the potential available in the modern world. The **Romanian** study's results are very close to the aforementioned problem; on the professional level, illiterates gain no leverage, which often results in depression and in their being disassociated from others. An interesting example is cogently cited to depict the bleak picture of life functionally illiterates face on a daily basis; their inability to use an ATM and their always being dependent on others is a serious cause of concern, as it unavoidably leads to depression and isolation. Similar difficulties have been recorded in all partner studies.

A sceptic would probably not be tempted to reconsider illiterate people's danger of being excluded from the modern world, were it not for the fact that it seems like a tall order for some of them to read and comprehend even food labels, thus being unable to meet even the most basic of their needs, such as quenching thirst and satisfying hunger. The **Lithuanian** study has brought this problem to the foreground, a fact which calls for the intervention of the school and the state both on a national and on an international level, as it also true of other countries as well.

Disadvantageous geographical location and low income undoubtedly both play a predominant role in allowing functional illiteracy to creep into daily life, as it is obvious from the **Lithuanian** and the **Turkish** studies. The **Turkish** partner, in particular, shed light on the concept of the country's oral tradition which [albeit captivating at first glance] can have a detrimental effect to people acquiring functional literacy. The ones relying on oral tradition and establishing their social relationships via it, find it harder to embrace the need for developing their literacy skills. The rate of illiterate women increases to 30.7% in rural areas in **Turkey** as opposed to that of the urban areas, where it is 14.5%, and has called for the intervention of NGOs and UNICEF. Migration from rural to urban areas, allowing oral tradition to be the predominant tool of communication affects women to a great extent in **Turkey**, reminding the reader that the United Nations' number 5 sustainable goal, concerning gender equality, has not been met yet. This particular conclusion comes in contrast to one of the points maintained in the **Greek** study, in which it is stated that women outperform men in literacy and numeracy. However, the ones who ARE illiterate tend to have problems experiencing the fruits of emancipation in **Greece.**

Another interesting point, one should not fail to mention in this comparative work, is presented in the **Turkish** research; the predominance of visual culture since the early 1990´s has been a serious threat as to combating functional illiteracy. Because of this, people lose motivation

and they wrongly assume they are able to respond effectively in all given situations neglecting the need for improvement through reading.

The problems encountered in one's walk of life due to functional illiteracy go beyond the personal level. When one researches the effects of functional illiteracy, one should not ignore its impact on political involvement and political illiteracy (**Greek** study). Once adults, former students with poor academic performance, who would be unwilling to contribute to the school's community, are unlikely to be involved in the country's political affairs. It is a fact that literacy and political illiteracy are two concepts closely connected in Greece. In the same vein, the **North Macedonian** study raises the issue of marginalisation which creates adverse situations for one to be an active citizen as an adult; with 75% of students being functionally illiterate and 99% of adults being unwilling to improve the skills via practicing reading, the problem of functional illiteracy in the country is comparable to that in **Turkey**. Functionally illiterate people run the risk of being marginalised and manipulated and not performing their basic civic duties. The **North Macedonian** study draws attention to the birth of totalitarian regimes being [partly] the result of (functionally) illiterate citizens who are unable to participate effectively in society and uphold the democratic spirit, making the party in power the State's owner, wrongly allowing for well-being to be enjoyed by the party's sympathisers. In effect, a new group of people is formed, one that comprises servants and flatterers, which takes us back to Middle Ages than helping societies advance.

The problem of one's abstaining from one's civic duties due to functional illiteracy has also been recorded in the **Romanian,** the **Croatian, and Italian** studies, all of which have pinpointed the problem of people being fanaticized and manipulated due to their inability to use critical thinking skills. They are often misinformed/disinformed, lacking the ability to assess the agenda of political parties and be conscious of both their rights and obligations (**Greek** article).

In the financial sense, countries suffer too due to very slow overall long-term Gross Domestic Product (GDP) growth, as mentioned in the **Italian** study; citizens fall behind in improving their life conditions and that has an impact on the country as a whole. Undoubtedly, this holds true in all partner countries, and has also been stressed in the **Romanian** article, pointing out that functional illiteracy is a threat to a country's decreased productivity. This is a common problem indeed and as noted by the **Lithuanian** counterpart, young illiterate people are deprived of equal opportunities when compared to their peers. Illiterate employees are very likely to provide their customers with less qualified service, which is the case in **Greece** too. In the

country, there are very few workplaces offering employment which do not require specialized knowledge. As to participating in cooperative organisations and defending their rights, functionally illiterate people are the least expected to undertake this role.

The effects of functional illiteracy are also detrimental to the preservation of a country's culture, leading to its alienation and its projecting an ambiguous image in the world arena. Countries are unable to benefit from interaction with other cultures leading to the birth of racism and xenophobia (**Greek study**).

Overall, it becomes evident that except for minor differences, all partner studies have drawn similar or very close conclusions as to the effects of functional illiteracy, namely:

- School absenteeism or dropping out of school altogether
- Students' poor results in national and international tests such as PISA
- Lack of opportunities especially for young functionally illiterate people
- Increasing the unemployment rate
- Suffering poor health
- Depression, inferiority complex
- Inability to conduct simple, every-day tasks
- Inability to fare well in the digital world
- Low income and vocations of a lower status
- Little opportunity for self-development
- Being deprived of emancipation opportunities (especially for women)
- Lack of empathy
- Lack of involvement in civic activity
- Isolation both on a personal and on country's level
- Inability to preserve culture
- Lack of contact amongst countries
- Cultural alienation
- Birth of totalitarian regimes
- Birth of racism and xenophobia
- Decreased productivity on a national level
- Digital divide amongst developed and developing countries widened

The 8th of September is celebrated as world Literacy Day. It is of great value to consider that the theme of Literacy Day in 2021, an initiative of UNESCO, has focused on exploring the

potential of spreading technology-enabled literacy under "Literacy for a human-centred recovery: Narrowing the digital divide". A great choice indeed, as the pandemic is still going strong.

Common difficulties

Formally, availability of education for children has increased around the world over the last decades. However, despite having a successful formal education career, adults can become functional illiterates. Functional illiteracy means that a person cannot use reading, writing, and calculation skills for his/her own and the community's development. Functional illiteracy has considerable negative effects not only on personal development, but also in economic and social terms.

A recent article (2016) wrote by Réka Vágvölgyi, Andra Coldea, Thomas Dresler, Josef Schrader and Hans-Christoph Nuerk, shows related deficits that may or may not be part of functional illiteracy depending on the definition and the assessment tool. They focus mainly on three of these related deficits: language-related deficits (1), general cognitive deficits (2), and deficits related to numerical abilities (3).

1. Functional illiterates have linguistic deficits in several domains, including phonological, orthographic and lexical processing, oral and reading comprehension, and verbal fluency. However, these deficits may not be homogeneous. It is important to note that correlated or co-morbid deficits are not necessarily functionally causal. What is more, they do not necessarily add unique variance to the diagnostic assessment.

2. Cognitive deficits of functional illiterates have also been reported. Van Linden and Cremers (2008) showed that functional illiterates performed significantly worse than literates not only in language processing, but also in all cognitive tasks such as in copying and recalling the Rey Complex Figure, visual organizational, and visual memory, mental spatial orientation as well sustained or split attention tasks (Van Linden and Cremers, 2008). Functional illiterates seem to have working memory difficulties: they performed worse than reading-level matched children (Eme, 2006; Grosche, 2012) and than normal adult readers (Grosche, 2012) in the verbal tasks.

3. Research needs further experimental studies to answer the question but, at the moment, numerical abilities are considered as part of functional illiteracy despite studies on numerical deficits in functional illiteracy has largely been neglected.

An often-discussed approach (Greenberg et al. 1997) assumes weak phonological processing skills coupled with untreated developmental dyslexia as possible causes of functional

illiteracy. Although there is some data suggesting commonalities between low literacy and developmental dyslexia, it is still not clear, whether these reflect shared consequences (i.e., cognitive and behavioral profile) or shared causes.

According to the recent literacy rate, 85% of the adult population in the world is literate, and therefore worldwide about 757 million people are illiterate (UNESCO, 2015). Large-scale assessments measuring literacy skills indicate that in developing countries, illiteracy is more prevalent, while in developed countries, functional illiteracy is more prevalent (Bhola, 1995, p. 18). According to the Organization for Economic Co-operation and Development (OECD), literacy is defined as follows:

"Literacy is defined as the ability to understand, evaluate, use, and engage with written texts to participate in society, achieve one's goals, and develop one's knowledge and potential (OECD, 2013, p. 59)."

Formal literacy has increased over the last decades. However, despite improvements in formal literacy, many people still have problems understanding formal texts. On the one hand, this is a problem because in today's society, functioning literacy plays a significant role. It appears in every aspect of daily life, e.g., opening bank accounts, reading ingredients of food products, understanding medication or technical instructions, signing contracts, etc. (Cree et al., 2012). On the other hand, this leads to fewer educational and employment opportunities and hinders living a successful life.

Possessing literacy has many benefits for individuals, families, communities, and nations. The improvement in literacy levels has beneficial effects on individual (e.g., self-esteem), political (e.g., democratic values), cultural (e.g., cultural openness), social (e.g., children's health), and economic (e.g., individual income) levels (UNESCO, 2006). On the other hand, functioning in a society without literacy becomes more difficult: those who cannot acquire basic literacy skills have fewer opportunities in every area of life (Cree et al., 2012).

In Italy, it affects 47% of individuals, one out of six is young. These are people who cannot understand written texts.

Analyzing data, there are 3 main Functional Illiteracy profiles:

- over 55 years old, poorly educated and in unskilled professions
- unoccupied idler young who stay at their parents' home
- somebody that comes from families where there are fewer than 25 books.

They are the functional illiterates, those Italians who are unable to understand the instruction booklet of a mobile phone or who cannot trace a telephone number contained in a web page if it is found in correspondence with the "Contact us" link.

A functional illiterate, recalls the OECD, is also a person who knows how to write his name and who perhaps uses his smartphone, but who is not able "to understand, evaluate, use and get involved with written texts to actively intervene in society, to achieve their goals and to develop their knowledge and potential ».

A functional illiterate, apparently, does not have to ask anyone for help, as was the case in the past, when there was a real profession - the scribe - which, for a fee, read and wrote letters for distant relatives. Although apparently autonomous, a functional illiterate does not understand the terms of an insurance policy or the meaning of an article published in a newspaper, is unable to summarize and become passionate about a written text, is unable to interpret a graph. He is therefore unable to read and understand the complex society in which he finds himself living.

On average, 1 in 5 young Italians doesn't complete lower secondary education. Italy is the penultimate European country in terms of the share of the total graduated population and also the one where less than 1 out of 10 adults participate in lifelong learning activities: in other words, more than seven Italians out of ten are functional illiterate or have minimal cognitive and processing skills.

According to Luca Aterini: […] *For decades Italy has been a prisoner of a vicious circle - supported by functional illiteracy - which does not allow it to carry out the structural changes it needs. This vicious circle must be interrupted with a massive investment in education in general, to build an educational system that prepares everyone (young and adults) to live the life of our times and that forms an adequate ruling class".*

A recent inquiry on the fake news phenomenon in Italy by Buzzfeed emerged that some political parties are exploiting the alarming spread of the fake news in order to gain political force: functional illiterates can read, write, work, communicate, and (above all) **vote,** without actually having a deep understanding of what they are talking about.

An important element is **internet diffusion:** Internet is now available for everyone, even for the functional illiterates. To be concise, internet development wasn't followed by the development of its users.

Internet is, without a doubt, a very powerful instrument and the propeller for the development of the future society. But you can't give an instrument so powerful to everyone. A functional

illiterate won't be able to distinguish a trustworthy source of news from a fraudulent one. And the result can be catastrophic on different levels: with the spread of fake news few, hidden subjects can shape the political situation of a country, the stability of its administration and its society.

Several articles show clearly how nowadays Society is directly connected to Functional Illiteracies who have their role on different important areas. We wrote *"functional illiterates can read, write, work, communicate, and (above all)* ***vote,*** *without actually having a deep understanding of what they are talking about."*: everybody should have sufficient skill to live his life and plays a good role in Society development.

The absence of cultural capital is the first and most serious factor that slows down the process of change that Italy needs. This can be possible only with a massive investment in education to prepare everyone to live nowadays society. Despite Internet can be a dangerous instrument, it is to much strong to be put aside. We are sure it is a powerful widget that arrives everywhere and we must use it against illiteracy and Functional Illiteracy.

B. Teachers' kit for preventing, reducing and overcoming functional illiteracy:

1. Projecting and and developing operational pedagogical tools to prevent and reduce functional illiteracy:

1.1. Psycho-pedagogical screening for the preparatory classes to identify the pre-requisites with which the child enters the school environment.

CHEK LIST - DEVELOPMENT OF LANGUAGE, COMMUNICATION, READING AND WRITING PREMISES

- His/ Hers communication is made taking into account the agreement by gender, number, person and time
- Uses and repeats developed sentences and phrases in speech
- Develops a sense of self and communicates and cooperates with peers and adults
- Answers questions about name, family, his friends, everyday life, preferences, toys, games, friends and retells an event or a familiar story, respecting the sequence of events
- He/ She sits and listens, in moments of reading, without bothering or interrupting
- Recognizes uppercase / lowercase letters and matches them to the associated sound
- Understands the role of writing in communication Pronunciation of sounds
- Splitts orally words into sounds and combining sounds into words/ spelling Freely communicates his / her needs, opinions and attitudes
- Uses adjectives and adverbs
- Names objects and describes their use
- Starts to see that one word has more than one meaning Starts verbally expressing a sense of humor
- Develops the aesthetic sense through the observation of images and works of art
- Plays with words, building rhymes and nursery rhymes
- Recognizes the importance of devices in communication

CHEK LIST - COGNITIVE DEVELOPMENT AND KNOWLEDGE OF THE WORLD

- Puts objects in groups that meet two criteria simultaneously
- Works in groups to solve a problem, using the strategies developed by the group
- Easily counts up to 10/20

- Creates, copies and builds shapes (circle, square, triangle, etc.)
- Describes and compares the basic needs of living things
- Describes the probable weather and illustrates a certain weather (uses conventional signs for water, rain, mountains, snow, seasons, days of the week, etc.)
- Reasons logically (strings, odd one out, similarities and differences...)
- Perceives object relations (short/ tall, big/ small, shapes, colors)
- Identifies colors, and quantity
- Takes positive attitudes towards ecological messages
- Has developed hand-eye coordination movement

CHEK LIST - LEARNING SKILLS AND ATTITUDES

- Asks questions showing curiosity about the changes around him/her in surrounding environment
- Expresses the desire to learn how to perform certain self-service actions, to make objects, toys or to find information about topics of interest
- Makes an activity plan (3-4 steps) and puts it into practice Focuses on an activity for 20 minutes without supervision
- Finds new forms and means of expressing thoughts and emotions (through music, drawing, dance, symbolic play)
- Uses or combines materials and strategies in new ways to explore or solve problems
- Explores nature and technological devices
- Describes time, length, distance and shapes using suitable words
- Is able to count things, group them and decide the special position
- Acts in line with her/ his aims
- Tells the home address, phone number and full name
- Recognizes the feelings of others
- Follows the social norms and explains the rules to others when necessary
- Has the capacity of orientation in space
- Shows maturity of graphomotor skills

1.2. Standard tests to evaluate the literacy skills after each teaching unit

Competences to be followed for assessing the student`s literacy skills

PRIMARY SCHOOL

LITERATURE

1. Reads, writes, listens and discusses simple texts at appropriate level
2. Receives, expresses and writes different messages / simple texts on various topics with the use of the acquired vocabulary elements
3. Fills in forms and charts by following the instructions and by using information from different media
4. Expresses and supports with arguments his/ her feelings, opinions and attitudes

MATHS

1. Names geometric shapes and bodys, classifies them according to their features, identifies them in the immediate environment
2. Determines measurable characteristics of a simple object or phenomenon in everyday situations and applies conventional standards units of measurement in problem solving
3. Applies arithmetic operations of addition, subtraction, multiplication and division without the use of calculators
4. Counts, reads and writes numbers up to 10000
5. Compares and sorts natural numbers up to a million
6. Describes and draws 2-D and 3-D figures, creates structures using shape models
7. Solves problems that require multiple operations
8. Reads and interprets the data presented in simple tables, pictograms and bars diagrams

SCIENCE

1. Explores the characteristics of different bodies, phenomena and processes, cycles in nature with a scientific approach, including Solar system and investigates of the environment using tools and specific techniques
2. Solves problems regarding day-to-day life using previous knowledge, names parts of the body, explains their function and expresses concern of their own health
3. Develops responsible attitude towards oneself, to others and nature and understands living conditions and diversity of living beings in different habitats
4. Recognises and describes different materials and their states, magnetic forces, recognizes reasons for movement and types of energy and their measurements
5. Finds and interprets geographical national map and concludes of the relationship between the landscape characteristics

SECONDARY SCHOOL

LITERATURE

1. Comprehends different types of texts, selects, analyses, interprets important information and expresses it in a written and oral form. (Reading competence)
2. Applies writing strategies and writes short texts regarding grammar and punctuation rules, recipients, purpose of the text, structure the text and uses basic syntactic rules (Writing competence)
3. Interacts effectively in different communication situations and recognizes the relationships between linguistic varieties. Prepares and delivers speech in a different content and for different purpose, using correct grammar, intonation and pronunciation patterns. (Speaking competence)

MATHS

1. Builds arguments, formulates hypotheses and recognizes its specific terms and move confidentially in calculation
2. Estimates and calculates the probability of an event in simple situations and displays it in form fraction decimal number and percentage, rounding numbers to a certain degree of accuracy
3. Recognizes and solves problems in different contexts, analyses and interprets data representations to obtain measures of variability and make decisions
4. Draws conclusions with quantities which are directly proportional and uses proportionality in problem solving
5. Determines measurable features of an object or phenomenon in everyday situations and applies formulas and mathematical operations
6. Uses a sequence of operations with integers, fractions and decimals numbers including brackets

SCIENCE

1. Communicates in an adequate way in different scientific contexts, explores and experiences the unfolding of the most common phenomena;
2. Develops simple schematizations and modeling of facts and phenomena;
3. Recognizes structures and functioning in its own organism and is aware of its potential and its limits;
4. Has a vision of the complexity of the living system and its evolution over time;
5. Plans, performs experiments, explains and interprets the data and information obtained in an investigative approach;
6. Uses basic scientific knowledge to explain the natural world.

HIGH SCHOOL

LITERATURE

1. Approach the structure, grammar and language of the texts
2. Has got the ability to understand, critically examine and analyze texts
3. Multilevel analysis and discussion
4. Discusses language, culture and use of language in different context and styles respecting his own culture and other countries culture
5. Developing their skills of expressing their feelings and thoughts through written and oral expression

MATHS

1. Learn the analytical geometry of space
2. Learns the study of fundamental functions
3. Applies Math terms, definitions, knowledge in new practical situations
4. Expressing quantitative or qualitative mathematical characteristics of a specific situation chooses
5. Appropriate units of measurement and measuring devices in solving problems

SCIENCE

1. Analyzes human impact on the environment, understands and explains complex natural phenomena, processes and procedures establishing relevant correlations
2. Transfers and integrates scientific knowledge
3. Acquires oral and written communication using correctly the terminology
4. Develops critical thinking by experimenting, solving problems, conducting investigations and reporting results.
5. Examines the contents related to ecology, energy resources and renewable source

Standard tests to evaluate the literacy skills after each teaching unit

LANGUAGE TEST FOR PRIMARY SCHOOL (grades 1-4)

Competency: ***Reads, writes, listens and discusses simple texts at appropriate level*** Total:10 points 3 points = not developed 6 points = in progress 10 points = developed		
1st Grade	Recognize the following letters of the alphabet and match the given upper case with their lower case pair.	3 points

	Create words using 3-5 letters.	3 points
	Create a simple sentence illustrating a familiar action.	4 points
2nd Grade	Read the following words and use them in a simple phrase.	3 points
	Answer the following 3 questions based on the heard/read text.	3 points
	Write a non-literary text (ex. a note, an invitation, card etc.) that matches the given context, paying attention to grammar/ punctuation rules/ recipient /purpose of the text.	4 points
3rd Grade	Write after dictation the following text.	3 points
	Create 3 questions based on the given answers.	3 points
	Compose a short text based on the given images, add a title and follow the required structure (introduction, content, conclusion), paying attention to grammar/ punctuation rules/ recipient/purpose of the text.	4 points
4th Grade	Retell the story you listen and use the following key words.	3 points
	Establish if the given sentences are true or false.	3 points
	Compose a text based on main ideas (a story, a fairytale, an event etc.), paying attention to grammar/ punctuation rules/ recipient/purpose of the text.	4 points
Competency: ***Receives, expresses and writes different messages / simple texts on various topics with the use of the acquired vocabulary elements*** Total:10 points 3 points = not developed 6 points = in progress 10 points = developed		
1st Grade	Match the following words with their diminutives.	3 points
	Identify the plural form for the following words.	3 points
	Recognize and use the opposite form for the following words.	4 points
2nd Grade	Match the following words with their diminutives.	3 points
	Identify the plural form for the following words.	3 points
	Recognize and use the opposite form for the following words.	4 points
3rd Grade	Match the following words with their synonymy and use them in sentences.	3 points

	Identify the different meanings for the following words and use them in sentences.	3 points
	Fill in the sentences with the appropriate antonyms of the given words.	4 points
4th Grade	Match the following words with their synonymy and use them in sentences.	3 points
	Identify the different meanings for the following words and use them in sentences.	3 points
	Fill in the sentences with the appropriate antonyms of the given words.	4 points
Competency: ***Fills in forms and charts by following the instructions and by using information from different media*** Total:10 points 0 points = not developed 5 points = in progress 10 points = developed		
1st Grade	Fill in the form with information about you (name, age, gender, city etc.) with capital letters.	10 points
2nd Grade	Fill in a scheme based on the read text or audio or video materials.	10 points
3rd Grade	Complete the sentences using the information presented in the text or audio or video materials.	10 points
4th Grade	Create a table or a chart using the information presented in the text or audio or video materials.	10 points
Competency: ***Expresses and supports with arguments his/ her feelings, opinions and attitudes*** Total:10 points 0 points = not developed 5 points = in progress 10 points = developed		
1st Grade	Match the image with the appropriate emoticon.	10 points
2nd Grade	Connect the words or sentences with the appropriate emoticon or image.	10 points
3rd Grade	Draw and explain the images on a certain topic.	5 points

	Explain your opinion on the given topic.	5 points
4th Grade	Write and explain your attitude on the following topic.	5 points
	Write a short paragraph about your opinion on the given topic.	5 points

MATHEMATICS TEST FOR PRIMARY SCHOOL (grades 1-4)

Competency: ***Names geometric shapes and bodies, classifies them according to their features, identifies them in the immediate environment*** Total:10 points 3 points = not developed 6 points = in progress 10 points = developed		
1st Grade	Colors specified shapes/ bodies in the picture according to specified colors	3 points
	Counts specified shapes/ bodies in the picture	3 points
	Matches objects in the picture with the appropriate shapes/ bodies	4 points
2nd Grade	Makes certain geometric shape out of given geometric shapes	4 points
	Counts shapes/ bodies in in the picture	3 points
	Finds all geometric shapes/ bodies in the photo	3 points
3rd Grade	Makes geometric body out of given geometric shapes	7 points
	Counts shapes/ bodies in in the picture	3 points
4th Grade	Classifies shapes/ bodies according to their features	10 points
Competency: ***Student determines measurable characteristics of a simple object or phenomenon in everyday situations and applies conventional units of measurement in problem solving*** Total:10 points 3 points = not developed 6 points = in progress 10 points = developed		
1st Grade	Is able to point objects in the picture according to defined measurable characterisic	2 points
	Puts objects in correct order by certain measurable characteristic	3 points
	Finds a match between objects that share certain measurable charasteristic	4 points

2nd Grade	Applies conventional units of measurement in problem solving tasks	10 points
3rd Grade	Applies conventional units of measurement in problem solving tasks	10 points
4th Grade	Applies conventional units of measurement in problem solving tasks	10 points
Competency: ***Applies arithmetic operations of addition, subtraction, multiplication and division without the use of calculators*** Total:10 points 0 points = not developed 5 points = in progress 10 points = developed		
1st Grade	Matches pairs with the same result (up to 20)	2 points
	Calculates and completes tasks (up to 20)	3 points
	Solves the problem task (up to 20)	5 points
2nd Grade	Matches pairs with the same result (up to 100)	2 points
	Calculates and completes tasks (up to 100)	3 points
	Solves the problem task (up to 100)	5 points
3rd Grade	Matches pairs with the same result (up to 1000)	2 points
	Calculates and completes tasks (up to 1000)	3 points
	Solves the problem task (up to 1000)	5 points
4th Grade	Matches pairs with the same result (up to 10000)	2 points
	Calculates and completes tasks (up to 10000)	3 points
	Solves the problem task (up to 10000)	5 points
Competency: ***Counts, reads and writes numbers up to 10000 and compares and sorts natural numbers up to a million*** Total:10 points		

0 points = not developed 5 points = in progress 10 points = developed		
1st Grade	Writes numbers in words (up to 20)	2 points
	Puts numbers in the correct order (up to 20)	3 points
	Completes gaps with the missing numbers (up to 20)	5 points
2nd Grade	Writes numbers in words (up to 1000)	2 points
	Puts numbers in the correct order (up to 100)	3 points
	Completes gaps with the missing numbers in the sequence (up to 100)	5 points
3rd Grade	Writes numbers in words (up to 10000)	3 points
	Puts numbers in the correct order (up to 10000)	3 points
	Completes gaps with the missing numbers in the sequence (up to 10000)	4 points
4th Grade	Writes numbers in words (up to 100000)	3 points
	Puts numbers in the correct order (up to 100000)	3 points
	Completes gaps with the missing numbers in the sequence (up to 100000)	4 points
Competency: ***Describes and draws 2-D and 3-D figures, creates structures using shape models*** Total:10 points 0 points = not developed 6 points = in progress 10 points = developed		
1st Grade	Draws an object using the given geometric shapes and bodies	10 points
2ndGrade	Uses given geometric shapes to make certain shape/ body	4 points
	Makes objects out of given shapes	6 points
3rd	Uses given geometric shapes to make certain object	3 points

Grade	Makes geometric body out of given shapes	3 points
	Draws the reflection of the given shape	4 points
4th Grade	Creates structures using shape/ body models	10 points
Competency: ***Solves problems that require multiple operations*** Total:10 points 0 points = not developed 6 points = in progress 10 points = developed		
1st Grade	Uses the acquired knowledge in solving textual problems, selects mathematical notation and arithmetic operation in textual problems (up to 20)	10 points
2nd Grade	Uses the acquired knowledge in solving textual problems, selects mathematical notation and arithmetic operation in textual problems (up to 100)	10 points
3rd Grade	Uses the acquired knowledge in solving textual problems, selects mathematical notation and arithmetic operation in textual problems (up to 1000)	10 points
4th Grade	Uses the acquired knowledge in solving textual problems, selects mathematical notation and arithmetic operation in textual problems (up to 10000)	10 points
Competency: ***Reads and interprets the data presented in simple tables, pictograms and bars diagrams*** Total:10 points 0 points = not developed 6 points = in progress 10 points = developed		
1st Grade	Answer the questions using the chart/table.	10 points
2ndGrade	Answer the questions using the chart/table.	10 points
3rd	Answer the questions using the chart/table.	10

Grade		points
4th Grade	Answer the questions using the chart/table.	10 points

SCIENCE TEST FOR PRIMARY SCHOOL (grades 1-4)

Competency: *Explores the characteristics of different bodies, phenomena and processes, cycles in nature with a scientific approach, including the Solar system and investigates the environment using tools and specific techniques.* Total:10 points 3 points = not developed 6 points = in progress 10 points = developed		
1st Grade	Recognize the Sun and the planets of the Solar System in the following pictures.	3 points
	Draw the required body or phenomena.	3 points
	Establish if the following sentences and images are true or false.	4 points
2nd Grade	Match the images of the bodies and phenomena with their appropriate words.	3 points
	Identify the words for the following cycles in nature.	3 points
	Draw the Earth and its two neighboring planets.	4 points
3rd Grade	Put the planets of the Solar System in order and name them.	3 points
	Fill in the gaps with the key words given in brackets to complete the sentences about the Solar System or phenomena.	3 points
	Create models of the planets of the Solar System.	4 points
4th Grade	Match the following characteristics of the planets with the appropriate planet.	3 points
	Fill in the gaps with the words in brackets to complete the sentences about the characteristics of the planets in the Solar System, phenomena or cycles in nature.	3 points
	Observe, describe and then make a project about the characteristics of the planets in the Solar System, phenomena or cycles in nature.	4 points

Competency: *Solves problems regarding day-to-day life using previous knowledge, names parts of the body, explains their function and expresses concern of their own health.* Total:10 points 0 points = not developed 5 points = in progress 5 points = developed		
1st Grade	Identify the body parts in the picture and name them.	5 points
	Match the given images of the hygiene products with the body parts they are used for.	5 points
2nd Grade	Name and match the vital organs with their positions in the body.	5 points
	Put the pictures of food and drinks in the appropriate part of the food pyramid.	5 points
3rd Grade	Use the appropriate words or phrases to complete the sentences about the vital organs' functions.	5 points
	Draw a food pyramid.	5 points
	Look at the following picture and write a short composition to solve the given problem.	5 points
	Draw a diagram or a concept map related to the lesson.	5 points
Competency: *Develops responsible attitude towards oneself, to others and nature and understands living conditions and diversity of living beings in different habitats.* Total:10 points 0 points = not developed 5 points = in progress 10 points = developed		
1st Grade	Recognize and then put the pictures of animals within two groups: domestic and wild animals.	5 points
	Match the waste materials given in a picture of a room with the appropriate waste bins.	5 points
2nd	Match the wild animals to their natural habitat.	5 points

Grade	Name the given recyclable and the non-recyclable materials.	5 points
3rd Grade	Draw the wild animals and their natural habitat.	5 points
	Fill in the missing words for the animals (domestic and wild) and their natural habitats.	5 points
4th Grade	Draw a diagram or a concept map related to the lesson.	5 points
	Look at the following picture and write a short composition to solve the given problem.	5 points
Competency: *Recognizes and describes different materials and their states, magnetic forces, recognizes reasons for movement and types of energy and their measurements* Total:10 points 0 points = not developed 5 points = in progress 10 points = developed		
1st Grade	Match the object with the material it is made of.	5 points
	Color the living beings in the picture in read and the non-living things in blue.	5 points
2nd Grade	Write the names of the materials which are used to make each of the given objects.	5 points
	Write five living beings and five non-living things.	5 points
3rd Grade	Identify the parts of the circuit.	5 points
	Name and draw the sources of energy.	5 points
4th Grade	Connect the parts of the circuit properly to make the bulb shine.	5 points
	Answer the questions about the states of matter and the circuit.	5 points
Competency: *Finds and interprets geographical national map and concludes of the relationship between the landscape characteristics* Total:10 points 0 points = not developed 5 points = in progress 10 points = developed		
1st Grade	Identify the color code for the main landscape.	5 points

	Identify landscape characteristics by matching the pictures.	5 points
2nd Grade	Create a model of a hill and a model of a mountain.	5 points
	Present elements related to the climate, flora and fauna of the main landforms.	5 points
3rd Grade	Draw the geographical symbols under the geographical names in the map.	5 points
	Solve orientation exercises on the map or on the globe.	5 points
4th Grade	Answer the questions about the main geographical features of your country.	5 points
	Using the knowledge gained in other disciplines, explain the following situation in real life.	5 points

LANGUAGE TEST FOR SECONDARY SCHOOL (grades 5-8)

Competency: ***Comprehends different types of texts, selects, analyses, interprets important information and expresses it in a written and oral form. (Reading competence)*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	What is the main idea of the text?	3 points
	Find the characters of the text.	3 points
	Answer the questions: When… where … why …	4 points
6th Grade	What is the main idea and the purpose of the text?	3 points
	Find and describe the characters of the text.	3 points
	Give your opinion about…	4 points
7rd Grade	What is the main idea and the purpose and mood of the text?	3 points
	Describe the characters using antonyms and synonyms.	3 points
	Express and justify your opinion about…	4 points
8th Grade	Express and justify your opinion about… Evaluate the relevance of the text in the modern context.	3 points

	Analyze the relationships, feelings and attitudes of the characters.	3 points
	What is the type, main idea, purpose, mood, values and problem of the text?	4 points
Competency: ***Applies writing strategies and writes short texts regarding grammar and punctuation rules, recipients, purpose of the text, structure the text and uses basic syntactic rules (Writing competence)*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Write a short text according to the given task.	3 points
	Use figurative language in your text.	3 points
	Write grammatically correct sentences. Mind the spelling rules.	4 points
6th Grade	Write a clear, interesting, persuasive text according to the given task.	3 points
	Use a proper vocabulary in accordance with the type of the text.	3 points
	Write grammatically correct, complex sentences. Mind the spelling rules.	4 points
7rd Grade	Plan and write a clear, interesting, persuasive text according to the given task.	3 points
	Use a proper vocabulary, figurative language and examples in accordance to the type of the text.	3 points
	Write grammatically and stylistically correct, complex sentences. Mind the spelling rules.	4 points
8th Grade	Plan and write a clear, structured text according to the given task.	3 points
	Use a proper vocabulary, figurative language, examples and details in accordance to the type of the text.	3 points
	Write grammatically and stylistically correct, complex sentences. Mind the spelling rules. Show your distinctive style.	4 points
Competency: ***Interacts effectively in different communication situations and recognizes the relationships between linguistic varieties. Prepares and delivers speech in a different context and for different purposes, using correct grammar, intonation and pronunciation patterns. (Speaking competence)***		

Total:10 points 0 points = not developed 5 points = in progress 10 points = developed		
5th Grade	Participate in a conversation, ask and answer the questions.	5 points
	Tell shortly about …	5 points
6th Grade	Participate in a conversation, ask and answer the questions and express your positive or negative opinion.	5 points
	Tell about … giving some details.	5 points
7rd Grade	Participate in a conversation, ask and answer the questions, express your positive or negative opinion, summarize and draw conclusions.	5 points
	Tell about … giving details, arguments and your opinion.	5 points
8th Grade	Participate in a conversation, exchange opinions and react regarding the addressee, situation and purpose. Mind the intonation, pronunciation, stresses and use complex sentences	5 points
	Give a 2-3-minute speech on a given topic, giving details, arguments and your opinion.	5 points

MATHEMATICS TEST FOR SECONDARY SCHOOL (grades 5-8)

Competency: ***Builds arguments, formulates hypotheses and recognizes its specific terms*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	For the following natural numbers ... specify the class and order of each digit	3 points
	Underline with a line the numbers in the string .... which are divisible by 3	3 points
	Determine the appropriate method for solving the following problems .... and apply it	4 points
6th Grade	Identify the directly proportional sizes in the following graphical representations ...	3 points
	Select from a given list the prime / compound natural numbers	3 points

	Justify the parallelism of two lines using pairs of angles formed by two lines with a secant	4 points
7rd Grade	Recognize the following quadrilaterals, specifying their properties	3 points
	Solve the following systems of equations, arguing the chosen method	3 points
	Arguing the choice between the fundamental similarity theorem and Thales' theorem for solving specific problems	4 points
8th Grade	Identify such terms by specifying the coefficients and the literal part	3 points
	Identifies and names geometric bodies (cube; rectangular parallelepiped; right prism with base: equilateral triangle, square, regular hexagon; straight circular cylinder; straight circular cone) from a set of given or everyday bodies	3 points
	Argue the way to solve a geometry problem in space	4 points
Competency: ***Estimates and calculates the probability of an event in simple situations and displays it in form fraction decimal number and percentage, rounding numbers to a certain degree of accuracy*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Illustrate graphically 3 subunit fractions.	3 points
	Write an ordinary fraction as a percentage.	3 points
	Calculates the probability that the fractions in the given string are supraunitar.	4 points
6th Grade	Transform the following decimal fractions into ordinary fractions.	3 points
	Determine a percentage of a given number.	3 points
	Sets the price of an item, depending on the percentage increase / decrease applied.	4 points
7rd Grade	Identify the membership of numbers in the studied sets (N, Z, Q, R).	3 points
	Estimate the result of an operation consisting in extracting the square root	3 points

	from a rational number.	
	Calculate the probability that a pair of numbers in a given string is the solution of a system of equations.	4 points
8th Grade	Compare real numbers using the estimation method.	3 points
	Problems estimating the results of calculations regarding distances, measures of angles, areas and volumes	3 points
	Transform an inequality into an equivalent inequality, highlighting the range discovered.	4 points
Competency: ***Recognizes and solves problems in different contexts, analyses and interprets data representations to obtain measures of variability and make decisions*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Divide decimal fractions between two consecutive natural numbers.	3 points
	Calculate the perimeter of a figure using unit transformations.	3 points
	Formulate a problem based on a given scheme or rule, then solve it by arithmetic methods.	4 points
6th Grade	Recognition of divisors of a given number and finding the greatest common divisor of two numbers	3 points
	Recognizes the characteristic elements of different types of triangles in drawings, models, environment	3 points
	Recognize different types of angles and use their properties to solve problems	4 points
7rd Grade	Recognize the elements of a circle in different configurations and use them in different contexts	3 points
	Recognition of the legs and hypotenuse of a right triangle and finding their lengths in different contexts	3 points
	Recognize particular quadrilaterals based on specific properties and calculate their dimensions.	4 points

8th Grade	Recognize and apply an abbreviated calculation formula	3 points
	Identifying, constructing, noting, and reading competing / parallel / non-coplanar lines in configurations spatial, exemplified and in the surrounding reality	3 points
	Recognize and solve equations/ inequalities such as ax + b =, <, > 0 where a, b∈ℝ	4 points
Competency: ***Draws conclusions with quantities which are directly proportional and uses proportionality in problem solving*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Calculating the perimeter of a geometric figure, intuitively highlighting the perimeter	3 points
	Framing a decimal fraction between two consecutive natural numbers	3 points
	Expression of two-digit natural numbers as a product of prime numbers	4 points
6th Grade	Writing directly or inversely proportional proportions and sizes, every day (for example: the scale of a map, concentration of a solution)	3 points
	Graphs directly and inversely proportional sizes	3 points
	Determine the proportionality of two quantities and solve problems with the simple rule of three	4 points
7rd Grade	Exercises to identify images that retain their shape by zooming in or out	3 points
	Calculate by proportionality the lengths of some segments that represent sides of some triangles	3 points
	Determine the similarity between two triangles using the proportionality of the sides	4 points
8th Grade	Sorts and organizes data according to functional dependency criteria	3 points
	To correlate the elements of a function with practical situations	3 points
	Specify the projections of certain points, lines, segments and calculate the lengths of their projections	4 points

Competency: ***Determines measurable features of an object or phenomenon in everyday situations and applies formulas and mathematical operations*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Determine the axes of symmetry of the square and the rectangle by folding	3 points
	Determine the volume of a cube using the network of cubes with edge 1 and then apply the calculation formula	3 points
	Formulation of a problem based on a given scheme or rule and solving it by methods arithmetical	4 points
6th Grade	Based on the congruence criteria, determine which triangles are congruent	3 points
	Determine an unknown from an equation using the reverse method	3 points
	Determines the percentage ratio or probability of an event occurring ...	4 points
7rd Grade	Determine the measures of some angles using the similarity of triangles	3 points
	Determine the length of the hypotenuse of a right triangle using Pythagoras' theorem	3 points
	Determine the area of a quadrilateral using the area of the triangle	4 points
8th Grade	Determine which of the following points belong to the graph of the function ....?	3 points
	Decompose into factors using the common factor or abbreviated calculation formulas	3 points
	Determine the collinearity of three points, knowing their coordinates	4 points
Competency: ***Uses a sequence of operations with integers, fractions and decimals numbers including brackets*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		

5th Grade	Performs additions, subtractions and multiplications with natural numbers	3 points
	Calculation of numerical expressions containing parentheses (round, square and brackets), with respect to the order of operations	3 points
	Performs operations with rational numbers expressed as a decimal and / or ordinary fraction	4 points
6th Grade	Apply the rules for adding and multiplying integers in the following exercises	3 points
	Solve equations / inequalities in the set of integers and check the solutions	3 points
	Put the following problem into an equation and solve it in the set of rational numbers	4 points
7rd Grade	Uses calculation rules for addition / product / ratio operations of two real numbers	3 points
	Sort natural, integer, rational and irrational numbers according to the set they belong to	3 points
	Solve problems with practical content, using the properties of real-number operations	4 points
8th Grade	Perform calculations with real numbers represented by letters (addition, subtraction, multiplication,division, rise to power with integer exponent)	3 points
	Performs calculations that follow the meaning of the parentheses and the order of execution operations with real numbers represented by letters	3 points
	Solve inequalities of the form / ax + b / <c (≤), where a∈ℝ *, b c ∈ℝ	4 points

SCIENCE TEST FOR SECONDARY SCHOOL (grades 5-8)

Competency: ***Communicates in an adequate way in different scientific contexts, explores and experiences the unfolding of the most common phenomena***

Total:10 points

1-3 points = not developed

4-8 points = in progress

8-10 points = developed		
5th Grade	Complete the given logic diagram.	3 points
	Make a poster with the topic in question.	3 points
	Composes a text based on an image or a concept map.	4 points
6th Grade	Search and select the information from the given source, in order to describe the presented phenomenon.	3 points
	Fill in the given observation sheet, based on the investigation activity performed.	3 points
	For the given problem situation, formulate the hypothesis, identify the working methods, choose the appropriate working tools, make the observations, collect and interpret the data in the form of conclusions.	4 points
7rd Grade	Analyze the indicated phenomena, in order to establish the similarities and differences between them.	3 points
	Describe the processes involved in the physical and chemical phenomena studied in this unit.	3 points
	Perform a demonstration experiment, correlated with the studied topic.	4 points
8th Grade	Compare the information extracted from the indicated sources to formulate your own point of view.	3 points
	Analyze the case study and make predictions based on that analysis.	3 points
	Design and conduct the investigation appropriate to the situation indicated, by: identifying the problem, choosing methods and tools, making observations, measurements, collecting, recording and interpreting data, formulating conclusions.	4 points
Competency: ***Develops simple schematizations and modeling of facts and phenomena*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Read the given scientific text and make a logical scheme of the content.	3 points

	Using unconventional materials, he makes a model of the given phenomenon.	3 points
	Collect samples from the indicated ecosystem, research using the appropriate tools and make a short report.	4 points
6th Grade	Make a drawing to show the structure and functions of the studied organ.	3 points
	Draw up a table in which to set out the characteristics of the object / phenomenon under observation.	3 points
	It graphically represents the evolution in a certain time interval of the given phenomenon.	4 points
7rd Grade	Graph the electronic structure of the following elements in the Periodic Table:	3 points
	Model, using Lewis structures, the formation of the molecule	3 points
	Graphically represent the dependence between the physical quantities that characterize the studied phenomenon / process.	4 points
8th Grade	Make the graphical representation of the following substance	3 points
	Make an artisanal model, illustrating the structure of the molecule of	3 points
	Graph the values of the following physical quantity, determined from the experiment performed, ...	4 points
Competency: ***Recognizes structures and functioning in its own organism and is aware of its potential and its limits*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Observe the adjacent image and specify its functions and importance.	3 points
	Composes three riddles to identify vital organs for humans.	3 points

	Write an argumentative text about the negative effect of …… on man.	4 points
6th Grade	Establishes the correspondence between the causes and effects of the appearance of the following disease, which affects humans.	3 points
	Observe under a microscope the structure of the given tissue and complete, in the observation sheet, its characteristics.	3 points
	Make a composition to describe the peculiarities of ……	4 points
7rd Grade	Name and explain, in short, three behaviors to prevent the disease of the human reproductive system.	3 points
	Explain how the next self-adjusting mechanism works	3 points
	Make a questionnaire, consisting of 5 questions, to capture the daily work and rest regimen of a person.	4 points
8th Grade	Explain, in short, the impact ..... (of one transformation of the environment) on the human body.	3 points
	Make a poster about the benefits for humans of sustainable development.	3 points
	Analyze the following case study, from the point of view of the transmission of hereditary features.	4 points
Competency: ***Plans, performs experiments, explains and interprets the data and information obtained in an investigative approach*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Read the text and fill in the given table with the data extracted from the text. For the last column, document yourself using the application	3 points
	Observe the series of images below, identify the similarities and differences between them, then place the species in the groups studied.	3 points
	Analyze under a microscope, the sample taken from ..... and complete the attached investigation sheet.	4 points
6th Grade	Read the text, then formulate the hypothesis and conclusion of the problem situation described in the text.	3 points

	Make a graph based on the data presented in the table.	3 points
	Formulatea a reasoned conclusion based on the evidence obtained from the conducted investigation.	4 points
7rd Grade	Observe the images and identify the substances that can be used in the mixture, specifying the name of the mixture obtained.	3 points
	Observe the experiment and ask questions about the stages of its implementation.	3 points
	Records the data obtained from the investigation in the given table.	4 points
8th Grade	Formulate 2 hypotheses related to the properties of the given element.	3 points
	Carry out the following investigation, going through the studied work stages.	3 points
	Draw up and complete a table containing the observations corresponding to each stage of the investigation carried out.	4 points
Competency: ***Uses basic scientific knowledge to explain the natural world*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
5th Grade	Using the knowledge gained in the lesson, explain the following phenomenon	3 points
	Name three scientific arguments against this action ....., taken by man, from the perspective of its impact on the environment / on the human body.	3 points
	Make a creative text starting from the image below, in which you will describe the ecosystem, specify the representative species, talk about the relationships between living things, show their importance for man and nature, talk about the role of man in maintaining that ecosystem.	4 points
6th Grade	Look at the picture and explain the phenomenon, starting from the properties of the bodies learned so far.	3 points
	Identify at least 2 causes that have the effect of the following phenomenon	3 points
	Make a concept map to explain, using the scientific knowledge gained, how	4 points

	..... works.	
7rd Grade	Compare this phenomenon in nature ..... with this technological phenomenon ....., following the indicated comparison criteria.	3 points
	Describe the phenomenon in the picture, using the physical principles studied so far.	3 points
	Explain how the device in the picture works	4 points
8th Grade	Group the images into exothermic and endothermic processes.	3 points
	Specify what properties of the studied substances are manifested in the following life situation	3 points
	Write an argumentative text in which to talk about the effects of pollution with ....., specifying the impact of that substance on man and the environment, but also solutions to prevent or combat pollution with	4 points

LANGUAGE TEST FOR HIGH SCHOOL (grades 9-12)

Competency: ***Approach the structure, grammar and language of the texts*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Reads but has difficulty in recognizing the basic structure (subject, predicate, complement) of the sentence and hardly understands its grammatical structure's basis.	1-3 points
	Reads and recognizes some parts of the basic structure (subject, predicate, complement) of the sentence and mostly understands its grammatical structures basis	4-8 points
	Reads and recognizes the basic structure (subject, predicate, complement) of the sentence and understands its grammatical structures basis.	8-10 points
10th Grade	Reads but has difficulties in recognizing the complex structure of a short text and hardly understands more complex grammatical structures.	1-3 points
	Reads and recognizes some complex structures of a short text and mostly	4-8

	understands more complex grammatical structures.	points
	Reads and recognizes the complex structure of a short text and understands more complex grammatical structures.	8-10 points
11th Grade	Reads but has difficulties in recognizing the complex structure of simple texts and hardly understands more complex grammatical structures.	1-3 points
	Reads and recognizes some complex structures of simple texts and mostly understands more complex grammatical structures.	4-8 points
	Reads and recognizes the complex structure of simple texts and understands more complex grammatical structures.	8-10 points
12th Grade	Reads but has difficulties in recognizing complex texts, uses hardly any grammatical structures correctly..	1-3 points
	Reads and recognizes some complex texts, recognizes and uses most grammatical structures correctly.	4-8 points
	Reads and easily recognizes complex texts, recognizes and uses all the grammatical structures.	8-10 points
Competency: ***Has got the ability to understand, critically examine and analyze texts*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Reads but hardly understands the elements that represent a sentence.	1-3 points
	Reads and understands some elements that represent a sentence.	4-8 points
	Reads and understands all the elements that represent a sentence.	8-10 points
10th Grade	Reads but hardly understands the elements that represent a short text.	1-3 points
	Reads and understands some elements that represent a short text.	4-8 points
	Reads and understands all the elements that represent a short text.	8-10

		points
11th Grade	Reads and hardly understands the elements that represent a simple text.	1-3 points
	Reads and understands some elements that represent a simple text.	4-8 points
	Reads and understands all the elements that represent a simple text.	8-10 points
12th Grade	Reads but has difficulties in understanding and analysing a complex text.	1-3 points
	Reads, understands but has difficulties in critically analyzing a complex text.	4-8 points
	Reads, understands and critically analyses a complex text.	8-10 points
Competency: ***Multilevel analysis and discussion*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Reads but hardly analyses the lexicon of sentences.	1-3 points
	Reads but has difficulties in analyzing the lexicon of sentences.	4-8 points
	Reads and analyses the lexicon of sentences.	8-10 points
10th Grade	Reads but hardly analyses the lexicon of a short text.	1-3 points
	Reads but has difficulties in analyzing the lexicon of a short text.	4-8 points
	Reads and analyses the lexicon of a short text.	8-10 points
11th	Reads but hardly analyses the lexicon of a simple text.	1-3

Grade		points
	Reads but has difficulties analyzing the lexicon of a simple text.	4-8 points
	Reads and analyses the lexicon of a simple text.	8-10 points
12th Grade	Reads but hardly analyses the lexicon of a complex text.	1-3 points
	Reads but has difficulties in analyzing the lexicon of a complex text.	4-8 points
	Reads and analyses the lexicon of a complex text.	8-10 points
Competency: ***Discusses language, culture and use of language in different context and styles respecting his own culture and other countries culture*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Is hardly able to recognise the correct use of the language and his own culture.	1-3 points
	Has difficulties recognising the correct use of the language and his own culture.	4-8 points
	Recognises the correct use of the language and his own culture.	8-10 points
10th Grade	Is hardly able to recognise the correct use of the language and his own culture in different contexts.	1-3 points
	Has difficulties recognising the correct use of the language and his own culture in different contexts.	4-8 points
	Recognises the correct use of the language and his own culture in different contexts.	8-10 points
11th Grade	Is hardly able to recognise the correct use of the language and the culture of a different country.	1-3 points

	Has difficulties recognising the correct use of the language and the culture of a different country.	4-8 points
	Recognises the correct use of the language and the culture of a different country.	8-10 points
12th Grade	Has frequent difficulties recognising different cultures and problems using the language in different contexts and styles respecting his own culture and other countries' cultures.	1-3 points
	Has certain difficulties recognising different cultures and uses the language in different contexts and styles respecting his own culture and other countries' cultures.	4-8 points
	Recognises different cultures and uses the language fluently in different contexts and styles respecting his own culture and other countries' cultures.	8-10 points
Competency: ***Developing their skills of expressing their feelings and thoughts through written and oral expression*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Hardly develops his/her skills of expressing his/her feelings and thoughts through written simple sentences.	1-3 points
	Develops his/her skills of expressing most of his/her feelings and thoughts through written simple sentences.	4-8 points
	Develops his/her skills of expressing a wide range of his/her feelings and thoughts through written simple sentences.	8-10 points
10th Grade	Hardly develops his/her skills of expressing his/her feelings and thoughts through written short texts.	1-3 points
	Develops his/her skills of expressing most of his/her feelings and thoughts through written short texts.	4-8 points
	Develops his/her skills of expressing a wide range of his/her feelings and thoughts through written short texts.	8-10 points
11th Grade	Hardly develops his/her skills of expressing his/her feelings and thoughts through written and oral expression in simple texts.	1-3 points

	Develops his/her skills of expressing most of his/her feelings and thoughts through written and oral expression in simple texts.	4-8 points
	Develops his/her skills of expressing a wide range of his/her feelings and thoughts through written and oral expression in simple texts.	8-10 points
12th Grade	Hardly develops his/her skills of expressing his/her feelings and thoughts through written and oral expression in complex texts.	1-3 points
	Develops his/her skills of expressing most of his/her feelings and thoughts through written and oral expression in complex texts.	4-8 points
	Develops his/her skills of expressing a wide range of his/her feelings and thoughts through written and oral expression in complex texts.	8-10 points

MATHEMATICS TEST FOR HIGH SCHOOL (grades 9-12)

Competency: ***Learn the analytical geometry of space*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Identifies the basic formulas and definitions of analytical geometry of space	3 points
	Identifies geometric figures in the plane	3 points
	Knows several strategies to solve problems	4 points
10th Grade	Solves easy problems using formulas of analytical geometry of space	3 points
	Represents geometric figures in the plane	3 points
	Applies several strategies to solve problems	4 points
11rd Grade	Applies formulas of analytical geometry to solve difficult problems	3 points
	Compares geometric figures in the plane	3 points
	Can identify the appropriate strategies to solve simple problems	4 points
12th Grade	Applies formulas of analytical geometry of space to solve problems related to everyday life.	3 points

	Compares and analyzes geometric figures in the plane	3 points
	Can identify the appropriate strategies to solve complex problems	4 points
Competency: ***Learns the study of fundamental functions*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Identifies the basic formulas and definitions of functions	3 points
	Solves integer and fractional numerical equations	3 points
	Uses calculation tools in a conscious way	4 points
10th Grade	Solves easy problems using formulas of fundamental functions	3 points
	Uses equations to represent and solve simple problems	3 points
	Calculates limits and derivatives of functions	4 points
11rd Grade	Solves difficult problems using formulas of fundamental functions	3 points
	Solves equations, goniometric inequalities, with graphical or numerical methods	3 points
	Calculates derivatives of compound functions	4 points
12th Grade	Applies formulas of fundamental functions to solve problems related to everyday life	3 points
	Solves equations, exponential and logarithmic inequalities with modulo, with graphical or numerical methods and also with the help of electronic tools	3 points
	Analyzes examples of functions that are discontinuous or non-derivable at some point	4 points
Competency: ***Applies Math terms, definitions, knowledge in new practical situations*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		

9th Grade	Solves easy problems using math terms, definitions and knowledge.	3 points
	Knows and can use drawing tools correctly.	3 points
	Knows terminology and linguistic codes specific to the mathematical and geometric disciplines	4 points
10th Grade	Solves easy problems from everyday life using math terms, definitions and knowledge.	3 points
	Knows and can use easy specific technical drawing rules.	3 points
	Knows and uses terminology and linguistic codes specific to the mathematical and geometric disciplines	4 points
11rd Grade	Solves difficult problems from everyday life using math terms, definitions and knowledge.	3 points
	Has the ability to synthesize, analyze and graphically transpose simple theoretically assigned data.	3 points
	Uses correctly terminology and linguistic codes specific to the mathematical and geometric disciplines	4 points
12th Grade	Solves complex problems from everyday life using math terms, definitions and knowledge	3 points
	Understands the relationships between reality and its graphic representation through technical drawing.	3 points
	Uses correctly terminology and linguistic codes specific to the mathematical and geometric disciplines in practical situation.	4 points
Competency: ***Expressing quantitative or qualitative mathematical characteristics of a specific situation chooses*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Recognizes the correct way to use scales of measurement in 2 dimensions	3 points
	Recognizes and uses mathematical data	3 points
	Consciously uses the tools of calculation.	4 points

10th Grade	Recognizes the correct way to use scales of measurement in 3 dimensions	3 points
	Uses mathematical data to solve simple problems	3 points
	Uses the techniques and procedures of arithmetic and algebraic calculus, also representing them in graphic form.	4 points
11rd Grade	Applies the correct way to use scales of measurement in simple problems	3 points
	Uses mathematical data to solve complex problems	3 points
	Compares and analyses geometric figures, identifying invariants and relationships.	4 points
12th Grade	Applies the correct way to use scales of measurement in different specific situation with different difficult problems	3 points
	Analyses and interprets data with the aid of graphical representations.	3 points
	Solves a system algebraically and analytically.	4 points
Competency: ***Appropriate units of measurement and measuring devices in solving problems*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Identifies the definitions and properties of units of measurement	3 points
	Knows different measurement devices	3 points
	Knows the lexicon of conventional units of measurement.	4 points
10th Grade	Solves easy problems related to units of measurement	3 points
	Recognizes and uses different measurement devices	3 points
	Expresses measures using multiples and submultiples of units of measure.	4 points
11rd Grade	Solves difficult problems related to units of measurement	3 points
	Solve problems using correctly different measurement devices	3 points
	Takes direct or indirect measurements and expresses them according to conventional and non-conventional units of measurement.	4 points

12th Grade	Solves difficult problems from everyday life related to units of measurement by combining skills and synthesis of previous knowledge	3 points
	Solve problems related to everyday life using correctly different measurement devices	3 points
	Uses correctly the main measurement systems solving problems.	4 points

SCIENCE TEST FOR HIGH SCHOOL (grades 9-12)

Competency: ***Analyses human impact on the environment, understands and explains complex natural phenomena, processes and procedures establishing relevant correlations*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Write down three of the current environmental problems.	3 points
	According to the text given, write three questions about the negative effects of current environmental problems on living things.	3 points
	Match the environmental problems in the pictures with the given concepts.	4 points
10th Grade	Define the carbon footprint.	3 points
	Write the carbon footprint of the average person on the pie chart.	3 points
	Write down four solutions to minimize the carbon footprint.	4 points
11th Grade	Put the given concepts in the appropriate spaces below.	3 points
	Write three causes of acid rain.	3 points
	Answer the following questions based on the video you watched.	4 points
12th Grade	Fill in the blanks with suitable words about environmental problems.	3 points
	Write the answer to the following open-ended question in the blank.	3 points
	Read the text about environmental problems and answer the questions	4 points
Competency: ***Transfers and integrates scientific knowledge*** Total:10 points		

1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Complete the text using the following terms	3 points
	Create three questions according to the text completed	3 points
	Fiil in the chart using terms regarding to the text	4 points
10th Grade	Explain the concepts related to the keyword given below. (Keyword=.....)	3 points
	Complete the concept map by writing the words related to (KEYWORD) in the appropriate places.	3 points
	Match the definitions about (KEYWORD) in column A with the terms in column B.	4 points
11th Grade	Prepare a text from the concepts of *the female reproductive system* you watched in the video.	3 points
	Match the definitions in the text you prepared with the concepts.	3 points
	Create and answer two questions about the system in the video.	4 points
12th Grade	Write three sentences about the relationship between *photosynthesis* and *respiration*.	3 points
	Create three questions about the sentences you wrote.	3 points
	Show the steps of *photosynthesis* by writing in the numbered parts of *the organelle* in the figure.	4 points
Competency: ***Acquires oral and written communication using correctly the terminology*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Write a text from the given three terms about *the cell.*	3 points
	Match the terms of *the cell* with their definitions.	3 points
	Prepare a vein diagram and place the names of the *organelles of animal and*	4 points

	plant cells in it	
10th Grade	Place *the stages of mitosis cell division* in the image.	3 points
	Write a sentence describing the properties of *the phases.*	3 points
	Find and match the images of the concepts in the chart	4 points
11th Grade	Watch the video about *the circulatory system* and write down *the parts of the heart*	3 points
	Explain the cause of one of the diseases mentioned in the video.	3 points
	Write two examples of the relationship of *infarction* with nutrition.	4 points
12th Grade	Write the terms of DNA in the text given above.	3 points
	Explain one of the terms in the figure.	3 points
	Match the terms with their definitions.	4 points
Competency: ***Develops critical thinking by experimenting, solving problems, conducting investigations and reporting results.*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Prepare a preparation containing the cells you take with a toothpick inside your mouth and put it under the microscope..	3 points
	Write down *the main parts of the animal cell* you examine under the microscope.	3 points
	Calculate how much you enlarged your cell under the microscope.	4 points
10th Grade	Prepare the preparation with the section taken from the onion roots.	3 points
	Place the preparation you prepared under the microscope and write down which phase of cell division you observed.	3 points
	Draw the shape you see in the preparation.	4 points
11th	Write down three of the materials used *in the preparation of culture water.*	3 points

Grade	Which creatures did you see in the preparation prepared from the culture water?	3 points
	Write your conclusion of this experiment	4 points
12th Grade	Examine the plant leaves in front of you and write down the jaw structures.	3 points
	Name three differences in the leaves of the given plant.	3 points
	Write sentences about why plants are different.	4 points
Competency: ***Examines the contents related to ecology, energy resources and renewable source*** Total:10 points 1-3 points = not developed 4-8 points = in progress 8-10 points = developed		
9th Grade	Which energy sources are renewable energy in the image shown to you.	3 points
	Write down which renewable energy sources are used to produce energy in our region	3 points
	Mark the energy sources that give harm living things and nature in the image	4 points
10th Grade	Write down the depletable energy sources in the text.	3 points
	Write three questions based on the text about natural resources.	3 points
	Mark permanent sources from natural sources in the diagram.	4 points
11th Grade	Read the text about the sustainability of water resources and write its relation with population growth.	3 points
	Fill in the blanks in the text that is about the sustainability of water resources.	3 points
	Answer the questions about the sustainability of water resources.	4 points
12th Grade	Watch the video about water footprint and answer the question.	3 points
	List three things we should do to reduce our water footprint	3 points
	Write if the sentences are true or false to reduce the water footprint.	4 points

1.3. Training tools corelated with the students results on national exams, for improving their literacy difficulties.

The results obtained by the students from the countries involved in this partnership, at their national exams, are showing that a high percentage need help for improving their literacy skills and passing the exams. Based on our shared experience, we build up the following table, containing a series of training tools that could be applied in the classroom or in remedial sessions on small groups or individually, to make learning and understanding more easy and to put the students in a variety of learning situations. We kept in mind the different types of intelligence and learning styles we are working with, as well as the student's need for guidance in selecting the relevant information.

The pandemic situation showed us that students are more keen on learning if we use interactive and collaborative tools, so we focused on the positive side ot if, selecting the digital instruments that we applied during online teaching, those applications that were well received by the students and that contributed to improving their school results.

Literacy difficulties encountered by the students participating in national exams	**Training tools to improve the student`s results at national exams**
Primary school students, participating in national evaluation	
Difficulties in writing a text on the basis of helpful questions	*Readwritethink* – is an application that guides teachers in lesson planning; *Google docs* for giving feedback; *Think-Pair-Share* – a collaborative learning / teaching strategy; *EdPuzzle* - helps students understand the text.
Difficulties in writing functional texts	*Oscrisoare* – letter writing tool; *Canva* - posters, presentations, fliers; *Padlet* - for short texts, comments; *Linoit* - for short texts, comments; *Pixton* - story writing based on pictures and comics; *Animaker* - story writing based on pictures and comics; *Plotagon* - story writing based on pictures and comics; *Bookcreator* – for creating stories, small books and presentations.
Difficulties in making	*EdPuzzle* - helps students understand a given text, with the help of short

associations, not being able to visualise, internalise and make connections between the ideas	questions, integrated into the text; *Toytheater* – contains educational games for developing maths skills and literacy skills; *MyKoolio* – provides lessons, exercises and problems for language, maths and geography, for primary and secondary school students.
Difficulties in systematically and faithfully receives all ideas and information from literary texts	*Mindmeister* - gives a systematic view over the subject at hand; *Prezi* - helps students focus on the notions presented within a lesson; *Liveworksheets* – provides interactive worksheets for students, which can be filled in online or offline; *LearningApps* - supports learning and teaching processes with small interactive, multimedia exercises; *Wordwall* – uses games to make learning easy and fun.
Difficulties in complex calculations (multiplication and division)	*Photomath* – scanning the exercise students find out the method; *Microsoft maths* - helps with the procedure of multiplying and dividing numbers; *Dudamath* – an app for students and teachers, is an integrated environment for interactive exploration of mathematical concepts and problem solving; *Khan Academy* – offers explanations on different mathematical problems.
Difficulties in difficulties in solving exercises with several operations	*Symbaloo Learning Paths* – useful for creating a gaming-style digital lesson plan; *Dudamath* – an app for students and teachers, is an integrated environment for interactive exploration of mathematical concepts and problem solving; *Khan Academy* – offers explanations on different mathematical problems.
Difficulties in problem solving	*Symbaloo Learning Paths* – useful for creating a gaming-style digital lesson plan; *Dudamath* – an app for students and teachers, is an integrated environment for interactive exploration of mathematical concepts and problem solving; *Khan Academy* – offers explanations on different mathematical problems.
Secondary school students, participating in national evaluation	
Difficulties in solving reasoning items	*Examenultau* - is a platform used by students from 5th to 12th grade, to learn for their national exams; *Readwritethink* - guides teachers in lesson planning.
Difficulties in analysing the characteristics of "some relationships, phenomena or	*Science Fun* - helps students to understand the different phenomenon, by the use of experiments; *Science Practical Simulator* - allows both the modelling and completion

processes specific to mathematics and/ or sciences, starting from real or hypothetical situations	of science practical activities in a safe and innovative way. The app is easy to follow, with the descriptions and explanations of these concepts broken down into stages that supports every ability of learner. *TinkerBox* - This is an action and reaction type puzzler where students can place a variety of levers, pulleys, gears, springs and more into a situation to solve a problem. *Amazing Science Facts* - From physics to chemistry and natural sciences, this app brings fun to any lesson. You and your students will no doubt be inspired by the fascinating facts it throws out about the world around us.
Difficulties in interpreting some problem-situations specific to mathematics and/or sciences by integrating knowledge from different fields	*Academia ABC* - offers lessons and exercises to help students overcome their learning difficulties; *CrashCourse videos* - provide full video courses on a multitude of various scientific topics. On top of being produced and hosted brilliantly, the videos will assist in explaining hard to grasp scientific concepts. *Veritasium* - The channel captivates the audience with mind-blowing experiments, interesting concepts and brilliant presenting by Derek. The creator of Veritasium, Dr. Derek Muller was the winner of the Streamy award for Science and Education in 2017. *Vsauce*- The channel was created by Michael Stevens in 2010 and has since gathered one of the largest followings of any science channel on Youtube. Michael has the ability to break down the most complex topics and ideas in an easy to understand way. His videos are always captivating and he has had an array of famous people featured in his videos, including Sir David Attenborough, Adam Savage, (Mythbusters) Chris Pratt, among others.
High school students, participating in national evaluation	
Difficulties in addressing the subjective items	*Examenultau* - is a platform used by students from 5th to 12th grade, to learn for their national exams; *Online dictionaries* –Thesaurus - for elevating and improving the speech, writing, and vocabulary with the tips. *Cathoven dictionary* - using artificial intelligence, it can determine the difficulty of any text, analyse text characteristics, extract key teaching points according to the students' level. *Oxford dictionary* - new grammar pages combine clear explanations with interactive exercises to test your understanding.

Difficulties in understanding the content of ideas in a text, the requirements of exercises and problems	*GeoGebra* - is a mathematics learning and teaching software that provides tools for studying geometry, algebra and analysis; *Khan Academy* - produces short lessons in the form of videos. Its website also includes supplementary practice exercises and materials for educators. It has produced over 8,000 video lessons teaching a wide spectrum of academic subjects, originally focusing on mathematics and sciences. *EDUKA* - provides theoretical knowledge, exercises, tests in different subject *eTest.lt* –online platform for creating tests and practising different subjects *Emapamokos.lt* - online practice platform for differentiation and individualisation. *Matific* - is a fantastic tool for teaching mathematics intuitively and introducing students to scientific thinking."
Spelling, punctuation and expression mistakes	*Izibac* - Romanian platform useful to students in understanding learning contents; *Microsoft 365 Word application* - has an embedded editor tool that analyses documents and offers suggestions for spelling, grammar, and stylistic issues, like making sentences more concise, choosing simpler words, or writing with more formality.
Lacks originality in the drafting of texts	*Izibac* - Romanian platform useful to students in understanding learning contents. *Duplichecker* - detects plagiarism from a text http://plagiarisma.net/ free online tool for avoiding plagiarism *Paraphrase* - a tool for sentence rephrasing and essay rewriting
Difficulties in understanding and following the given tasks and instructions	*Liveworksheets* - provides a wide variety of tasks for comprehension; *Egzaminatorius* - provides exam tasks examples of different subjects.
Lacks interest in reading e.g. books, long-read articles	*Readtheory* - provides interactive reading exercises and keeps students engaged and interested; *Squid app* - provides the texts from the newspapers on breaking news with reading comprehension exercises;

	Readingtrainer- provides everything you need to read texts of all types faster, more effectively and with better retention.
Difficulties in structuring the written texts e.g. essays, letters	*Grammarly* - indicates grammar, vocabulary, spelling, punctuation, logics errors and gives solutions for correcting; *Hemingwayapp* - in edit mode it guides the writer to avoid certain loopholes. It focuses on the quality of the text; it will not correct spelling mistakes. *Webfx* - provides a quick and easy way to test the readability of your work
Difficulties in applying what they have learned in real life situations and difficulties in processing and depicting physics via graphs	*Phet.simulations* - provides simulations for chemistry, physics, maths and biology provided in order to make students see what they have learned applied to real life situations; *Humanoid 4D* - is an augmented reality application that allows students to explore human body parts in details.
Difficulties applying maths formulae to laws of physics	*ogmmateryal.eba.gov.tr/* - the official page prepared by the Turkish Ministry of National Education General Directorate of Secondary Education. You can find interactive books, games and activities. *Play.google.com/store/apps* - is the official Mobile Question Bank application prepared by the Turkish Ministry of National Education General Directorate of Secondary Education. *Newtonium* - Physics Simulator app is a unique app for solving physics problems. The application calculates forces exerted on a body and simulates the resulting motion in two dimensions, with three degrees of freedom. You can set physical properties such as mass, velocity, size, position and many more. Running a simulation will see the forces in action where you can specify conditions and change the models variables.
Difficulties in connecting chemical symbols with their meaning (problems memorising)	*Quizlet* - a free website providing learning tools for students, including flashcards, study and game modes. *Flashcardmachine* - a free service for creating web-based study flashcards that can be shared with others. *Technotes* - a website with interactive tools for learning the periodic table. *Study* - a website for quizes, videos and tutoring materials and resourses. *Memorize* - a website that offers tecniques and videos for memorising the periodic table.

Difficulties in the use of language, structural analysis of literary works, reading comprehension of different types of texts and writing different forms of written expressions	During regular classes, teachers should allocate more time from regular teaching for: use of the language, for use of the theory of literature in the structural analysis of literary works, reading comprehension of different types of texts, for writing different forms of written expression; *Grammarly* - an overall grammar checker; *Mondly AR* - is a virtual language learning assistant; *Hemingwayapp* - helps with producing cohesive texts.
Difficulties in acquiring knowledge in Geometry	*Geometry Pad* - an app for creating fundamental geometric shapes,for exploring and changing their properties and calculating metrics; *Geogebra* - for teaching and learning Math. Free digital tools for class activities, graphing, geometry, collaborative whiteboard and more; *Cabri* - a simple and comprehensive software to understand 3D geometry in the classroom; *Sketchpad* made use of drawing as a computer's unique interaction medium. The system consisted of input, output as well as computation programs that allowed it to decipher information sketched directly on a computer screen.
Difficulties in solving questions from scientific literacy	Attention should be paid to work with data, reading graphs and tables. *Science Practical Simulator* - is an educational app that allows students to complete practical activities in a safe and engaging way. *National Geographic ScienceLab* - is a website with experiments, videos, articles and more. *National Geographic Website* and TV series and films - ”Science of stupid” *WeAreTeachers* - is a website for teachers and high school students for experiments and ideas for science experiments. *Study.com* - is a website for quizes, videos and tutoring materials and resourses. *WowScience* - is a website that offers science games, activities, apps, videos experiments and other websites.

2. Projecting and applying motivational strategies to stimulate the students interest towards reading and to facilitate the understanding of the read texts.

2.1. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION - TEXT MAPPING

CLASS: 4th grade (secondary school)

SUBJECT: English language

TEXTUAL SUPPORT: https://www.commonlit.org/en/texts/screen-addiction-among-teens-is-there-such-a-thing

METHOD: Text mapping

Text mapping is a visual technique that can be used to aid students in understanding how information is organized in the text. It can be used to teach reading comprehension, writing skills, study skills, and course content.

Instead of using a book or a textbook students use copied pages and tape them together creating a scroll. This allows students to see the entire text at once instead of focusing on pieces of it. Teachers can create scrolls before the class starts or students can do it themselves.

Students use various coloured pens, markers, highlighters to mark up (map) different text features or parts of the text so that they could more easily see the relationship between the text structure, text organisation, and meaning. They highlight, underline, box, circle the text, draw the arrows, bubbles, or use any other way to make the relevant information prominent.

Benefits of using text mapping in the classroom:

- Simple, low-tech and inexpensive
- Students can see and be taught the strategies used for marking up the text
- Students acquire reading strategies during the process of text mapping – learning how to focus on relevant parts of the text
- It helps students to develop active reading skills – they spend more time analysing different parts of the text, grasping the general idea as well as the details
- It is suited to different learning styles (visual, spatial, kinaesthetic, tactile)
- It is quite helpful to students who have learning disabilities
- Appropriate for all grade levels
- It can be used both on fiction and non-fiction

How to implement text mapping:

- Copy a text (magazine article, textbook passage, story, poem, etc.) and tape the pages together

- Make a marking or textmapping key which corresponds to the reading aim/s e.g.

For non-fiction: orange – chapters, gray – illustrations, black – the textstream, green – headings, blue – subheadings, red box – key words, etc.

For fiction: gray – plot line, black – chapters, orange – section structure, green – setting, blue – references to characters, purple – characterization, etc.

It can be done before the class or with students.

Mark up the text (students can do it with the teacher, in groups, or individually)

Prepare the tasks that will help you enable you to achieve the reading aim/s

Materials:

A Commonlit article SCREEN ADDICTION AMONG TEENS: IS THERE SUCH A THING?

Text mapping color key (Students made it themselves at the beginning of the class.)

Colored markers/pencils/pens

Outcomes:

Students read a magazine article about addiction of adolescents to technology

Students search for the negative effects that technology can have on users

Students acquire new vocabulary

Students look into the structure of the article

Students develop active reading skills answering guiding comprehension questions

Students learn how to work in teams

The Steps:

Step 1: Students make a text mapping colour key (title, subheadings, topic sentences, key words, unfamiliar words, key sentences, negative effects)

Step 2: Students are given scrolls with the magazine article

Step 3: In groups students „map“ the text according to the text mapping key they made.

Step 4: Students answer the comprehension questions

Step 5: Discussion. Students discuss the questions in groups using the text mapped article. They report their opinions to the class.

Comprehension questions:

List the negative effects that technology can have on users.

In the introduction, the author is certain that all technology users are addicted to their devices.

What are the two terms mentioned that refer to the technology overuse?

Why is it difficult to deal with „technology addiction“?

Describe the anti-addiction application.

Discussion questions:

In relation to the article, how can technology usage be harmful? When does spending time on your device become an addiction? How do the benefits of technology compare to the disadvantages discussed in the text?

2.2. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – VENN DIAGRAM

SUBJECT: Ethics

COURSE UNIT/TOPIC: Society and the state

TEACHING UNIT: The origin and purpose of society and the state

SOURCE: https://www.lucidchart.com/pages/tutorial/venn-diagram

Goal: Students will explain the concepts of society, state of nature, social contract, state, and the relationship between the state and sociality, identify the reasons for the emergence of more complex forms of association, separate and compare the philosophical ideas of Hobbes, Locke and Rousseau about the emergence of states, and conclude about the purpose of the emergence of the state.

Connection with teaching subjects: History, Philosophy, Sociology

Venn diagram is used to represent similarities and differences between concepts. It helps to visualise the logical connection between different sets and their elements by using intersecting and non intersecting circles to show the relationship between sets.

The diagram works this way: each circle represent the concept. Circles which overlap represent the similarities, while detached circles represent the difference between concepts.

Normally, you can use any number of circles in a Venn diagram, but the most commonly used type is the triple-circle diagram. When three circles partially overlap each other in a diagram,

they create a triangle at the intersection area. This triangle represents similar data in those three circles.

Venn diagram purpose and benefits

To visually organize information to see the relationship between sets of items, such as commonalities and differences. Students and professionals can use them to think through the logic behind a concept and to depict the relationships for visual communication. This purpose can range from elementary to highly advanced.

To compare two or more choices and clearly see what they have in common versus what might distinguish them. This might be done for selecting an important product or service to buy.

To solve complex mathematical problems. Assuming you're a mathematician, of course.

To compare data sets, find correlations and predict probabilities of certain occurrences.

To reason through the logic behind statements or equations, such as the Boolean logic behind a word search involving "or" and "and" statements and how they're grouped.

Elaboration of achievements (outcomes) and tasks/activities to check their adoption

ACHIEVEMENTS	LEARNING AND TEACHING OUTCOMES	PLANNED TASKS/ACTIVITIES FOR CHECKING THE ACCEPTANCE OF LEARNING AND TEACHING OUTCOMES
Defines the fundamental ethical concepts related to moral and ethical problems in politics and law Judges the actions of society, institutions and authorities	Explains and appropriately uses the terms society, social contract, state of nature, state Compares the philosophical ideas of Hobbes, Locke and Rousseau about the origin of states Identifies the reasons for the emergence of more	Evaluation for learning: oral conversation with students during the learning process, pair work and group work, solving teaching sheets, giving feedback regarding the quality of solving tasks Evaluation as learning: self-evaluation-table for evaluation of work within the group Evaluation of what has been learned: will spend one of the following hours through: creating a discussion essay with pre-set evaluation criteria

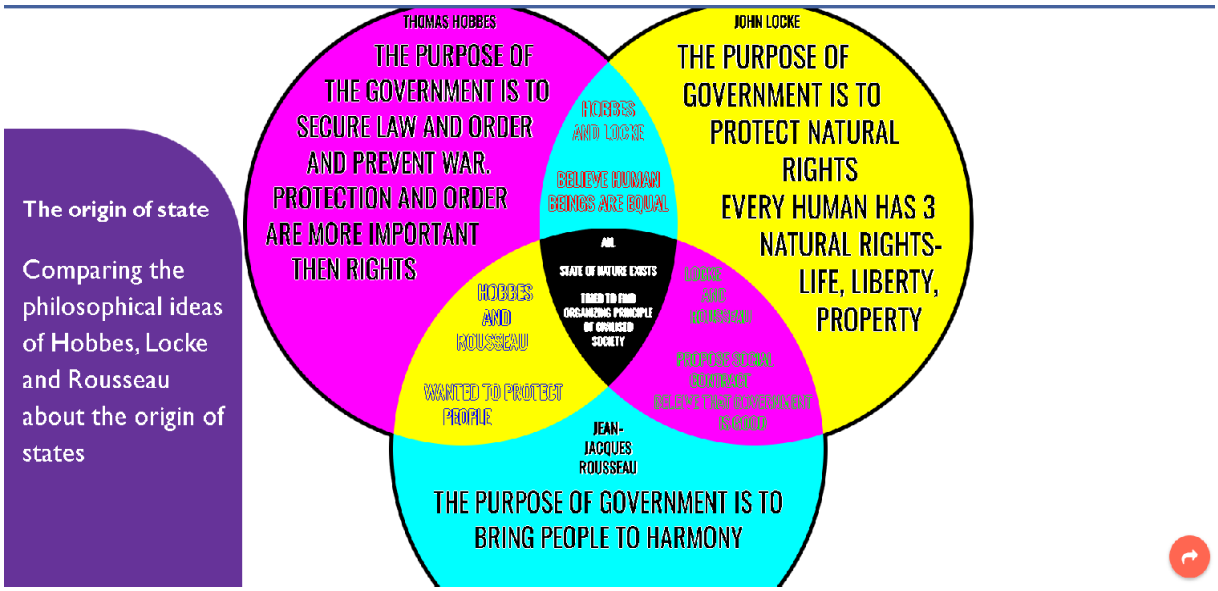
The course of the lesson

STAGES OF THE LESSON	TEACHER ACTIVITIES	STUDENT ACTIVITIES	MODELS, STRATEGIES AND METHODS OF LEARNING AND TEACHING
Introduction 10 min	Asks students questions related to human sociability and the main features of that sociability (repetition) Announces the topic of the lesson and the questions to which we will try to find answers during the lesson	Answering questions	Conversation and open questions
Main part/ middle part 70 min	Invites students to consider what society is and what its characteristics are. (5 min) Invites them to think about a hypothetical situation (what would life be like if there were no rules/laws/government) - explains the task Imagine that there are no rules in your class (society)... What would your class look like if there were no rules? What would happen if the teacher did not have the right to guide and direct the students? Divide into small groups and answer questions about such a situation. What would be the advantages and disadvantages of such work? How would the students behave? The teacher briefly explains the	They state the basic characteristics of the society that will be written on the board Students in a group do the task: They choose a group representative who explains the conclusion Students follow a short presentation In pairs, they work on the task - with the help of the text and the table, they classify the ideas of philosophers about relations in the state of nature and the ideas about relations	Conversation, brainstorming, Working in a group cooperative learning problem solving Work in pairs cooperative learning method of reading and working on the text A storm of ideas, a conversation with encouragement

	concept of natural state Announces and explains the task to the students - Show the basic ideas of Hobbes, Locke, Rousseau about the origin of states and sort them into a diagram (investigate what solutions these 3 philosophers came up with) The teacher monitors the presentation	in the state, then they present the solutions they came up with	
Final part 10 min	Invites students to draw conclusions about the goal and purpose of the creation of the state and the basic characteristics of the state	They state the basic characteristics of the state, which are written on the board, They answer questions	A storm of ideas, a conversation with encouragement

Student's product of the lesson using Venn diagram

Show the basic ideas of Hobbes, Locke, Rousseau about the origin of states and classify them in a diagram (investigate what solutions these 3 philosophers came up with).



2.3. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – Grammar through drama (1st and 2nd Conditionals)

From Shakespeare´s Romeo and Juliet, Act II. Scene II

Task sheet: Look at the picture. Do you know who the characters are?



1. The two young people loved each other but they could not be together. Do you know why?
2. Read the text below and find out the answer to question 2.
3. Would a rose smell different if you called it by another name?
4. Will Romeo still be Romeo if he changes his name?
5. Now, give your own examples of things being the same if we changed their names.

Jul. 'Tis but thy name that is my enemy;
Thou art (you are) thyself (yourself) though, not a Montague.
What's Montague? it is nor hand, nor foot,
Nor arm, nor face, nor any other part
Belonging to a man. O! be some other name:
What's in a name? that which we call a rose
By any other name would smell as sweet;
So Romeo would, were he not Romeo call'd,
Retain that dear perfection which he owes
Without that title. Romeo, doff thy (your) name;
And for that name, which is no part of thee (you),
Take all myself.
Rom. I take thee at thy word.
Call me but love, and I'll be new baptiz'd;
Henceforth I never will be Romeo

2.4. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – TABLE OF EXPECTATIONS

Task 1 - First read the questions below and try to answer the questions using your imagination.

Table of expectations				
1.Who do you expect the main character of the story to be?	2.What do you expect to find out when reading the text?	3. What do you think happened to the friends of the hero?	4. What do you think the title of the text could be?	5. What do you expect to happen to the hero?

Task 2 - Now, read the text below. Have your expectations been confirmed? In other words, have you guessed what the story is about?

SPEAK, MEMORY

„Of the cunning hero,
The wanderer, blown off course time and again
After he plundered Troy's sacred heights.
Speak
Of all the cities he saw, the minds he grasped,
The suffering deep in his heart at sea
As he struggled to survive and bring his men home
But could not save them, hard as he tried—
The fools—destroyed by their own recklessness
When they ate the oxen of Hyperion the Sun,
And that god snuffed out their day of return.
Of these things,
Speak, Immortal One,
And tell the tale once more in our time.
By now, all the others who had fought at Troy—
At least those who had survived the war and the sea—
Were safely back home. Only Odysseus
Still longed to return to his home and his wife.”

2.5. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – MULTIPLE INTELLIGENCES

Class: 10th – IPSIA (technical course)

Discipline: English

Supporting text (subject): Methods of producing electricity

Procedural Resources: The Method of Multiple Intelligences

The Multiple Intelligences method is a constructivist teaching tool centered on the student that gives him the opportunity to perceive, understand and capitalize on his creative potential. Also, this process facilitates the understanding of the text, develops students' interest in reading and combats functional illiteracy at the school level.

Linguistic intelligence: How can we use words?

Those with this dominant type of intelligence think primarily in words and easily use language to express and understand complex realities.

Logical-mathematical intelligence: How can we enter numbers, calculations, elements of logic?

This intelligence determines the analysis of causes and effects, the understanding of the relationships between actions, objects and ideas.

Musical-rhythmic intelligence: How can we bring sound, music, rhythm?

Those with this intelligence think in sound, melodies, rhythms, rhymes, are sensitive to musical sounds, recognize, create and reproduce music using an instrument or the voice.

Spatial-visual intelligence: How do we use visual materials or color?

People with this intelligence think in images and clearly perceive the visual world.

Naturalistic intelligence: How can I get students to communicate with nature?

Those with this dominant intelligence understand the natural world, love plants and animals.

Kinesthetic intelligence: How can we move the body and hands of students?

This intelligence brings thinking into motion and using the body in suggestive and complex ways.

Interpersonal intelligence: How can we motivate students to cooperate in learning?

This means thinking about other people and understanding them, having empathy, recognizing the differences between people and appreciating their way of thinking, being sensitive to their motives, intentions and states.

Intrapersonal intelligence: How can we evoke feelings, cooperate with classmates?

This kind of intelligence had got the ability to socialize and to understand different points of view. these students enjoy to work in a group, caring and learning together with others, they learn more easily through interaction with others on the contents.

OBJECTIVES:

O1.to orally introduce the new words used in the text;

O2.to read a text at first sight correctly, consciously and fluently, respecting the punctuation marks;

O3.to identify the methods of producing electricity, differences and similarities;

O4.to make statements with the different energy sources;

O5.to express one's own opinions and thoughts orally;

Methods of producing electricity.

Electricity can be generated directly from sunlight using photovoltaic cells grouped together in a solar panel. The alternative is to create an electric current through electromagnetism inside a generator. In this case, power is needed to turn the turbines moving the electromagnets. The power can come from wind, water or steam.Wind power has been used for centuries in the form of mills. The force of the wind rotates blades which turn a drive shaft.

Water power too has a long history, with watermills constructed at the side of rivers. We build dams to increase the power of rivers to turn the turbines in hydro-electric stations. We also use the energy of waves, tides and currents to generate electricity.

Steam power produced by boiling water has been a source of energy since the Industrial Revolution. The heat to boil the water can be created in the following ways. Fossil fuels can be burned to heat water in a boiler. Coal, oil and natural gas are called fossil fuels because they are formed from the remains of plants and animals that died millions of years ago. Buried underground or under the sea, they are extracted through mining or drilling.

Nuclear fission is the process of splitting the atoms of uranium or plutonium. This releases an enormous amount of heat which can be controlled inside a nuclear power station and used to produce steam and thus electricity. Solar furnaces create steam by using a system of mirrors to focus the rays of the sun onto a water tank thus heating it.

Biomass is fuel in the form of wood or other plants, produced through agriculture or forestry. It can be burned to heat water and create steam. Many cities have special incinerators, linked to power stations, which burn household rubbish and other forms of waste material.

Geothermal energy is present under the surface of the earth. In certain places it is practical to drill deep holes and then pipe water down to be heated by the 'hot rocks'.

The students were divided into 8 groups, depending on their abilities. The workloads were distributed in the same way.

GROUP NO. 1 – LINGUISTIC INTELLIGENCE

Make a sentence with each energy power.

Power Sentence	Sentence
Wind power	
Water power	
Steam power	
Fossil fuels	
Nuclear fission	
Solar furnaces	
Biomass	
Geothermal energy	

GROUP NO. 2 – INTRAPERSONAL INTELLIGENCE

Make an interview of 10 - 12 lines to your classmate asking 2 methods of producing electricity we will use in the future.

GROUP NO. 3 – INTERPERSONAL INTELLIGENCE

Which method of producing electricity is the best? Justify your answer. Bring PRO (YES) or AGAINST (NO) arguments.

GROUP NO. 4 – MUSICAL INTELLIGENCE

Play the sound of energy: wind, water, fire burning, steam. Try to compose a song about there different sounds. Sing it!

GROUP NO. 5 – KINASTHETIC INTELLIGENCE

Create and describe a little model about at least 3 methods.

GROUP NO. 6 – SPATIAL INTELLIGENCE

Search in the Internet pictures about energy plants and draw, at least, 3 different plants. Use the right colors! Be creative!

GROUP NO. 7 – LOGICAL-MATHEMATICAL INTELLIGENCE

Answer to the following:

Which methods for generating electricity...

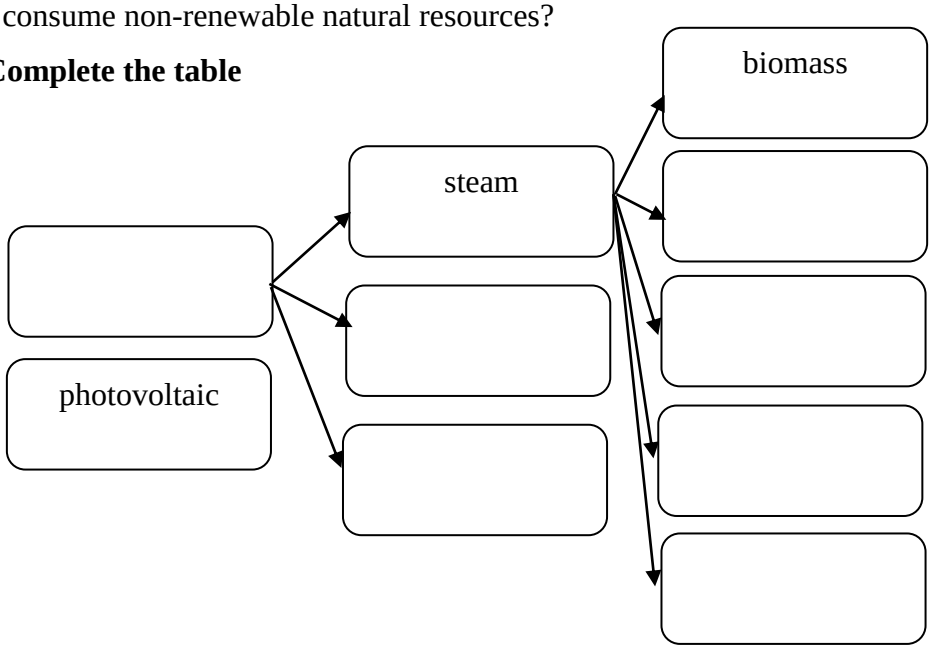
! depend on the weather or climate?

! are limited to certain places?

! use renewable natural resources?

! consume non-renewable natural resources?

Complete the table



GROUP NO. 8 – NATURAL INTELLIGENCE

Which methods are related to renewable energy?

Propose three measures to encourage people to protect environment. Make a poster about it!

2.6. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – JIGSAW

Class: 11th – IPSIA (technical course)

Discipline: English

Supporting text (subject): Renewable energy sources and plants

Procedural Resources: The Method of Jigsaw

Jigsaw is a cooperative learning strategy that enables each student of a "home" group to specialize in one aspect of a topic (for example, one group studies habitats of rainforest animals, another group studies predators of rainforest animals). Students meet with members from other groups who are assigned the same aspect, and after mastering the material, return to the "home" group and teach the material to their group members. With this strategy, each student in the

"home" group serves as a piece of the topic's puzzle and when they work together as a whole, they create the complete jigsaw puzzle.

OBJECTIVES:

O1.Build comprehension of the argument.

O2.Encourage cooperative learning among students.

O3.Improve listening, communication, and problem-solving skills.

Renewable energy.

1. Water - Hydroelectric power

Hydropower plants convert the energy of falling water into electricity. The amount of electricity generated depends on the volume of water flow and the distance it falls. Here the part of an hydroelectric plant.

Reservoir - This construction holds back water from a river, creating a large Dam.

Intake - A control gate opens and gravity pulls the water through the Penstock, a pipeline that leads to the turbine. Water builds up pressure as it flows through this pipe.

Turbine - This is a large disc with curved blades which the water strikes and turns.

Generator - This is attached to the turbine below it by a drive shaft. As the turbine blades turn, they rotate giant magnets and copper coils, producing electric current.

Transformer - Located inside the powerhouse, it converts the electric current to a higher voltage ready for transmission along the power lines.

Outflow - Used water is carried through pipelines and re-enters the river downstream.

A pumped-storage plant has two reservoirs instead of one and continually reuses the same water. The water leaving the hydropower plant flows into a lower reservoir. Using a reversible turbine, the plant can then pump the water back to the upper reservoir during off-peak hours. The plant therefore always has water available to generate electricity during periods of peak consumption and is not dependent on the flow of the river.

2. Wind power

The giant blades of the rotor are set in motion by the force of the wind pushing against them, thus turning the hub. The spinning hub turns a drive shaft but the speed of rotation from the rotor is not enough to generate electricity. The drive shaft therefore passes through a gearbox, which increases its rotation speed, before connecting to the generator. Through the force of electromagnetism, the rapidly spinning generator creates a flow of electricity.

3. Solar power - how a solar cell works.

Light is a form of energy, consisting of streams of particles called photons. When a photon hits an atom, it can pass its energy to one of the atom's electrons and the electron then becomes free so it can fly out of the atom.

A solar cell is made of two layers of semi-conducting material, an n-type semiconductor and a p-type semiconductor. When light shines on the junction between the types of semiconductor, it frees electrons in the n-type semiconductor. The free electrons move from the n-type semiconductor to the p-type semiconductor creating an electric current.

4. Biomass and biofuels

Power can be generated from decomposing organic materials and waste, such as plants, wood, and household rubbish. Organic materials like methane gas, bioethanol, biodiesel can simply be burned in incinerators to provide the energy to turn steam turbines and thus generate electricity. The combustion of biomass or biofuel, through a boiler, boils water and creates steam. The steam turns a turbine and thus the generator, creating energy.

5. Geothermal energy

In regions with high levels of volcanic activity, underground rocks heated naturally by the earth can be used to produce electricity. Cold water is pumped under pressure down an injection well and heated by the hot rocks. The hot water returns to the surface under pressure and passes through a heat exchanger where its heat is used to create steam to turn a turbine and thus to create energy by a generator. This energy source is not completely renewable since the hot rocks can cool down over time.

STEP 1 – DIVISION OF THE WORKLOAD

The teacher divides the class into 4 groups, with 5 students each each (depending on the number of students and topics). Each student has to study just 1 topic. The teacher divides the topic trying to involve different types of students.

STEP 2 – SAME ARGUMENT

The 4 students with the same topic study together helping each other to learn their lesson.

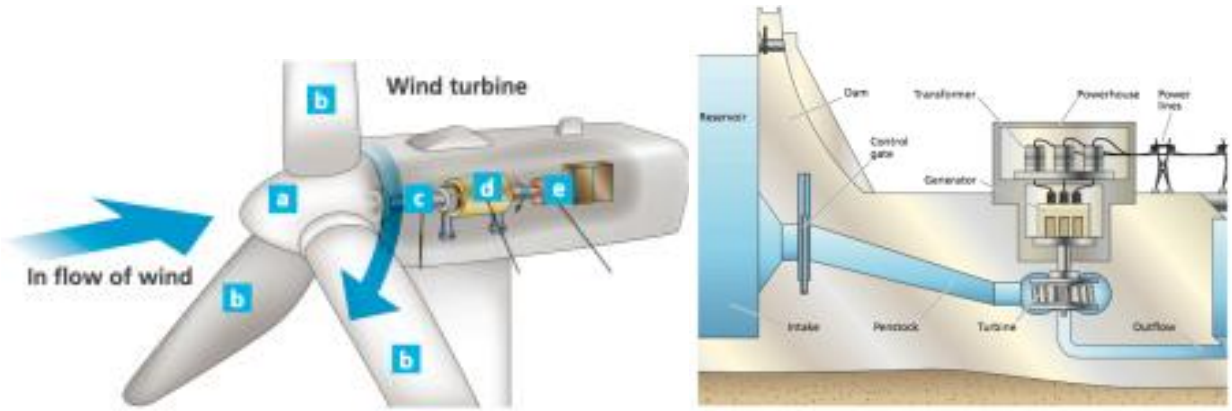
STEP 3 – BACK TO ORIGINAL GROUP

Each student goes back to the original team sharing what he had learned before. Each student tries to help his/her team classmates learning the topic so that the whole group knows the complete lesson.

STEP 4 – DISSEMINATION

Teams orally disseminate to the teacher what they have learned about the lesson or the teacher takes a test to verify what the students have learned.

Test - *Use the following diagrams to explain how each plant works.*



2.7. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – AN INQUIRY METHOD

Peer Learning - Lesson plan using the inquiry method

Class: 9th grade

Discipline: English language

Objectives:

-to encourage reading and understanding a story

-to encourage students to think individually and share ideas with classmates

-to revise question formation

Inquiry learning activity

The teacher provides the students with the same text. The students read it individually, asking the peers or the teacher for help if there is any unfamiliar vocabulary or structures.

The students are divided into three groups A, B and C. (1st group-A, A, A, 2nd group-B, B, B, 3rd group-C, C, C)

Each group is given a list of 5 answers.

Working as a team the students' task is to form and write down the questions corresponding the given answers.

The teacher monitors the groups to form grammatically correct questions.

Having written the questions, the groups are transformed into the ones containing one student from each previous group (1st group-A, B, C, 2nd group-A, B, C, 3rd group-A, B, C)

In the new groups students ask each other questions expecting to receive the answer which has been given on the list by the teacher.

If the answers are the same as on the list, that shows that all the students have understood the text and that they formed correct questions.

Then, the students are supposed to be able summarize the story and retell it.

Variation:

The students are encouraged to ask each other more questions on the text to be able to mediate the knowledge and facts from the text.

The students can mingle forming some more different groups and repeat the asking-answering phase, which helps them to practice more.

2.8. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – KNOW/WANT TO KNOW/LEARNED

Class: 9th grade

Discipline: English language

Objectives:

-to encourage students to make connections to prior knowledge,

-to encourage students to think about new questions that they might want to investigate as a result of what they learned,

- to help students reflect and evaluate their learning experience.

Reading with purpose activity (Know/Want-to-know/Learned)

The teacher explains the importance of prior learning and how life experience and making connections to what we already know is a very important part of learning.

The teacher should be sure that all students understand how to use this method and support them as they work.

Step 1. Introduce/remind the KWL strategy and explain how to use it with the topic.

Step 2. Draw a three-column chart on the board OR each student draws such a chart in his/her exercise book.

Students will write the things they already know **K** and the things they wish to know **W** before reading. After reading, they will complete the chart with things they have learned **L**.

Step 3. KNOW

Introduce the topic and outline students' prior knowledge of the topic brainstorming with the entire class or in small groups. Write the responses/ideas on the **KWL** chart.

OR

Ask the students to draw a **KWL** chart in their exercise books and list everything they think they know about the topic of study in their charts.

Step 4. WANT-to-LEARN

Encourage students to generate a list of what they want to learn, to raise questions they would like to be answered after reading the text. Students can preview the text and turn the heading, subheadings and any charts, pictures into questions. In this way they will set a purpose for reading.

The teacher writes the questions on the KWL chart or every student writes his/her questions.

Now, students read the text and actively look for answers as well as verify their knowledge.

Step 5. LEARNED

After reading the text students discuss and take notes on the things they learned to complete the chart. Emphasize new information that relates to the "What I want to know" questions.

Discuss this new information with the class. Note any questions that were not answered. As a possible homework assignment might be to look for additional information to answer those questions.

Encourage students to write down the ideas that surprised them or were hard to understand. Ask the students to evaluate their learning experience.

K **What I know**	**W** **What I want to know**	**L** **What I learned**
Before reading access and write what you know about the topic.	Write everything you want to know about the topic.	After reading, reflect, note and review what you learned from your reading.

2.9. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – THINK-PAIR-SHARE

Class: 7th grade

Discipline: English language

Objectives:

-to encourage reading and understanding a story

-to encourage students to think individually and share ideas with classmates in a discussion

Peer learning activity (Think-Pair-Share)

The teacher gives instructions for the story to be read and develops the set of questions or prompts that target key content concepts. The teacher then describes the purpose of the strategy and provides guidelines for discussions. As with all strategy instruction, the teacher should model the procedure to ensure that students understand how to use the strategy. Teachers should monitor and support students as they work.

First of all, students read the story. Then:

T : (Think) Teacher begins by asking a specific question about the story. Students "think" about what they know or have learned about the topic.

P : (Pair) Each student should be paired with another student or a small group.

S : (Share) Students share their thinking with their partners. Teachers expand the "share" into a whole-class discussion.

Variation:

The teacher can modify this strategy and include various writing components within the Think-Pair-Share strategy. This provides the teacher with the opportunity to see whether there are problems in comprehension. Teachers can create a Read-Write-Pair-Share strategy in which students:

R: Read the assigned material (a story);

W: Write down their thoughts about the topic before the discussions;

P: Pair up with a partner

S: Share their ideas with a partner and/or the whole class.

2.10. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – CLUSTER

Class: 7th grade

Discipline: English language

Lesson Plan using cluster:

Lesson 1- Reading comprehension- a short story Hatchet by Gary Paulsen

Lesson 2- Creating and reading a short story

Cluster

Objectives:

- to read a short story

- to introduce new vocabulary

-to create and read a story

-to facilitate comprehension by using cluster and peer learning

Lesson 1 activities:

-Students read the short adapted version of the novel “Hatchet” by Gary Paulsen.

After that, they fill out the worksheet A STAR OF THE STORY. Students take turns and read their answers.



Lesson 2 activity: The main activity for the second lesson is a card cluster game which can be used to create/write and read a short story:

Card cluster: The teacher creates a deck of information cards (keywords and sentences from the story). This is a game played in small groups of three to four students. Each group is given a deck and from the deck, they take cards and create a cluster of sentences and phrases around one keyword trying to create the story. Once the cluster is formed they write down the story and then they take turns to read it.

It can be also used to put the sentences from the cards into the correct order to make a story.

Peer learning is used in all the stages of the learning process.

2.11. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – RECALL – REFLECTION – MEANING MAKING

Class: 4th grade

Discipline: Romanian language and literature

Supporting text (subject): The nightingale legend

Procedural resources: Recall – Reflection – Meaning Making (ERR), Prediction Table, I know - I want to know - I have learned;

The Evocation - Realization of Meaning - Reflection method is a three-phase model for designing and carrying out the instructional-educational process.

To achieve its goals, a lesson can be organized into **three parts**:

• activities to evoke or update the knowledge and experiences that the students have about the subject proposed in the lesson;

• meaning-making activities, through the accessibility and understanding of the knowledge taught;

• activities of critical reflection on the acquired knowledge to facilitate their integration into their own cognitive schemes.

A fourth can be added to these three groups, called extension, during which students can develop the notions or ideas acquired or practice specific applications.

OBJECTIVES:

O1: introduce explained words in new contexts;

O2: to compose a text using the key words in the text;

O3: to make predictions on the epic thread of the story to answer the questions;

O4: to express and argue orally their own opinions and thoughts;

Examples of learning activities:

1. Key terms

KEY TERMS

Make a text using all the given words in the order in which they are written**.**

- **…**
- **…**
- **…**
- **…**
- **…**

_____
_____
_____
_____
_____
_____

2. Table of predictions

After reading the text	What do you think will happen?	Why do you think this?	What really happened?
1.			
2.			
3.			
4.			
5.			

3. I know - I want to know - I have learned

I KNOW	I WANT TO KNOW	I HAVE LEARNED

4. Application of the Evoking - Making sense - Reflection method

The text: Legend of the Nightingale - folk legend

1. Being once the King of birds very well-disposed and wanting to know which of his subjects sings more beautifully, more pleasantly and more charming, he ordered the whole kingdom to gather at the court king the most famous singers, to sing at his table.

As the birds heard of this royal command, they lined up all together, they took counsel and then chose three from among themselves, whom they sent to the royal court.

These three were: the oriole, the blackbird and the nightingale. And they, as soon as they were chosen, did not think long, but quickly set off towards the royal courts.

2. The oriole, as one who has the choicest clothing and more beautiful, being covered with golden feathers, which shine very beautifully in sunlight, was allowed to go ahead. Not only that, but he alone put himself at the head of the other two and he did not allow them to go before him anyway.

The blackbird followed him, saying that she, like one with a golden beak like the feathers of the Oriole, and the garment black and shining like silk, must follow him. But the nightingale, being small in stature and having the simplest clothing, stayed behind and walked with a bowed and humble head towards the emperor's court.

3. When the oriole arrived at the royal court and entered before, the emperor, seeing that he was so beautifully adorned and that he had an imposing stature, received him with the greatest honor, placed him at the head of the table and then invited him to sing.

The oriole began to sing full of praise. Listening to him attentively, the emperor was very pleased with his song and praised him.

The blackbird then entered. As he saw her too, the emperor held out a chair to her, inviting her to sit by the table and sing.

Starting to sing, the Blackbird did much more pleasantly and much more beautifully than the oriole.

Finally the Nightingale arrived and, entering the court, bowed humbly to the ground before the emperor.

4. Seeing her so small, humble and unheeded, the emperor wondered what she was doing at his court and, therefore, he asked her a little bluntly what she needed, but without asking her to sit down, like the other guests who had entered before.

- Then, the exalted emperor answered the Nightingale by the door, where she had been since entering. Do not be angry, I was chosen and sent by my relatives to Your Highness so that I can sing you a song.

- Sing to me, said the emperor smiling, so I can see what you can do!

Not daring to even look at the king, the Nightingale first cleared her throat and then began to sing as she knew how, not as the others had done…

When he heard her sing, the emperor was amazed by the beauty of her song. He hadn't heard such a tender, sweet, pleasant and charming voice since he woke up in the world... The nightingale, with her song, put the other two singers from before under the bed. And when she had finished singing, the emperor did not let her stay at the door any longer, but put her in the oriole's place, at the head of the table, giving her at the same time the greatest, most beautiful and most precious gift, which was meant for the best singer. And after the meal was over, after all the guests, who were invited to that table, got up, she was the one who started first, even though her clothing was much simpler than oriole's and blackbird's.

5. The Blackbird, which had sung somewhat more beautifully than the oriole, followed the Nightingale.

But the oriole, with all his princely bearing, with all the beauty of his clothing, remained behind and, leaving the emperor humiliated and ashamed, he was the last.

And ever since these three birds came to their king to sing at his table, the Nightingale remained the most famous and the most masterful singer of all the birds. Every songbird must bow his head and worship before her.

The students received this template their task being to create a short text on the subject of their choice using the given words.

This is an example, the text being created by one of the students from 4th grade, Cristian Gymnasium School, Romania.

1. **Key terms**

KEY TERMS

Make a text using all the given words in the order in which they are written.

- birds
- the royal court
- humble
- song
- skillful

Once upon a time there was a king who lived alone in his kingdom and his only friends were birds.

One day, the emperor decided to invite all the surrounding birds to the royal court, to give them all gifts, as thanks for always being by his side. Among the birds that presented themselves at the event, a humble bird arrived, which, however, smiled more beautifully than all the others. She told the emperor that she does not need a gift, her friendship is sincere and does not rely on gifts and attention.

Hearing this, the emperor had tears in his eyes and said that this bird would forever be his best friend.

The bird was very happy, it sang a song to the king and the other birds, thus becoming the most skillful bird in the kingdom.

After making the texts using the given words, the text „ The nightingale legend" will be read, completing the table with predictions about the next fragment in turn.

2. **Table of predictions**

After reading the text	What do you think will happen?	Why do you think this?	What really happened?
1.	The oriole, the blackbird and the nightingale set off for the royal court with the other birds.	Because the birds have just been chosen for the contest.	The oriole started first, being the proudest, the blackbird started after him, and the nightingale last, being the most humble.

2.	The oriole and the blackbird will sing foul.	Usually the last character out of three given characters is the best.	The oriole and the blackbird sang beautifully, and the emperor was pleased.
3.	The nightingale will sing most beautifully.	Beacause it is the last bird and will sing the most beautiful.	The king treated the nightingale with contempt, but she sang the most beautifully, and was then invited before all the birds.
4.	The nightingale will always be the first among all the other birds.	Because the nightingale sang most beautifully.	The nightingale has remained the most famous bird, and all other birds must bow before her.

After reading and understanding the text, complete the following table, referring to the information the students already knew, but also to the new information.

3. I know - I want to know - I have learned

I know	I want to know	I have learned
Legends do not have a specific author. Legends are passed down from generation to generation by word of mouth (oral route)	What do legends convey?	Legends are literary texts that talk about the appearance and essential features of flowers, birds, lands etc

2.12. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – THE CUBE

Class: 2nd grade

Discipline: Romanian language and literature

Supporting text (subject): The legend of the ladybug

Procedural resources: The Cube;

The Cube method involves an algorithm aimed at description, comparison, association, analysis, application, argumentation, when one wants to explore a new or a known subject in order

to be enriched with new knowledge. It can also be applied to a situation viewed from several perspectives.

Applying the method involves making the cube, announcing the topic that will be explored and forming groups of children. Depending on the number of students in the class, they can play different roles:

ROLLERS – roll the cube;

INTELLECT – reads the image or task written on a symbol and formulates the question;

KNOWS EVERYTHING – remembers the task presented by his colleague to remind his group mates in case they forget it or want to compare the answer with the question;

TIMER – measures time and interrupts the activity. An hourglass, other non-conventional means or a timer is used;

THE HUMORIST – encourages the group, being optimistic, good-natured, with a sense of humor.

Work steps:

1. Making a cube on whose faces are written the words: describe, compare, analyze, associate, apply, argue.

2. Announcing the theme.

3. Dividing the class into 6 groups, each of them examining a theme from the faces of the cube.

Describe: What does it look like? - colors, shapes, sizes, etc.

Compare: What is similar, what is different?

Analyze: Tell what it is made of?

Associate: What does it make you think of?

Apply: How can it be used?

Argue: for or against and list a series of reasons that support your statement. Is it good or bad? Why?

At the end of the class, each group's cards will be displayed, presented and conclusions will be drawn on the way of working.

This method stimulates logical thinking, facilitates understanding of the read text and significantly increases interest in reading.

OBJECTIVES:

O1: to answer the questions asked;

O2: to complete the answers corresponding to each required requirement;

O3: to describe the situations/characters/phenomena presented;

O4: to express and argue orally their own opinions and thoughts;

Examples of learning activities - THE CUBE METHOD

GROUP 1: DESCRIBE

GROUP 2: COMPARE

GROUP 3: ASSOCIATES

GROUP 4: ANALYZES

GROUP 5: APPLY

GROUP 6: ARGUES

The legend of the ladybug

The white snowmen, the yellow bandits and the blue axeman came out. The bees straighten their hive. Tomorrow they will go to work. The lambs are frolicking on the meadows barely bare of snow.

In the yard, the chickens are clucking and clucking. Everyone has a job; no one sits idle.

Comforted by the sun, the little red ladybug also came out of the cracks in the bark of the tree where she had been hiding until then. He widened his eyes and looked around. As it sat on the gray bark of the tree, it looked like a fragment of a red precious stone. He also had ruby flashes when a ray caressed her back. The ladybug was sad.

- How small and insignificant I am! Everything around me has a purpose, only I don't. Nobody pays attention to me!

Saying this, she spread her wings wide, letting herself be carried by a gust of wind. That's how it ended up on the porch of a house, and from there on the hand of a child who was playing.

- Grandfather, the child was happy, look a ladybug. What a cute little girl, she'll be cold... But for now, that's it! Don't worry, ladybug. I'll warm you up! And the child slowly raised his hand to the sun and lovingly caressed the red drop that bloomed in his palm. Then he blew softly on her.

- Come on, ladybug! bask in the sun!

The ladybug was happy. She understood that, small and insignificant as she is, she also has a purpose in this world. It is the first gauze that appears in the spring. She is, as they say, a brave herald.

The children were divided into six groups, with each group having to solve the requirements on one side of the cube given the text The legend of the Ladybug.

The activity was oragnised as a focus grup activity each group having the task to fill in a flipchart paper shit according to the type of group they were chosing for. Their work was sistematised as follows:

1. Describe

- what plants and animals do you see: white snowmen, the yellow bandits, bees, lambs, chickens, ladybug, tree.

- what colors do you see: white, yellow, red, gray

- what sounds do you hear: the bees, the chickens are clucking and clucking, the wind.

- what do you smell: flowers.

- what do you feel: joy because spring it is coming, happy for the ladybug

2. Compare - the signs of winter with the signs of spring:

WINTER	SPRING
- the weather is cold	- the weather is much warmer
- there are no flowers or grass	- the flowers and the grass appear
- the ground is covered with snow and ice	- the ground is covered with grass
- the days are very short	- the days are starting to grow

3. Associates

Find attributions (from the text and beyond) for the following words:

Sun = bright, yellow

Child = joyful, happy, curious

Birds = busy, small, colored

Leaf = green, small

Ladybug = sad, happy, small, insignificant

Tree = big, green, a house for birds

Spring = warm, joyful

Forest = crouded, noisy, alive

4. Analyzes

What does the ladybug feel when it comes out from under the bark of the tree?

The ladybug feels sad because she thinks is very small and insignificant.

What does the ladybug founds out about herself?

The ladybug founds out that she has an important meaning in the world.

5. Apply

Continue the story by saying what you think happened to the ladybug

The ladybug flew further through nature. He met a butterfly then, distressed that he does not find his purpose in the world. Ladybug decided to help him. He took him into flight and they flew together until they got back to the little boy. The child was very happy to see the butterfly. The butterfly landed on his hand and the child noticed how beautiful and colorful it was. The ladybug was very happy to hear these and then watched the expression of the butterfly. He was proud and happy. The ladybug happily went on, thinking that maybe she could help someone else.

6. Argues

Draw something based on the text ”The legend of the ladybug”



2.13. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – 5E LEARNING MODEL

The 5E Learning Model consists of 5 stages of practices in the contemporary education system with a constructivist approach. The 5E Learning Model, which is based on a constructivist learning model with the conceptual transformation of learning, argues that in order for a permanent learning, the student should have ideas about the subject beforehand, be open to new ideas that he/she will encounter, and integrate the new information he/she will encounter later into the existing conceptual framework. It proposes the view that an education has more than one component. In this respect, the 5E Learning Model enables educators and teachers to design learning environments that can reach students with differences in learning styles.

Since the 5E Learning Model is a student-centered model, it encourages students to become entrepreneurs. The main purpose of the 5E Learning Model, which is based on accessing information from primary and primary sources, is to guide students on how to learn to learn. It is recommended to complete the activities in the 5E Learning Model within 2-3 weeks.

FIVE PHASES OF THE 5E MODEL

ENGAGE

In the first phase of the learning cycle, the teacher works to gain an understanding of the students' prior knowledge and identify any knowledge gaps. It is also important to foster an interest in the upcoming concepts so students will be ready to learn. Teachers might task students with asking opening questions or writing down what they already know about the topic. This is also when the concept is introduced to students for the first time.

EXPLORE

During the exploration phase, students actively explore the new concept through concrete learning experiences. They might be asked to go through the scientific method and communicate with their peers to make observations. This phase allows students to learn in a hands-on way.

EXPLAIN

This is a teacher-led phase that helps students synthesize new knowledge and ask questions if they need further clarification. For the Explain phase to be effective, teachers should ask students to share what they learned during the Explore phase before introducing technical information in a more direct manner. This is also when teachers utilize video, computer software, or other aides to boost understanding.

ELABORATE

The elaboration phase of the 5E Model focuses on giving students space to apply what they've learned. This helps them to develop a deeper understanding. Teachers may ask students to create presentations or conduct additional investigations to reinforce new skills. This phase allows students to cement their knowledge before evaluation.

EVALUATE

The 5E Model allows for both formal and informal assessment. During this phase, teachers can observe their students and see whether they have a complete grasp of the core concepts. It is also helpful to note whether students approach problems in a different way based on what they

learned. Other helpful elements of the Evaluate phase include self-assessment, peer-assessment, writing assignments, and exams.

LESSON PLAN BASED ON THE 5E MODEL

Lesson:	Physics
Class:	9th Grade
Theme:	Force and Motion
Subject:	Energy and Frictional Force
Duration:	40+40 mins.
Learning outcomes:	Friction force causes loss of energy o In relation to this: o Students; Demonstrate that the frictional surfaces are heated by experiments. Realize that friction force will cause a decrease in kinetic energy. Make a generalization that air and water resistance also cause a decrease in kinetic energy. Research and present the places where it is necessary to have more or less friction force.
Process:	Expresses the effect of the independent variable in a given event on the dependent variable as a testable proposition. Proposes an experiment to test his hypothesis. Uses the necessary materials, tools and equipment safely and effectively in simple research. Set up an experiment. Keeps the variables other than the variables related to the hypothesis constant. Determines the effect on the dependent variable by changing the independent variable. Observes and researches, presents and shares the results in appropriate ways using oral, written and/or visual materials.
Teaching-Learning Methods and Techniques:	Question-answer, presentationi discovery learning, 5E method
Equipments:	Cardboard, various books, toy cars, sandpaper, aluminum foil, rulers, envelopes, pictures
Engage:	The teacher greets the students and then asks how their day was. Before starting the activities, students are divided into groups. A remarkable story about friction force and energy is distributed to each group.(Activity 1 Elif's Snow Adventure).
Explore:	In order to observe that the friction force changes depending on the type of the friction surface and causes a decrease in the kinetic energy, Activity 2 is made by the students.
Explain:	The force that opposes the motion of the object is called the frictional force. All objects rubbing against each other lose energy. In other words, it transforms some of their energies into forms they cannot use. In our experiment, the potential energy of the car turns into kinetic energy when it accelerates. Then the frictional force between the

	wheel of the car and the ground causes a decrease in kinetic energy and the car slows down and stops. Also, the friction force varies depending on the type of the ground For this reason, it is observed that the car goes more on aluminum ground than sandpaper ground. Experiment
Elaborate:	Activity 3 is given to students in order to elaborate the learning outcomes.
Evaluate:	Activity 4 is handed out to students to evaluate.
Assignment:	Students are asked to preapare posters using CANVA about the concepts they learned in the unit "Force and Motion" for the next lesson.

TEACHING-LEARNING ACTIVITIES

Activity 1 : Elif's Snow Adventure



Elif and her family had set off from Izmir to Erzurum, where her grandfather lived, for the semester break. As they approached Erzurum, the weather got colder and covered with snow. When Elif looked out of the car window, she saw that some cars had stopped and some cars were sliding and crashing into each other.

Her father realized that he needed to put chains on the wheels and got out of the car and open the trunk. But he saw that there was no chain. While her father was hurrying to find a chain he slipped and fell on the ground. Her father: 'I wish I had worn my snowboots instead of these flat shoes.' Luckily, people around helped them and brought chains for the car wheels. They continued their journey by attaching the chain to their car wheels. Elif watched all these events with curiosity and thought about them along the way.

What is the reason for attaching chains to the car wheels? Why did her father fell off?

Process: A student is asked to read this story aloud. Answers are taken from each group for the questions at the end of the story. Students are asked what examples they can give from daily life on this subject.

Activity 2: Why did the kinetic energy decrease?

Why did the kinetic energy decrease?

Topic : Energy and Frictional Force

Name of the experiment: Why did the kinetic energy decrease?

Tools and equipments

• Cardboard

•Toy car

• Different types of grounds (sandpaper, aluminum foil)

• Various books

• Ruler

Instructions

1. Students are asked to create an inclined plane.

2. Have students write a hypothesis about which surfaces the car will travel on by placing the different surfaces under the inclined plane.

Hypothesis:.....

3. Students release the cars from the top of the inclined plane and write down their observations.

4. They measure how far the car travels on different surfaces with a ruler and record the measurements on the table.

Settings Type of	Type of ground	Overshoot(cm)
Setting 1	……..	……
Setting 2	……..	……

Conclusions

1. What energy did the initially equal potential energies of the cars turn into when they landed on the ground?

2. On which ground did the car travel further and stop?

3. Since energy would not be lost, wouldn't the cars have to go on forever? What is the force that stops the cars?

4. Why does the car running on the aluminum foil floor go further than the car running on the sandpaper floor?

Her gruptan hipotez,ölçüm sonuçları ve sorulara verdikleri cevaplar alınır.

Öğrencilerin verdikleri cevaplar tartışılır ve beyin fırtınası oluşturulur.

Activity 3 : What is there in the envelope?

In this activity, it is aimed for students to elaborate the learrning outcomes. For this purpose, pictures of objects that increase and decrease the friction force in daily life are placed inside the envelopes.

Envelopes are distributed to each group. Each group is supposed to answer the questions about the pictures in the envelope.

EXAMPLES:

1. Why do suitcases, bags and vacuum cleaners that we use in our daily life have wheels?





2. Why are ice skates designed this way?





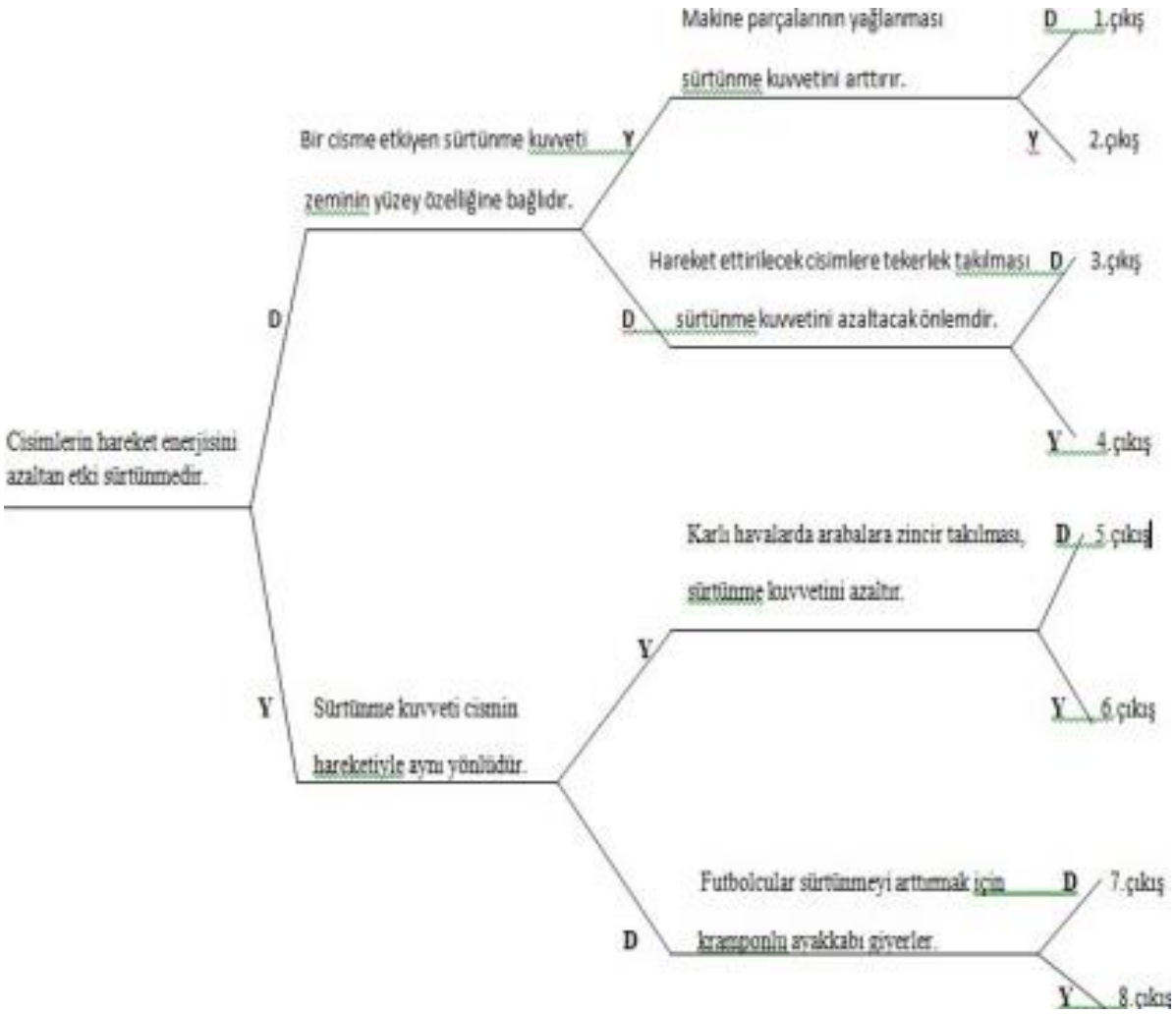
3. Why are football boots designed like this?





Activity 4 : Diagnostic Branch Tree

In this activity, students are asked to find the appropriate exit.



2.14. ACTIVITY PLAN FOR STIMULATING READING AND FACILITATING READING COMPREHENSION – OUTDOOR EDUCATION

Outdoor education can be simply defined as experiential learning in, for, or about the outdoors. Outdoor learning describes school curriculum learning, other than with a class of students sitting in a room with a teacher and books. It encompasses biology field trips and searching for insects in the school garden, as well as indoor activities like observing stock control in a local shop, or visiting a museum. It is a concept currently enjoying a revival because of the recognition of benefits from the more active style.

Some typical aims of outdoor education are to:

• learn how to overcome adversity;

• enhance personal and social development;

• develop a deeper relationship with nature;

• raise attainment through better teaching and learning experiences.

The teacher chooses teaching methods, techniques and strategies that are suitable for the goals he has determined while planning the teaching. Some of the teacher's choices are teacher-centered and some are student-centered. If we list some of the teaching methods and techniques that can be used in Outdoor learning environments;

1. Lecture
2. Question and answer
3. Discussion
4. Brainstorming
5. Demonstration Method
6. Case study
7. The Speech Ring Method
8. Station Technique
9. Creative drama methods and techniques

LESSON PLAN BASED ON OUTDOOR LEARNING METHOD

Lesson: Turkish Language and Literature

Class: 9th Grade

Theme: Letter

Subject: Types of Letters

Duration: 40+40+40 mins.

Learning Outcome: Explains the characteristics of the letter type.

Methods and Techniques: Question and answer, lecture, guided tour, question card

PART 1

The teacher visits the area where the letter samples are located in the museum to be visited and collects the letter samples. photos. Determines the area where the activity will be held in the museum.

Students are divided into groups of 4-5; A relationship is established between writing and experiences, and it is highlighted that writing is a communication tool. The students are asked to

discuss about the methods of expressing their feelings, thoughts and experiences to people far away.

They are asked to make a comparison between the letter used in the past and the instruments used for writing today like messaging via e-mail and mobile phone, which are the most used written communication tools today and It is emphasized to the students that the first examples of many tools we use today can be seen in museums.

PART 2

The style of expression specific to the letter type is introduced. The function of the letters which famous scientists and artists wrote is mentioned. Museum tour is done by question and answer method.

Typewriters used for writing are examined. Characteristics of the letter and information that it is a genre that emerged with the invention of writing are shared with the students.

In the Literature Museum, the area where the letters of poets and writers are located is visited. When the students arrive there the letter samples are examined. The development of the letter type in our literature is expressed. Letter types are emphasized. Students are asked to think about the questions in the card and fill in about the letter they examined in the museum.

The students examine the letters based on the letters they chose and they are asked to share their findings.

PART 3

Based on the typewriters that students saw in the museum, they discuss the effect of today's technology on writing and possible communication methods in the future. Students are asked to express their thoughts by writing a paragraph and support their composition with visual aids.

QUESTION CARD

1. Who wrote the letter to whom?
2. What formal features does the letter type have?
3. For what purpose was the letter written?
4. What clues does this letter give about the life, language characteristics, etc. of the period it belongs to?
5. On what other topics are there letters written in this field?
6. If you wrote a letter about 100 years from now to be displayed in a museum, what would you write?

3. Creating didactic games for overcoming functional illiteracy.

3.1. The teachers involved in the OFI-ICT-PSI, Erasmus+ project, created for the 1st grade students from Tehnička škola Nikole Tesle, a notebook for an optional subject, called „Digital literacy", which was structured into 4 learning units: Describing people, Health, Messages, Technology.

1. **Describing people**
   Solve anagram.

HOME PASSION

_ _ _ _ _ _ _ _ _ _ _ _

2. **Health**
   Solve the rebus.





_ _

3. **Messages -** Solve the puzzle

Recipient or ...

Means of communication.

To perceive the meaning of something.

Data or ...

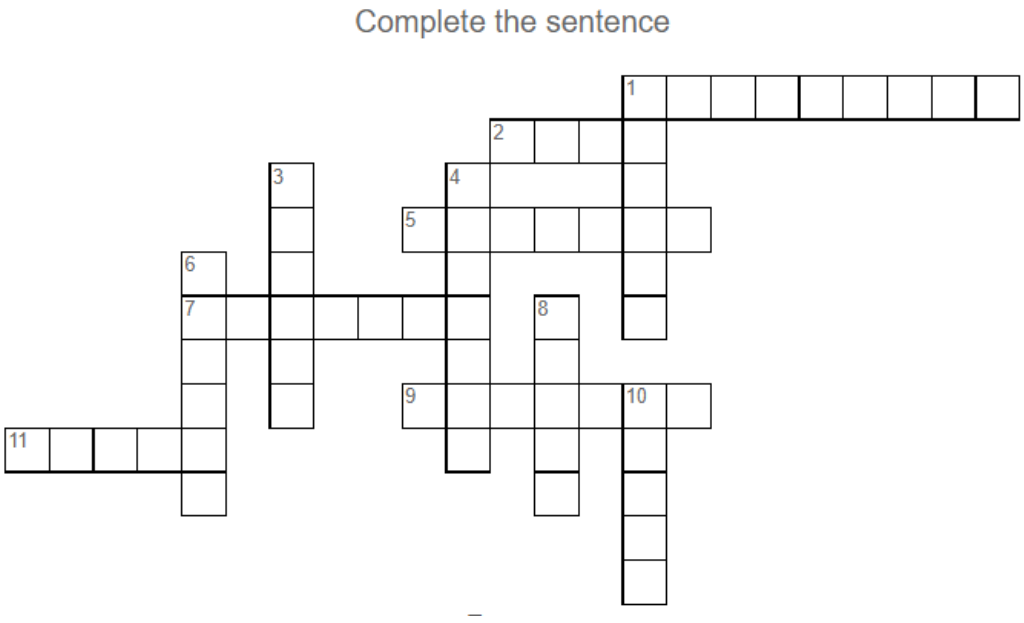
A person that sends message.

To show, to put into words, or to ...

Exchanging of information.

E H B C Q W R Z G B X N C M C
A G Q H O S N L V D N U O H V
Y Z E N O X J C S N O E M X J
Y R K B W R P F S A I R M F S
P K E W F E R J N T T T U D E
H S X C J N P W N S A V N S N
I N J B E N I Q P R M D I S D
V H F L A I C W C E R F C E E
U T W S D C V K T D O N A R R
N U D B K X I E P N F D T P O
C J Z A Q D X F R U N V I X M
D M Z P F X S M E D I A O E H
Q E U T H L T I T I Y W N I J
F Y O V N X E A A W V I P E F
R F Q C R P E X D Q Z H T A N

4. Technology



Across

1 _____to a YouTube channel?
2 _____ contributions on a social networking site?
5 _____a text, message you received from one friend to another friend?
7 _____a simple game?
9 _____an app on your phone?
11 _____a document directly from your phone?

Down

1 use Google to_____within a specific website?
3 _____a video clip to Youtube?
4 post _____on and
6 _____your profile on a social networking site?
8 _____a new email account?
10 _____to a Wi-Fi hotspot with your tablet or phone when your away from home?

3.2. The teachers involved in the OFI-ICT-PSI, Erasmus+ project, created for the 9th grade students from 1 Geniko Lykeio Kaisarianis, a notebook for an optional subject, called „Digital literacy", out of which we are presenting the following games:

Science (Biology)
https://learningapps.org/display?v=pmog5gt5322

Humanities
https://learningapps.org/display?v=pecpgyai322

Maths
https://wordwall.net/resource/36286370

Economy
https://thewordsearch.com/puzzle/3959739/on-economy/

3.3. The Italian teachers involved in the OFI-ICT-PSI Erasmus+ project, created, for the 9th grade students of our IISS "F. D'Aguirre Salemi Dante Alighieri Partanna", a notebook for an optional subject, called "Active Citizenship" which was structured into 4 learning units: The wonderful world of Internet, Environmental sustainability, My City, A day at the Museum.

I. The wonderful world of Internet

Match every word with the right part of a computer.

https://learningapps.org/watch?v=pionpoa0322



Case

CD reader

Monitor

Mouse

USB port

Keyboard

II. Environmental sustainability

Match every image with the right definition.

https://learningapps.org/watch?v=pau2i593a22



Dumpster – Plastic - Glass – Incinerators - Garbages - Fossil Fuels - Paper - Pollution

III. My City

Find the words related to Customs and Traditions

https://learningapps.org/watch?v=pu7wco3s222

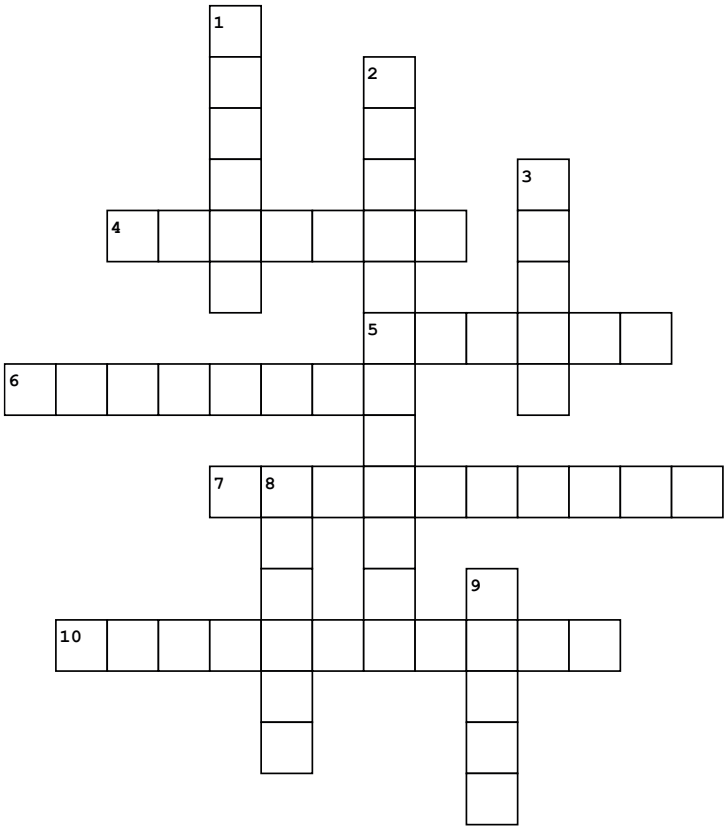
S	X	R	A	Ö	N	V	G	T	L	A	T	M	T	B	L	N	S	R	B	I	V	X	Q	R	X	P	B	Ä	E	C	G	Y
R	R	E	I	Ö	P	Ö	U	A	R	F	F	Ä	F	O	S	T	F	T	S	U	F	O	K	Q	G	Ü	M	D	U	U	P	W
Ü	I	X	Q	R	S	K	N	E	L	A	P	K	J	B	A	A	Ä	J	J	B	A	B	Ü	F	N	B	H	M	E	Q	O	J
Ä	G	F	H	R	Ü	O	E	Y	Ü	Ü	D	Ü	Ö	H	M	R	Ä	W	Q	O	M	S	C	I	Ä	X	Q	N	D	D	D	Z
F	U	E	W	U	I	R	Q	T	V	C	V	I	Q	C	O	I	F	W	L	Y	M	Z	Y	Y	G	M	P	P	I	Q	N	T
I	V	O	V	T	A	R	O	J	E	R	K	K	T	I	S	T	G	I	P	S	O	N	F	K	S	I	Ü	P	Y	R	T	Ä
N	F	A	O	M	M	S	E	C	D	L	D	D	D	I	Q	Y	M	D	U	B	E	G	G	I	N	G	K	G	Q	F	Ä	W
T	Ü	V	V	X	U	Ä	K	I	P	N	H	Q	U	V	O	W	A	L	E	X	Y	K	L	D	R	L	Q	K	F	V	X	P
B	E	E	C	X	E	M	Ä	R	Q	P	S	O	Q	D	Q	N	C	Ö	V	U	L	O	H	N	G	Z	E	G	L	Ä	C	Ö
D	E	S	M	K	X	S	H	Y	P	H	A	P	B	W	D	Z	O	C	W	A	B	Q	R	A	L	T	A	R	Q	Q	T	G
S	K	W	Z	S	H	B	Z	A	Ü	E	P	L	F	O	I	Y	S	K	U	M	I	D	T	P	A	G	A	N	D	A	Z	G
Q	Q	Q	B	E	M	X	A	V	Ä	X	Q	M	Z	Ä	Z	J	G	T	Y	Ä	P	R	O	P	I	T	I	A	T	O	R	Y
J	N	W	Ä	Ä	Ö	Ö	A	Z	C	G	I	D	T	X	Y	W	I	S	N	X	C	I	M	I	Ü	L	L	V	H	Ö	Z	Y
R	G	V	Ö	Z	T	I	Ä	X	R	G	D	Y	Z	S	O	R	C	J	T	A	J	T	K	N	U	X	Q	K	M	K	A	C
N	T	H	I	Q	W	J	Y	C	C	J	C	T	X	J	Y	O	Z	N	U	T	B	C	Y	G	T	X	W	Y	S	L	E	F

1. KIDNAPPING
2. SYMBOLISM
3. RITUAL
4. ALTAR
5. PAGAN
6. TRADITION
7. VOW
8. BEGGING
9. PROPITIATORY
10. DEVOTIONAL

IV. A day at the Museum

Play our Custom and Tradition Crossword puzzle

https://crosswordlabs.com/view/custom-and-tradition



Across

4. a country, state, or territory ruled by a king or queen
5. an extensive group of states or countries ruled over by a single monarch, an oligarchy, or a sovereign state
6. relating to a line of hereditary rulers of a country
7. a cemetery, especially a large one belonging to an ancient city
10. the exercise of power or influence over someone or something, or the state of being so controlled

Down

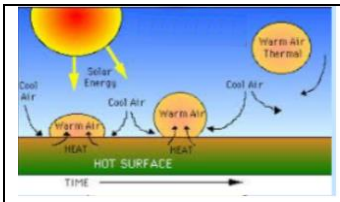
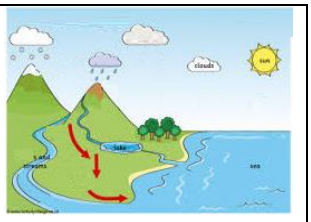
1. a cruel and oppressive ruler
2. expression used in the Christian calendar when referring to a year before Jesus Christ was born
3. relating to ancient Carthage
8. relating to a population subgroup (within a larger or dominant national or cultural group) with a common national or cultural tradition
9. relating to or denoting a classical order of architecture characterized by a sturdy fluted column and a thick square abacus resting on a rounded moulding

3.4. The Lithuanian teachers involved in the OFI-ICT-PSI Erasmus+ project, created, for the 5th grade students of our Vilnius Municipality`s Grigiskes Sviesos Gymnasium a notebook for an optional subject, called “Nature and Human” which was structured into 9 learning units: Diversity of life, Materials, Heat, Environment and evolution, Water, Food, Human, Permanent magnets, Pets.

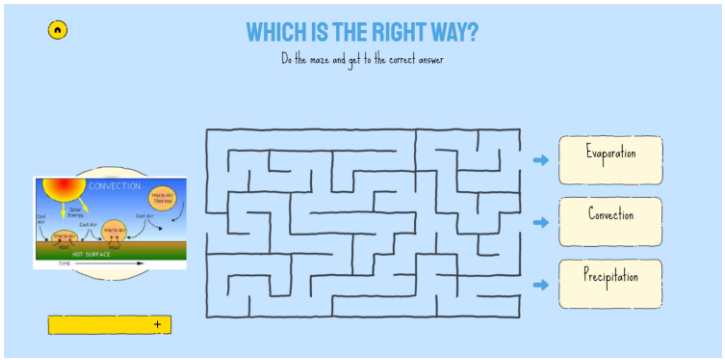
Water Cycle

The water from the various water bodies on the earth gets evaporated because of the Sun’s heat. The water in the form of vapours then cools down at a certain height and condenses to form clouds. The water keeps condensing to form clouds, but when too much water gets accumulated, the clouds become heavy and then the water falls from the sky in the form of rain, snow, or hail. The water then gets collected in oceans, lakes, or ponds. In due course, this water again gets evaporated initiating the whole cycle over and over.

Match the parts of the water cycle with pictures

			
Evaporation	Collection	Convection	Precipitation

Or play a maze game online:





https://view.genial.ly/632aef05040b860017f1fc4d/interactive-content-water-cycle

Animal similarities and differences

By comparing various features, one organism can be easily distinguished from another.

Assign the traits to the animal



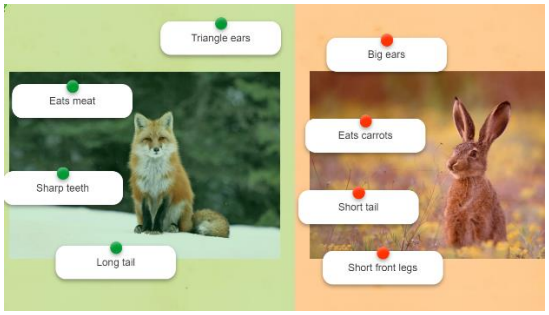
FOX



RABBIT

Big ears	Long tail	Eats carrots	Sharp teeth
Triangle ears	Short tail	Eats meat	Short front legs

Or play a game online:



https://learningapps.org/watch?v=pss2yhw8j22&fbclid=IwAR1oDZkLNjx-RVTU0m205b0W7IgajlHH6Z5gH7ua7qEenyVND0Sa5ZJ5ezU

Find right picture

	Feathers and light bones, Swimming membrane between the toes, sebaceous gland for lubricating feathers, Flat beak
	Good hearing and sense of smell, Strong legs with sharp claws, Long tail, Sharp fangs

	Poor eyesight, Good sense of smell, Short and strong front legs, Muscular body
	Thick stem, Thin, sharp spines, Waxy outer coating, Long roots

Or play a game online:





https://www.tripticoplus.com/media/resources/match.html?save=53114&array=%5B%5D

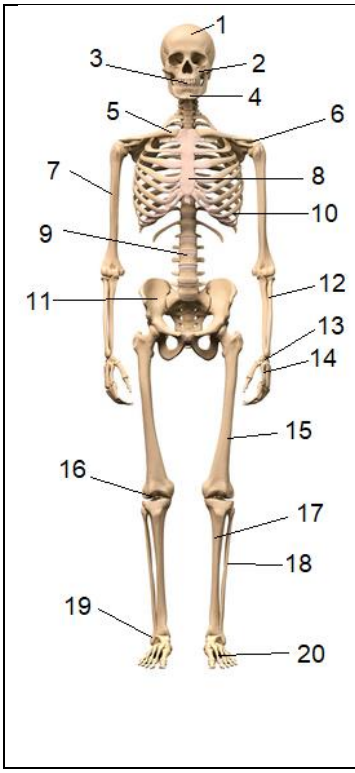
Human body. Bones

Bones provide the structure for our bodies. The adult human skeleton is made up of 206 bones. These include the bones of the skull, spine (vertebrae), ribs, arms and legs. Bones are made of connective tissue reinforced with calcium and specialised bone cells. Most bones also contain bone marrow, where blood cells are made.

Bones work with muscles and joints to hold our body together and support freedom of movement. This is called the musculoskeletal system. The skeleton supports and shapes the body and protects delicate internal organs such as the brain, heart and lungs.

Bones contain most of our body's calcium supply. The body is constantly building up and breaking down bone tissue as required. Healthy bone needs a balanced diet, regular weight-bearing exercise and the right levels of various hormones.

Find right place for bone name



19	Ankle bones
	Backbone
	Breastbone
	Calf bone
	Collarbone
	Facial bones
	Finger bones
	Foot bones
	Forearm bones
	Hip bone
	Jaw bone
	Kneecap
	Rib cage
	Scull
	Shinbone
	Shoulder bones
	Teeth
	Thigh bone
	Upper arm bone
	Wrist

Or play a game online:



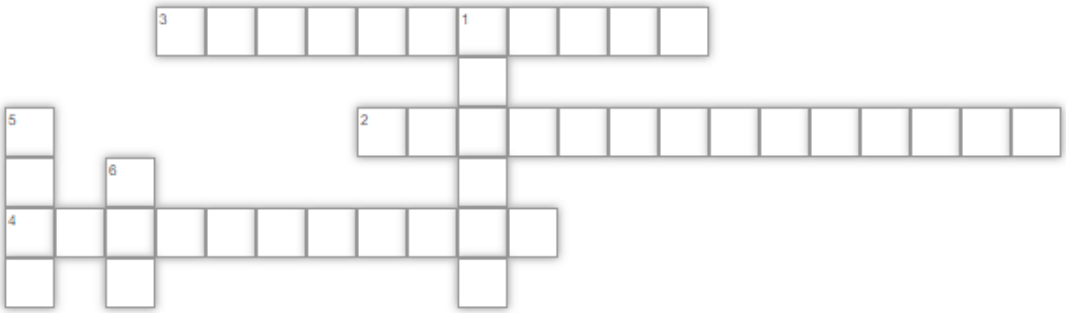
https://learningapps.org/watch?v=p2tgw6f2v22

3.5. The teachers involved in the OFI-ICT-PSI, Erasmus+ project, created for the 8th-grade students from OOU Mirce Acev Primary School-Skopje, a notebook for an optional subject, called "Digital Literacy". These Didactic games that they created for this optional notebook are about Energy, Light, Electricity and Magnetism, and Power.

Energy

https://learningapps.org/watch?v=pynoueev522

Crossword puzzle: Click on the number and write the correct answer:



Across:

Question 2: Energy of chemical substances ____

Question 3: Energy can be stored and____

Question 4: Energy coming from the sound source____

Down:

Question 1: It can pass from one body to another ____

Question 5: Energy can neither be created nor____

Question 6: The unit of measure for energy is ____

Light

https://learningapps.org/watch?v=pv3xqjn0v22

Wordsearch: Find the given words in the word search

W	V	L	A	I	Y	S	K	L	V	G	S	O	B	I	I
P	L	R	O	B	X	J	A	L	V	B	L	K	J	H	Q
B	N	E	G	I	R	I	U	K	M	A	S	S	Y	A	U
B	O	U	M	D	R	O	F	L	P	L	A	S	T	E	R
O	F	T	A	E	P	L	A	V	O	A	K	K	V	V	W
V	E	N	T	I	L	A	T	I	O	N	T	M	E	S	R
Y	Y	A	C	H	Y	F	A	L	E	C	M	P	T	F	B
L	M	M	W	J	Z	G	P	D	H	E	A	T	B	E	B
M	Y	K	E	A	R	B	G	L	T	H	N	C	F	U	W
B	A	R	V	V	W	I	I	X	V	J	Y	E	I	M	Y
Q	C	R	J	A	L	Q	G	K	L	B	B	N	R	O	F
M	O	B	Y	J	P	I	R	U	T	X	C	O	P	G	H
J	R	E	P	Y	K	D	V	W	E	I	N	E	O	S	Y

1. BALANC
2. HEAT
3. VENTILA
4. MASS
5. PLASTEF
6. MATERIA
7. ENERGY
8. JUL

Electricity and Magnetism

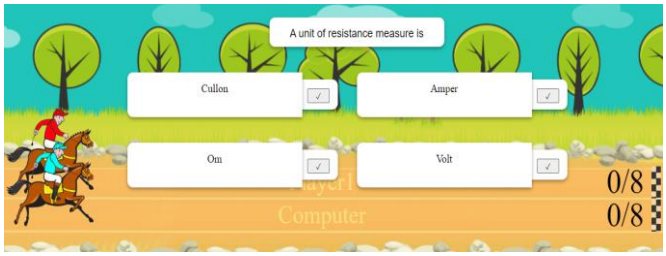
https://learningapps.org/watch?v=pmmyr9nba22

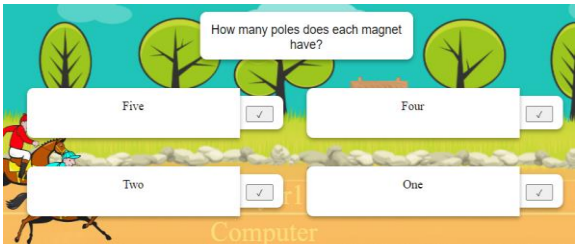
Quiz (horses): Choose the option and start the game

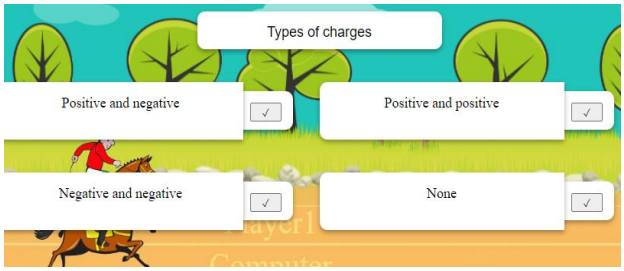


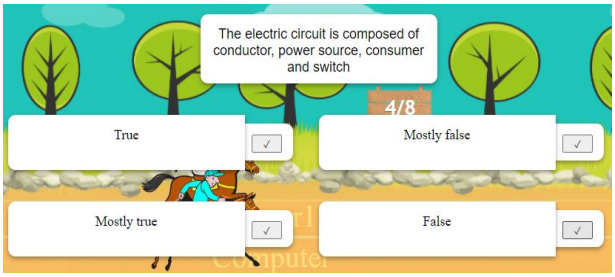


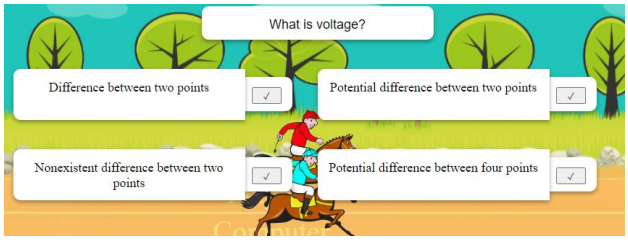
Now answer the questions correctly to finish the race:

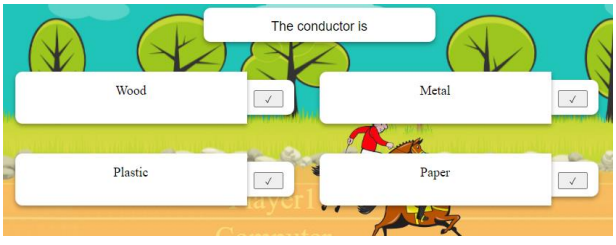


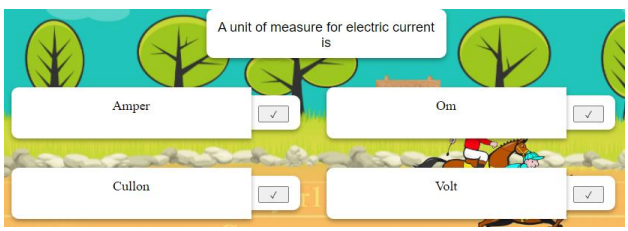


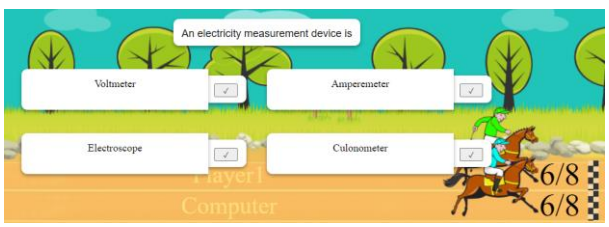












Power
who wants to be a millionaire topic 1 (learningapps.org)

Who wants to be a millionaire - Click a,b,c or d to answer the questions and win a million !



3.6. The teachers involved in the OFI-ICT-PSI, Erasmus+ project, created for the 4th grade students from Cristian Gymnasium, a notebook for an optional subject, called „Digital literacy", which was structured into 4 learning units: Animal world, The human body, Solar system, The tools in our life.

1. Animal world

Discover the endangered animals in Romania and fill in their names:

F	W	J	W	V	U	G	Z	F	K	E	P	S	C	B	I	S	O	N	K	U
R	O	M	A	N	I	A	N		H	A	M	S	T	E	R	H	O	A	W	H
A	P	S	C	F	I	J	G	D	G	K	K	L	R	L	Y	N	X	O	D	W
H	B	P	K	N	Q	C	U	A	P	D	K	S	T	U	R	G	E	O	N	G
B	D	O	B	R	O	G	E	A	N		D	R	A	G	O	N	V	G	I	Y
I	Y	T	B	O	N	C	C	E	U	R	O	P	E	A	N		M	I	N	K
F	O	T	Z	E	C	Q	X	T	G	Y	G	M	H	N	O	G	H	A	L	H
B	R	E	E	U	L	K	I	X	V	G	F	Z	I	T	O	N	S	L	V	D
H	G	D	V	H	Y	Y	W	Y	S	M	T	M	O	E	G	P	L	Y	W	S
I	U		O	J	H	D	E	Z	H	P	T	K	A	L	Y	S	T	S	S	X
L	Z	F	H	F	R	J	T	X	L	W	J	I	F	O	V	A	P	X	Q	R
E	X	E	T	N	S	U	R	C	X	B	S	M	C	P	H	K	X	M	Z	L
Z	A	R	X	N	F	P	L	K	R	R	V	N	Z	E	U	X	V	L	I	Z
Q	H	R	T	X	F	U	V	W	P	G	U	Z	D	J	S	P	W	O	T	F
Q	E	E	P	Z	S	V	K	E	C	O	A	O	A	L	F	P	V	N	G	B
J	G	T	W	O	H	V	R	D	U	E	E	K	I	N	A	K	O	C	B	G

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

2. The human body

Quizlet: For each definition given, please state the name of the organ whose function is described:

https://quizlet.com/_bzeu2a?x=1jqt&i=4cllf3

Function	Organ
Coordinates the activity of the whole organism.	……
It pumps blood though the body.	……
Helps with breathing.	……
Transforms food into nutrients.	……
Removes useless substances.	……

3. The Solar System

https://wordwall.net/resource/35854009

Didactic game - Save the Planet!

It classifies environmental protection activities according to the category they belong to.

Yes! – Protecting the planet – positive behaviors that must be implemented

NO! – Pollution - negative, harmful behaviors that we must never commit.

Scan the code and save the planet.

4. Great inventors

The clock, the instrument that measures and shows us time, is today found everywhere, and we probably wouldn't know how to live or how to guide ourselves in its absence. Whether we are talking about a wall clock, clocks or a wristwatch, they all have a long history behind them, dating back to before our era.

Until it reached its final form (as we know it today), the watch went through many stages of evolution and "through the hands" of several cultures, peoples and scientists or personalities.

Write the numbers in Arabic numerals to discover the years the watch was invented and its evolution:

https://app.nearpod.com/?pin=47ECD93CE2DAC819E6E0ACA02624AF70-1

- The mechanical watch – CMXCVI - _____
- Clock spring – MD - _____
- The pendulum clock – MDCLVII - _____
- The alarm clock – MDCCLXXXVII - _____
- The wristwatch – MCM - _____

3.7. The teachers involved in the OFI-ICT-PSI, Erasmus+ project, created for the 9th grade students from Merkez Çanakkale Anadolu Lisesi, a notebook for an optional subject, called “Digital Literacy” . These Didactic games that they created for this optional notebook are about world famous authors, types of poetry, literary movements and firsts in Turkish literature.

World Famous Authors

Name of the game: Guess who?

https://wordwall.net/tr/resource/35806395

Guess the name of the author and Choose the correct answer.

1-Writer of “Count Monte Cristo” and “Three Muskeeters”

a-Emile Zola b-Alexandre Dumas

2-An Italian writer, poet. His most notable works is “The Decameron”

a-Bacon b-Boccacio

3-A polymath, known for his contributions to mathematics, astronomy, philosophy, and Persian poetry. There is a tradition of attributing poetry to him, written in the form of quatrains.

a-Firdevsi b-Omer Hayyam

4-A German-speaking Bohemian novelist and short-story writer, widely regarded as one of the major figures of 20th-century literature. His work fuses elements of realism and the fantastic. His best known works include the short story "The Metamorphosis" and novels The Trial and The Castle.

a-Franz Kafka b-Knut Hamsun

5-An American writer and the 1962 Nobel Prize in Literature winner "for his realistic and imaginative writings, combining as they do sympathetic humor and keen social perception." He has been called "a giant of American letters."

a-Ernest Hemingway b-John Steinbeck

6-Russian novelist, short story writer, poet, playwright, translator and popularizer of Russian literature in the West. His first major publication, a short story collection entitled A Sportsman's Sketches (1852), was a milestone of Russian realism. His novel Fathers and Sons (1862) is regarded as one of the major works of 19th-century fiction.

a-Dostoyevski b-Turgenyev

7-American novelist, journalist and activist. A pioneer of commercial fiction and American magazines, he was one of the first American authors to become an international celebrity and earn a large fortune from writing. He was also an innovator in the genre that would later become known as science fiction. His most famous works include The Call of the Wild and White Fang, both set in Alaska.

a-Jack London b-Mark Twain

8-An English playwright, poet and actor. He is widely regarded as the greatest writer in the English language and the world's greatest dramatist. His most wellknown plays are Hamlet, Romeo and Juliet, Othello, King Lear, and Macbeth.

a-Shakespeare b-Moliere

9-A French playwright, actor, and poet, widely regarded as one of the greatest writers in the French language and world literature. His extant works include comedies, farces, tragicomedies,

comédie-ballets, and more. The Affected Ladies, The School for Husbands, and The School for Wives are some of his famous works.

a- Moliere b-Shakespeare

10-A Russian poet, playwright, and novelist of the Romantic era. Critics consider many of his works masterpieces, such as the poem The Bronze Horseman and the drama The Stone Guest, a tale of the fall of Don Juan.

a-Maxim Gorky b- Alexander Pushkin

Turkish Literature

Name of the game: Firsts in turkish literature

wordwall.net/tr/resource/35807534

Match the name of the literary works with their definition

1. First example of story	a. Letâif-i Rivayat
2. First literary novel	b. İntibah
3. First Psychological Novel	c. Eylül
4. First Female Novelist	d. Fatma Aliye Hanım
5. First detective novel	e. Esrar-ı Cinayet
6. First drama	f. Şair Evlenmesi
7. First Epic Theater example	g. Keşanlı Ali Destanı
8. First Turkish epic	h. Alp Er Tunga

Poetry

Name of the game: Types of poetry

wordwall.net/tr/resource/35807860

Match the types of poetry with their definition:

TYPES OF POETRY

Lyric Poetry	poetry that instructs, either in terms of morals or by providing knowledge of philosophy, religion, arts, science, or skills.
Epic Poetry	a lengthy, narrative work of poetry. These long poems typically detail extraordinary feats and adventures of characters from a distant past.

Pastoral poetry	a formal type of poetry which expresses personal emotions or feelings, typically spoken in the first person
Didactic Poetry	known for exploring the relationship between humans and nature, and for romanticizing the ideals of a simple country life.
Dramatic Poetry	a written work that both tells a story and connects the reader to an audience through emotions or behavior. A form of narrative closely related to acting, it usually is performed physically and can be either spoken or sung.

Literary Movements

Name of the game: Hunting names of the literary movements

Find the literary movements and write their names on the list:

i	y	t	t	i	m	u	k	a	e	v	x	g	h	y	l
r	u	o	l	q	x	l	j	b	x	h	l	g	y	x	d
z	k	y	e	v	h	j	b	f	p	i	n	a	y	p	r
v	y	l	j	p	e	k	g	x	r	e	a	l	i	s	m
t	a	b	a	a	u	c	z	a	e	s	r	z	c	l	j
q	w	n	h	u	m	a	n	i	s	m	o	f	n	v	p
s	c	m	o	d	e	r	n	i	s	m	q	i	m	s	x
y	r	o	m	a	n	t	i	c	i	s	m	b	j	t	l
v	i	m	p	r	e	s	s	i	o	n	i	s	m	w	x
p	o	s	t	m	o	d	e	r	n	i	s	m	m	e	l
i	t	l	o	l	d	a	d	a	i	s	m	w	l	i	a
f	n	a	t	u	r	a	l	i	s	m	e	a	i	d	w
u	l	y	i	c	u	b	i	s	m	r	o	h	r	k	t

1. _____
2. _____
3. _____
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7. _____
8. _____
9. _____
10. _____

4. Using ICT tools and digital literacy during the teaching and learning process.

4.1. OSCRISOARE

During our first training event, organized at Cristian Gymnasium, the teachers involved developed their digital competences, as they were taught to use **„OScrisoare”** application. This gives students and teachers the possibility to write and send: letters, messages and cards, in an interactive and interesting way, which may be very interesting to students.

It is a tool, useful especially for primary school students, which contributes to the development of their key competences: literacy skills, English communication skills, digital competences, social competences, sensitivity and cultural expression, learning how to learn.

Examples of how this application can be used during the teaching and learning process

On the International Day of Goodness (13 September), the students at Tehnicka Skola Nikole Tesle, from Croatia, used this application to write and send kind messages to their colleagues, the purpose of the activity being to remind all that the simple acts of goodness have lots of power and that together we can create a better world.

The students at 1o Geniko Lykeio Kaisarianis, from Greece, used the application during a lesson on health education, which was organized as a flipped classroom. Students received a letter from their English teacher, containing their task for the next lesson.

During an English class, conducted with the students form the 12th grade, at IISS F.sco D'Aguirre-Dante Alighieri, from Italy, „OScrisoare” was used to recap the student's knowledge regarding functional texts – How to write a letter. The lesson helped students in developing their: English skills, IT and digital competences, social, cultural and civic skills.

In North Macedonia, at OOU Mirce Acev Gjorce Petrov Skopje, students learned about this application during a project on the field of environmental education, within the framework of „The Little Ecologists Club”.

The 9th grade students from Anadolu Lisesi, in Turkey, during their English class, worked on groups, their task being to underline each part of a letter presented by the teacher and to create their own letters. The objectives of the activity were: a. Students will be

able to identify the difference between a formal and informal letter. b. Students will be able to use digital technology to write a letter. c. The students will use the right terminology for writing a letter.

During the Romanian Language class, conducted with the 4th grade students at Cristian Gymnasium, in Romania, the application was used, in order for the students to better understand the lesson on functional texts. The teacher challenged the students to write a letter, on TEACHERS DAY, exercising their Romanian communication skills, their digital competences, their ability to learn, as well as their social, cultural and civic competences.

4.2. LIVRESQ

Is an integrated platform for creating, publishing, editing, consulting and online management of interactive books. During classes, you can use the materials already created, which can be found in the Livresq library. If you want to create your own materials, to meet the needs of the class you are coordinating, you need to follow the steps listed in the attached presentation.

Examples of how this application can be used during the teaching and learning process:

A lesson on Fast Fashion, conducted with the 10th grade students. The lesson was divided into 4 phases. Starting with some support questions, the students are introduced to the theme of the lesson. The learning process is led with the use of a support video, based on which students discover the learning content and are motivated to search for new information on the given theme. In order for the students to understand the lesson, using Livresq, the teacher introduced in her lesson a couple of interactive exercises.

The 9th grade students form IISS F.sco D'Aguirre-Dante Alighieri, in Italy, were presented a Livresq lesson on „English Phonetic”.

7th grade students from OOU Mirce Acev,in North Macedonia were having an English lesson on Hobbies and Leisure Activities. The lesson was created using the Livresq app. During this lesson the students name the activities and talk about them, then they watch a video on women's football. After doing a quiz with comprehension questions, at the end of the lesson they write a short paragraph describing their interests and free time activities.

The 9th grade students from Anadolu Lisesi, in Turkey, were taught a lesson on Future Tense, using Livresq application. The English lesson was divided into 4 parts: „The Present Continuous", „Going to future", „Simple Future Tense" and „Simple Present Tense". It contains films and different exercises, which makes it very attractive to students.

The 5th and 6th grade students from Cristian Gymnasium, in Romania, were taught a Mathematics lesson, with the help of this digital tool, its content being structured as follows: the angle, objective, definition of angle, quiz, angle measurement, classification of angles, congruent angles, quiz.

4.3. ALICE 3D

During our second training event in Athens, organized at 1o Geniko Lykeio Kaisarianis, the teachers involved ,were taught to use "Alice 3D" software. This gives the teachers the possibility to create interactive animations,build interactive narratives, or program simple games in 3D.

It is a tool, useful especially for high school students, which contributes to the development of their programming skills competences. Also it helps the storytelling procedure and the development of literacy skills, English communication skills, digital competences, social competences.

scan me

Examples of how this application can be used during the teaching and learning process:

The teachers at Tehnicka Skola Nikole Tesle, from Croatia, used this application for producing an animation concerning the maths (How to add the first 1000 numbers).

scan

The Italian teachers used this application for creating an animation in which the prepositions of space in english language are taught.

scan me

The teachers produced an animation based on Christmas how it is celebrated in North Macedonia.

scan me

The teachers at Cristian Gymnasium produced an animation which can be used at the beginning of a primary school Sicence leeson about animals and their habitat.

The Turkish teachers produced an animation in turkish language showing a ship going to Instabul. It is a traditional poem.

4.4. CACOO

This software application helps to create flowcharts, wireframes, network diagrams, mind maps and network charts. It is a friendly online diagramming tool which allows to create and share diagrams for the education sector as well. Instructions are given in the presentation which can be found by scaning the code on the right.

Examples of how this application can be used during the teaching and learning process:

English lesson - verb tenses

Mathematics lesson – diagrams and conceptual maps

Science lesson – circular cid

Swot analyse using Cacoo diagram

Lesson on consumerism

Ven Diagram about Erasmus +

English exercise

4.5. PIXTON

Pixton is a comic creation site for classrooms where teachers and students can both make and share their comic characters. A free version includes limited content. There are various templates/themes (content packs) that educators can choose from to help their students get a better understanding of the topic they are learning and to help them develop their writing skills.This tool allows students to get creative and improve their storytelling.

Examples of how this application can be used during the teaching and learning process:

Comics about English prepositions



Comics about English expressions



Comics about physics



Comics about European Union



Comics about Turkish literature



4.6. QUIZLET

During the meeting days, the Italian group presented three workshops about second generation web tools: Quizlet, Kahoot and Little bird tales. The three apps are game-based learning platform that makes it easy to create, share and play learning games or trivia quizzes unleashing fun in our classrooms: the goal is try to find an attractive tool to engage students and let them knowledge playing.



Quizlet is a web tool and a mobile app that boosts students' learning through a number of study tools that include flashcards and game-based quizzes. As a teacher, you can create your own class on Quizlet and share study sets with your students. You can either design your study sets from scratch or search for pre-made sets to customize and use in your teaching.

Examples of how this application can be used during the teaching and learning process:

English lesson on „Vocabulary”



English lesson for learning new Social media specific terms



Geography lesson for learning about Salemi



English lesson for learning new Biology specific terms



Mathematics lesson on 2nd grade Geometry



Vocabulary building quizlet



4.7. KAHOOT

Kahoot! is a digital learning platform that uses quiz-style games to help students learn by making the information engaging in a fun way. One of the biggest names in quiz-based learning, it still offers a free-to-use platform which makes it highly accessible for teachers and students alike. It's also a helpful tool for a hybrid class that uses both digital and classroom-based learning.



The cloud-based service will work on most devices via a web browser. That means this is accessible for students in class or at home using laptops, tablets and smartphones.

Examples of how this application can be used during the teaching and learning process:

Kahoot about Cavafy



Learning about Salemi

Arithmetic exercise

North Macedonian Kahoot

Mathematics lesson about „The pyramid”

Geography lesson about the wonders of Turkey

4.8. LITTLE BIRD TALES

Little Bird Tales offers a platform for kids to create digital storybooks. In their own unique accounts, kids use a drawing pad, upload images from a computer, add text, and record their own voices to create original slideshow stories. Teachers manage classes, add students, create their own storybooks, and browse pre-loaded lesson templates organized by grade. Lesson templates guide kids to complete such activities as reporting on folk tales from around the world with images, text, and audio narration, or counting dots from 1 to 100 by writing numbers on the dots and recording themselves as they count. When kids finish their stories, teachers can review their work on the teacher dashboard. Kids can choose to share their tales through email or post them on the Little Bird Tales website. A free account allows a limited number of users, online storage space, and lesson plan templates; all users can print their storybooks or buy an mp4 download to keep. There's also a companion app.

Examples of how this application can be used during the teaching and learning process:

Short presentation about Palermo



The story of a refugee teenager



Other short presentation about Salemi



Spider tale



The legend of Lake Dojran



Mathematics lesson about Tangram



4.9. BOOKCREATOR

Bookcreator is an online tool for making digital content. With it we can create virtual books,



which are more attractive to students, as the application offers the possibility to create your own design, to add animation, but also to make it easy to read, even for those that do not know hoe to read.

Examples of how this application can be used during the teaching and learning process:

Car service book



Life after the Pandemic



English articles



Comparison of adjectives



Great jobs



Holiday card



Past modals



4.10. GENIALLY

Genially is an online platform that allows the creation of colorful, artistic and creative infographics, videos, guides, images and digital presentations, as well as games, fun online quizzes. It is easy to use both for teachers and students, during lessons or evaluations.



Examples of how this application can be used during the teaching and learning process:

Genially about Nikola Tesla



Genially about prepositions of place



Genially about verbs



Genially about asking and givind advice



5. Creating contextualized learning situations, starting from everyday life situations in which to use literacy skills (reading, writing, counting) in various and original ways.

5.1. CASE STUDY – How to fill in a medical form in Greece

Our study case concerns a young Syrian female refugee, Nagham, who arrived in Greece two and a half years ago. Melody, as her name translates, travelled on her own in a boat crossing the Aegean. She went through an ordeal, just as other refugees trying to start their life from scratch have done.

She spent the first three months on the island of Kos in a camp set up for accommodating refugees. Then, she was reunited with her father and went to Athens. There, she took free Greek courses with Steki Metanaston and Elixis and she did make great progress but there is still a lot to acquire when it comes to language.

Nagham, now almost nineteen, is trying her hardest to cope with school and, in her own words, it takes her much longer than other students to be able to comprehend texts.

It is through our project, Overcoming Functional Illiteracy that we aim to focus on her being able to use instructions that could be of help as to her daily wellbeing.

In this light, we have created a short instructional video concerning how to register online with a personal doctor in Greece. Along with the rest of our work, we hope it will be of great help to Nagham. Scan the qr code to watch it!

5.2. CASE STUDY – How to obtain an Identity Card in Croatia

Our story is about the student Jan Herzog who is 14 years old and comes from a small town in the south of Hungary, Mohacs. His mother is Croatian who married a Hungarian about 20 years ago.

Jan finished elementary school and is currently on vacation on the Adriatic coast. While visiting the beauties of the Croatian coast and observing the way of life, society, and culture, he began to think about continuing his education in the Republic of Croatia.

When he returned home to Mohacs, he told his parents that he would like to continue his education, that is enroll in high school in Croatia. The parents thought about his idea and decided to support their son in this, and enable him to go to Croatia. However, to stay

in Croatia, he needs documents, i.e. an identity card. The mother knows the Croatian language and script, however, she is not familiar with Croatian laws or the procedure for issuing an identity card.

When they came to the school for enrollment, the mother asked whom they should contact to make an identity card. Mother and Jan were referred to school administrator Nina. Mrs. Nina explained to them that they should go to the Ministry of Internal Affairs and at the very entrance they have a QR code that gives them all the instructions for creating an identity card.

5.3. CASE STUDY – How to fill in a school registration form in Italy

We spoke with Nursena Amity, a woman who emigrated with her family from Tunisia with her husband and their child Ahmed. Ahmed is 14 years old and he needs to go to high school. The Nursena family doesn't speak Italian but only a bit of English but she must fill in the form to register Ahmed to school.

Upper Secondary School involves between three and five years of attendance. Students do an obligatory two years of general studies followed by an optional three years of specialized education. Students have to choose at this time which type, of course, they want to study, depending on whether they are thinking of going on to university afterward, or if they are looking at obtaining a vocational qualification.

There are two categories of upper secondary school: the liceo (like a British grammar school), which is more academic in nature, and an istituto, which is essentially a vocational school. For the first two years of upper secondary school all students use the same state-mandated curriculum of Italian language and literature, science, mathematics, foreign language, religion, geography, history, social studies and physical education. Specialized courses begin in the third year of upper primary school. In order to receive the upper secondary school diploma (diploma di maturità), students must take and pass written and oral exams. There are various high school classes that students can take which specialize in different subjects:

• Classical High School (Liceo Classico)

This lasts for five years and prepares the student for university-level studies. Latin, Greek, and Italian literature form an important part of the curriculum. During the last three years philosophy and the history of art are also studied.

• Scientific High School (Liceo Scientifico)

Lasts for five years with an emphasis on physics, chemistry, and natural sciences. The student also continues to study Latin and one modern language

• Fine Arts High School (Liceo Artistico)

Studies can last four to five years and prepare for university studies in painting, sculpture, or architecture

• Teacher Training School (Istituto Magistrale)

Studies last for five years and prepare future primary school teachers. There is also a three year training course for nursery school teachers, but this diploma does not entitle students to then enroll at a university.

• Artistic Schools (Istituto d'Arte)

Studies last three years and prepare for work within an artistic field and leading to an arts qualification (diploma di Maestro d'Arte)

• Technical Institutes (Istituti Tecnici)

Studies last five years and prepare for both university studies and for a vocation. There is a majority of students in technical schools that prepare students to work in a technical or administrative capacity in agriculture, industry, or commerce.

• Professional Institutes (Istituti Professionali)

These studies lead, in three or five years, to the achievement of a vocational qualification.

To fill in the form, Nursena needs to proceed with the following instruction:

Step 1. You need to write the name of the parent (if mother or father) or who is the child's guardian

Step 2. The name of the student and which class he/she will go to.

Step 3. Put a cross on the school type to choose

Step 4. Now some personal information about the student:

a. Name and surname

b. Social Security Number (Codice fiscale) is a special code given by Italian government to identify uniquely a person (if you haven't, follow this link tax identification-number-for-foreign-citizens)

c. Where and when the student was born

d. Student nationality – write a cross if he/she is Italian or not (write the right country) e. Where the student lives: town, province, street, number and contact information: home phone number, mobile phone number, email address

f. Which middle school the student came from. The name and the town.

g. Which languages the student has studied in his middle school.

h. How the student's family is composed (father, mother, siblings). For each component, you need to write name, surname, codice fiscale, where and when he/she was born and degree of kinship.

Step 5. Last, the parent (or the parents if they are divorced) has to sign the paper two times: first to confirm the details he/she wrote and second to authorize the school to keep and to use those personal data only for Public Administration purposes.

5.4. CASE STUDY – How to fill a Registration form at a Health care Center in Lithuania

Two years ago, Saidai with her parents, two brothers and a sister, had to emigrate from Tajikistan to Lithuania because her parents asked for asylum. Her father was accused of political issues in the home country. The family stayed at a refugee center for a year and learned some Lithuanian. The family is fluent in Russian. After a while they moved to the suburbs of Vilnius where mixed families prevail in the population. This way the skills of the Russian language became very handy.

Saidai and her siblings started to attend the local school. In Lithuania each student must have a health examination before each school year starts and present the health certificate indicating health conditions and physical state.

The document must be issued and signed by a health center. The class teacher provided the family with instructions on how to manage the situation.

In Lithuania each person is free to choose one health care facility that is the closest to their place of residence or more convenient to them. As Saidai family were staying in Grigiškės, near Vilnius, they went to Grigiškės Health Center. Applications to register at the Center for minors are signed by a parent or guardian.

If a person is illiterate, their application is signed by two health care center's employees. Traditionally in Tajik families a father signs all the documents which are connected to family

matters. Saidai went to the health center with her parents and her father filled in the application form to register to the Health Center.

In Lithuania the person or a parent of a minor is free to choose a family doctor. At the institution‘s reception desk the person fills in the „Request for treatment at the chosen health care institution“. The request form F Nr 025-025-1/a can be found online and printed or it can be given at the reception desk. If the person (parent/guardian) who has chosen a health care centre but has not chosen a doctor confirms his consent to visit the doctor designated by the centre administration with their signature. The application is completed on the basis of an identity document, a passport or ID card. Saidai’s application was completed on the basis of an ID document issued by the Migration Department under the Ministry of the Interior of the Republic of Lithuania.

Having filled in the application, Saidai could get an appointment to the family doctor who examined her health condition, measured her height, weight and blood pressure, examined her eyesight and prescribed a visit to a dentist for further examination. After the dentist’s examination the nurse at the family doctor’s office issued the certificate for the school with recommendation to choose a seat in the classroom closer to the board as Saidai appeared to have some eyesight problems. For Physical Education teachers it was noted that Saidai is able to attend regular PE lessons. Saidai brought the certificate to the class teacher.

5.5. CASE STUDY – How to obtain an identity card in North Macedonia

Ivan is a 17 years old teenager. He’s a student in his final year in one high school in Skopje. He is an orphan who grew up in an orphanage until the age of 14 and then was moved with a caretaker to the SOS Children’s Villages in Skopje.

He is almost an adult and is obliged by law to obtain an Identity Card. So Ivan’s assigned caretaker is helping him out with the documents and the application for his first ID.

Ivan needs to obtain his ID on time before his 18th birthday for many reasons. First of all, it is a legal obligation. Then an ID card carries personal information.

It also can help Ivan to

- enroll at the university,
- be legally employed,
- have a bank credit card,
- vote at elections etc.

Ivan is not able to apply on his own, so his caretaker helps him with the documents required and the procedure required to obtain his national ID card.

To help Ivan and other children from the SOS Children's Villages, his caretaker has prepared a webinar to explain the importance of obtaining an ID, the documents needed and the procedure too.

5.6. CASE STUDY – How to fill a GDPR form, according to the national law in Romania

Lets meet ANNA NEWMAN, a student in the 7th grade, who emigrated with her family from Ukraine to Romania, in February 2022. ANNA enrolled in a school in Brasov, in a class of immigrant students. Being a hard-working student, she wanted to get involved in as many extracurricular activities as possible, so she approached her head professor in this regard.

Like any other public institution, the school is subject to the legislation in force, regarding the processing of personal data. Thus, before Anna's inclusion in the work teams of the various projects and partnerships being implemented at the school level, the head professor informed the class about the procedure regarding the request, storage and operation with personal data.



First of all, the notion of "processing" was defined, meaning: any operation or set of operations performed on personal data or sets of personal data, with or without the use of automated means, such as: collecting, recording, organizing, structuring, storing, adapting or modifying, extracting, consulting, using, disclosing by transmission, disseminating or otherwise making available, aligning or combining, restricting, erasing or destroying data.

The students were then made aware of the issues related to: the legal obligation of those requesting personal data, the fact that the requesting institution can use the data only in the legitimate interest of the person, what the consent refers to, what is the data storage period, under what conditions the international transfer is carried out, what are the rights of the person.

Legal obligation

The institution processes personal data to comply with legislation, including, but not limited to, the National Education Law, the Student Statute, the Didactic Framework Statute, the Regulation on the Organization and Functioning of Pre-University Education Units.

Legitimate interest

The institution could process personal data:

- for enabling students to develop their full potential and meet educational, social, physical and emotional needs;

- to allow contacting parents and legal representatives in case of emergency;

- for informing parents and legal representatives about the child's educational progress.

Consent

The institution may, based on consent, process personal information (i.e. photos) to be posted on the school website, on online social media platforms or in the press. Consent can be withdrawn at any time by contacting the institution.

Storage period

Personal information is stored only as long as necessary to fulfil the purposes for which it was collected, in compliance with the legislation in force.

International transfer

The institution may transfer personal information to countries outside the EEA. In the absence of a decision on the suitability of a non-EEA state, other mechanisms permitted by law, such as standard clauses or derogations for specific situations, may be used for data transfer.

Rights

The rights granted by the GDPR to natural persons are as follows:

- The right to withdraw consent;

- The right to be informed about data processing;

- The right of access to data;

- The right to rectify inaccurate or incomplete data;

- The right to erasure ("the right to be forgotten");

- The right to restrict processing;

- The right to portability;

- The right to opposition;

- The right not to be subject to a decision based solely on automated processing, including profiling;

- The right to apply to justice;

- The right to a complaint before a Supervisory Authority.

In order to further help Anna, but also the other students, the head teacher prepared and presented them with support material, a webinar that includes the steps to follow, when they will be in a situation to complete a GDPR form.

5.7. CASE STUDY – How to apply for Turkish visa

An exchange student will attend university in Turkey came Turkish representatives' office to get detailed information about Turkish Visa application procedures. Turkish university representative gives detailed information and brings her brochure about Turkish Visa.

The Electronic Visa (e-Visa) Application System was launched on 17 April 2013. It is possible to obtain e-Visa 7/24 at everywhere with internet connection. The applicants can obtain their visa after they fill in the necessary information concerning their identity, passport and travel dates and pay visa fee online.

E-visa is only valid when the purpose of travel is tourism or commerce. For other purposes, such as work and study, visas are given by Turkish Embassies or Consulates. Citizens of countries who are allowed to enter Türkiye with their national ID's in accordance with "European Agreement on Regulations governing the Movement of Persons between Member States of the Council of Europe".

What is an e-visa?

An Electronic Visa (e-visa) is a convenient and effective way of securing visas for one country.

Do I need a visa to travel to Turkey?

It depends on your nationality, but most nationalities require you to secure a Turkish e-visa before arrival at any of the Turkish airports and land borders. It's always best to check and make research prior to your visit to Turkey.

E-visa types:

There are two main e-Visa types to differentiate between:

- a multiple-entry visa that allows 90 days total spent in Turkey during the 180-day validity period;

- a single-entry visa that allows a 30-day stay within 180 days.

How to apply for a Turkysh visa:

Before applying, please check carefully what and if you need to prepare any additional documents and what visa type you are eligible for. Now, if you are already prepared, follow these steps to apply online:

1. Fill in an online application form. Provide your data, passport details, e-mail address, any additional documents if you are required to do so.

2. Pay the handling visa fee using any convenient to you method of online payment.

3. Check your e-mail box for the confirmation number. You can check the status of your visa processing using this number. Within the next 72 hours, e-Visa will scan the qr code arrive at your e-mail box.

6. Projecting personalized recovery programs for students facing learning difficulties.

This plan is for the students that, based on their results to the standard test, applied after each learning unit, did not form or developed the key competences listed in the table below. The teachers involved in this project, came up with a list of remedial activities, which can be used during the teaching process to help students overcome their learning difficulties. The remedial activities can be organized as part of the class or can be the basis for a remedial program after classes.

REMEDIAL PLAN from 1st grade to 12 grade	
UNACHIEVED COMPETENCE, ACCORDING TO THE STANDARD TEST (PROFILE FOR A STUDENT AT RISK)	**PROPOSED REMEDIAL ACTIVITY**
STUDENTS AT THE END OF PRIMARY SCHOOL / LANGUAGE	
Receives, expresses and writes different messages / simple texts on various topics with the use of the acquired vocabulary elements	Stimulating active reading Word games Stimulating conversation in pairs or groups of 3 or 4 students Drama and role play Integrating Audio-Visual Materials And Realia Into The Teaching Process
Expresses and supports with arguments his/ her feelings, opinions and attitudes	Encourage reading (a book club) Drama and role play (puppet character activities) Storytelling Outdoor activities Kinesthetic activities Debates Specific activities on thematic days (Pet Day, ...) Portfolio / project
STUDENTS AT THE END OF PRIMARY SCHOOL / MATHEMATICS	
Determines measurable characteristics of a simple object or phenomenon in everyday situations and applies conventional standards	Outdoor activities Brainstorming Use of online tools (google measure)

units of measurement in problem solving	Cooperative learning activities - Practical problems Peer tutoring
Compares and sorts natural numbers up to a million	Peer tutoring Practical problems Online games
Describes and draws 2-D and 3-D figures, creates structures using shape models	Practical problems Peer tutoring Cooperative learning activities Portfolio Kinesthetic activities
Solves problems that require multiple operations *Solves problems that require multiple operations*	Online games Bar modeling method Peer tutoring Cooperative learning activities Portfolio Brainstorming
STUDENTS AT THE END OF PRIMARY SCHOOL / SCIENCE	
Explores the characteristics of different bodies, phenomena and processes, cycles in nature with a scientific approach, including Solar system and investigates of the environment using tools and specific techniques	Science Learning Hub website teaching resources Activity - Creating a concept map for earth and space A project -Building a model of the solar system Outdoor lessons National Geographic ScienceLab website experiments, videos, articles and more Integrating audio-visual materials into the teaching process
Recognizes and describes different materials and their states, magnetic forces, recognizes reasons for movement and types of energy and their	National Geographic ScienceLab website experiments, videos, articles and more National Geographic TV series and films Legends of Learning website educational games

measurements	Outdoor lessons Integrating audio-visual materials and realia into the teaching process
STUDENTS AT THE END OF SECONDARY SCHOOL / LANGUAGE	
Analyses, interprets information and expresses it in a written and oral form (reading competence)	Role reading Multiple choice Mediation Writing messages Filling in missing information Completing True/False exercises Drawing mindmaps
Identifies the purpose of the text, analyses the structure the text and uses basic syntactic rules (Writing competence)	Writing informal letters Writing descriptive paragraphs Project based activities
Prepares and delivers speech in a different content and for different purpose, using correct grammar and intonation (Speaking competence)	Preparing PPT presentations Performing dialogues Retelling the text Roleplay Debates
STUDENTS AT THE END OF SECONDARY SCHOOL / MATHEMATICS	
Estimates and calculates the probability of an event in simple situations and displays it in form fraction decimal number and percentage, rounding numbers to a certain degree of accuracy	Didactic games Outdoor lessons Creating a portfolio
Recognizes and solves problems in different contexts, analyses and interprets data representations to obtain measures of variability and make decisions	Outdoor activities Practical problems Conceptual maps

Uses a sequence of operations with integers, fractions and decimals numbers including brackets	Interactiv worksheets Practical activities exploiting students daily experiences Activity- Recognition of operations and the order in which they are performed
STUDENTS AT THE END OF SECONDARY SCHOOL / SCIENCE	
Has a vision of the complexity of the living system and its evolution over time	Conceptual maps Usage of graphics, video snippets, animation, science demonstration Science visits with specific tasks and worksheets Outdoor lessons
Plans, performs experiments, explains and interprets the data and information obtained in an investigative approach	Preparing scientific report based on following an Experimental procedure with clear set of instructions Project based learning- creating a science poster or a short pitch on their findings learning by doing worksheets with different tasks and levels of difficulty Designing special tasks for students who need more support Using the following app: Science Practical Simulator, Khan Academy
STUDENTS AT THE END OF HIGH SCHOOL / LANGUAGE	
Has got the ability to understand, critically examine and analyze texts and do multilevel analysis and discussion	Reading Comprehension using textual indicators to help students comprehend figures of speech,the text main ideas Using critical thinking questions Reading; guess content from the title Paraphrasing a text main ideas in order to avoid repetitions Finding common points-differences between

	texts (compare and contrast) Project based learning - working on online projects with international partners Problem solving
Developing their skills of expressing their feelings and thoughts through written and oral expression	Process writing (peer assessed) Writing Summaries Portfolios (students are responsible for the creation of their own portfolios justifying their choice/ alternative assessment) Information gap activities Using information from a text for a different purpose through role playing (e.g. reading into speaking conveying info to the partner) Producing written text in stages,starting from guided questions with a view to eventually producing free writing Using mediation to convey ideas from one language to another (both in written and in oral task) Debates
STUDENTS AT THE END OF HIGH SCHOOL / MATHEMATICS	
Learns the analytical geometry of space	Minecraft games Map reading to learn coordinates Creating battleships board Chess game Problem solving Orienteering
Expresses quantitative or qualitative mathematical characteristics of a specific situation chooses	Graphics Graphic problems Using real life data Visual aids Interdisciplinary activities (geography-sports-

	economy)
STUDENTS AT THE END OF HIGH SCHOOL /SCIENCE	
Analyzes human impact on the environment, understands and explains complex natural phenomena, processes and procedures establishing relevant correlations	Labworks Labworks related to real life Researches about industrial regions (impact on environment) Outdoor lessons Project based activities
Develops critical thinking by experimenting, solving problems, conducting investigations and reporting results.	Project based activities Science project fair

7. Establishing an early intervention pedagogical model for the development of automated decoding skills in children at risk of functional illiteracy.

PSYCHO-PEDAGOGICAL PROFILE - PREPARATORY CLASS	COMPETENCES THAT THE STUDENT MUST HAVE	ACTIVITIES FOR INTERVENTION
LEARNING SKILLS AND ATTITUDES	Asks questions showing curiosity about the environment changes around him/her	- role playing games - discussions based on the stories heard - discussions based on the drawings viewed - establishing some similarities and differences from the environment - outdoor activities for observation of nature - social and cognitive games (”freezing”, “day/night”) - science/ easy experiments - being in environments with different stimuli
	Expresses the desire to learn how to perform autonomous actions, through which to create objects/toys or discover information about a subject	- puppet theatre - drawing with favourite objects - creative workshop: making school objects, musical instruments, toys from recyclable materials, etc. using different work techniques art workshops - creating their own individual story through children's picture books
	Create an activity plan (in 3-4 steps) and apply it.	- carrying out works using different work techniques: Cutting, assembling, glueing Cutting, twisting, glueing -Tearing, crumpling, glueing -Tracing, following patterns, matching and drawing

		- painting-cutting-pasting-exhibiting - drawing-painting-cut-pasting - doing puzzles
	Focuses on an activity for 20 minutes without supervision	- drawing the activities that are part of the school's daily schedule - cutting out images in order to create a collage on a given theme - colouring a series of images using a specific -colour code - jigsaw puzzles - coloring books - tangram - gaining daily routines with coloring activities with cartoon characters
	Find new forms and means of expressing thoughts and emotions through music, drawing, dance, symbolic play	- singing songs starting from a certain theme/event/season - drawing a symbol for different situations - performing movements based on the text of the songs heard - interpreting sequences from songs with different movements: marching head-first, like soldiers, standing in twos, etc. - activity “express how you feel through dancing”. - use information from one skill to another and for a different purpose e.g listening to writing - expressing and predicting different emotions through demonstrating
	Uses or combines materials and strategies in new ways for exploration or problem	- the presence of "guests" during the lessons: Winter Fairy, Autumn Fairy, characters from stories, etc.

	solving	- organising debated using the technique "So yes, so no...", "Pros and cons" - using different materials to create a vehicle/ robot/… - building a tower without glue
	Explores nature and technological devices	- carrying out age-appropriate experiments - carrying out age-appropriate simulations of natural phenomena - interactive activities - hiking to observe elements of nature - nature observation - growing seasonal vegetables in hobby gardens - going to the market and get to know the fruits and vegetables grown in the area - playing mobile games about nature and farm (max. 20 min in a day e.g. Hoopacity) - photographing the leaves of different types of trees and preparing an exhibition
	Describes time, length, distance and shapes, using the right words and realises the perception of time	- carrying out the morning meeting using the Nature Calendar, focusing on the days of the week, months of the year, seasons - practical activities of measuring the length of some objects using non-conventional measuring instruments - group activity for creating a clock for the time for breakfast, snack, recess lunch,and going home. - overcoming time challenges e.g having time limitations - playing mobile games teaching shapes (e.g. paintbox, petting zoo, Artie's magical pencil)

	He/she is able to count things, group them and determine and estimate their position	- counting objects from nature - counting using concrete objects: sticks, balls, chestnuts - grouping objects according to different criteria - forming groups of objects of the same kind - establishing the position of some objects using specific terms: left, right, up, down, vertical, horizontal, oblique, in front, behind - estimating the distance between objects and comparing this with a true measurement distance - running and counting game with a ball (Every child represents a number, when the number is called out, the student runs for the ball) - playing mobile games (e.g. Agnitus, Mars Pop)
	Acts in accordance with his/her goals	- establishing similarities and differences between personal and other peers' activities - free discussions about passions, hobbies, free time - verbalising and being aware of the difficulty they encounter in carrying out various tasks and cooperates to complete them - creating games according to their interests (doctor-patient, teacher-students etc.)
	He/ she knows his address, phone number and full name	- exercises like "Let's introduce ourselves!", "Who am I?", "My address" - role playing games - information gap exercises - ? draw the area where you live

		- activities using hiphop and rap songs to memorize the address,phone number etc.
	Recognizes the feelings of others	- viewing of movies/cartoons about feeling/emotions (Inside out) - the game "Mime" – with emotions - draw emotions starting from given images - daily completion of the "Calendar of Emotions" - emotions songs eg. “If you’r happy…” - draw how you feel- projective technique (the student fills in the facial expression on a drawn face- how she/he feels every day, or about his peers, teachers…) - completing the story with his/her own words (what would you do if it were you...? how will the story end..?
	Follows the social rules and explains other rules if needed	- role-playing games of the type: "At the library", "At the theatre", "At the cinema", "At the store", "At the play" - on-site visits to the public places - workshops with visitors from museums, hospitals, libraries etc. - watching cartoons about social rules
	It is oriented in space	- establishing the position of some objects using specific terms: left, right, up, down, vertical, horizontal, oblique, in front, behind - colouring worksheets to indicate directions and positions of objects - playing age-appropriate treasure hunt games with the use of maps or guidance indicating the position in space
	Maturity of writing skills	- practising the graphic signs: oval, semi-oval,

		hook, hall, bar - practising graphic signs on different types of rulers
COGNITIVE DEVELOPMENT AND KNOWLEDGE OF THE WORLD	Put objects into groups that meet two criteria at the same time	- sorting objects according to two given criteria: shape – colour, length – colour, thickness – shape
	Work in groups to solve problems, using strategies developed by the group	- using didactic strategies based on collaborative work: Dials, Pencils in the middle, Thinking Hats
	Easily counts to 10/20	- counting objects from nature - counting using concrete objects: sticks, balls, chestnuts - counting up and down exercises up to 10/20 - ”Bingo” game with numbers 1-20
	Builds shapes (circle, square, triangle)	- using the Tangram technique - making drawings using geometric shapes - circle, square, triangle
	Describes and compares the basic needs of living beings	- applying exercises using the Venn diagram with pictures - free discussions based on images of animals - comparing the living environment of living things
	Describes the likely weather and compares it to specific weather conditions. Uses conventional signs for water, rain, mountains, snow, days of the week)	- carrying out the morning meeting using the Nature Calendar, focusing on the weather - making specific drawings: rain, snow, autumn landscape - watching some materials (such as cartoons) about the water circuit in nature
	Logically understands the elimination of the inappropriate element, similarities and differences	- exercises such as "Find the intruder", "Cut the intruder" - "Find the differences between pictures" - odd the one out

	Perceives the relationship between objects (short/tall, big/small, shapes, colors...)	- classifying objects according to different criteria - comparing and contrasting object/toy pairs in the classroom
	Identifies colors and quantities	- applying exercises such us: Forming groups of objects of the same colour Counting the objects of a given set Colouring different objects according to a given code
	He has positive attitudes towards environmental conservation messages	- practical ecological activities - making objects using recyclable materials - planting and taking care of a plant - making posters
DEVELOPMENT OF LANGUAGE, COMMUNICATION, READING SKILLS AND WRITING SKILLS	Communication skills take into account elements such as gender, number, person and time	- role playing games - exercises like "I say one, you say many", "Match the words"
	Uses and repeats developed sentences and phrases	- role playing games - exercises such as "I introduce myself" - expressing the opinion in relation to a given topic
	Develops a sense of self, communicates and collaborates with other peers and adults	- active participation in the dialogue, respecting the order of the speakers - expresses his point of view, presenting arguments
	Answers questions about name, family, friends, daily life, preferences, toys, games, friends and retell a familiar story respecting the order of events	- exercises like "Let's introduce ourselves!", "Who am I?", "My family" - retelling a lived event respecting the chronological order of events - creating a family tree
	Listens while reading	- drawing some key elements from the story

	without interrupting or interrupting	while reading - making predictions about the text to be heard
	Recognizes uppercase / lowercase letters and assimilates them with the corresponding sound	- exercises to circle the given letter - examples of words that have the same initial sound - exercises for associating the initial sound with the corresponding image
	Understands the role of writing in communication	- recognition of different signs: pharmacy, hospital, school
	Pronounces the sounds correctly	- tongue twisters - memos
	Orally divides words into sounds and combines sounds into words	- games of the type "Flying syllable", "Word formation by arranging syllables", "Orally separate words into syllables"
	Communicates freely his own needs, opinions and attitudes	- role playing games - exercises of the type "I introduce myself", "How I feel" - expressing the opinion in relation to a given topic - like/dislike games
	Use adjectives and adverbs	- describing people, characters, toys, seasons - describing actions
	Names objects and describe their purpose	- listing the school's objects and their role in the didactic activity - listing jobs and specific items for each job
	He begins to understand that a word has several meanings	- formulating sentences using pictures with different meanings of the same word - picture puzzles
	Begins to verbally express a sense of humour	- role playing - naming the meanings of emojis

	Develops an aesthetic sense by observing images and works of art	- applying the "Gallery Tour" method - exhibition of works - activities at a real art gallery
	They play with words, building rhymes	- exercises with blank spaces at the end, so that the statements rhyme - singing activities including body movements/body language
	Recognizes the importance of devices in communication	- watching documentaries, watching cartoons - PPT presentations for different topics - using applications for solving exercises

C. Teachers' competences for preventing, reducing and overcoming functional illiteracy:

1. Communication skills

In a modern society, functional illiteracy is a major problem with negative consequences on individual and social development. In this context, teachers play a crucial role in preventing, improving, and combating this phenomenon. Teacher communication skills are essential to help students understand the importance of literacy and to develop the necessary skills for reading, writing, and critical thinking.

One of the most important communication skills for teachers is the ability to clearly and concisely communicate relevant information to help students understand essential concepts. This can be achieved by using simple and clear language, avoiding technical terms or unclear jargon. Additionally, it is important for teachers to be able to explain complex concepts in an accessible and easy-to-understand manner for students.

Furthermore, teachers must be empathetic and able to encourage students to express their ideas and opinions openly and without judgment. By creating a safe and trustworthy environment, teachers can encourage students to actively participate in the learning process and engage in activities that help them develop their literacy skills.

Teachers must also have the ability to adapt to different learning styles of students, by using various teaching methods and techniques. These can include using visual aids, practical exercises, and group discussions to help students develop their literacy skills and gain confidence in their own abilities.

Finally, teachers must have a positive attitude and be a role model for students. By expressing interest and enthusiasm in the learning process, teachers can inspire students to be motivated to develop their literacy skills and continue to learn and grow throughout their lives.

In conclusion, teacher communication skills are essential in preventing, improving, and combating functional illiteracy. By using clear and accessible language, creating a safe and trustworthy environment, adapting to different learning styles, and expressing a positive and enthusiastic attitude, teachers can help students develop their literacy skills and gain the necessary competencies to succeed in life.

Understanding the communication skills required to prevent, fix and fight functional illiteracy can be an important aspect for improving the quality of education and to diminish this phenomenon. Here is a **questionnaire**, that can be used to identify these skills:

1. Which of the following should be the priorities in preventing and repelling functional illiteracy?

a. Developing reading and writing abilities

b. Developing speaking abilities

c. Both

Correction scale:

1 point

0 points

2 points

Interpretation of the results:

This item measure the degree of teacher's awareness regarding the imortance of developing reading, writing and speaking abilities. The correct answer is option c. A 2 points score indicates a good understanding of the two abilities needed in fighting functional illiteracy.

2. What strategies do you use to make the reading and writing more atractive for the students?

a. I read with the students

b. Associating reading with other fun activities

c. Associating reading with higher grades

d. All of the above

Correction scale:

1 point

1 point

0 points

2 points

Interpretation of the results:

This item measures the degree of awareness regarding the strategies of teaching how to read and write, which can be effective in motivating the students. The correct answer is option d. A 2 points score indicates a good understanding of the strategies that can improve students reading and writing abilities.

3. How do you use questions to encourage students to think critic and analytic?

a. By asking open questions which requires a detail answer

b. By asking questions which requires straight answer

c. By avoiding questions to avoid students confusion

Correction scale:

1 point

0 point

0 points

Interpretation of the results:

This item measures the degree of awareness regarding the strategies of how to use certain questions to ecourage the analytical and critical thinking of students. The correct answer is option a. A 1 point score indicates a good understanding of the importance of usage of open question.

4. What techniques do you use to evaluate the communication abilities of the students?

a. Observing how students communicate during talks or presentation

b. Written tests and exams

c. By evaluating students speeches, based on criteria such as: coherence, clarity and organization

d. All above

Correction scale:

a - 1 point

b - 0 points

c - 1 point

d - 2 points

Interpretation of the results:

This item measures the degree of awareness regarding the techniques of how to evaluate students abilities to communicate. The correct answer is option d. A 2 points score indicates a good understanding of the importance of usagedifferent techniques to evaluate students communication skills.

5. What kind of methods do you use to develop oral communication abilities of the students?

a. Practicing speeches and presentation in the classroom

b. Grup conversations

c. Role play

d. All above

Correction scale:

a - 1 point

b - 1 point

c - 1 point

d - 2 points

Interpretation of the results:

This item measures the degree of awareness regarding the methods of how to develop the abilities of oral communication. The correct answer is option d. A 2 points score indicates a good understanding of the importance of usage different methods to develop the oral communication abilities.

6. How do you help the students to develop their writing abilities?

a. By giving constructiv feed-back

b. By practicing writing in a regular manner

c. By ecouraging free writing

d. All above

Correction scale:

a - 1 point

b - 1 point

c - 1 point

d - 2 points

Interpretation of the results:

This item measures the degree of awareness regarding the methods of how to develop the writing abilities of students. The correct answer is option d. A 2 points score indicates a good understanding of the importance of usage different methods to develop the writing abilities.

2. Competences to select and use the appropriate texts to achieve the objectives of the lesson

Texts serve as a valuable resource for conveying information, promoting critical thinking, and enhancing students' language and literacy skills. Here are some key competences that teachers can utilize when selecting and using texts effectively:

1. Knowledge of Curriculum and Learning Objectives: Teachers should have a deep understanding of the curriculum and the specific learning objectives they aim to achieve in a lesson. This knowledge helps them identify the types of texts that align with the content and skills they want students to develop. By aligning the texts with the curriculum, teachers ensure that the selected texts support the intended learning outcomes.

2. Assessment of Student Needs and Abilities: Effective teachers assess their students' needs and abilities to determine the appropriate level and complexity of texts. They consider factors such as reading levels, language proficiency, and prior knowledge. By selecting texts that are accessible and engaging for their students, teachers can support comprehension and foster a positive learning experience.

3. Familiarity with a Range of Texts: Teachers should be knowledgeable about various types of texts, including fiction, non-fiction, poetry, articles, and multimedia resources. They should be able to select texts that cater to different learning styles and interests. By offering a diverse range of texts, teachers can engage students and cater to their individual preferences.

4. Text Authenticity and Relevance: Teachers should consider the authenticity and relevance of the texts they choose. Authentic texts reflect real-world contexts, such as newspaper articles, scientific journals, or primary source documents. These texts provide students with opportunities to develop critical thinking skills and make connections to the world around them. Additionally, texts that are relevant to students' lives and interests enhance engagement and motivation.

5. Text Complexity: Teachers need to gauge the appropriate level of text complexity based on their students' abilities. They should consider factors such as vocabulary, sentence structure, content knowledge, and the cognitive demands of the task. By selecting texts that are challenging yet within the reach of their students, teachers can promote growth and development in reading and comprehension skills.

6. Differentiation and Adaptation: Teachers should be able to adapt texts to meet the diverse needs of their students. They can modify texts by simplifying vocabulary, adjusting sentence structure, or providing additional support materials. Similarly, they can provide extension activities or supplementary texts for advanced learners. By differentiating the use of texts, teachers can ensure that all students can access and engage with the content effectively.

7. Integration of Multimodal Resources: Teachers should incorporate various multimedia resources alongside texts to enhance understanding and engagement. These resources may include videos, images, infographics, interactive websites, or audio recordings. By using multimodal resources, teachers cater to different learning styles and create a dynamic and interactive learning experience.

8. Ongoing Reflection and Evaluation: Teachers should regularly reflect on the effectiveness of the texts used in their lessons. They can gather feedback from students, analyze student

performance, and make adjustments as needed. By evaluating the impact of the texts on students' learning outcomes, teachers can continuously refine their text selection and instructional practices.

By employing these competences, teachers can effectively select and use appropriate texts that support the objectives of their lessons. Well-chosen texts enhance students' understanding, critical thinking, and language skills. They also foster a love for reading and lifelong learning. Ultimately, teachers' competences in text selection and usage contribute to creating engaging and meaningful learning experiences for their students.

Here is a questionnaire: The following questions aim to assess your competences in selecting and using appropriate texts to achieve the objectives of your lessons. Please answer each question to the best of your abilities.

1. How familiar are you with the curriculum and learning objectives of your subject area?

(1 = Not familiar at all, 2= Somewhat familiar, 3= Familiar, 4= Very familiar, 5 = Absolutly familiar)

2. Are you able to assess your students' needs and abilities when selecting texts?

(1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Usually, 5 = Always)

3. Do you consider the authenticity and relevance of texts when selecting them for your lessons?

(1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Usually, 5 = Always)

4. How comfortable are you with a range of text types, such as fiction, non-fiction, poetry, articles, and multimedia resources?

(1 = Not comfortable at all, 2 = Somewhat comfortable, 3 = Comfortable, 4 = Very comfortable, 5 = Extrimly comfortable)

5. How do you determine the appropriate level of text complexity for your students?

• Analyze vocabulary and sentence structure

• Consider students' prior knowledge on the topic

• Assess the cognitive demands of the task

(1 = Neither of the options, 2 = 1 of the options, 3 = 2 of the given options, 4 = All of the above, 5 = All of the above and more)

6. How do you differentiate and adapt texts to meet the diverse needs of your students?

• Simplify vocabulary and sentence structure

• Provide additional support materials

• Offer extension activities for advanced learners

(1 = Neither of the options, 2 = 1 of the options, 3 = 2 of the given options, 4 = All of the above, 5 = All of the above and more)

7. Do you incorporate multimodal resources (e.g., videos, images, infographics) alongside texts to enhance understanding and engagement?

(1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Usually, 5 = Always)

8. How often do you reflect on the effectiveness of the texts used in your lessons?

(1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Usually, 5 = Always)

9. Do you seek feedback from students regarding the texts used in your lessons?

(1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Usually, 5 = Always)

10. How do you stay updated on new texts and resources that could enhance your teaching?

• Attend professional development workshops or conferences

• Engage in online communities and educational platforms

• Collaborate with colleagues to share resources

(1 = Neither of the options, 2 = 1 of the options, 3 = 2 of the given options, 4 = All of the above, 5 = All of the above and more)

Interpretation of results:

The average score for each question can be calculated, and the results can be interpreted as follows:

- Scores between 1 and 12 indicate a low level of competences to select and use the appropriate texts to achieve the objectives of the lesson.

- Scores between 13 and 24 indicate a moderate level of competences to select and use the appropriate texts to achieve the objectives of the lesson.

- Scores between 25 and 35 indicate a high level competences to select and use the appropriate texts to achieve the objectives of the lesson.

Overall, the higher the average score across all questions, the higher the level of teacher's competences to select and use the appropriate texts to achieve the objectives of the lesson.

3. The ability to use personal introspection and creativity to generate learning situations

In a nowadays society, functional illiteracy is a common problem with really negative consequences on individual and social development. One of the most widespread causes of

functional illiteracy is student's lack of attention and teachers play a crucial role in preventing, improving, and combating this phenomenon. Teacher's use of personal introspection and creativity skills are essential to engage students' attention and interests, enabling them to participate actively in the lesson and developing their reading, writing and critical thinking skills.

Somebody to teach need to have three key elements: competence, creativity in teaching, and sincerity to lead their students to success. Creativity plays a crucial role: a teacher must have a sense of creativity so that they can find learning models suitable to apply in the classroom. A creative teacher can find the ways to solve students' problems in the class, at school, or outside the school.

The creativity will help the teacher find good ways of teaching, an elegant classroom opening, ways to make and carry out practical assessments, proper ways to give assignments without burden the students, ways to lead classroom discussions that encourage the children to actively share their ideas, ways to administer punishment wisely, and much more.

Creativity will distinguish a teacher from the others. Students will always look forward to the creative teacher's lesson hours.

Therefore, teachers must be able to improve their creativity. In addition to bringing changes in teaching and learning activities, creativity also shows that the person is competent to become a professional ideal teacher. The teacher's creativity will help students grasp the lessons quickly as well as improve their motivation in learning.

To reach the goal and find the right method, a teacher needs to take time to reflect on his/her own teaching, his/her own lesson material, and how he/she engaged with his/her students can help him/her recognize areas of improvement. Analyzing his/her way to teach, maybe, he/she can realize students were off-task for most of the lesson because they did not understand the material. Maybe he/she can realize he/she needs to add or change some classroom expectations. Maybe he/she can realize used material wasn't challenging enough.

Personal introspection is another crucial point a teacher should use. A teacher might recognize how his/her words and actions affect those around him/her. As teachers, it is crucial to use sensitive language, teach with inclusive material, and connect with students. Being more self-aware of what he/she says and how he/she says can help teachers make students feel comfortable and loved.

Taking the time to reflect on your practice can help teachers to decide whether students responded the way they should have and mastered understanding of the material. In this way

he/she can better understand student's strengths and their needs going forward. It helps us put students first and recognize that teaching is not just a job to complete each day: teachers must do it well and acknowledge that they can always improve.

In conclusion, teacher use of personal introspection and creativity are two of the main skill a teacher need to have to engage students, develop life skills and combat functional illiteracy. ICT for sure can be a good practice to use to improve teacher creativity.

Here is a **questionnaire**, that can be used to identify these skills:

1. Do you usually follow training courses to improve your teacher skills?

(1 = Never, 2=Rarely, 3= Sometimes, 4= Usually, 5 = Always)

Interpretation: A higher score indicates a higher level of competence in teaching methods and implementing creativity to find different and new ways to engage students, to promote literacy development and to combat functional illiteracy.

2. Dou you discuss with other teachers about your teaching method and how you engage your class?

(1 = Never, 2=Rarely, 3= Sometimes, 4= Usually, 5 = Always)

Interpretation: A higher score indicates a higher level of sharing teaching methods and different and new ways to engage students. Although formal training will help us develop as a teacher, it's important to connect with others in teacher field. Inspiration can come from famous speakers and writers, but just as often, it can come from other teachers.

3. Do you usually look for new ideas to improve your teacher skills on the Internet and organize them in a way that makes it easy to try them out when the right opportunity presents itself?

(1 = Never, 2=Rarely, 3= Sometimes, 4= Usually, 5 = Always)

Interpretation: A higher score indicates a higher level of up to date and organize new ideas in a way that makes it easy to try out when the right opportunity presents itself, nudging teachers along the road to creativity, especially as everybody begins to adapt and experiments with them.

4. Do you do to exercise you mind?

(1 = Never, 2=Rarely, 3= Sometimes, 4= Usually, 5 = Always)

Interpretation: Just as athletes maintain their ability through continual training, our brains also benefit from regular exercise. Crosswords, Sudoku or jigsaw puzzles and similar 'brain-training' activities have been shown to increase our concentration and boost creativity A higher score indicates a higher level of active brain and thus of creativity.

5. Do you usually try to use new teaching methods and techniques with your students?

(1 = Never, 2=Rarely, 3= Sometimes, 4= Usually, 5 = Always)

Interpretation: Learners respond positively to teachers who don't follow the same old steps in the same old way day in and day out. As much as learners like teachers who are patient, tolerant and able to explain things well, they appreciate teachers whose lessons have surprises and elements of fun. A higher score indicates a higher level of fluency and creativity, and desire to find the right method for the right students.

6. Do you usually give to your student questionnaire about your teaching methods or do you usually discuss about them?

(1 = Never, 2=Rarely, 3= Sometimes, 4= Usually, 5 = Always)

Interpretation: A teacher needs to take time to reflect on his/her own teaching, his/her own lesson material, and how he/she engaged with his/her students can help him/her recognize areas of improvement. Analyzing his/her way to teach and speaking with students, can help teachers to realize what they need to add or change or if used material aren't challenging enough. A higher score indicates a higher level of feedback from students that means a higher personal introspection of the teacher.

7. Do you usually are creative to solve problems?

(1 = Never, 2=Rarely, 3= Sometimes, 4= Usually, 5 = Always)

Interpretation: Problem-solving is what teachers do every moment of their working day, from deciding on teaching materials, procedures and grades, to adapting an activity that learners are not responding to, and helping individuals who are not progressing as they should. To keep developing these skills, teachers need to make creativity part of their daily routine rather than an occasional activity. Look at everything they do with a critical eye and consider how lessons could be made more motivating, productive and interesting for learners. A higher score indicates a higher level of use of creativity in teacher's everyday life.

Interpretation of results:

The average score for each question can be calculated, and the results can be interpreted as follows:

- Scores between 1 and 12 indicate a low level of use personal introspection and creativity to generate learning situations.

- Scores between 13 and 24 indicate a moderate level of use personal introspection and creativity to generate learning situations.

- Scores between 25 and 35 indicate a high level of use personal introspection and creativity to generate learning situations.

Overall, the higher the average score across all questions, the higher the level of teacher's use of personal introspection and creativity to generate learning situations.

4. Literacy, numeracy, problem solving, critical thinking and reflective learning skills

Today's society demands citizens who cannot only read and write, but can use these skills to evaluate and apply information gained from across a range of media. Literacy is also about developing in each individual a positive attitude towards lifelong learning and awareness of the wider world.

Being numerate is an important fundamental life skill that permeates all aspects of our life – from doing the weekly shopping, to finding a job. Being numerate is another form of literacy – it helps us to become more financially literate.

Responsibility for both literacy and numeracy skills must not just lie with the language and math teachers, who admittedly are at the centre of the task, but with teachers of all subjects who have the responsibility of supporting children in developing their literacy skills.

Developing literacy and numeracy skills not only supports learning but also enhances understanding within the curriculum area and is a key way of raising standards and outcomes in all subjects.

Developing critical thinking and problem-solving skills is associated with certain competencies, such as the ability to:

• ask questions that require higher-order thinking;
• gather evidence from reliable sources;
• express thoughts using arguments;
• consider other perspectives;
• solve problems;
• understand causes and effects;
• think independently and self-motivated;
• make decisions based on evidence.

In order to develop critical thinking and problem-solving skills, teachers with highly developed abilities to create a safe and stimulating learning environment that provides support and in which students feel free and encouraged to think, ask questions, explore, work in teams, without

fear of making mistakes, are needed. Trained teachers are needed who want to teach their students more than just examples of factual knowledge.

Aim: This questionnaire is designed to identify the abilities of teachers to create activities aimed at developing specific skills in students, such as language literacy, numeracy, problem solving, critical thinking, and reflective learning.

Instructions:

For each question, indicate how often you behave in that way, using the following rating scale:

• Almost never - 1

• Rarely - 2

• Occasionally - 3

• Often - 4

• Almost always – 5

A questionnaire

1. I understand the concept of language literacy and feel competent in creating activities to develop language literacy skills in students.

2. I understand the concept of numerical skills and literacy and feel competent in creating activities to develop numerical skills and literacy in students.

3. I understand the concepts and feel competent in creating activities to develop problem-solving and critical thinking skills in students.

4. I feel competent in creating activities to develop reflective learning skills in students.

5. I create and use educational games and activities to promote language literacy in students.

6. I create and use educational games and activities to develop numerical skills and literacy in students.

7. I create and use educational games and activities to develop problem-solving and critical thinking skills in students.

8. I use activities that develop reflective learning skills.

9. I know the abilities of my students and model my teaching according to their abilities.

10. I use ICT in teaching to develop language and numerical skills in students.

11. I use ICT in teaching to develop activities to develop problem-solving and critical thinking skills in students.

12. I use ICT in teaching to develop reflective learning skills.

13. During mu teaching I ask questions that require higher-order thinking.

14. During mu teaching I encourage my students to think independently and express thoughts using arguments.

15.During mu teaching I encourage my students to make decisions based on evidence and consider other perspectives.

The results can be interpreted as follows:

Results between 1 and 5 indicate a low level of competence, confidence, and effectiveness in the respective area.

Results between 6 and 9 indicate a moderate level of competence, confidence, and effectiveness in the respective area.

Results over 10 indicate a high level of competence, confidence, and effectiveness in the respective area.

5. Competences regarding the stimulation of transdisciplinary learning for the formation of life skills

Functional illiteracy is a significant problem that affects individuals and communities worldwide. Individuals who experience functional illiteracy struggle with basic reading, writing, and language skills, making it difficult for them to navigate daily life and participate fully in society. Teachers can play a critical role in combating functional illiteracy by promoting interdisciplinary learning experiences that develop life skills. In this essay, we will discuss teacher competences that are particularly relevant for combating functional illiteracy through interdisciplinary learning.

One essential teacher competence for promoting interdisciplinary learning to combat functional illiteracy is literacy expertise. Teachers should have a deep understanding of literacy development and strategies for promoting reading, writing, and language skills. This expertise can be applied across different academic disciplines to promote literacy skills in various contexts. Teachers can use this expertise to design interdisciplinary learning experiences that promote literacy development, such as integrating reading and writing activities into other subject areas such as science, history, or math.

Another critical teacher competence for promoting interdisciplinary learning to combat functional illiteracy is cross-disciplinary connections. Teachers should be able to identify and articulate connections between different academic disciplines that are relevant to literacy development. For example, a science teacher might incorporate reading and writing activities into

their curriculum to help students learn scientific concepts and vocabulary. By integrating literacy skills across different academic disciplines, teachers can help students see the relevance of these skills to their daily lives and promote literacy development.

Culturally responsive teaching is also an essential teacher competence for promoting interdisciplinary learning to combat functional illiteracy. Teachers should be able to develop interdisciplinary learning experiences that are culturally responsive and relevant to the diverse backgrounds and experiences of their students. This can involve incorporating literature and other resources that reflect the cultural backgrounds and experiences of their students. By incorporating diverse perspectives and resources into interdisciplinary learning experiences, teachers can help students develop the critical thinking skills needed to navigate different cultural contexts.

Technology integration is another important teacher competence for promoting interdisciplinary learning to combat functional illiteracy. Teachers should be able to use technology effectively to support literacy development in interdisciplinary learning experiences. This can involve using digital resources and tools to support reading, writing, and language skills. For example, teachers might use educational apps, e-books, or other digital resources to provide additional support to students who are struggling with literacy skills.

Differentiated instruction is another critical teacher competence for promoting interdisciplinary learning to combat functional illiteracy. Teachers should be able to differentiate their instruction to meet the needs of individual students with varying levels of literacy skills. This can involve providing targeted interventions and support to students who are struggling with literacy skills, such as additional one-on-one support, small-group instruction, or alternative learning materials.

Collaboration and teamwork are also essential teacher competences for promoting interdisciplinary learning to combat functional illiteracy. Teachers should be able to collaborate with other professionals and community organizations to promote literacy development and combat functional illiteracy. This can involve partnering with local libraries, literacy programs, and other community resources to support student learning and promote literacy development.

Finally, assessment and evaluation are critical teacher competences for promoting interdisciplinary learning to combat functional illiteracy. Teachers should be able to assess and evaluate the effectiveness of interdisciplinary learning experiences for promoting literacy development and combatting functional illiteracy. This can involve using a variety of assessment strategies and tools to measure student progress and adjust instruction accordingly.

In conclusion, teacher competences play a critical role in promoting interdisciplinary learning experiences that develop life skills and combat functional illiteracy. By integrating literacy skills across different academic disciplines, using technology effectively, collaborating with other professionals and community resources, and differentiating instruction to meet the needs of individual students, teachers can help students develop the life skills they need to succeed.

Here is a **questionnaire**, that can be used to identify these skills:

1. To what extent do you feel competent in designing and implementing interdisciplinary learning experiences to promote literacy development and combat functional illiteracy? (1 = Not at all competent, 2 = Slightly competent, 3 = Moderately competent, 4 = Very competent, 5 = Extremely competent)

Interpretation: A higher score indicates a higher level of perceived competence in designing and implementing interdisciplinary learning experiences to promote literacy development and combat functional illiteracy.

2. How confident are you in your ability to differentiate instruction to meet the needs of students with varying levels of literacy skills in interdisciplinary learning experiences? (1 = Not at all confident, 2 = Slightly confident, 3 = Moderately confident, 4 =Very confident, 5 = Extremely confident)

Interpretation: A higher score indicates a higher level of confidence in the ability to differentiate instruction to meet the needs of students with varying levels of literacy skills in interdisciplinary learning experiences.

3. How often do you incorporate cultural and linguistic diversity in your interdisciplinary learning experiences to promote literacy development and combat functional illiteracy? (1 = Rarely or never, 2 = Seldom, 3 = Sometimes, 4 = Often, 5 = Almost always)

Interpretation: A higher score indicates a higher frequency of incorporating cultural and linguistic diversity in interdisciplinary learning experiences to promote literacy development and combat functional illiteracy.

4. How effectively do you collaborate with other professionals and community organizations to support interdisciplinary learning experiences that promote literacy development and combat functional illiteracy? (1 = Not at all effectively, 2 = Slightly effectively, 3 = Moderately effectively, 4 = Very effectively, 5 = Extremely effectively)

Interpretation: A higher score indicates a higher level of perceived effectiveness in collaborating with other professionals and community organizations to support interdisciplinary learning experiences that promote literacy development and combat functional illiteracy.

5. How often do you assess and evaluate the effectiveness of interdisciplinary learning experiences for promoting literacy development and combatting functional illiteracy, and what data do you use? (1 = Rarely or never, 2 = Seldom, 3 = Sometimes, 4 = Often, 5 = Almost always).

Interpretation: A higher score indicates a higher frequency of assessing and evaluating the effectiveness of interdisciplinary learning experiences for promoting literacy development and combatting functional illiteracy, and using data to inform instructional decisions.

6. To what extent do you feel confident in engaging students with diverse learning styles in interdisciplinary learning experiences to promote literacy development and combat functional illiteracy? (1 = Not at all confident, 2 = Slightly confident, 3 = Moderately confident, 4 = Very confident, 5 = Extremely confident)

Interpretation: A higher score indicates a higher level of confidence in engaging students with diverse learning styles in interdisciplinary learning experiences to promote literacy development and combat functional illiteracy.

7. *How effectively do you use technology to enhance interdisciplinary learning experiences and support literacy development?* (1 = Not at all effectively, 2 = Slightly effectively, 3 = Moderately effectively, 4 = Very effectively, 5 = Extremely effectively)

Interpretation: A higher score indicates a higher level of perceived effectiveness in using technology to enhance interdisciplinary learning experiences and support literacy development.

Interpretation of results:

The average score for each question can be calculated, and the results can be interpreted as follows:

- Scores between 1 and 2.5 indicate a low level of competency, confidence, frequency, or effectiveness in the respective area.

- Scores between 2.5 and 3.5 indicate a moderate level of competency, confidence, frequency, or effectiveness in the respective area.

- Scores between 3.5 and 5 indicate a high level of competency, confidence, frequency, or effectiveness in the respective area.

Overall, the higher the average score across all questions, the higher the level of teacher competencies in stimulating interdisciplinary learning for the formation of life skills to combat functional illiteracy.

6. The ability to design activities aimed at forming the "learn to learn" competence

Learn-to-learn competence, refers to the ability to understand and regulate one's own learning process. It involves being aware of and actively monitoring one's own learning strategies, setting goals, planning and organizing learning tasks, monitoring progress, evaluating learning outcomes, and adjusting strategies as needed to optimize learning..

Learn-to-learn competence goes beyond simply acquiring knowledge or skills; it involves developing the ability to learn efficiently and effectively across different domains and contexts. It includes skills such as self-reflection, self-regulation, critical thinking, problem-solving, and adaptability, which enable individuals to become autonomous, lifelong learners

As education continues to evolve in the 21st century, the role of teachers extends beyond just delivering content and instruction. It is crucial for teachers to equip their students with not just knowledge, but also the ability to learn how to learn. This is where the concept of "learn-to-learn competence" comes into play. Learn-to-learn competence refers to the metacognitive skills that enable individuals to understand, regulate, and optimize their own learning process. Teachers who possess the ability to design activities that foster learn-to-learn competence can empower their students to become lifelong learners who are capable of adapting and thriving in a rapidly changing world. 'Learning how to learn', is specifically crucial for developing independent learners, when the educators are no longer the main source of knowledge and information

The purpose of this questionnaire is to assess teachers' awareness and understanding of strategies and techniques for designing activities aimed at forming the "learn to learn" competences among their students. By identifying teachers' abilities in this area, we can better understand their readiness to support students in becoming effective and self-directed learners. Your participation in this questionnaire will provide valuable insights into the importance of developing "learn to learn" competences and how teachers can play a critical role in fostering these skills in their students.

Questionnaire:

1. Do you feel competent in designing and implementing activities that promote self-directed learning skills in students?

(1 = Not at all competent; 2 = Slightly competent; 3 = Moderately competent; 4 = Very competent; 5 = Extremely competent)

2. How confident are you in your ability to design activities that foster metacognitive skills in students, such as goal-setting and self-reflection?

(1 = Not at all confident; 2 = Slightly confident; 3 = Moderately confident; 4 = Very confident; 5 = Extremely confident)

3. Do you design activities that promote inquiry-based learning, where students actively explore and discover new knowledge and skills?

(1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = Very; 5 = Extremely)

4. How often do you incorporate opportunities for students to engage in problem-solving, critical thinking, and decision-making skills in your lesson plans?

(1 = Rarely or never; 2 = Seldom; 3 = Sometimes; 4 = Often; 5 = Almost always)

5. How often do you incorporate opportunities for students to reflect on their learning process and provide feedback on their own progress?

(1 = Rarely or never; 2 = Seldom; 3 = Sometimes; 4 = Often; 5 = Almost always)

6. How effectively do you design activities that promote student autonomy, allowing them to take ownership of their own learning process?

(1 = Not at all effectively; 2 = Slightly effectively; 3 = Moderately effectively; 4 = Very effectively; 5 = Extremely effectively)

7. Do you design activities that promote collaboration, communication, and teamwork skills among students?

(1 = Not at all; 2 = Slightly; 3 = Moderately; 4 = Very; 5 = Extremely)

8. How effectively do you design activities that promote critical information literacy skills, such as evaluating sources, analyzing information, and synthesizing knowledge?

(1 = Not at all effectively; 2 = Slightly effectively; 3 = Moderately effectively; 4 = Very effectively; 5 = Extremely effectively)

9. How often do you design activities that promote creativity, innovation, and problem-solving skills in students?

(1 = Rarely or never; 2 = Seldom; 3 = Sometimes; 4 = Often; 5 = Almost always)

10. Do you feel confident in designing activities that cater to different learning styles, abilities, and interests of students to promote "Learn to Learn" competence?

(1 = Not at all confident; 2 = Slightly confident; 3 = Moderately confident; 4 = Very confident; 5 = Extremely confident)

Interpretation of Results:

The average score for each question can be calculated, and the results can be interpreted as follows:

- Scores between 1 and 2.5 indicate a low level of competency, confidence, frequency, or effectiveness in the respective area.

- Scores between 2.5 and 3.5 indicate a moderate level of competency, confidence, frequency, or effectiveness in the respective area.

- Scores between 3.5 and 5 indicate a high level of competency, confidence, frequency, or effectiveness in the respective area.

Overall, the higher the average score across all questions, the higher the level of teacher competencies in designing activities for "Learn to Learn" competence in students.

In summary, the competencies specific to the ability to design activities aimed at forming the "learn to learn" competence include

1. instructional design,
2. metacognition,
3. a learner-centered approach.

These competencies are crucial in creating effective learning experiences that empower learners with the skills and strategies to become self-directed learners who are capable of learning independently and adapting to new learning challenges.

7. Socio-emotional skills according to the child's age particularities

The role of the teacher in 21st century is more demanding and is constantly expanding. This means that teachers need to use a wide variety of methods, tools and approaches and adapt them to the needs of students. They also need to acquire skills and have abilities necessary to create a positive environment in the classroom and collaborate with other stakeholders inside and outside the school to provide timely support to students. These skills and abilities need to be constantly improved.

The following are some of the competences teachers are expected to have in order to effectively teach their students.

Positive attitude towards teaching in diverse classes. Teachers need to know how to choose the most suitable teaching techniques and strategies of active learning in order to be able to work effectively and design the learning process for a diverse group of students with different needs and preferences

Teachers should gain knowledge and collect information about the latest research and evidence-based best practices in areas relevant to their work and share it with other teachers and in their daily classes.

Teachers have to know how to provide students with feedback and support on achieving their learning goals

Teachers need to have the ability to recognize risk factors for early school leaving and to have knowledge about effective interventions that can prevent it. This means being able to recognize and address inappropriate school and classroom atmosphere, poor student-teacher relationships, negative peer influence, absenteeism, illness, learning difficulties, etc.

Communication, interpersonal and conflict resolution skills are important competences which leead to building strong and positive relationships between students and teachers, prevention of peer violence and positive atmosphere in the school and the classroom.

Knowledge and awareness about students cognitive , social and behavioral development

Ability to work in multidisciplinary professional teams and communities, leadership skills improve student achievement and increase student retention.

Teacher should also have the ability to collaborate with parents and involve them in their children's learning and development as well as to collaborate with external partners.

One of the crucial roles teachers have is preventing, improving and combating functional illiteracy in students which if not addressed causes wide range of problems on individual and social level. Teachers should use all of the above competences to enable their students for reading, writing and critical thinking skills and prevent functional illiteracy.

Here is a **questionnaire**, that can be used to self assess skills in preventing functional illiteracy:

1. How much do you agree with the following statements?

(strongly disagree - 1, disagree - 2, agree - 3, strongly agree - 4)

- Teacher is responsible for improving student's reading comprehension skills.
- Teachers should attend trainings to acquire skills to teach reading comprehension

- I am very confident in my skills to teach reading anf writing for critical thinking and reading comprehension.

Interpretation: A higher score indicates a higher level of understanding of the teaher's role in preventing functional illiteracy and improving students comprehension skills

2. How often do you use these practices in your classroom?

(never - 1, sometimes - 2, always - 3)

- Summarizing read texts
- Connecting text with what was learnt before
- Addapting reading time to reading purpose
- Reasearch information on the Internet
- Assessing credibility of Internet sources
- Check comprehension of text with students

Interpretation: A higher score indicates a higher frequency of assessing and evaluating the effectiveness of methods used in classroom for development of reading comprehension.

3. How often do you:

(never -1, few times a year - 2, on monthly basis - 3, once a week or more - 4)

- Exchange information about learning development of students
- Exchange information about different methods and tools you use in your classroom
- Exchange infomation about teaching materials, articles, studies, etc with your colleagues
- Work with your colleagues on developing learning assesment materials

Interpretation: A higher score indicates a higher level of ability to work in multidisciplinary professional teams and improve student achievement and increase student retention, gain knowledge and collect information about the latest research and evidence-based best practices in areas relevant to their work and share it with other teachers and in their daily classes.

4. In your opinion, to what extent teacher is responsible for the following:

(not at all responsible - 1, responsible to some extent - 2, responsible a lot - 3)

- Motivate students for school work and learning
- Help students think critically
- Use a variety of teaching methods and tools
- Use different assesment strategies in evaluation of student's development
- Provide alternative explanations for students who need more time to undestand new concepts

- Implement alternative strategies for students who need more time to undestand new concepts

Interpretation: A higher score indicates a higher level of positive attitude towards teaching in diverse classes. Teachers need to know how to choose the most suitable teaching techniques and strategies of active learning in order to be able to work effectively and design the learning process for a diverse group of students with different needs and preferences

5. To what extent do you practice the following in your classroom:

(never - 1, sometimes - 2, all the time - 3)

- Motivate students for school work and learning
- Help students think critically
- Use a variety of teaching methods and tools
- Use different assesment strategies in evaluation of student's development
- Provide alternative explanations for students who need more time to undestand new concepts
- Implement alternative strategies for students who need more time to undestand new concepts

Interpretation: A higher score indicates a higher level of practicing teaching in diverse classes. Teachers need to know how to choose the most suitable teaching techniques and strategies of active learning in order to be able to work effectively and design the learning process for a diverse group of students with different needs and preferences

6. How do you assess you students' improvement?

(never -1, during some lessons - 2, almost every lesson - 3)

- I let students assess themselves
- I develop my own standardized tests
- I provide immediate feedback to students about the tasks they are working on
- I give them written feedback on their work in addition to grade
- I use homework and different assignments to collect data about the improvement

Interpretation: A higher score indicates a higher level of teacher's ability to know how to provide students with feedback and support on achieving their learning goals

D. Good practices exchange for preventing, reducing and overcoming functional illiteracy

1. Good practices provided by the Croatian partner

Technical school Nikola Tesla was faced with students having low motivation for learning and low self esteem in their skills and abilities. This resulted in students having difficulties with regular classes and increase in student absence rate. Additional to this, we were facing problems with conflicts between two ethnic groups we educate in school.

The school decided to address these problems through organization of extracurricular activities in different areas covering sports activities, social science activities, science activities, programming and robotics, ecology activities, holocaust education, volunteering, etc. Since our students come from rural areas participating in similar activities outside from school was something they could not easily access.

The organization of these activities was tricky for our school since most of our students come from rural areas around town Vukovar, transport connections are week and due to lack of facilities classes are organized in two shifts- morning from 7 a.m. to 1 p.m. and afternoon from 1 p.m. to 7 p.m.

This situation was resolved by decision to shorten regular classes for 5 min one day a week, thus creating a 2h break between shifts and allowing time for students from both shifts to participate in different activities. We started implementing these activities in a way that assured students from different ethnic groups would participate in them together.

The results were suprising. A lot of students decided to involve in these activites and later on suggested activities they would like to engage in. They were given opportunity to discover and develop their own interests, to colaborate with others on different tasks and acquire new knowledge.

In addition to these activities, additional classess in math, language and scince were organized to help students who had difficulties with lessons, as well as additional classess to help graduate studenta with State exams.

Also, school started to implement projects with local, national and international partners and involved students in them.

Participation in these activities had numerous positive effects on our students. They were provided with opportunity to show variety of skills and abilities they have which improved their

self esteem and motivation for learning and sense of belonging to the school. School success was improved as well. Participation in these activities inluenced students to present their own qualities, their group quality, they developed a sense of self confidence and sense of empathy.

Engagement in extracurricular activities influenced our students to revive their behaviour, to become more aware of regular classes and obligations and duties which led to decrease in their school absence rate.

Since different ethnic groups participated in these activities, it also led to decrease of conflicts between these groups.

In conclusion, extracurricular activities have the characteristics of a framework, open curriculum that allows, considering the type of extracurricular activities and the area of interest, the contents to be creatively adapted to the interests and abilities of students and to the specifics of individual schools and environments.

During these activities, the student's active participation, teamwork, direct experience, research, critical thinking and presentation of ideas and the application of what has been learned in new situations are encouraged.

When students feel a certain kind of freedom, they are more willing to explore and advance in those areas in which they feel curious.

When, in addition, they are offered a wide range of activities in which they can realize their own potential, additional motivation is created that is not only related to school, but to the general creation of ambitions among students.

Involvement in organized activities in free time builds work habits, develops a sense of personal responsibility and self-control, encourages creativity and motivation, and shapes the social and emotional skills of a young person.

2. Good practices provided by the Greek partner

In previous years, due to the pandemic, a large part of the educational program in our school was conducted by distance learning. Most students responded positively to the implementation of innovative practices and familiarized themselves with new technologies. However, the techniques that were applied could not, in several cases, replace the necessary physical teaching for our students, of the A Lyceum, who were then studying in the Gymnasium. These students also have to adapt to the data of a different level, that of the Lyceum, which is also accompanied by increased difficulty at the level of courses. In initial evaluations of the science

lessons, poor performance was noted and the involved teachers found difficulties in getting students to understand scientific concepts.

A team of teachers, teaching science decided to improve the understanding of science concepts by high school students. It was also considered necessary to develop their skills, with an impact on the following grades. It was considered important to involve the teachers involved in innovative teaching practices that will activate the students and promote their exploratory learning and the development of their critical thinking.

Based on the above, an Action Plan was followed. The main objectives of the Action were:

• strengthening the interest and participation of high school students in the science courses

• promoting the mobilization of teachers to participate in innovative teaching practices and the use of teaching materials (teaching scenarios with educational software) in the science lessons

• improving the understanding of science concepts by high school students and developing their skills

• the improvement of the performance of high school students in the above courses.

Actions & implementation schedule:

a) November

A meeting of the Action group was held to plan the activities, according to the objectives. A questionnaire was distributed to students in Mathematics, Physics and Chemistry in order to evaluate their basic concepts. There was training in educational software (Kahoot, genially, Triptico, Socrative, LearningAPPs) for teachers online. Groups of students were formed to prepare for experiments.

More workshops on Physics labs provided students with the opportunity to engage in hands-on experiments and activities, allowing them to directly interact with the physical world and observe phenomena. This practical experience helped students to develop a deeper understanding of physics concepts, as they could witness how theories and principles apply in real-world scenarios. This hands-on approach helped students bridge the gap between theoretical concepts and their practical applications, making physics concepts more tangible and relatable. Moreover this active engagement helped students to internalize the concepts better compared to passive learning methods like lectures or reading. By actively manipulating materials, measuring quantities, and observing outcomes, students could grasp physics concepts in a more experiential and meaningful way.

Taking part in competitions concerning Maths, physics and chemistry will help students. Science competitions often require students to research, experiment, and solve complex problems, which can deepen their understanding of scientific concepts and improve their analytical, critical thinking, and problem-solving skills. Through competitions, students may also learn new techniques, technologies, and methods that can broaden their knowledge and skill set in their chosen scientific field.

Develop teamwork and collaboration skills: We tried to make students to communicate effectively, delegate tasks, and work together towards a common goal. These skills are not only essential in scientific endeavors but also in many aspects of life and future careers.

Expand networking opportunities: we invited professionals, scientists, and experts in their field of interest. This can help students expand their network, establish contacts, and learn from experienced individuals who can provide guidance and mentorship.

Improving presentation and communication skills: We asked students to present their findings, results, and solutions to judges, peers, and audiences. This helped students develop effective communication skills, including oral and written presentation skills, data visualization, and scientific reporting. These skills are vital in scientific research.

Using appropriate software in the school lab in science education enhanced student learning through virtual simulations, real-world data analysis, multimedia content, collaborative learning, adaptive learning, real-time monitoring, and accessibility features, promoting understanding of concepts, critical thinking, inquiry skills, and inclusivity.

Personalized lessons in science enhanced student learning through individualized instruction, customized content, adaptive feedback, flexibility, autonomy, remediation/enrichment, data-driven instruction, and motivation/engagement.

STEAM scenarios were used to provide opportunities for students to apply scientific concepts in real-world contexts, integrating knowledge from multiple disciplines. This helped students see the relevance and application of science in everyday life, promoting a deeper understanding of scientific concepts.

Each action teacher developed their own scenarios by doing two lessons using the above mentioned. The material was posted on the school website as part of the dissemination of good practice among colleagues.

2. APRIL

A questionnaire is distributed again to the students in the positive Courses in order to evaluate their progress. Statistics of the results were published.

In particular, in the context of Physics and Chemistry, the students of the A Lyceum had the opportunity to prepare to take part in an experiment competition (EUSO) concerning the B Lyceum, as well as in other local competitions with the aim of deepening the subjects Physics and Chemistry .Some children took part in the Mathematical Society competition.

RESULTS

We had positive results for the students:

- strengthening the interest and participation of A Lyceum students in the positive courses
- increasing the number of A Lyceum students who want to get involved in groups of experiments and participation in Competitions of positive cognitive subjects
- satisfaction of the A Lyceum students from the possibility of better attendance in the class of positive subjects
- increase in the number of A Lyceum students who understand concepts in the positive subjects by (%) percentage that will be estimated from the final questionnaires
- better performance by (%) percentage that will be calculated, in the contests and finally in their participation in the final exams

We had positive results for the teachers:

- visits to colleagues' classrooms (other observation) during the implementation of teaching with new approaches
- enrichment of teaching practices with appropriate software
- variety in their teaching work
- satisfaction with the success of their students.

3. Good practices provided by the Italian partner

Our schools are today full of students who come from two years of Pandemic situation. COVID 19 has not helped us in a didactic way. Italy has used distance learning and while same students themselves have tried to follow lessons as good as possible, other students have found every solution to miss lessons. It was a really bad situation: in one hand there were students really not interested in learning and on the other hand teachers lacking the requested skills to lead lessons using ICT. The results were boring lesson and sleeping students. We were not prepared to

build the right teaching environment and now we need to work with problematic students without a strong didactic background. In this framework every teacher finds a widespread functional illiteracy that requires new and different solution to involve students and persuade them to study and to overcome their difficulties.

Teaching to a class with a high level of functional illiteracy is not very easy but there are methods that can be effective.

• Use visual aids: Students with functional illiteracy may have difficulty reading, but they can still learn through visual aids such as diagrams, images, and videos. These tools can help students understand the meaning of words and how they are used.

• Use gestures and body language: Gesture and body language can be a helpful tool for communication. Use them to clarify meanings when teaching vocabulary or writing and to communicate instructions.

• Simplify grammar: Use simple grammar structures and avoid complex grammar concepts. Start with basic tenses and gradually move up to more complex grammar rules. • Use real-life examples: Use materials that relate to the students' real-life situations. Choosing topics that are familiar to students will motivate them to learn.

• Develop listening and speaking skills: Work on developing listening and speaking skills through simple dialogues and role plays. This will not only improve their language ability but also boost their confidence and motivation.

• Personalize lessons: Personalize lessons to individual students' needs and interests. Students with functional illiteracy may struggle with some aspects of language learning, so tailor lessons to their strengths and abilities.

• Repeat, Review and Reinforce: Regularly review and reinforce learned material to build connections between language concepts and develop students' overall understanding. • Use repetition: Repeat key vocabulary and grammar structures frequently in class in different contexts - this helps to reinforce language structures and improve retention.

• Deliver feedback: Offer constructive feedback to students. Provide them with opportunities to practice and revise while providing feedback on areas for improvement.

• Make it engaging: Make learning fun and engaging. Use games and interactive activities that involve students in the learning process to keep them interested and motivated. Overall, it's important to recognize that students with functional illiteracy have different needs and abilities, but with the right approach, they can still be successful language learners. By using visual aids,

simplifying grammar, using real-life examples, personalizing lessons, and making it engaging, you can help students improve their language skills even with existing literacy challenges. In particular I want to present the case of a class 9 of a vocational school. It is a class with 25 students of medium socio-cultural origin with huge problems in understanding, reading and writing in English. Only a few students (3) have got the basic skills in English language.

Based on the above, an Action Plan was followed. The main objectives of the Action were: • Establish a good relationship with the class

• Develop interest and participation of the students in English

• Use of innovative teaching practices and methods

• Improving English language understanding, reading and writing skills

• Improve self-learning skills.

The first problem (the biggest one) was to engage the students and find the right way to establish communication with them. Trying to use an emphatic approach, I started with some lessons that are far from the classic way the teacher addresses the students. Mainly I tried to establish a debate to understand what the problem was with the English language.

After discussion and observation, it was time to use the right methods. I used the VARK method to engage students. VARK stands for: Visual, Aural, Read/write, Kinesthetic. According to this method each student uses a different method to learn. Someone prefers a visual method where pictures, diagrams, mind maps and videos are useful. The other students should activate their hearing aids by listening to the teacher explain the lesson. The eighth grade is about reading/writing students: this type of student learns only if he reads or writes something about the lesson. Less kinesthetic student. This type of student has to do something. They can only learn by doing them or involving them emotionally. VARK is a method that attracts students' attention using 4 different media and involving all the different ways of learning of each student.

To follow this method, I paid attention to my gestures, my body language, my way of speaking and I repeated each lesson 4 times: 1 for each different medium. Taking the daily routine lesson as an example, I did the following:

Using the book, I first asked students to read the day's lesson for themselves. Then I asked a student to read the lesson aloud, going through each action step-by-step and letting the students write notes (Read/Write).

I talked about the daily routine, explaining every action we do during the day and trying to contextualize by asking the students to talk about what they usually do during the day. (aural)

Using visual aids, I showed a small video and then an image for every action we take in our daily routine. (Visual).

Finally, I asked the student to work in pairs and simulate a dialogue about the daily routine. This was just one example of a lesson but throughout the year I would work with cooperative learning or pair teaching, letting students work in small groups or in pairs so they could easily learn from classmates. We also used ICT for practice and to apply what we learned. Today I can see good results. Most of the class can write simple sentences and are able to read and understand a basic level of the English language. Most importantly: students are now more motivated to learn English and to participate in English lessons, but also with other teachers you can see a different approach on their self-esteem and self-confidence.

4. Good practices provided by the Lithuanian partner

At Vilniaus Grigiskiu Sviesos gymnasium we implement early intervention programs that target children at risk of functional illiteracy. This includes providing quality early childhood education, promoting language development, and fostering a love for reading and books from an early age. This school year we have a monthly reading hour, during which each child and a teachers brings a book to the class and spends time reading.

Teachers try to create a literacy-rich environment in classrooms. This means having a variety of reading materials, such as books, newspapers, and magazines, readily available. We design spaces that encourage reading, writing, and exploration, and establish a culture that values literacy. During language classes the teachers promote vocabulary development by exposing students to rich and diverse language experiences. They ecourage discussions, provide explicit vocabulary instruction, and connect new words to students' prior knowledge. Expanding vocabulary enhances reading comprehension and communication skills. Teachers teach students effective reading comprehension strategies, such as predicting, questioning, summarizing, and making connections. Teachers guide students in actively engaging with texts, understanding main ideas, and making inferences. These strategies improve understanding and critical thinking.

At our school we provide individualized support and interventions for students with functional illiteracy. Teachers assess their specific needs, develop personalized learning plans, and offer targeted instruction. They use differentiated instructional strategies and provide ongoing feedback to address unique challenges.

A huge attention is paid to technology integration as teachers utilize educational technology tools and resources to support literacy development. They use interactive apps, digital reading platforms, and online resources to engage students and provide additional practice opportunities. The school fosters collaboration among teachers, parents, and community members to support literacy development.

Teachers try to involve parents in their child's education, offer workshops and resources, and encourage home literacy activities. The school collaborates with community organizations such as a local library, a neighbouring school to provide literacy programs and resources. The school recognizes and values students' cultural backgrounds and experiences. What is more, a huge attention is paid to Professional Development. It is a continuous professional development to stay updated on research-based instructional practices.

5. Good practices provided by the North Macedonian partner

In our country, there have been many changes in the education system over the last 10 years. The study of English as a foreign language was introduced from the first grade of primary school, which was one of the positive changes.

One year before the COVID-19 pandemic and the forced shift to online teaching and learning, another change was made. The English language curriculum was revised for all levels of primary and secondary education, but the textbooks were not updated. The old textbooks were no longer compatible, and new ones were not approved.

English teachers had to manage on their own and search for appropriate materials to implement the teaching program. Fortunately, there are many resources available. English teachers have been receiving help from the British Council for years, which organizes training for teachers and provides resources and materials for English language teaching on its website.

With the organization of online teaching, English teachers were able to access and use resources and materials they found online through the Teams platform. Some teachers who had no previous knowledge were forced to learn and adapt. Many of them discovered the positive aspects of digital tools, websites, and educational games they found online.

With the end of the pandemic and the normalization of teaching, English language teachers were once again left without textbooks, but they continued to use digital materials. The most commonly used tools in English language teaching are: Web 2.0 educational applications, projectors, TVs, audio and video materials, movies, educational websites, games, and more.

English teachers in our school realized that the use of technology in learning English has many advantages:

Students are more motivated and their interest in learning is increased.

Classes become more interesting with the use of audio-visual materials, which help to improve language skills.

Students are not just passive listeners but active participants.

Students are encouraged to be more creative and take greater part in class, leading to increased interaction between students and teachers without stress, as well as boosting students' self-confidence.

When students research on the internet on various websites, they acquire new information and gain new knowledge.

Technology creates opportunities to change traditional teaching and approach English language teaching creatively. Creative teaching of English is of great importance as students become active participants and easily master the language. The introduction of modern educational technology leads to modern and creative teaching, exciting new opportunities and challenges for learning. The internet supplements the sources and materials available to teachers and students, providing a variety of information and opportunities for exploration, as well as powerful and diverse ways that can be incorporated into the learning process. The use of ICT in language teaching is quite an innovative and attractive method of work for both students and teachers.

In conclusion, ICT in English language teaching, organized in this way, enables easier mastery and practice of the material and helps overcome functional illiteracy among students, as well as easier social and professional integration into life.

In our school, English teachers use ICT in teaching almost every day and almost exclusively use digital materials and tools.

We sincerely hope that in our school and in our country, all teachers in the future will be provided with conditions to modernize their teaching on daily basis and use ICT every day without any technical problems.

6. Good practices provided by the Romanian partner

Cristian Secondary School faces a high rate of functional illiteracy in mathematics among its students. Mathematics is considered a difficult subject, not very friendly to students who do not show the willingness to dedicate a lot of time to study.

I want to bring to your attention the case of a 7th grader to whom I teach "Math" and who, on initial testing, failed to achieve a passing average, having difficulty understanding basic math concepts such as fractions and word problems.

Although I reviewed with them for about 2 weeks, on the given test, which was average to poor, only 3 students managed to score above 7. Then I wondered what could be the cause? In class, the students gave me the impression that they understood. After a few weeks of observation, I discovered out the reason: in the classroom I help my students by reading their statements and giving them pointers, the students always understood what they had to do. Instead at home, reading by themselves, superficially, they failed to understand the requirements, they could not even make connections with what I was explaining in class.

In an attempt to address this problem, I began to change teaching-learning methods. I chose to use as many methods and means as possible in teaching a concept, to involve students more in reading a text and explaining it. Moreover, I made an intervention plan and, for those interested, I designed a remedial program.

Every week, outside of class, I went over the basics with these students, preparing worksheets with both the theoretical part and problems, interactive games and movies, in which they could observe the practical applicability of some of the concepts taught.

The remedial program that I developed and implemented aimed at developing mathematical skills for students with difficulties, including a series of learning activities such as:

1. *Training sessions and remediation of gaps in mathematical knowledge*.

We have provided support to all those students who have the right to clarify specific notions and terms.

2. *Using interactive and experiential methods in teaching mathematics.*

Students were involved in participative activities, such as role plays or simulations, which made mathematical concepts more accessible, helping students to understand them in a concrete and applicable way in everyday life.

3. *The use of didactic materials adapted to the level of development of the students*.

I used teaching materials that were easy to understand and provided clear instructions and illustrations.

4. *Using educational technology to enhance mathematics learning.*

We used online platforms and apps adapted to the students' developmental level to provide additional opportunities for practice and development of mathematical skills. I found that working with a smaller group of students, using RED resources: Livresq, ASQ, Kahoot, Wordwall, Liveworksheets, with which students repeatedly applied a certain set of concepts, led to a slight improvement in results.

5. *Offer personalized learning opportunities*.

For students with special educational needs, I created individualized learning plans, thus providing them with additional support and capitalizing on each student's specific abilities.

6. The program also included *counselling sessions* and emotional support for students who had learning difficulties to encourage them not to give up and to continue to develop their skills.

For each content unit, I applied a variety of exercises, as listed below:

Contents	**Learning activities**
Natural, integer, positive rational numbers	- Exercises to represent whole numbers on the number line - Exercises to use appropriate terminology for integers (sign, opposite, modulo/absolute value) - Exercises to compare/order whole numbers - Addition/subtraction exercises of positive rational numbers - Exercises to use the properties of addition and multiplication of positive rational numbers in calculations - Exercises for multiplying positive rational numbers - Exercises for dividing a positive rational number by a positive rational number - Exercises for adding whole numbers (including removing parentheses) - Exercises to highlight the properties of the addition of whole numbers in different contexts - Exercises for subtracting whole numbers; exercises for writing the opposite of a sum of whole numbers - Exercises to multiply whole numbers using the rule of signs - Exercises highlighting the advantages of using the properties of multiplying

	whole numbers in calculations - Exercises for dividing whole numbers with the multiple division of the divisor, using the rule of signs - Exercises for raising an integer to a power with a natural number exponent; - Exercises to apply the rules of calculation with powers of an integer with a natural number exponent - Exercises to solve some equations and inequalities in the set of whole numbers - Calculation exercises with whole numbers, observing the order of operations and the use of all types of parentheses
Divisibility	- Exercises for writing the set of divisors of a natural number using decomposition into products of powers of prime numbers - Using division as a way of checking the divisibility relation for pairs of natural numbers - Identifying and writing the set of divisors and the set of multiples of a natural number by using exact division and multiplication - Identifying prime numbers by writing the set of their divisors - Exercises to sort natural numbers into prime numbers and composite numbers using different methods; the special case of the numbers 0 and 1 -Exercises on writing a natural number as a product of powers of prime numbers using the divisibility criteria and division - Exercises to recognize prime numbers with each other through different procedures - Exercises for applying the divisibility criteria for determining the unknown digits of a natural number divisible by 2, 5, 10, 3 or 9
Ratios and proportions	- Examples of equal ratios and the composition of proportions using the amplification or simplification of fractions - Exercises to identify and solve some practical problems that lead to the use of reports and proportions - Exercises to identify and solve some practical problems that lead to the use of the weighted arithmetic mean - Application of the fundamental property of proportions

	- Exercises to determine an unknown term from a given proportion - Using the fundamental property of proportions and commutativity of multiplication for obtaining derived proportions with the same terms - Checking the fundamental property of proportions in the case of proportions derived with other terms - Calculation of the value of the ratio between two quantities of the same kind, measured with the same unit of measure
Percentages	- Identifying practical situations in which percentages are used - Exercises for determining p% of a rational number greater than or equal to 0; estimating some results - Exercises to transform a certain ratio into a percentage ratio through different procedures
The triangle, cases of congruence	- Exercises to establish the congruence of some triangles (some, rectangles) based on congruence criteria, for solving problems - Identifying the relevant elements of a geometric figure in relation to an isosceles or equilateral triangle - Solving problems using the method of congruent right triangles and writing the solution to the given problem - The use of geometric tools for the construction of triangles
Important lines in the triangle	- Exercises to represent by drawing some elements of an isosceles/equilateral triangle regarding angles, important lines and symmetries - Exercises to represent by drawing some elements of a right triangle related to angles and important lines - Intuition exercises and demonstration of the symmetry properties of an isosceles triangle in solving problems
Properties of the isosceles, equilateral triangle	- Exercises to locate the center of an equilateral triangle using the important lines in the triangle - Exercises to represent by drawing some elements of an equilateral triangle regarding angles, important lines and symmetries - Intuition exercises and demonstration of the symmetry properties of an isosceles triangle in solving problems

Properties of the right triangle	- Sensing by measuring the link between the lengths of the sides of a right triangle with an angle measuring 300; application of the 300 angle theorem - Identifying some properties of the isosceles right triangle - Exercises to verify the validity of certain statements on particular cases - Argumentation of the approach to solving a problem in which triangles appear in given geometric configurations

The results of the program were positive as more students improved their math skills and scored better on current and summative tests. In addition, these students were more motivated to learn mathematics and actively participate in mathematics lessons, which had a positive impact on their self-esteem and confidence in their own abilities.

7. Good practices provided by the Turkish partner

My name is Neslihan Karakas Sen, and I am a history teacher. I work at a school that provides education at the high school level. 9th grade is the first step of high school education, so the information learned at this level forms the foundation of high school education. I teach history to 9th grade class 9/A. History class is a lesson where oral narration techinique is frequently and mostly used due to its nature. Therefore, history lessons are mostly taught through auditory learning, appealing to the students' auditory senses.

I used the oral narration technique to teach the first topics, "The way of life of the first humans and the impact of writing on human history," to the students. Afterwards, I administered a written exam to my students to measure their level of learning on the topic. However, the results showed that the students did not fully understand the topic and were not able to reflect their existing knowledge accurately. Oral narration technique alone was not sufficient to create a sufficient level of learning. Based on the exam data, I decided to use different teaching techniques and prepared a plan for higher level learning by affecting the students' different sensory organs.

As part of this plan, I first organized a guided tour to the Troy Museum in my city. In this way, the narration of the guide and the visual elements in the museum helped the students gain deeper and more understandable knowledge about the topic. In addition, concrete visuals enabled the students to acquire more objective information about the "way of life of the first humans" topic. We completed the tour effectively. Then, when we returned to school, we did a question-

answer activity and had a discussion about the museum, so I had the chance to observe the impression created by the museum visit on each student.

The second step of my plan was to ask my students to prepare a presentation on "the way of life of the first humans" topic related to the museum visit using Canva as an interactive learning environment. I aimed to contribute to the development of their skills in using and transferring information by having them present the product of the group work to other 9th grade classes. This activity was also successfully completed.

The third stage of my plan was to make replicas of the historical artifacts we saw at the museum and taught during the lesson together as a class. For this, I brought clay, papyrus, and parchment to the class. I asked the students to work in groups and create a project on "the first writings used by humanity" using different materials for each group. Thus, I tried to create a collaborative learning environment and a more effective learning environment. My students gained concrete experiences on how Sumerian cuneiform was written on clay, hieroglyphics on papyrus, and the first examples of the Latin alphabet on parchment. I also displayed these works at school during an exhibition, allowing other students to gain information about the topic. In addition, during this exhibition, my students explained their works and the historical significance of the artifacts to visitors, further improving their oral communication and presentation skills.

As a result, my plan, consisting of museum visit, interactive learning environment, and hands-on activity, proved to be effective in increasing my students' understanding of the topic and promoting higher level learning. I will continue to use different teaching techniques to create an engaging and effective learning environment for my students in the future.

E. Workshop template for parents – Family literacy

1. Croatian workshop template

High school requires much better organization and more independence. The parent should always be with the child, but it is important to explain to the child how important his independence is and what is expected of him. Focus on work and study should come first.

Learning is a mental activity. Just as physical activity changes your body, learning changes your brain — and in a positive way. By learning, your mental muscle becomes stronger because new synapses, places and processes are created that enable communication between nerves. These learning techniques can help you create new synapses faster and thus speed up the learning process.

Good conditions for learning - Studying should always take place in the same place and at the same time-, it is best for the brain to get used to learning in one place and at a certain time. Creating a stimulating and well-organized environment for learning without mess is also very important. According to psychologists, the studying should take place between from 9 to 11 a.m. and from 4 to 6 p.m. Materials for learning should suit the learner. If it is difficult form someone to learn from books, it is important to use other materials like videos, quizzes, etc…Taking a break from learning and engaging in relaxing activities is also important.

These learning techniques can be helpful:

The top-down technique means that we first look at the bigger picture, and only then focus on learning individual elements. This learning technique relies on your previous knowledge and experience.

The bottom-up learning and memorizing technique is completely the opposite. It implies the learning of individual elements of the material, which we then connect to each other in a larger picture. Most students and students learn exclusively in this way.

It has numerous advantages. It helps you connect new material with what you already know. That way you will learn with understanding, but also better understand the function of individual elements.

It is best to switch between these two techniques when learning — or to try both and then decide which one suits you better.

Connecting the material and real life

Learning actively, not passively - when you learn passively, you just absorb information without understanding it. After learning, you know how to state facts, but you do not know how to apply them. Active learning, on the other hand, implies that you are engaged during learning — you discover, ask questions and fit information into a meaningful whole in order to understand the essence of the lesson. This way of learning is far more effective than passive learning. The learned material acquires meaning and remains in the brain for a long time.

Explain the material to someone else – if something is really learnt, we will be able to explain in simple terms to others. This way we repeat the material, but also accurately determine weak points and parts of the material that it would not be bad to go over again.

Separate the important from the unimportant information - in a lesson, what is important is what is bold, italic and everything that contains key words — these are the words that are most often found in the very title of the lesson you are learning.

Taking care of memory and lifestyle - practicing concentration, memory is very important for improving learning process

As a parent you can:

Offer help to your child in the area the child is not doing well. Even if you are not expert in this area as well, it will mean a lot to your child if you do the research together and that you let him know you are there for him.

Help with the organization- make a good organizational plan together with all obligations, hobbies and activities of your child. Make a schedule on how to make those activities work. Teach him how to manage his/ her time. Let your child know how important it is to complete his tasks and obligations in order to enjoy his free time later peacefully.

The importance of taking notes during classes - It is important that you offer your child help and talk about it. Make a plan with your child that will make taking notes much easier.

Let him start writing on a new page every day and mark the new material with a date. This will make it much easier to find your way around later.

The most important terms should be marked immediately, in capital letters or in a different color, so that it is easier to recognize the most important ones later.

Let the child pay special attention to the sentences that the teachers emphasize as important. If the child fails to write something down, he should seek the help of his colleagues

immediately after the lesson. The very next day, he probably won't remember what's missing from his notebook.

Using different learning techniques and finding the one that suits your child the best- reading aloud, creating cards for learning, watching videos, solving quizzes, etc…

In order to be able to learn the material well, the child must first master the learning technique

If nothing is working, regardless of what your child is learning, it is probably time for professional help. Instructors will be able to explain things that are not clear to the child much more easily.

2. Greek workshop template:

As parents, supporting our children's learning is a top priority, especially when it comes to challenging subjects like math. Creating a positive and supportive learning environment at home is crucial for helping your child improve their science skills. Encouraging their curiosity, providing resources for exploration, and engaging in hands-on activities can foster a love for maths and support their overall learning and development.

Children have different levels of aptitude and readiness for math, and their math skills can vary based on factors such as age, cognitive development, prior exposure to math concepts, and individual learning styles. Some children may excel in math and demonstrate advanced skills at an early age, while others may struggle and require additional support. It's important to recognize and respect these individual differences and provide appropriate guidance and resources to help each child develop their math skills to their fullest potentia

There are many engaging activities that families can do together to help their children improve their math skills. From playing math games and creating math-themed scavenger hunts to using real-life examples and online resources, there are numerous ways to make math enjoyable and relevant for children.

ACTIVITIES FOR CHILDERN RELATED TO MATHS

1. One very common method is to **incorporate math into daily activities** and look for opportunities , such as counting objects, measuring ingredients during cooking, or calculating change during shopping. This helps children see the practical application of math in real-life situations. After counting the objects, you can encourage a child to sort and classify them based on

different attributes such as color, size, or shape. This helps develop important math skills such as sorting, classifying, and making comparisons:

- calculating distances during road trips;
- measuring ingredients in recipes;
- shopping quantities (e.g 1kg cheese.....);
- telling time using a clock.

Simple Addition and Subtraction by asking questions such as "If we add two more objects to our collection, how many will we have in total?" or "If we take away three objects from our collection, how many will be left?"

Outdoor Counting: Take the counting activity outdoors and count natural objects such as rocks, leaves, or flowers. This allows a child to connect math with the real world and develop their observational skills.

2. **Play board games**. Board games often involve simple arithmetic operations such as addition and subtraction. Players may need to add or subtract numbers on cards or dice to determine moves or scores, which reinforces their understanding of basic math operations. Moreover,board games typically require strategic thinking and problem-solving skills, which are closely linked to mathematical reasoning.

3. **Encourage children to develop math-related hobbies** such as building with blocks, creating patterns with beads, or solving puzzles, which can enhance their spatial awareness

4. **Create a scavenger hunt**: Hide math problems or equations around the house or in the yard, and have your child solve them to find the next clue. This can be a fun way to practice math skills while incorporating physical activity.

5 **Use Online Math Games and Apps**: There are many math games and apps available online that can provide engaging and interactive math practice for children. These can cover various math concepts, from basic counting and number recognition to more advanced topics like geometry, fractions, or algebra.

A family must always adapt the activities to a child's age, interests, and level of math proficiency.

3. Italian workshop template:

The development of language skills is a crucial aspect of a child's growth and plays a significant role in their overall cognitive and social development. Children learn to communicate and express themselves through language, which helps them form relationships with others, engage in social interactions, and acquire knowledge about the world.

The family, as the primary unit of socialization, plays a critical role in promoting children's language development. Parents are the first and most important teachers in a child's life, and they have a profound impact on their language skills. Family interactions, such as reading, talking, and playing with children, provide them with opportunities to practice and develop their language skills.

Research has shown that the amount of language a child is exposed to during early childhood has a significant impact on their language development. The quality and quantity of language input provided by parents and caregivers are critical factors that influence a child's vocabulary, grammar, and communication skills.

Children who grow up in language-rich environments are more likely to have stronger language skills and be better prepared for academic success. It is essential for parents to take an active role in promoting their child's language development by providing them with language-rich experiences, such as reading books together, talking about their day, and encouraging imaginative play.

What Can Parents Do to Support Language Development of Children?

There are several activities that parents can do with their children to improve their language skills:

• **Talk to your child often**: Engage in conversation with your child, even if they are too young to respond. This will help them become familiar with sounds and language.

• **Read to your child**: Reading aloud to your child is one of the best ways to help them develop language skills. It exposes them to new words, concepts, and ideas.

• **Use repetition**: Repeat words and phrases often when talking to your child. This will help them learn and remember new vocabulary.

• **Encourage conversation**: Ask your child open-ended questions and encourage them to express themselves. This will help them develop communication skills and confidence in their abilities.

• **Use real-life experiences**: Take your child to new places and expose them to different experiences. This will help them expand their vocabulary and learn about the world around them.

• **Play language games**: Play games with your child that involve language, such as rhyming or word association games. This will make learning fun and engaging.

• **Provide opportunities for socialization**: Allow your child to interact with other children and adults. This will help them learn to communicate and express themselves in different social situations.

Activities and games parents/teacher can do with children to develop language skills:

• **Storytelling Game**: In this game, one child will start telling a story and then pass it to the next child who will continue the story. This game will help children develop their storytelling skills and improve their listening and speaking abilities.

• **Word Building Game**: In this game, children will take turns saying a word and then adding another word that starts with the last letter of the previous word. This game will help children improve their vocabulary, spelling, and pronunciation.

• **Sight Word Memory Game**: This game involves matching sight words on cards, which helps children develop their reading skills and improve their memory.

• **Mad Libs**: Mad Libs are fill-in-the-blank stories, and children can fill in the blanks with their own words, helping them practice vocabulary, grammar, and sentence structure. • Charades or Pictionary: These games involve acting out, drawing or guessing words, and help children develop their vocabulary and communication skills.

• **I Spy**: In this game, one child chooses an object and describes it, and the others have to guess what it is. This game helps children improve their descriptive skills and vocabulary. • Word Hunt Game: Parents or guardians write words on cards and hide them around the house. The goal is to find the words and read them aloud. This game helps children practice reading, spelling, and identifying words.

• **Alphabet Game**: Players take turns naming words that start with each letter of the alphabet, with each word beginning with the next letter of the alphabet. This game helps children develop their phonics, vocabulary, and quick-thinking skills.

In conclusion, language development is a complex process that requires support and interaction from parents, caregivers and school. By providing children with a rich language environment, families can promote their child's language development and prepare them for success in school and beyond.

4. Lithuanian workshop template:

Families play a crucial role in supporting the literacy development of their members, including overcoming functional illiteracy. Here are some strategies and practices that families can implement to overcome functional illiteracy:

1. **Cultivate a Reading Culture** - Create a positive and supportive reading environment at home. Set aside dedicated time for reading activities, such as family reading sessions or reading aloud to younger children. Make books and reading materials easily accessible and encourage family members to read for pleasure.

2. **Lead by Example** - Parents and caregivers should serve as role models by demonstrating their own love for reading and engaging in literacy activities. When children observe adults valuing reading and literacy, they are more likely to develop a positive attitude towards reading and learning.

3. **Read Aloud** - Read aloud to children of all ages, including older children and teenagers. This practice helps improve comprehension, vocabulary, and listening skills. Discuss the content, ask questions, and encourage discussions to deepen understanding and critical thinking.

4**. Engage in Literacy Activitie** - Involve the entire family in literacy-based activities. This can include playing word games, solving puzzles, writing stories or letters together, or creating a family newsletter. These activities not only enhance literacy skills but also strengthen family bonds.

5. **Use Technology and Online Resources** - Take advantage of technology and online resources that support literacy development. Explore educational apps, digital reading platforms, and interactive websites that offer engaging and age-appropriate literacy activities. Monitor and guide children's technology use to ensure productive and educational experiences.

6. **Collaborate with Schools and Community** - Establish partnerships with schools, libraries, and community organizations to access literacy resources and programs. Attend literacy workshops or events, participate in parent-teacher meetings, and seek guidance from professionals to support family members with functional illiteracy.

7. **Set Realistic Goals** - Set achievable and measurable goals for literacy improvement within the family. Create a plan and track progress over time. Celebrate milestones and achievements to maintain motivation and a sense of accomplishment.

8. **Seek Additional Support** - If family members face significant challenges in overcoming functional illiteracy, consider seeking additional support from literacy tutors, adult education programs, or community organizations specializing in adult literacy. These resources can provide targeted instruction and guidance tailored to individual needs.

9. **Foster a Positive Attitude -** Encourage family members with functional illiteracy to develop a growth mindset. Emphasize that everyone can improve their literacy skills with practice and perseverance. Provide positive reinforcement, praise efforts, and create a non-judgmental and supportive environment for learning.

10. **Promote Lifelong Learning** - Encourage family members to view literacy as a lifelong pursuit. Emphasize the importance of continuous learning, whether through reading books, taking courses, or exploring new interests. Instilling a love for learning promotes ongoing personal growth and development.

By implementing these strategies, families can create a nurturing environment that supports the literacy development of all family members, helping to overcome functional illiteracy and fostering a lifelong love for reading and learning.

5. North Macedonain workshop template:

Language development is a vital part of communication in the early years.

During the early years, children must develop both receptive and expressive language. Parents within their families can help their children develop language through activities and interaction. The way to interact with the children is to spend time with them and to seize the opportunities and learn during the play.

Here are some simple and fun language activities:

1. Storytelling - Books and telling stories are one of the best ways to encourage language. Read age-appropriate story or just tell story through the pictures. Start early books experiences with board books and use sensory books to encourage your children to touch and feel items in the pictures.

2. Picture books - Picture books and non-fiction books provide great opportunities for developing language. Many picture relate to specific themes. Looking at a page about the farm, for example, teaches a variety of vocabulary related to farms. Some picture books with hidden items in the pictures or spot-the-difference pictures. These picture books encourage observation skills as well as language stimulation.

3. Puppet Shows - Playing with puppets and making up puppet shows is wonderful for language development. Children feel free to talk through their puppet friends. They can also tell a favourite fairy tale using puppets.

4. Touchy-feely Bags - This is a very good way to encourage children to describe objects. You need a cloth bag to put small objects into so they are not visible. The items are put into the bag and your child puts their hand into the bag to feel one of the items. Then the item is described to you. You have to guess what it is.

5. Fantasy Play at Home - Creating fantasy scenarios at home really encourages language and helps children have different social experiences in the comfort of their homes. Here are some ideas for fantasy play:

- Set up a corner and play "shop".
- Have a tea party and invite a friend to dress up.
- Play having a wedding or party or just play "house".
- Nursery Rhymes and Finger-plays

Saying rhymes and learning finger-plays helps develop language through repetition and memorizing the words of the rhyme. Repetition is very important in learning a language. If you are not familiar with the age-old favourites you can listen to songs on YouTube. Playing word games and singing silly songs will increase your child's vocabulary in an entertaining way.

6. Card Games - There are numerous card games available, which encourage vocabulary development. Matching pairs is one way of playing with cards. Playing card games develops social interaction and vocabulary associated with the game.

There some other tips for encouraging language development:

- Pay attention to your children when they are talking to you
- Praise good speech and vocabulary
- Help with new words by repeating them
- Add onto phrases or words and boost vocabulary
- Never make fun of mistakes
- Talk about what you are doing as you do your daily chores
- Be a good role model

The rate children learn new words is amazing. They learn quickly and soak up every word they hear. What a great joy to be part of their language learning experience.

6. Romanian workshop template:

The family is the ideal place where a child can and should acquire a vocabulary according to his /her age. It is important that parents and other family members use every moment of life to develop in the child a rich baggage of knowledge and, in particular, a rich content of words. It is known, language is an element that helps to increase cognitive intelligence and emotional intelligence. The language learning activity takes place permanently and is linked to every life circumstance in which the child is also involved:

- at the table
- during game time
- during the household activities
- in nature, etc.

It is very important that the adults in the family and the older siblings correctly name the terms specific to the situation they are in and explain these terms. It is very important that adults and other family members do not encourage the child's misexpression. Most of the time this becomes a topic of fun for family members and the child continues this misexpression, which can become frustrating in early school age.

In addition to this responsible and conscious approach to the education of a child in the family, many other activities of learning through play can be organized. Of great use are word games, which are a challenge for children, as they are made to think, find solutions, describe, use words in appropriate contexts. Through these, children enrich their vocabulary, use elaborate expressions, understand the meaning of unknown words. It is a way of learning through play.

Examples of activities:

1. **In my schoolbag there is...** - it can also be played by preschoolers.

The first player says: There's a wet sandwich in my schoolbag.

The second player repets the words of the first player and adds an other object which can be found in his schoolbag: There's a wet sandwich and a rusty trumpet in my schoolbag.

Each player adds one thing to the list of items in the bag and repeats the entire list.

The game develops the ability to reason, develops language and memory.

2. **The succession of stories** - can be played by students, as the game requires writing skills.

Certain types of words are established, for example: an adjective, the name of a personality, a famous place, two words that describe a woman, a line you can give to a man, an answer for an angry person, etc.

Each player writes all of these in the order set:

- during the first in the first round each player writes at the top of the page an adjective (beautiful) then folds the sheet to hide the word and gives it to the player on his right.

- the second player adds the name of a famous person (Einstein), folds the sheet and gives it to the player on hir right.

When each player has received his sheet on which he wrote the first word, he opens it and will get a number of words with which he makes a short story:

Einstein arrived happly in Panama where he met a petite woman. The woman asked:

- Are you the famous Einstein?

Einstein replied:

- Don't worry, I won't invent anything about you!

The game develops the ability to reason, develops language, the ability to put into context and to make correct grammatical associations.

3. **Looking for.....** – it can be successfully played in the car, in nature, at home.

One player chooses a letter of the alphabet then all players must observe something (an object, a natural phenomenon, etc.) starting with the chosen letter. The first player to see an object whose name begins with the indicated letter announces aloud: I saw a.....

The game must contain all the letters of the alphabet. The first player to spot something that starts with the chosen letter gets a point and chooses the letter for the next round. The player who has accumulated the most points at the end of the game wins.

The game develops both the ability to notice and identify words that fall into a certain category, as well as concentration and language.

4. **Endless story** - it can be played at any age, being able to be adapted to the age of the child. It is a game of creativity and language development.

A player begins a story by saying a made-up phrase: *Once upon a time there was a very sad king who did nothing but stare out the window for hours. One day.....*

Then the first player stops and the other players take turns adding a phrase. The next player always stops mid-sentence to allow the other player to continue the idea.

The game develops creativity, the ability to issue reasoning, to generalize, to solve problems.

5. **Do not say „Yes”** - it is a game that requires attention and the ability to substitute a closed answer.

For example, one player asks the other a question (Do you like to eat pizza?) to which the answer is obviously Yes.

The player asked must answer, but not use the word "yes". It can use an affirmative word ("of course," "almost true") or an explanation ("Well, pizza is among my favorite foods").

If one of the players makes a mistake and says the word "yes", he receives a funny punishment: drink a glass of water, go out barefoot in the snow/rain, shout out loud (at the door/window) various things (I love you; I'm not afraid; I need a friend, etc.).

The game develops the ability to concentrate, the attention, the vocabulary.

6. **The job game** – is a game that has a triple purpose: identifying jobs, developing language, accumulating knowledge specific to certain jobs.

One player thinks of a job that the others have to guess. He says: I am a...

Game participants ask questions to the one who chose the job. These helpful questions have the role of narrowing down the identification area of the respective job:

- *Do you work outside?*

- *Do you have a team?*

- *Do you use a tool?*

- *Do you work with people?*

The player who has chosen his job answers with "yes" or "no".

Players are allowed 10 attempts and can name the job they suspect at any time. The 10 attempts are both the questions and the name of the job. If after the 10 attempts the job that the first player thought of has not been identified, he names it and gives additional explanations, if necessary.

7. **Can you see...?** - involves a limited time to find the required answer, for example one minute is set for each question. It is recommended to be played in crowded places (airports, train/bus stations) or in traffic, when we are stuck in a traffic jam.

The first player starts with a question such as: Can you see .... a man in a black hat?

All other players try to identify the named thing/person. The first person to identify that object/person gets a point. The player who collects more points wins.

The game develops the ability to observe and the language, while also contributing to reduce the tension generated by the static situation in which we find ourselves.

7. Turkish workshop template:

From the moment the child is born, he/she finds himself in the family, which is a social institution. From this moment on, his/her education begins with the sounds he/she hears, the objects he/she touches, and the things he/she sees. It can even be said that education begins before birth, considering that babies listen to outside sounds from the fifth month in the mother's womb. In this respect, family and pre-school education is very important in terms of developing various skills of children, especially language skills. Because at the age of 0-6, body, language and mental development progress very rapidly. Developments in this period determine the life and future of the child.

Language skills of children may differ according to the conditions of their upbringing, social environment and the child's own developmental speed. Although each child's developmental speed and shape is unique, it can be developed by external support. At this point, responsibilities fall on the family, social environment and pre-school educators, if any. As well as supporting the child's language acquisition, importance should be given to ensuring the correct language acquisition.

What Can Parents Do to Support Language Development of Children?

Speak with Eye Contact

One of the most important factors in establishing healthy communication is maintaining eye contact with the person you are communicating with. It is important to establish eye contact so that the child understands you, listens to you and sees himself or herself in communication. If possible, it is recommended to lean on your child's level and make eye contact during communication. Thus, the child becomes able to communicate directly with you.

Do not use digital resources such as televisions and tablets for the first 2 years.

It is quite common for children to use screens to speed up the learning process, to have a pleasant time and to keep them entertained. However, the mental development of children should be given importance as much as their language development. The use of digital screens for the first two or even 3 years is not suitable for children. If digital content is to be given to the child by the age of 2, the time must be limited and given under parental follow-up.

Uncontrolled and long use of tablets, phones and televisions causes problems in children. Problems of focusing and maintaining attention, learning difficulties can be seen, restlessness, aggression and hyperactivity may occur in children. In addition, children are exposed to one-sided communication in front of the screen. Therefore, language development and communication in children weaken as a result of uncontrolled screen use.

Arouse Curiosity, Encourage Conversation to Support Language Development in Children.

Children begin to ask about everything they see around them, especially at the age of 1 year. They try to learn by first showing, taking it in their hands, and then asking "what is this?" Thus, their vocabulary develops.

The child should be asked questions where the correct word is used, both to correct his pronunciation and to improve his/her vocabulary. "Are you thirsty? Do you want me to bring you water?" like. “It's a book. A red book. Do you want me to read this book to you?" like. Therefore, in order to support language development in children, parents should be in a role that arouses curiosity and encourages conversation.

Read to him/her, Tell Tales, Sing Together

You can read picture books suitable for the child's age so that your child can see their pictures. At younger ages, rich picture books with small and large writings are preferred. Telling tales that the child will add to and singing together also supports language development.

Activities and games that parents can do with their children for language development:

1. Listening to podcasts: There are many podcasts available for children that can help develop their listening and comprehension skills.

2. Playing with puppets: Puppets can be used to create stories and encourage children to practice their language skills.

3. Word Scavenger Hunt: In this game, children are given a list of words and must find items around the house or outside that match each word. This game helps children learn new vocabulary and improve their observation skills.

4. Simon Says: In this classic game, the leader gives commands starting with "Simon says," such as "Simon says touch your nose." This game helps children learn to follow directions and improve their listening skills.

5. Alphabet Hunt: In this game, children must find items in the room that start with each letter of the alphabet, starting with A and ending with Z. This game helps children learn the alphabet and improve their vocabulary.

6. Pictionary: In this game, one person draws a picture and the other players must guess what it represents. This game helps children improve their vocabulary and visual-spatial skills.

7. 20 Questions: In this game, one person thinks of an object and the other players must ask yes or no questions to try to guess what it is. This game helps children improve their questioning skills and vocabulary.

8. Story Sequence: In this game, children take turns saying a sentence to create a story. The catch is that each sentence must start with the next letter of the alphabet, starting with A and ending with Z. This game helps children practice their storytelling and letter recognition skills.

9. Vocabulary Bingo: In this game, children create their own bingo cards with words they want to learn. The caller calls out words, and the children mark off the words on their bingo card. This game helps children learn new vocabulary and improve their word recognition skills.

10. Tongue Twisters: In this game, children practice saying tongue twisters, which are phrases or sentences that are difficult to say. This game helps children improve their articulation and phonemic awareness skills.

11. Telephone: In this game, one person whispers a message to another person, and the message is passed down the line until the last person says it out loud. The message is usually very different from the original, which makes this game fun and entertaining. This game helps children practice their listening and speaking skills.

12. Word Chain Story: In this game, one person starts a story with one sentence. The next person must continue the story with a sentence that starts with the last word of the previous sentence. This game helps children practice their storytelling, vocabulary, and word association skills.

13. Charades: In this game, one person acts out a word or phrase without speaking, and the other players must guess what it is. This game helps children improve their vocabulary, creativity, and nonverbal communication skills.

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