

The
**SECRET FORMULA OF
EDUCATION IN SERBIA**



WE ARE ON A GOOD WAY

If we do all of what we have planned, we will create an environment in which students will get obtain knowledge in the future that will open the door to good jobs. This will be the result of a changed paradigm of learning and working methods

Minister of Education, Science and Technological Development, Mladen Šarčević expects that this year's PISA results of students in Serbia will be better than at the last testing in 2012, and that we will jump a few places on the rankings, primarily because we have introduced financial literacy into primary schools.

"We expect serious and much greater progress in 2021, because, within the framework of the reformed curriculum, which began to be applied on September 1st, with grades 1 and 5, we have started change the paradigm of learning and working methods," our interlocutor says.

In addition to reading, mathematical and scientific literacy, financial literacy has also been tested last year. To what extent can our children gain such knowledge with the help of the current curricula?

— Bearing in mind that financial literacy did not exist in our education system, two years ago I enhanced all the processes with the view of introducing financial literacy at all levels of education. We have also introduced this subject to high schools, and we are not only talking high schools that focus mainly on teaching economics. We did this through cross-curricular connections, that is, we have introduced financial models in Mathematics and other subjects.

A lot of companies contacted us, like Visa, to help us with elevating all of this to a higher level.

Often we can hear that children must acquire strong entrepreneurial skills, which have not been nurtured in our

country for decades. How much is this knowledge represented in education?

— Entrepreneurial skills are the most represented in dual education, or in vocational high schools. We felt that it was necessary to impart this knowledge into younger children too, and, to that end, we re-designated the curriculum for 5th grade of primary school, during the so-called pre-reform phase, two years ago.

At that time, we established a link between sporting competencies and health, through the Technical Education subject, and formed a new subject called Technology with Entrepreneurship. We have also done the same will all other interdisciplinary competencies. In this way, children learn about entrepreneurship through everything they do.

Now, we are focusing on student cooperatives and companies. They exist in some schools, and we insist on forming them in schools where they don't exist. In vocational high schools, which have not yet implemented the dual model, we work on specific models of practice. At the same time, we are finishing the draft Law on Dual Studies.

This systemic approach encompasses all levels of education in terms of acquiring entrepreneurial competencies and skills.

How present are companies today in shaping teaching and extracurricular content in our country and will you welcome even more of them?

— Our doors are wide open to all companies. We have a very successful cooperation and regular meetings with the Chamber of Commerce and Industry of Serbia, entrepreneurial and various other associations, chambers of commerce of Germany, Austria, Switzerland,



INTERVIEW



MLADEN ŠARČEVIĆ

Minister of Education,
Science and Technological
Development

The gist here is achieving good, balanced relations both in the field of general and vocational education

Italy, United States, etc.

In the part that relates to student practice, we are monitoring how well that practice is executed. For example, recently we have found out that the student practice in freight forwarding was excellently executed, while mechatronics is not because the theory-to-practice ratio is not set at the right level.

The public often wonders whether the education system needs to be fully harmonized with the needs of businesses and produce future workers as if on a production line, or maybe it has to maintain its strong academic capacity. What is your view of this?

— The Ministry of Education, Science and Technological Development is not turning the future workers into 'semi-robots', so to speak, but into sufficiently educated and aware people who take destiny into their own hands.

There has never been the strong academic capacity, as you call it, because so far, all that was done was simply relaying the content which was very soon forgotten, students caring only about grades and as a result, achieving success that is somehow rigged because it is not corroborated by knowledge.

That is why we are now changing the paradigm of the learning and work-

ing ways, working towards the ultimate learning and introducing an external assessment, that is, a system where competencies will be acquired for life. This will include all students, even those who are taught in line with the dual education model.

The gist here is achieving good, balanced relations both in the field of general and vocational education.

Take lifelong learning, for example. If you have decided to start working immediately after graduating, and notice that employees who have finished additional schooling are better paid and enjoy a better status, our current laws are such that they facilitate your progress and enable lifelong learning. We have even made non-formal education equal to formal.

How much are we, as a country, able to use the opportunities that our participation in European educational projects gives us?

— We fully utilize the opportunities for participation in European educational projects, i.e. those financed by the IPA, and the loans from the European Investment Bank (EIB), the World Bank, and the Council of Europe Development Bank (CEB). When I took over the Ministry, most of the projects and loans were falling through.

We have managed to reinstate everything and implement them within reasonable deadlines, while some we completed even before the deadlines. We have received a lot of recognition for implementing everything in a quality manner and to the full capacity.

This has also enabled us to apply new development lines that primarily relate to infrastructure in student standard and higher education.

The new Law on Science again raises questions about how important are young university staff to the state and whether we have a consistent policy of keeping them in the country or not. What is your message to researchers after some of them voiced their doubts about this law?

— The law is excellent and a public debate has shown that it has many new, good solutions. A great shift was made, because so far, everything that was done in that area was covered only by ordinances.

The most controversial article was Article 126, which, although stipulating a rather creative way for young researchers (there are about 1,500 of them working at universities), is misinterpreted.

A Part of the academic community, which disputes this article, ignores the fact that we need implement the solutions regarding the issues faced by the researchers at universities that

have been applied in all European countries with a developed science. Last year, we included 1,000 young university researchers in the work done by institutes. They got the means and a way to officially work on existing projects. This endeavour was incredibly successful and we have even expanded it. Currently, over 100 registered students at doctoral studies are given the same opportunity. In regard to Article 126, the Ministry has devised a modified proposal that will satisfy all researchers and create more favourable conditions than before.

For the most part, the university and vocational education are teaching processes first, and research processes second. These two processes cannot be separated. The fact is that a number of faculties have not employed new assistants for years, which sends a bad message to young people.

The analysis of the work done by vocational schools, which is almost finished and which will bring about a comprehensive reform and a new model of organization through vocational academies, has shown us that working pensioners and people who work almost 130% of their norm are employed in more than 400 job posts. This also creates space for employing young people.



What is your Ministry's role in preventing brain drain? How harmonized are relevant policies with education of young people that will enable them to find jobs as soon as they graduate?

— We are working on systemic solutions primarily through devising laws and other regulation.

We are also working on this through dual education, which educates students to find jobs immediately after graduating, but also forcing them to stay in Ser-

Our goal is the ultimate learning, not a mere transfer of knowledge from teachers to students, but rather students obtaining knowledge that is implementable

bia for a few years and in the company that provided them with scholarships.

We have dual education both in high schools and higher education. All technical studies are already dual. Companies are already queuing to hire students that have graduated electrical engineering, mechanical engineering, technology and similar.

In the following period, we will create a system which will identify jobs that are in demand, our recommendations for school enrollment, etc.

We have a new model of student funding. The first option is that students receive a salary from the company during their studies. In this way, this makes it mandatory for them to start working for that company once they graduate. For example, Austrian, German and Swiss companies in Serbia require experts from our country, and these are the companies that already employ around 100,000 people here. Bear in mind that they have enough workforce in their home countries. If they have facilities here, they will give a proportionately similar salary to those in their countries. If, for instance, in Germany, a dual education student has the salary of 1,000 euro, and bear in mind that living costs are much higher in Germany, than in Serbia, students could receive 600 euro which would be an equivalent to German salary. We are currently negotiating about this option.

The second option is that the state provides scholarships to best students, regardless of their worker profile. The result of this is good grades and efficient studies.

And thirdly, we have created a fund by amending of the Law on Student Standard. In this way, the state authorities suggest what students will get scholarships according to what prospects for the future and how much in demand is their field of study after they graduate.

We have also established the Science Fund which, through cooperation with other ministries and businesses, will have much bigger resources. This is one way how we can create employment for the brightest graduates and creating job opportunities for them here, so that they don't have to leave the country.

Furthermore, we have established cooperation with many countries and scientists from all over the world. We are implementing many projects with them, with the view of eliminating the reasons for our scientists to leave the country.

The fact is that the brain drain of doctors and other professions will not stop immediately, as did not happen in other countries that are members of the European Union either.

REFORM

NEW FORMULA

We are implementing a comprehensive reform of higher education and science, which will offer meaningful and sustainable solutions in the long run.

IT LITERACY IS NECESSARY

Nowadays, the Filipović Academy is recognizable throughout the region and is a leader in informal education. Through thirteen accredited seminars, we motivate teachers to think about the rapid development of technologies and software as learning tools



“Today, the status of informal education in Serbia, in all social segments, is quite high, much higher than in most countries that made the former Yugoslavia”, says Bratislav Filipović, MSc.oec. Director and Proprietor of the Filipović Academy, and adds: “The Filipović Academy gave a significant contribution to that and in the last 15 years, has educated over 30,000 students.”

“When we started our work, our mission, informal education was a taboo topic. We have come across many obstacles and misunderstandings (read: ignorance). At that time, we set ourselves a task or rather a goal that we have been successfully accomplishing for over a decade and a half now,” Mr Filipović adds.

Who needs continuous professional development? Which professions are you focusing on?

— Continuous training is definitely mandatory for everyone, regardless of the profession. The Filipović Academy is recognized for its training of education workers, although at the very beginning of our work, we were very active in education and re-training of the beneficiaries of the National Employment Service. However, at one point, we made the decision to base our work and activities exclusively on the education system, and expand into digitization, and promotion and application of modern technology. Today, we educate teachers through thirteen of our accredited seminars - we introduce them to modern technology, and motivate them to think about in line with the times in which we live, where the rapid development of technology and accompanying software is very pronounced.

We motivate them and to move them to unconditionally and on a daily basis apply all aspects of didactic materials



CORPORATE



**Msc.oec. BRATISLAV
FILIPOVIĆ**

Director and Proprietor of the
Filipović Academy



and to understand that their curricula can no longer be realized exclusively through traditional teaching without the use of contemporary teaching aids and programmes.

How much is the knowledge that educational experts have to possess changing and what new trends have you observed?

— Teachers possess a very good knowledge but they have to supplement their knowledge via various training, seminars, and courses and to differently articulate this acquired knowledge, as well as to use newly obtained skills and use and implement contemporary technology. Elsewhere in the world, education is the top priority in a society or a state. Nursery, elementary and high school teachers and university professors have huge importance for our society and the state of Serbia. The society that we live in depends on them, their work and their effort.

This is something that they have to understand, as well as those that run this country. Our state has an evident problem in not understanding the importance of teaching staff, hence, they treat them very superficially with educational staff often feeling degraded and neglected. Nobody is asking for their opinion, they have been stripped off many rights and burdened with unnecessary bureaucratic activities.

Today, you cannot have quality teaching without using contemporary technology

Which seminars are you planning in the next period? How willing are your students to perfect their knowledge and accept innovation?

— The seminars that we are preparing for the next period of accreditation re-

late to the improvement of computer literacy in teaching staff because this is still the sorest part of our educational system. Although, I have to say that IT literacy of employees in education in the regional countries in it is no better, nor is it at a higher level than in Serbia. Inclusion and inclusive education, integration of migrants, refugees, and asylum seekers in the education system of Serbia are inevitable topics that will be covered by our seminars.

Are contemporary forms of teaching and IT a precondition for the success of teachers and students?

— Today, in our country, there cannot be quality teaching without the use of modern technology, starting with basic things such as the projector, interactive whiteboard, and presentation software. It has been proven that students are more active, more interested and better at mastering teaching materials if teachers apply IT in the learning process. This is their time, the time of IT development, their needs, the time of our children, the way they perceive the environment in which they live, the way in which they learn, the time for fulfilling the basic needs of children, which we must accept unconditionally and without discussion.

Teachers have to adapt to the time in which we live, to give their best, to improve and to transfer their knowledge to students in a way that is consistent with the current time and best suits the children.

How is the process of digitization in schools developing? What is what you would like to single out from your offer and is, in your opinion, indispensable?

— The process of digitization in schools is not carried out in a planned, but rather a more improvised manner, with the desire to arrive at some predicted results as soon as possible, which are definitely needed. Not all the basic factors of the digitization process are considered, starting from the technical equipment in schools, and more importantly, the degree of IT literacy of teachers is not ascertained. The Filipović Academy has been working on digitization in schools since 2008 when we were among the first in Serbia to create an electronic grade register.

Teachers, their resistance and refusal to cooperate in the implementation of the programmes were the biggest obstacle that we have encountered and this problem persists until today. In addition to the electronic grade register, the Filipović Academy has developed a complete school information system consisting of Electronic Library, Electronic Portfolio for Educators, Teachers, Students and School Directors, Electron-

ic Pedagogical Notebooks for primary and secondary music, ballet and specialized schools, platforms for creating school websites, and the programme for school pedagogues and psychologists. Many schools are happy to use our contemporary applications.

How are you going to further develop the Academy's capacities?

— Digitization remains our priority, and by that, we mean raising IT awareness and IT literacy of education staff through careful planning, and certainly not through improvisation. Our wealth of experience shows that this has to be taken seriously, but also that there is an interest shown by teachers for additional training and acquiring skills in this field, except in some extreme cases that should not be rejected, but tactically resolved.

As the pioneers and advocates of the application of modern technology in teaching, last year, the Filipović Academy started producing portable interactive boards and accompanying software, which, in addition to schools in Serbia, are distributed in schools in Montenegro and the Republic of Srpska.

Portable interactive boards are very popular with teachers, they are appli-

time in which we live, as well as reassuring teaching staff that all of these resources can be easily used, that highly developed IT literacy is not needed, they do not have to be programmers or IT teachers, but only have basic IT knowledge, and that it is the duty of everyone to engage in the digitization process, teachers easily accept new challenges.

We are still focusing on further improvement of software, in particular, the Electronic Portfolio, over 8,000 teachers in Serbia use, and the Electronic Pedagogical Notebooks, namely the programmes that are recognized by the Ministry of Education of Montenegro. The Filipović Academy was also the recipient of the Diskobolos Award in 2015 in the category of education for use of the E-portfolio of teachers web application. The e-portfolio, devised by the Filipović Academy, is of the highest quality and one of the most useful tools in the educational system in Serbia, which is validated by a large number of users and their positive comments and praise.

Our recent application (dating back to October 2017) has been translated into multiple languages, and it is also used by teachers from other neighbouring countries. We are negotiating with the



INFO

PORTABLE INTERACTIVE BOARD

As the pioneers and advocates of the application of modern technology in teaching, last year, the Filipović Academy started producing portable interactive board.

cable in every classroom and are very easy to use. In many schools, we have activated the already existing interactive boards, which were donated. We have also educated and still are educating teachers on how to use and implement these boards in the teaching. Furthermore, we equip schools with modern teaching tools that include the aforementioned interactive boards (portable, static, touch displays, projectors, ...) and 3D presentation software, MozaBook.

With our adequate education, moral support and explanation that the use of these resources is an imperative in the

Ministry of Education of Montenegro on the implementation of the application in their education system.

Our plan is also to expand our operations to North Macedonia and Slovenia. We have been setting high standards since the first day, we continuously improving, we are working on personal education and thanks to the team of professionals who make the Filipović Academy, we have earned recognition, both in Serbia and in the neighbouring countries. Digital transformation is in line with our mission and vision and perfectly fits into our motto that is „A STEP AHEAD OF EVERYONE“.