



SPECIAL COMMISSION ON FUTURES

(Meeting held on August 23, 2022).

THE CHAIR.— Since we have a quorum, the meeting is now open.

(The time is 16:13).

—Good afternoon.

We are beginning a new meeting of the Special Commission on Futures of the General Assembly.

Coordination of this meeting is in the hands of Legislator Sanguinetti and Legislator Melazzi, who is going to connect via Zoom.

MS. SANGUINETTI.— We are very pleased to welcome our experts Ms. María Inés Fariello, Ms. Cecilia LLambí, Ms. Mercedes Aramendía, and Ms. Lydia Garrido, and Mr. Juan Bogliaccini, Mr. Guillermo Dutra, Mr. Felipe Miguez, and Mr. Bruno Gili to address the thematic axis “New Capabilities for the Twenty-First Century: Lifelong Learning.” We welcome you and thank you for being here. I think this is one of the big topics, and obviously we chose it because we find it the most interesting, the most challenging, and we share with other societies this paradigm shift in which the traditional segmentation that used to exist between work, skills, and the capacity to work, as independent spheres, is now becoming blurred, because everything is getting mixed, joined, or fused together. Societies are moving toward lifelong learning, that is, toward this idea of learning to learn and relearn; it is the attitude we must have, especially our young people, throughout their entire path.

I think it is important to mention that we are in this at the same time as a transformation in education that is being driven forward. In fact, we had thought it would be a good idea to have Adriana Aristimuño present at this meeting—we would have loved it, and it would have been much more interesting than the person speaking—but unfortunately her schedule is crazy. This commission was even going to meet at another time, but she could not attend then either.

Ultimately, a large part of what is being done and what is being promoted through the education transformation has to do with this paradigm shift. For those who are not familiar with the national curricular framework, I invite you to take a look at it, because I think it is a very valuable document that is under study by the various groups and sectors of society. It really is aligned with what is set out in this third axis, and it is so necessary for our country.

So many experts have come that I would like to start right away, even though Legislator Melazzi has not connected yet. Perhaps we can start with the first question and leave my colleague's remarks for the end.

(The Zoom connection with Legislator Melazzi begins).

—Since he has been able to connect, we welcome Legislator Melazzi, to whom I mention that I was giving the introduction to the topic and was about to start with the questions.

MR. MELAZZI.— Good afternoon, everyone; greetings to the Chair of the commission, to the legislators, and to the experts.

Since I am only just connecting, I would like to know whether Legislator Carmen Sanguinetti has already spoken.

MS. SANGUINETTI.— Yes, I gave a brief introduction.

MR. MELAZZI.— Perfect. Thank you!

I simply want to give a brief introduction as well, a more down-to-earth one, since we have the experts who will later be able to expand on the topic.

First of all, good afternoon to everyone.

As was mentioned earlier, on this occasion we are going to address vector three of the document, “The Future of Work and the Work of the Future,” which emphasizes the need for intensive lifelong learning. Training must be actively available throughout a person's entire life and for society as a whole. In this context, during the twenty-first century our country faces challenges that push it to keep thinking about developing capacities, skills, and competencies for the future of work. In that scenario, we find that the figures being used this year for global economic growth hover around 3.2% worldwide; however, in Latin America the economy is going to grow only 0.6%.

Therefore, we should ask ourselves what the reasons are why, in some way, we grow so little. There can undoubtedly be countless reasons, but we could highlight two of them as fundamental keys to growth. Broadly speaking, we can say that economies do not grow if we do not invest in education for the future. In Latin America we have not realized that we are in the knowledge economy, where mental work is worth more and more than manual work and where commodities—like oil, among others—will be worth less and less. It is for those reasons that the Asians have created an educational meritocracy where students study more and better all the time. In Latin America, however, education is falling further and further behind and drifting away from the real world.

In our region we constantly talk about the heroes of the past in matters of education, which I think is perfectly fine, since we are who we are today thanks to the past, but we cannot lose sight of the fact that we must think more about the innovators of the future. While Asians live guided by pragmatism and are obsessed with the future, Latin Americans live guided by ideologies and are obsessed with the past. As an example—I have heard it several times—our currency is compared with theirs. For example, in Latin America our currencies bear the founding heroes of independence, while in Singapore their currency shows the university with a

teacher and his students, and you can read the word “education.” In other words, while we venerate our heroes of the past, they venerate the innovators of tomorrow.

I simply wanted to give this little introduction. I appreciate the opportunity, and I hope we can keep moving forward to have a fairer society and to create opportunities for everyone. I think this commission was formed with that purpose. Thank you very much, Madam Chair.

MS. SANGUINETTI.— If you agree, we will move on to the question that reads: What are the main challenges Uruguay faces in keeping pace with the changing context and its requirements, so that people, groups, and companies can function in the world of the future of work? What capacities, competencies, and skills?

MR. DUTRA.— Good afternoon.

It is truly a pleasure to be here to address this topic. The last meeting I attended pointed to a vector of transformation: lifelong learning, or learning throughout one's whole life, as a vector that could bring about the transformation the country has to take on for sustainable development, with the implications that concept requires.

Perhaps because of the role I am currently fulfilling as director of Inefop, my vision and my contributions can be complemented by the rest of the experts. I would like to address the definition of lifelong learning so that it is clear what we are referring to and where we want to get to. This is a concept we have been coining since 1996, with the Delors Report, which spoke of the knowledge society, the information society, and was already beginning to identify lifelong learning as a policy that countries should incorporate for the sake of sustainable development.

Lifelong learning poses the challenge of having to recognize formal education, non-formal training spaces, and even informal training. These are clearly complementary components; we have to recognize those settings where learning is generated: the classroom, the company, the community. Ultimately, that learning is what will enable—to the extent that it can be accumulated and recognized—the exercise of citizenship and employability. So, I believe the goal of lifelong learning leads us not only to view the topic from the educational sphere, but also to try to integrate other actors and other spheres into its approach, its governance, and the reform processes. It is that complex and that challenging, but it is what is being demanded of us today. Legislator Melazzi set very demanding standards for our production, that is, standards that set the pace for competitiveness, that demand productivity, that demand being open to incorporating technology. Just as we have those demands and that agenda, we have a demand and an agenda that point to structural problems. There are segments of the population that truly face obstacles to taking part in the learning processes that are under way. I am talking about young people who have dropped out of the education system, rural workers, women, workers in the informal sector.

For now, taking on the topic of lifelong learning seems to require taking care of that scenario that poses different demands and—I repeat—whose approach necessarily requires keeping in mind that what we are trying to promote in the twenty-first century is related to the exercise of citizenship and employability. I share with you that in March 2020, just after the pandemic was declared, Inefop had to discuss its strategic map to 2024 and, to do so, agreements had to be reached with the labor movement and the business organizations. We had to put together an agenda that would allow us to build a roadmap to 2025. The first strategic objective was to promote lifelong training centered on transversal competencies in order to facilitate the mobility of workers within the workforce. Here there are several points that begin to set the agenda for us. When we talk about lifelong learning we are focusing on people and we are not confining ourselves to an age; we are trying to recognize trajectories and what Legislator Sanguinetti said, that is, the ability to learn and unlearn in a context of permanent change.

In the same way that these topics set the agenda or the approach, we have to acknowledge something that is new to us and hard to work with, but that undoubtedly demands that we increasingly have definitions about it. I am referring to twenty-first-century skills and, as I already noted, soft skills. Clearly society is demanding answers from us, answers that enable people to face change, to stay in training circuits, and to build training itineraries.

I can tell you that in Inefop's case we put together an agenda of ten transversal competencies in order to take on the topic. They complement one another, but it takes into account everything related to attitude, work culture, the ability to work in teams, to communicate, to embrace change, and to be flexible in the face of conflict.

The identification we made of this first package of ten transversal competencies, which we translated into a glossary, taught us to start including it in all the training that we are purchasing from our providers through Inefop. That is, we must link specific training with the development of transversal competencies, and for that we introduced this first reference, the glossary of ten competencies that we are promoting, through a program with three private consulting firms, which has reached a universe of 10,000 people in Uruguay, with recognition; now we are going to give it scalability so that it has greater impact in the country's interior. I think this is a topic that raises a strong challenge to formal education and to non-formal education and, from the standpoint of employability, it is being demanded of us and prioritized over specific training. I will leave my remarks here; I will pick them up again afterward.

MS. SANGUINETTI.— Thank you very much.

We now give the floor to Cecilia Llambí.

MS. LLAMBÍ.— Thank you.

I was not sure whether the idea was to give a presentation or not, because last time we had a conversation; in any case, I had put something together, and I will take the opportunity to share it.

(A presentation is shown).

—Actually, in this first part I was planning to refer to the main challenges Uruguay faces in keeping up with the changes in the world of work and then, in a second round, I imagine we will address the second topic. The idea of this first part is to present, in broad strokes, which aspects are involved. Although there are many things that I think are known to everyone, I think it is useful to have a summary of where the main gaps are that we need to know about and confront in order to think about a context of lifelong learning in Uruguay.

The first—and perhaps the most obvious—is the fact of Uruguay's low accumulation of human capital. That, in itself, is a constraint if we are thinking about lifelong learning and about adult learning and retraining. That means that Uruguay, in comparative terms with Latin America, has a lower educational level among its population. As an example, I point out that in the average of twenty-two countries of Latin America and the Caribbean, for those born in eighty, 50% of the population goes beyond secondary education, that is, they already have at least completed secondary education or university. In Uruguay it is 40% and, in fact, what is seen in all the comparisons is that our accumulation of years of education is slower than the Latin American average. So that, in itself, is an important challenge.

There is another relevant aspect as well, which has to do with the previous one—though not only with that—and it is that, in addition, Uruguay's slow progress—which goes back decades—has not closed the gap between people in the lowest and the highest income quintiles.

What you can see are graphs of the ratio of quintile 1 to quintile 5 in average years of education of the population between twenty-one and thirty years old for several Latin American countries. What matters here, ultimately, is to notice that, although in several of the countries in the region that ratio has been rising, that is, the gaps in years of education of the population between the lowest quintile and the highest quintile have tended—not to close, but at least—to narrow, that has not happened in Uruguay. That is another constraint we must consider when thinking about policies for lifelong learning.

I want to highlight, very briefly—since it is not quite like that—that we have two population groups, sets of young people who have begun to access higher education. There is an increase in the proportion of first-generation university students, which means that in Uruguay there is some upward educational mobility, but it is primarily among the children of parents who completed secondary education. It is like the upper-middle tail of the educational distribution that is moving forward. This had to do with the expansion of the offerings in the interior and so on.

Moreover, according to a study carried out by Bonavida and others, from CAF, for several Latin American countries, it can be seen that there is no upward educational mobility at the secondary level. That is, the fraction of young people whose parents did not finish secondary school remains stagnant in our country.

If the legislators look at the light blue graph, you will see that in the region there has been some upward mobility, some reduction of educational gaps, and that in Uruguay there is a fraction of the population for which that has not happened. This is another constraint to bear in mind when thinking about policies for learning throughout life.

When young people are asked why they leave the education system, two big reasons emerge that I think are important. There is a first group that appears at the top of the chart. These are economic or work-related reasons, expressed fundamentally by men, males, and reasons of caring for children or family members, expressed essentially by women. They actually refer to constraints in terms of the opportunity costs those young people face in continuing to study. Any policy of incentives for the training of young people in certain vulnerable contexts must in some way be able to address these opportunity costs of not working or of continuing to study, and facilitate the care of children and family members, fundamentally for women.

There is another group of reasons that has to do with the education system in particular. I am referring to learning difficulties, preferences for learning different things, demotivation, a perception that it is a lot for the result that will be achieved, “this is of no use to me,” and so on. We should analyze the pertinence and relevance of what is being taught in our education systems. This has to do with what Mr. Guillermo Dutra mentioned regarding which skills, knowledge, or competencies we should be thinking of teaching young people that would be motivating and that would increase their perception that they will be useful for entering the labor market and society.

Returning to what Mr. Guillermo Dutra said, skills are not formed only in the education system; there are other settings such as non-formal education, education at work, vocational training, et cetera. What we do know is that without completing formal education, job opportunities are reduced quite a lot, not only in the quality of the work and the possibility of getting into a formal company or a large company, but also in the chances of receiving on-the-job training. Work is a source of learning, and large companies, or companies of a certain size, have in-house policies for training their workers and for their retraining, but that does not happen with all companies. Moreover, if the young people who are less well trained or who have dropped out of school do not get into those companies but into others, then their chances of continuing to accumulate skills are more limited. I will add another piece of data: if we compare Uruguay with Latin America, we see that, on average, the education-to-work transition is more difficult. In our country, if we look at the ratio of the youth unemployment rate to the average unemployment rate, we will observe that in Uruguay that ratio is higher than in the rest of Latin America according to CED data.

There are many other issues, but in my judgment these are the main aspects to keep in mind when we think about training options or models and the elements we must consider in order to generate learning throughout life.

MS. SANGUINETTI.— Actually, it is the second question that went along with this one, which is what the capacities, competencies, and skills are, and the one that has to do with educational systems and models is the second question, which we can leave for later. Thank you so much.

In connection with what Cecilia Llambí said about students' perception of how useful they considered what they were learning, I think it is pertinent to mention that ANEP is conducting a massive survey of students on these perceptions. We were told recently in the Education and Culture Commission that those results are going to be public, so for many of those here, who are academics and researchers on these topics, it will be relevant and significant information.

MR. BOGLIACCINI.— First of all, I want to thank you for the invitation. It is a pleasure for me to be here and to be able to share some ideas, the fruit of my research and that of many other colleagues whom I have been able to read.

(A presentation is shown).

—The problem is not being few, but not being prepared and, although in some respects I am going to be repeating things that have already been said, I want to offer a different perspective. I am going to talk about three issues. First, about what we are discussing in this meeting, which is adapting, lifelong learning; there is a prior question that is very important: adapting starting from what assets, because no human being can do it in thin air.

Second, I highlight the role of the political system. You are alone, you are like the Lone Ranger, and I will explain why afterward.

Third, I cite the proposal of a new social contract that has two components and that I do not want to leave without presenting.

In Uruguay and in the world we have a sharpening of the shortage of workers. In our country it is evident, and in the world the same thing is happening. For a while the demand for labor will rise, but the supply of labor will tend to fall. What can we do?

(The Zoom connection is interrupted).

—Thank you all for your patience.

I am going to name automation, the promotion of immigration—many countries are trying to do it—, raising the retirement age, which is a discussion Uruguay is having right now, including many more women in the workforce, or what is called the reserve army, and maximizing skills development in the workforces. I am going to talk about these last two issues. What does adapting imply? It implies that in the coming years there will be an abundance

of unskilled labor supply and a shortage of skilled labor supply. So the problems we have to adapt to are two: the shortage of labor supply plus the mismatch between the skills available and the skills required. This is a big problem for us. Adapting—and I want to focus on this—requires one's own tools, which are acquired first in the educational process. The use of one's own skills is a prerequisite for adapting to the future or for innovating. Therefore, when we reach a certain point in life we have to think about what our portfolio of activities is, which are those assets that, if scarce, leave our capacity to adapt diminished, as well as our capacity to intuit paths of change. Why do I want to insist on this? Really, today we have two Uruguays: the one that is inside the education system and the one that is outside. They are two halves. Ms. Llambí said it, and now I am going to try to underscore it. This is an exercise. This is the potential human development index by education factor. In the image you can see that on the left side we have the human development index of the countries, where we stand, and on the right side there is an adjustment for educational inequality. On this, I ask that you observe Uruguay's slope, which is gigantic. It is among the countries with the greatest loss of human development due to educational inequality.

MS. SANGUINETTI.— Sorry, but I can't see which one is Uruguay.

MR. BOGLIACCINI.— It's the second to last. It came out a bit small. The orange one is Costa Rica and below, at the very end, is Uruguay in blue. It is important to look at the slope. This is an exercise, but we go from 79.5 to 64.2 because of educational inequality. This means that, looking at it the other way around, we could be much better off than we are in the human development index if we had equality in access to and completion of the educational cycle. Why are we where we are? First, the economy is not going to help us, because given the productive matrix itself the demand for social labor, or from the most dynamic sectors, is scarce. Our export sector is primary. We have scarce specific skills. Ms. Llambí said that in some companies they train workers, but in Latin America this is tremendously marginal. Specific skills are not required in these labor markets, and with regard to sector-specific skills, such as in construction, we have great difficulty generating that training because if you train the person and the company next door poaches them, a problem arises. Our construction sector is extremely successful at that, and later we can talk about that example. This scarce demand for skills produces a very weak tracking toward the formal education system, and this generates few incentives for training on the part of companies because there is high risk, as I said earlier. There is a bottleneck in boosting dynamism in new sectors. Suddenly they will appear, but we don't know when. For example, software development today runs into the fact that we have no people to employ. Today we can think about software and be very worried about programming, but the truth is that I am worried about what comes next, which we don't know what it is or when it will arrive. We know we don't have the labor and that we don't have people prepared. That we do know. That is a problem. This is important because it forces us to look with one eye at the trends in the north, but with the other at the south's own problems which, familiar as they are, are no less important: poverty, the lack of skills, and low productivity.

Public opinion is not going to help us either, and this is very important. Often, a driver of our political system—of any political system—is having a public opinion that pushes to generate change. There are some incipient studies on this that are really interesting.

Something very well known is that education reform has concentrated and immediate costs, but dispersed, long-term results. So, we are going to take on the costs, we are going to heat the kettle—so to speak—but someone else is going to drink the mate. Public opinion has greater influence when the political system is vocal, but on the basis of high salience and consistent attitudes. So, when the political system aligns, public opinion also aligns. On the other hand, when problems are salient—as often happens in Uruguay—and the attitudes of the political system are in conflict, even though the signal in public opinion is strong, loud, political parties tend to have more influence on policy formulation than public opinion. Therefore, public opinion doesn't help me. Is that understood?

Now, when the political system does not vocalize the education problem consistently—this is the third circumstance—the salience of the issue is low and interest groups are dominant in determining policy. Those are the universes in which neither the labor market nor public opinion will help the political system process these reforms.

There are some instrumental nodes for addressing the problem that I think are key. One of them is that we need many more data for a fluid diagnosis. In Uruguay there is a reckless scarcity of data, and the few we have are not shared. Sometimes the Government does not share them with itself, and I am not talking about this one in particular, but about the Government as an entity. For example, we have the PISA tests in secondary, Aristas in primary, but we are not going to have PIAAC—it is the PISA of lifelong skills—even though we have been talking about lifelong learning for years. We need to measure much more than we are doing and release data for diagnosis and analysis in a fluid way.

There are many other initiatives—I brought some—but this data problem is by no means minor. Sometimes I think Uruguay should be in the OECD for one reason alone: being obliged to have its statistics so as to be able to work with the data. We really need to expand them. When we do comparative studies on Uruguay, the indicators we have are often very poor compared with those that others have.

I think we need a new social contract.

(Cross-talk).

—First, we must put an end to child poverty. The first thing to ask is why we have child poverty and to attack it with economic cash transfers to the mother-child pair at ages zero to two. Child poverty is a political decision and a limitation on neurocognitive development, with partially irreversible lags.

So, I return to the first slide. Who can adapt? Let us look at the trajectories of children and then ask ourselves whether we are all in a position to adapt or whether these dialogues—which are important—do not often fall exclusively within the preserve of those who have already arrived. As Cecilia Llambí rightly said, only some go to the workshop.

In the two graphs that I have, which appear on screen—you can't see much—we have Uruguay—the graph on the left—and Norway. The two lines at the bottom are cash transfers throughout life; the last are pensions. I point in particular to the yellow part, which is the transfers that Norway makes, in cash, to mothers in poor households. In the first years of life they are brutal. It is a political decision: to end child poverty. The transfer is made in cash and child poverty ends.

Here it is fiscally reasonable. Why? Because we have fewer and fewer children. Therefore, it is a policy that is not going to grow in a costly way and it is key to avoiding a set of problems—neurocognitive lags, child nutrition problems—that are extremely hard to make up for, whatever we do years later. Uruguay can do this because it has an extraordinary welfare structure. Over generations we have done this, but we need—and I leave you the second component, all of you, there—to eliminate child poverty.

MR. MIGUES.— Thank you very much for the invitation.

It is a pleasure to be able to share some ideas and to listen to others who have also been thinking about these issues.

We discussed some of these things at the last meeting. I have a very clear bias toward education, toward young people and the labor market; therefore, I am going to try to step out of that a little bit.

I was thinking along the same lines that Cecilia Llambí and Juan Bogliaccini conveyed. I would like to contribute a few more nuances to add complexity to the analysis. The first thing I say is that Uruguay does not start from zero; that is the first difficulty. Uruguay does not build on an empty lot, so to speak, but on top of a lot of things that already exist. Mainly, there is the low level of human capital, but it tends to be very strongly concentrated among young people.

An ECLAC economist spoke about unemployment, about flow and about stock. Young people are unemployed because they are young and they go through the stage of getting up to speed, paying their dues, or whatever it is called, and then they gradually find jobs. That can be seen, and as age increases, the specific unemployment rates fall. He also spoke of another idea of stock unemployment: young people who today are not employable and who probably will not be employable tomorrow either and, in the best of cases, if they are employable, it is in very bad jobs. This very clearly sets the pattern for future educational trajectories, because there is a stock of people who are very hard to employ.

A study has not been done, but we are trying to carry one out with the Center for Development Studies. Over the last twenty years in Uruguay, almost half of

the population—a little more or a little less—between twenty and twenty-four years old who were unemployed had lower secondary (ciclo básico) as their highest educational level. They faced unemployment with a maximum educational level of lower secondary, from twenty to twenty-four years old; therefore, the probability that they would re-enter the education system had already dropped enormously.

I will add another element; more than two, I would say there is a third Uruguay. We have the Uruguay that is outside the education system, but with the one inside the education system we have two more: the one that is learning and the one that is not learning. There are many kids inside the education system who are not learning because the education system fails to target the offering it is making. I think there we have a third population that I think is good to incorporate. I also add another challenge, which is institutional and cultural—and the two go hand in hand—and it is that, for Uruguay to move toward this idea of lifelong learning which, as Guillermo Dutra said, has been present for a long time, it needs to break with cultural elements. For example, technical education is not a bad option; it is an excellent option, if it is a quality offering. Developed countries have enrollment rates in technical education—what here would be UTU or UTEC—very close to half. Here in Uruguay, although it is the only educational offering that has grown, enrollment is far below that. The other day, working at a youth center in La Cruz de Carrasco, I was surprised. I thought that the idea of an option B was much more for the high socioeconomic levels. If someone says, “My son didn't go to university, he went to UTU,” they answer: “Ah, what a pity he went to UTU.” Many mothers at the youth center said: “I don't want him to do UTU; I want him to do secondary school.” I was very struck, and it seemed to me very interesting to bring it up. That cuts across the cultures or images that we have to break within the education system itself in order to work on this issue. Another challenge that is gradually taking shape is one of institutional design: how institutions are designed to be relevant, to bet on quality, to make decisions quickly, to not be delayed. That is an immense challenge that Uruguay has in general, but in education it seems quite clear, quite powerful. I give as an example the time it takes us to modify an education program. While the world changes five or six times, we have only just more or less agreed on whether the curricular framework came before, came after, was in the middle, on the way, or whether it was a martyr document or what.

That difference in speeds is also rooted in institutional designs that sometimes make it a bit complicated not to run at the speed of the labor market—because that is impossible and I don't even think it is desirable—but to be a little bit more agile and to move more along that line.

That leaves the idea of path dependence, the past determining the future, and it is very hard for us to break the notion of how the education system is put together. With respect to lifelong learning, it is a topic I like a lot and have been reflecting on. In general, the idea of lifelong learning overwhelms me, because it is a huge amount of very different time, and I like to think of it in

different stages. One—and I am very glad that Juan Bogliaccini also brought it up—is the one that goes from zero to three years. The first lifelong learning starts there and perhaps even before the child is born, in the care of the pregnant woman; there we are already putting some limitations, some ceilings, on young people in that sense.

Then comes the passage through compulsory formal education, where there is a very short neuralgic point, which is the school-to-work transition, a stage in which many future work and educational trajectories are determined.

Lastly, there is a somewhat longer stage of relearning and upskilling, in which new things are learned in order to move horizontally and also vertically in the labor market. In this regard, I reach very few conclusions about what it is and what it should entail, because I am overwhelmed by the feeling that lifelong learning encompasses a number of concepts; a lot has been said but little is clear and, really, it seems that we all agree, but when we go to refine them, not all of us understand the same thing. So, those concepts are a little tricky.

I want to throw out a few lines to express what, from my perspective, lifelong learning is.

First of all, lifelong learning is learning and unlearning; these are two processes that seem similar, but have some differences. Much of what I learned I will now have to unlearn in order to free up hard drive space and be able to take in new things. So, we have to think about how we are educating or training people to unlearn.

Likewise, lifelong learning is essentially self-managed, that is, the people who will make lifelong learning decisions are adults who do so autonomously. In turn, how could clear and precise information systems and incentives be designed so that people keep training? The labor market is tremendously unfriendly to this. We have to see what is being demanded and what skills are required, like JavaScript, HTML, Blockchain, and logistics of I don't know what kind. Well, what is demanded is the person who helps others understand all this. That is formed here and the learning is of very high quality. Therefore, we need to know how we generate clear and precise information in order to make decisions. In turn, lifelong learning is much more transversal than technical, something that has already been said repeatedly.

Another characteristic of lifelong learning is that it happens in a great number of spaces that have to start being recognized. Formal education has to be able to say: “If you have been working as an electrician for ten years, you don't have to go through UTU to study Electricity I. You clearly know Electricity I, so show me and move on. I don't have to keep you here any longer.” The same should happen in the labor market, and education should recognize the assessments that are done within a company. If the company says that the person knows how to do something and does it very well, education has to be able to say: “Fine, it is a skill that this person has acquired.” That is, the company is an absolutely decisive part of this process.

On the other hand, lifelong learning has no favorite trajectory. We always think of the training trajectory, but it is something totally cultural that we must break with: school, lower secondary, upper secondary, tertiary studies, and employment. Actually, what the data show us is that half of Uruguayans get a job between the ages of seventeen and twenty-two, and that the only quintile that manages to postpone that decision to enter the labor market at that stage is the fifth. That is, the first, second, third, and fourth quintiles behave the same, so –Cecilia Llambí also mentioned this, and it is great for interpreting– that need to enter the labor market just because the family needs money is not so clear for everyone. The third and fourth quintiles make decisions about entering the labor market the same as the first and second; that is, there is something else operating there that I think is interesting to analyze. This also tells us that they face the labor market – that is, the last stage of this process of lifelong learning– with what we basically gave them in secondary education; those who are luckier, with some years of tertiary studies completed. So, here we have to give them tools. Why do I concentrate on this stage? Because trajectories that get truncated here or are lost here are harder to get back on track afterward. The first job, in terms of quality and formality, has a great influence on the quality of the job one gets afterward. Educational trajectories that are cut off there – Juan Bogliaccini shared an account in which this idea was seen–, that is, those who do not finish lower secondary, as the years go by, are much less likely to complete it. Imagine, for example, a twenty-four-year-old who has been working for some time and has not finished lower secondary, having to go sit down and listen again to a Spanish Language class. That is asking a lot, I don't know, but we ask it of them. Now, fortunately, there is a test called AcreditaCB, which for me is immense news for the education system, because with just one test of three modalities it allows the person to validate and accredit lower secondary. I believe Uruguay has the enormous challenge of considering how to think about the future while trying to bring in people who have already been left behind. This is a very complex tension to manage.

From that side, I think there are several challenges for Uruguay, but there are very powerful cultural elements and institutions—I had never seen the perspective that Juan Bogliaccini gave—that need much more powerful and precise consensuses, and consensuses brought from the population. There are a lot of high schools that do not have Mathematics teachers until June or July; if I were a parent, I would be saying “bring teachers.” Those mechanisms are not there, because that information to which Juan Bogliaccini referred is not clear to those who evaluate the education system, formal or non-formal. Therefore, I think there is a set of challenges here that we need to keep thinking about.

MS. SANGUINETTI.— Thank you very much, Felipe Migue. The truth is that many questions, concerns, and a desire to go deeper into some concepts come up, but we will continue with what is scheduled.

MS. FARIELLO.— It always makes me a little embarrassed to speak after hearing them because, besides the fact that they research these things, mine is always in a smaller universe, more focused on university students. In any

case, I set about looking for some numbers because, coming from mathematics, it is hard to talk without figures.

I was always struck by what Felipe Migueles said: that, of those entering university, 25% are already working and of those 30% do so for more than forty hours a week. We always talk about how many enter university and how few graduate, and there is a kind of anger at the university because of that. It seems I have come to the wrong commission, but no, I know which one I am in, although with many of the things I am going to say you will think that, again, I came to the wrong commission.

So, I think we have to think about those populations. Once we get them to enter university and knowing that university graduates have such low unemployment percentages, we have to think about those we lose along the way and about how, for example, to accredit their training. There are many who, quite simply, do not finish university because two years of university training is enough for them to enter the labor market, but it was a huge effort for me to find numbers that quantify those situations. We know what percentage of university people are employed and what percentage are not, but we do not have the quantification of those who did two or three years because no data on that can be found. It strikes me because it is always presented as a binary variable, which it is not so much. In France, for example, people are classified as baccalauréat +1, +2, or +3. That is, university education is not “university graduate” or “non-university,” but how many years of university training one has. Perhaps it would be good to rethink that so as to be able to say “I am not a university graduate, but I still have a university education,” and that is super important. A short while ago we were talking with the people from the Ceibal program, Jóvenes a Programar, and they told us how the setup process went and what the business owners expected. At the beginning, the business owners expected young people with training equivalent to the first two years of the Faculty of Engineering. It is a totally different plan and, well, they adapted to what was required. This has to do, precisely, with how to accredit that +1 or +2, which is super important, and also with how to quantify them, because that leads to making decisions.

In the university population I am going to restrict myself much more, because I am going to refer to doctorates. What I saw is that in Uruguay we have approximately 4.5 PhD holders per 10,000 inhabitants. If we compare it with the OECD member countries, we will see that it is very little: in Turkey it is 10 and Germany reaches 70 per 10,000 inhabitants; this represents 1% of Uruguay's university population. Anyone who has ventured into science cannot avoid always having in mind Clemente Estable's phrase “With great science there is no small country,” and if we dig a little deeper, “A country is poor because research science is not done in it as the fundamental concern of the State.” In this the issue of causality always appears, the issue of where one can see whether there will be more PhD holders. So, I looked at the graph of how many researchers there are in a country as a function of gross income per capita. This information is in the online publication Our World in Data, in case you want to see it; that is where I found it.

What happens in Uruguay, as the graph shows, is that over the years per capita income increases, but the curve representing the number of researchers stays almost flat; we can see a barely positive slope. We can compare ourselves with Germany, needless to say, but the slope of South Korea, for example, is incredible. What the people who are a bit more in the know told me is that South Korea decided that its export product was going to be knowledge. At the moment South Korea asked itself what it had available and saw that it did not have that many raw materials, that those it had to work with were few, or that the productive system was very small, what did it bet on? On a knowledge society. So much so that, for example, in the OECD countries, when the PhD holders they can produce are not enough for them, they create programs that attract doctoral students. I was one of them, since my doctorate was completely financed by the French Government and without asking anything of me in return. However, when we fund a Uruguayan to go on a fellowship abroad, we tell him: "Go, but you have to come back no matter what." "How?" "It doesn't matter, because afterward there is no postdoctoral fellowship, there is nothing." "You just come back and manage as best you can." The OECD says that doctorates are very important because with them it is possible to develop innovations. Specifically, they point out that those who hold doctorates learn research methodology and statistical analysis, as two of the main characteristics. I don't know whether all doctoral students learn statistical analysis, but it is something they should do. It also happens that they are people who had to push the frontier of knowledge in whatever area it was; if you don't push the frontier of knowledge a little further, you cannot obtain a doctorate; original knowledge is required as part of that.

So, when I began studying for the doctorate, it seemed like something akin to training painters to please other painters. I always thought of science as that, as the most ethereal part, but what is happening today is that companies are absorbing PhD holders more and more. It is happening to us the other way around, at least in the area where I work, which is related to artificial intelligence—although I don't like using that word—where the data analysis part is in huge demand. In that sense, after a doctorate is finished, one says: "Perfect, I'm going to have a person who is going to help me train others," but suddenly that person leaves. It also happens that they are recruiting other scientists, whereas before, for example, it was thought that a mathematician only knew how to do mathematics. Now, instead, they are told: "You studied mathematics?" "Well, come and analyze this." "But I don't know statistics." "It doesn't matter, with your training you will pick it up right away." So, companies train people who are very eager to quickly acquire training, because that was, so to speak, their training.

Although I know I am at the other extreme from what we have been talking about, I think we always have to attend to two things: urgency, on the one hand, and the future, on the other. We said that today it is software that we need, but tomorrow we don't know what it might be. I think that is where the point goes: if I have many highly qualified people, they will help us move quickly from one place to another. I am not going to refer to COVID again because everyone is perfectly clear on how the movements there came about; what I can say is that these are people who can quickly switch from one topic to another, beyond their base training. The fact that the

training was not in a company, in the face of a practical problem, but in other situations, helps quite a bit in their adapting.

MS. SANGUINETTI.— I think that near the end she said something that, it seems to me, is an inherent tension of this commission. Precisely because we live in a country that still has some urgencies, from this commission we are posed this tension between attending to the urgent and attending to the future. Undoubtedly, the focus here is the Special Commission on Futures; that is what we are here for. I think it is one of the most interesting commissions, if you will, in having the possibility of having all of you who are experts in your various areas and sharing your visions with us, but in parallel we have urgencies such as, for example, early childhood. There that tension arises. Fortunately, we have the support of so many experts. I repeat: I think the crux, if you will, of this commission is that tension between these two realities. We also have to take care of the feedback loop, because if we don't put the focus on the future, the urgent will become more and more urgent. There is a very interesting relationship there.

MS. ARAMENDÍA.— Good afternoon. Thank you very much for the invitation; it is a pleasure to be able to join you.

Actually, I took a quite different focus, so I am grateful for having had the opportunity to hear the previous presentations because I learned a lot, they are all very interesting and, without a doubt, we have to work a lot on these topics. When thinking about the questions, I focused them mostly on the future of work, analyzing which skills were the most in demand, above all because of what demand is today with digital transformation, the new ways of working, what offices are like now, and everything that is needed as a response from the market.

As we know, everything is changing very fast. The norm today is uncertainty, and being able to respond appropriately is key. For this, without a doubt, we need to have the possibility of adapting, of being flexible, and of constantly learning and relearning, as those who spoke earlier said. Basically, people should be placed at the center, starting from the premise that education will give them more freedom and the possibility of being more flexible, adapting, being able to do other new or different tasks or to deepen them. We have many diverse facets on which we must identify which are the urgencies and needs in order to seek specific solutions.

As for education, there has to be more of it and of better quality, both formal and informal. This is focused on digital technologies. With regard to early childhood and young people, we must try to have them start, from a young age, to get education in the new digital skills and in harder skills such as robotics, programming, et cetera, but we also have to focus on the digital competencies that we need the rest of the population to develop, especially because of the issue of job retraining. It is important that people can learn about the tools and their uses, that they understand them, that they know what the risks are, as well as the various challenges we are having at present, such as disinformation, cybersecurity, the challenges that

arise with privacy, the importance of attending to human rights, as well as what is linked to ethical norms.

On the other hand, the issue of teaching methods is very important, because we need well-trained teachers, with specific competencies to be able to help and teach, both small children and people who need to retrain so that, precisely, they can adapt and join working life. On this issue we always have a challenge. At the university we are working on the topic of digital transformation and law, and we generally find that there are no people trained in the subject. So, without a doubt, on that topic synergies have to be built between companies and universities. Companies need trained labor that, perhaps, already exists and, in turn, they can help us with the training of more human resources so that afterward they manage to be properly placed.

It is also a challenge to develop and universalize the necessary infrastructure, and I am not only talking about quality connectivity but also that we need equipment and content in different languages, because frequently, when we train in new technologies, the texts tend to be in English or other languages, and that is a barrier. Having content that is easy, of quality, and accessible is an issue we have to address. We have to take advantage of what the pandemic left us, in the sense that people got used to educating themselves remotely and using these tools. I think that is in some way an advantage that got us past a barrier, because before, people did not see online education as something so natural. Motivation is key to learning, because many people—as was shown in the graphs—said that they didn't see why they would finish secondary school if in reality it wasn't of much use to them. So having motivation and being able to apply what they learn is key.

Regarding this, I repeat, the meeting between universities and companies is important, that is, among various actors of the economy, so that individuals have real motivation, see how to apply their knowledge, and don't forget it. Three years ago I took a programming course, I never applied it again, and today I don't feel qualified to work in that field because I forgot it. The same happens with a language; I learned Portuguese, I didn't keep studying, I didn't speak it anymore, and I forgot it. The possibility of really applying knowledge, I think, is something very important; it helps motivate people and to see results in the short term, focused on needs. Here, without a doubt, for research, development, and innovation, joint work among the Government, universities, and companies is, I think, key and one of the elements that will help us attend to the urgent and the important, achieving changes quickly. As for the Government, I think it is important that clear policies and agendas be developed that encourage and facilitate work, as well as investment in certain areas, in order to create new industries, products, and services, as well as to understand the needs that exist, both scientific and technological, focusing efforts on addressing them because, suddenly, if we start to study things that are not applicable, we begin to generate mismatches.

In addition, I think innovation comes from people, so we need trained human resources to create that knowledge, understand innovation, and keep developing it, like a wheel. Likewise, I consider it important to help startups, entrepreneurs, and SMEs, so that they can develop, address needs, and generate more work, more research, more development, and more innovation.

On the universities' side, it is important that they promote research in topics and areas where industry and the public interest require greater efforts. In this way, I think resources will be focused and it will be easier to obtain funding, motivation, application, transfer, as well as absorption of the resources. I understand that if it is shared with industry and joint efforts are made between university and industry, the development of innovation will be facilitated; there will be more sources of funding, as I said; it will be simpler to maintain and improve equipment, as well as to motivate and train people, while we also attend to real needs. We must not forget that today we have real economic and social needs.

I think it is also important to drive, help, and incentivize entrepreneurs and to have startups generated from the universities themselves, which contribute and collaborate in this. I think there are already examples in our country, with very good results. That allows us to generate more experience, more projects, which gradually become reality. This, without a doubt, generates more work, more development, more innovation for everyone.

On the other hand, also from the universities' point of view, it is important for alliances to be formed among them at the national, regional, and international levels, as well as with companies, to facilitate development and allow exchanges to take place, so that students can learn about other realities and then bring that knowledge back to the country. That helps all of us continue developing. As regards the productive sector, I understand it is important to invest more and more in research, development, and innovation, in ventures, in startups. I think we are still in very early stages on these issues, but if we need specialized human resources—and companies, universities, and the country need them—it is important that they have job placement and that while they are being trained they also have the possibility of applying their knowledge as they go, of being more motivated, of dealing with real problems, with the consequences and benefits that brings.

On the other hand, I understand it is important for industries to be clear about what their needs are, to be open and to contribute actively to developing joint projects with universities so that research deepens and human resources can be absorbed by the market. For this, training and constant learning are important, and I think some models that can be adopted are, for example, with mentorships or internships, through agreements made between universities and companies. This way students can apply their knowledge, have real job prospects, and are more motivated. It happened to me, for example, when I was studying in the United States, that I had a

work group that was multidisciplinary, transversal—there was a programmer, a network architect, an MBA; I was a lawyer studying technology—and we worked with a company, with the Bill Gates foundation, to solve a specific problem they had with app-based workers. So, we had a real problem and we tried to find solutions. This, without a doubt, was much more fulfilling for us. I think we have to work proactively as a society, reducing the gaps. I understand that we need new competencies. We must have the capacity to respond appropriately to uncertainty. We have to be able to adapt, be flexible, and develop new complex skills from an early age, but also drive the retraining of people who perhaps did not have that education, so that they can be part of various projects and multidisciplinary teams, everyone contributing from different areas. Education really is the best tool we have to respond to the new challenges and the future of work, and I think the key to responding in the best way is, precisely, by building synergies and developing relationships of trust among the various actors of the ecosystem, mainly among the Government, universities, and companies.

MS. SANGUINETTI.— We have approximately half an hour left to address question number two. We have five minutes per expert, but I propose letting it flow depending on how the conversation goes and not being so rigid. The second question is: “What educational systems and models can facilitate learning that keeps pace with permanent change?”.

I don't know who feels like starting with that question.

MR. DUTRA.— I can begin, if you agree, because in fact several things have been shared with us that move one to have to speak right away.

I think we are at a juncture that obliges us to manage this tension between the immediate and the future. Undoubtedly, with very pragmatic criteria, we have to begin to find a way to take on the future that is being pointed out to us, for example, by the IT sector, in the sense that over the next two years four thousand jobs are going to be created and today there are no trained people in the country to fill them. When we are sitting at that table, we are told to bear in mind that, notwithstanding that we take on a series of solutions for this, such as signing agreements with Microsoft, with Amazon; addressing level one of digital skills or developing a line oriented toward accrediting bootcamps in the country, et cetera, next year there will be ten thousand jobs in this situation, because it is a sector that wants to grow, aspires to reach 5% of GDP, is successful, exports, and is even having an impact on the productive diversification of the other sectors. That is a very strong signal that implies for us finding answers today. We are finding them, but we have to know that the compass points that way and that we have to keep moving forward. This immediately opens up two points on the agenda for us, which have to do with completing cycles and with languages.

The IT sector is clearly telling us that it takes in young people who have completed upper secondary education. The answers we can implement are for those who reach this level. At that point, we give them specific training in programming and we can place them quickly. So, completing cycles is an issue that must go on the agenda. It is an issue that is not confined to ANEP; today it is not an issue that can be on its agenda. Companies are asking us to support them in sending their workers to complete the cycles. Unions are telling us to support them so that their members complete the cycles. For now, the tools that ANEP has developed, such as tutoring, the Ciclo Básico Tutorado, or Proces, are tools that we must activate, strengthen, and project along this line.

The second point that the IT sector opens up for us, which is also linked to the topic of diversification and orientation toward the external market, has to do with languages. This issue was addressed today by the Board of Directors of Inefop. It is an enormous gap that Uruguay has. So we have to solve it and enable mechanisms that quickly resolve or make it easier to resolve that educational gap. There is also a topic that I think we have been handling in a very isolated, disjointed way, and that we have to address in a more integrated way, much more effectively, and with a greater level of efficiency. I am referring to the accreditation and certification of knowledge. If we recognize that lifelong learning is an objective and that it requires incorporating what is learned throughout life, there have to be mechanisms that make it easier for people to accredit their knowledge, whether acquired through training or through experience. Today the country has mechanisms that are confined to a limited reality, such as what we are doing with the certification of competencies at Inefop, within the framework of Uruguay Certifica; what the Technical-Professional Education Council is doing in terms of accreditation of knowledge, or what ANEP does with the accreditation of lower secondary. That has to be much more articulated and available so that people can resolve this issue.

I am going to give some headlines. Here we have said that trajectories and training itineraries must be much more flexible, but that is possible to the extent that educational and employment guidance mechanisms are available to people. We are betting heavily on completing cycles because we believe it must end with support in educational and employment guidance so that people can contextualize it quickly. We have made agreements with high schools in eleven departments of the country so that fifth- and sixth-year students receive educational and employment guidance. I recall that with Juan Bogliaccini and Felipe Migueo we worked on the design of a mechanism that would make it possible to link what happens in the orbit of UTU, ANEP, and Inefop. It is a kind of portal that makes it easier for the person to build their own itinerary and occupational project according to the reality they find themselves in.

MR. BOGLIACCINI.— I will be brief.

I simply want to look at the big picture again. This is the Special Commission on Futures, and if we look ahead and at our young people, we will see that there are two

giant holes in our welfare state: from zero to three years, and the completion of the secondary cycle.

The present graph shows the completion of the secondary cycle for the population between twenty and twenty-four years old. We are the red dot at the bottom, just above Guatemala; a few years ago it reached 41.6%, which means that four out of ten students achieve it. That includes people who previously could not access university and are now studying, and also those whose parents finished secondary school. Everything you said refers to these four out of ten, but we have to remember that the remaining six out of ten are not here and companies don't want them because they didn't finish secondary school. Why is this happening to us? We already know! This happens to us because of falling behind and dropping out. Falling behind strongly demotivates the effort-achievement pairing—on which our society is built—and delays the satisfaction that comes from studying. Dropping out—already mentioned by everyone—means that the person leaves the system, and bringing them back is very difficult.

The second new social contract has to be a revolution of incorporation, a zero-to-three-years transfer. I clarify that I am talking about a serious transfer; I am talking about 30,000 pesos per mother with a child from zero to three years; I am talking about getting them out of poverty. We must also lower repetition rates. Let us have a social contract! Let us see what the average is in the OECD; I am not saying we eliminate it. Is it 2%? Fine. Let's make it 3%, but not 35% in the first years of lower secondary, because that is one in every three. This is the Uruguay of the future. Based on everything we have been talking about—I have some slides to also talk about the other matter—we have already left people out. So, we are only as good as a country as the worst-off among us. We need everyone to make it. There are no developed countries with net secondary school graduation rates below 95%. There are none! The best in Latin America is Chile, with 82%, and look at the conflicts they have in educational matters, in part because it advances unequally, it advances poorly, but in our case we are leaving them out. We don't know—María Inés Fariello said she hadn't found the figures—how many university students we have with more than one year, two years, or three years. The data were not found because we don't have them.

There are many other things that are extremely important, such as the four-day work week, designing taxation instruments for robots, and promoting educational certification plans, among others. It is very important to look back, but those who come behind us are not arriving. The only thing we have to sell to the world is knowledge. The country's sustainability depends on this. We cannot insist on this enough.

Thank you very much.

MS. LLAMBÍ.— Several of the things I had to say have already been said. I will try to focus on some others.

In my view, there are two big areas to work on. One is the training of the new generations: children and young people who are—or will be—within the education system. The other is, in parallel, the training and retraining, or reskilling and

upskilling, of all the adults or young people who are already in the labor market but outside the education system. They are two populations that are the object of different kinds of policies, although some of them may touch at some point.

Within the education system I had pointed out some aspects to highlight. One is that to the enormous challenge our education system already has—as has been noted here—in terms of access, quality, school dropout, and equity, among others, there is now added—if we are thinking about the future—that of identifying and defining curricular priorities in a changing world.

A new curricular framework is now being developed, which is an important advance, but perhaps that also needs a mechanism—as Felipe Migueles already noted—that is a bit more agile in terms of its planning, so that it doesn't take us years every time we want to change a curricular framework. We must have a framework of skills and competencies that addresses the development of fundamental cognitive, transversal, socioemotional, and digital competencies and skills and everything else that we must have. That is the first thing. In addition to the curricular framework, it would be extremely desirable to move toward the how and establish what types of activities should be developed so that children and young people acquire those key skills, that is, what strategies should be followed. Clearly, some strategies need to change.

We can look at studies done abroad, but there are also some here. A recent one by Ineed identified the schools that had better results than expected—you know it already—in relation to the socioeconomic context of the students they serve. What you see there are some strategies, such as promoting autonomous learning, developing activities with higher cognitive demand, et cetera. That is generating better results. So, the focus should be put on how to develop those strategies within the education system to motivate the learning of certain competencies and learning to learn.

What you do it with also matters; it is not just the other thing. Resources and spaces for collaboration must be offered. If one wants to facilitate project-based learning and other kinds of strategies, one also has to offer resources for educators and spaces for collaboration for learning. Here I touch on the topic of educators and teachers, which you already pointed out, but it is the fundamental pillar of any educational change. Without that we will not be able to succeed. That is how it is. It is key to address the transformations in initial teacher training—and there is a study by Vaillant that points this out—since there is a fragmented curriculum, a high school format, and a lot of things that have to be changed in that initial teacher training, as well as in in-service teacher training. Uruguay has some of the lowest coverage of in-service teacher training, according to PISA and Ineed data.

For me there are two important points to tackle there. One refers to the teacher professionalization policy. We must have a policy that stimulates advancement on the basis of academic training, in-service training, and the incorporation of innovative initiatives into their practice. There must be something that motivates, and there must be a professionalization policy.

The other is to address some training challenges of the teachers themselves. In the latest Ineed report, from 2021, there are the topics that teachers consider

indispensable that they must know or learn in order to transform their educational practice. In first place are transversal skills. Some 43% of teachers say it is indispensable to have that; that they don't know it and that they must have it. There are also digital skills and work with heterogeneous groups, as Juan Bogliaccini pointed out; if we have classes with different kinds of abilities, they have to be able to work with that. In turn, there is socioemotional learning, et cetera. I totally agree with what has already been mentioned about young people and adult training. In headlines, the first thing is that we must extend and strengthen programs that incorporate work as a training setting. It cannot be the only alternative because perhaps we don't have a market for that, but I do think it has many advantages.

The other is the topic of technical and technological education that you already mentioned. In the case of non-formal learning, looking at adults, I think there are two or three important things to mention. One is to identify the needs of the population—what Juan Bogliaccini mentioned about PIAAC may be one route, but the truth is that we should have it—and another is to set up a mechanism to identify the areas of the labor market where there are gaps, which helps us direct resources to training programs and place subsidies in the programs that are necessary and also in job guidance.

MS. SANGUINETTI.— Thank you very much. If you agree, the presentations could be circulated afterward because there is a lot of relevant information in them.

MR. MIGUES.— Just now Cecilia Llambí brought two examples of how institutional design sets the possibilities or the decisions that people make. In the report that spoke about Ineed, the elements that characterize the schools and the elements that cause schools to be better are distinguished. I am not going to discuss statistically what the difference is, but one characteristic of the better-performing schools is that they have many teachers who have worked at the same school for many years. The system of choosing hours—it was validated ages ago and we all know it—encourages teachers to rotate through the most critical contexts and not to stay there for many years. That is a first example. The second that comes to mind is that of teacher professionalization. What is the teacher's incentive to train? Where is it expressed in their career ladder? In what way? With how much force? These are aspects that seem silly and simple, but that trigger choices. It is not that teachers are bad, but that they decide rationally; I would decide the same as they do. What happens is that the rules of the game and the education system are not prepared to reward the one who is excellent and to improve the one who is doing poorly by supporting them and giving them a hand to learn how to teach better classes. There are two or three little points that I think are quite interesting to mention here with some examples. First, the learning of the future is bilingual and, as Guillermo Dutra said, not by quickly sticking in a bilingual upper secondary program, but starting from the CAIF, from very early ages. A language is learned much better and much more easily from early ages. That is a very interesting point.

Regarding programs, last time I said—and at the risk of repeating myself I bring it up again—that last year, in an interview with the director of the CED for a

research project we were doing with CAF and the ILO, he said they are thinking about training plans that are four years long in which only the first three are designed; the fourth is left blank until the third arrives, and only then is it designed. Otherwise, if I put the person to study for years on something I foresaw today, I condemn them. That kind of thing, which seems like science fiction to us and to the Uruguayan education system, is happening in the world, and they are ways of approaching problems in the region.

Regarding the school-to-work transition, there is the idea of incorporating the labor market definitively so as not to lose too much time in incorporation discussions. In Uruguay we still have many discussions about whether we train for the labor market or for thinking critically, as if they were two different things. It is the same thing, because we all think critically at work. So, we lose a lot of time on things we should resolve quickly. It is dual; not only is the modality dual, but adults, when they go to train, will do so while working. Therefore, that training has to be incorporated into the educational offering that is made, in the schedules, in the modality, and in the workload that is proposed. We must train teachers so that in some time—hopefully—they receive, in the grades and even in upper secondary, people who are eighteen, but also forty-five, who go back to study a degree. What is that class like? It is very strange, because there is a person who has been working for a long time and suddenly a classmate shows up who is just starting out. How we put that together is also a mystery, but if we do things right, that is the classroom of the future. So, there we have to take that on. There is another topic that has to do with rethinking what we understand by diversified upper secondary and by diversification. As I said a while ago, UTU has twenty-two options for kids of fourteen and fifteen. I don't know what decisions you made at fourteen or fifteen, but I drown among twenty-two options; Humanities, Science, and Biology was already extremely complex and also determining; that is the important thing. When one of these options is taken, you walk four years ahead. I believe that in training there are many more options, because there are students choosing subjects and paths that are negotiated quickly—a little technical, a little university, a little labor market—and the teacher no longer teaches the subject but accompanies the kid in individual learning processes, helps them not to get frustrated, and to design strategies.

MS. FARIELLO.— There is one thing that Felipe Migués said that I think is key, which is to raise the profile of UTU-type programs.

It often happens that the technological programs are an alternative for finishing formal upper secondary, which brings you to the labor market much more quickly. This is not only the case with the technological ones but also with all the others. I think it is a very serious problem of the country to look down on that type of training. I don't know whether it is through a marketing campaign, but their profile has to be raised a lot.

On the other hand, I see that something is repeated quite a bit. I think we have to train bilinguals. Personally, I ran the experiment with my daughter. For five years I let her watch cartoons only in English. Today she told me: Mum, I'm trapped. In turn, for two years she has been going to the Colegio Alemán, but she still can't say it in that language.

So, we have to see how we think about this. That is, not thinking about bicultural upper secondary programs, but sometimes there are strategies that are extracurricular. The question is how we transmit them, how we diversify them. That experiment, obviously, works in my house, but perhaps a person who is worried about going out to eat is not going to worry about whether he puts Netflix on in English and whether he forces him to. That leads me to think that what is proven is that we talk a lot about the curriculum in school success, but we do not refer so much to communities. One of the most important variables in that success is how much parents get involved with their children's schools. There are a lot of articles about that. In turn, we see it in public schools every day. These are schools in contexts where parents have better education and get very involved in the parent committees. They work much better than the ones located in other contexts where, suddenly, parents don't have that time. It happens in Uruguay. I also saw that the same thing happened to my friends in France when they started teaching at the university and, by points, had to see where they could choose. They always ended up in the banlieue parisienne, that is, on the outskirts of Paris. They spent some time and, as soon as they could, they left. It means that the same thing happens here and in the rest of the world.

MR. MIGUES.— That is strictly linked to the permanence of stable teachers in schools.

MS. FARIELLO.— Exactly.

MR. MIGUES.— It is a harder counterpart.

MS. FARIELLO.— Totally agree. And if it is a school in a critical context where there is a hostile environment, no one will want to stay and work there. So, we have to think about the curriculum, but also about how we get the communities around the school to get involved with it.

On the other hand, we talk a lot about how to train teachers. Earlier they were saying how great it would be for someone who works in Java to go teach at a high school. Actually, it is the other way around: how great it would be for the high school teacher to be able to do an internship at a company and learn to program. What happens is that for this they must have time. I think the context for many is that the teaching load of the classes they give is too large. We want to demand that teachers train, be creative, and do project-based learning, but we have to see when they think about that and when they can step out of the way of giving classes. That is, if I only teach all day, the only thing I can do is repeat year after year because there is no way, however much willpower I have. Therefore, I repeat, we have to see how we do that. I want to refer very briefly to a very useful tool, which is Plan Ceibal. A while ago I was thinking about this Jóvenes a Programar and about how rural schools could function as the center of the community to be, for example, a place for the training of rural women. I have the child who is going to be trained and also the mother who stayed behind. In general these are young mothers who send their children to those rural schools and, many times, have to stay at home, in the countryside, doing things. Women are not only the labor reserve; they have many capacities. So, we would need to find a way to make compatible that school, which often serves only two or three children, and see whether that facility

—which is already up and running— can also be used as a place of learning for other people in the community who will never make it to the city, the university, or UTU to be trained.

MR. MIGUES.— I want to refer to one more aspect.

The problem I was bringing up, which is seen from Inefop, of the teachers of the Web Development and Java courses is something real. The opportunity cost of teaching for someone who works in the professional labor market is very high, and it most likely always happens with innovations. That is, those who are learning to execute are in companies and earning very good money. So, how do we bring them into the education system so that they help us teachers learn it, but also the kids, and, suddenly, be teachers even though they haven't gone through the IPA? How do I get them to come quickly and be able to give good classes? That is another challenge.

MS. FARIELLO.— At Pedeciba we run the Acortando Distancias program, which consists of internships taken in the summer—generally in February—for high school teachers who come to do research in mathematics. Obviously there are very few of them because resources are scarce. I was a tutor to one of them and there was a great experience with a young woman who was a Mathematics teacher and who did an internship in what I was researching, concerning mathematics applied to biology. She told me: “This is great for me because this way I can interact with the other teachers and start training them.” So, sometimes an internship doesn't have to last a year but can be thought of for the summer—although that is when they can rest—, in particular in the month of February, which is a good time of opportunity for making these things compatible. It is a lovely program, although few of us say “this year I'm dedicating myself to that” because it demands a lot. However, if we rotate, little by little we get through it.

MS. ARAMENDÍA.— By way of closing, I want to emphasize what was just said, regarding what I mentioned earlier: the importance of working between universities and companies. Of course that also applies to the needs of upper secondary. That is precisely what I wanted to refer to: very specific training is needed that teachers do not have but companies do. In that case, the development of policies that incentivize companies to release hours of their staff to train and work in both high schools and universities, I think, can be an incentive-based tool for the new joint work. On the other hand, I want to highlight four points and then develop some final comments.

Without a doubt, we need continuous learning throughout our whole lives, but I think it is important to keep in mind that this must be the responsibility of each one of us and that we have to be proactive about it. Our role in the family, with siblings and friends, and in the community, must go in the direction of collaborating so that others also become aware of this.

In this regard, I want to put emphasis on the importance of raising awareness. Sometimes it happens to me that my friends—who are professionals—tell me that their sisters don't know

what to study or that they are out of work, and when I tell them why don't they start studying something in IT, where there is great demand, I realize they didn't even have it on their radar. So, I think there is still a lot missing in making it known that there is real demand there and that with a little knowledge it is already possible to get a job placement, and then continue deepening. I think that is still not known and that people don't have it very well identified.

On the other hand, I want to highlight the experience of Estonia, a country I always take as a reference for how it quickly updated itself and brought the future into the present, above all by emphasizing digitalization and technology. Among the keys they used for the educational transformation, obviously they took many measures, but I will highlight a few.

First, they based themselves on equality of opportunity. I mean they sought compulsory education throughout the country—that is, in rural schools as well—and paid great attention to children with certain special needs. They also gave importance to languages and to the teaching profession, which is highly valued. The aim is for the latter to have continuous training that is focused, and for innovative practices to be carried out.

Second, highly technological education was pursued. Here we are talking about programming, learning related to the creation of video games and virtual environments. That means the aim was to awaken students' scientific curiosity. On the other hand, emphasis was placed on creativity and critical thinking. They work with real problems. The aim is for them to work outside the classroom on projects that are not necessarily academic, but whose application in practice can be seen.

Finally, we highlight the importance of continuous research and training. We have to be aware that at every moment of our lives we must train in order to adapt, be flexible, and respond appropriately to new needs.

Thank you.

MS. SANGUINETTI.— Before finishing, I want to note that at the start of the meeting I neglected to thank Lydia Garrido and Inés Fynn of the UNDP, who support us in this work of the commission.

A great many valuable and relevant things have been said, but I would like to close with one concept. Undoubtedly, here we are thinking big and macro and, if you will, we have the possibility of influencing the construction of big public policy, but we know—and it has been said here—that we are a country where the interaction between academia, the State, and the private sector still needs quite a bit of oiling. Therefore, I think there is a very relevant road to travel in that regard. While we think big and drive those big changes, there are also small matters that may seem trivial but that we can drive from this legislature.

A lot was said about data. Last year I happened to share a panel with a person who told me a phrase that stuck with me. The person speaking to you works quite

extensively on disability issues, and it is an area where we have almost no data. This person said that when a country does not measure something, it sets the tone about whether it prioritizes it or not. Many of the academics who are studying a topic as relevant and sensitive as education in our country are running into the lack of data.

Mr. Bogliaccini said that there are data that are not shared. While we dream and think big on those matters that we have to drive, there are small steps that, perhaps from our place, we can help move. That is why today those of us who make up this commission are willing to receive your suggestions and ideas in relation to these micro steps, while we think about the big ones.

Thank you very much, once again.

MS. FARIELLO.— It is very important to legislate on the issue of sharing data because in Uruguay there is a strong cultural problem, since there is a fear that if those data are shared, then failures will be shown. Obviously failures will be shown. Personally, I had a very bad experience while on the GACH. The President of the Republic had ordered that they give GACH all the data it needed, but it was not so. That is, they gave them to us, but they made us sign a confidentiality agreement in which even the models we generated had to be confidential, which we completely refused. The commitment said they would give us the data but we could not state a single conclusion in public. We could not even say that the pandemic was in such-and-such an age range at one moment and in another at another moment, things as insignificant as that. Needless to say, mobility data from telephony, which was an agreement with Antel, but based on person-to-person trust. It was achieved, but obviously there is a commercial part. The way the data were requested was extremely aggregated and did not reveal data about telephony, but about people's mobility. One had to be very careful because of a lot of existing regulations on people's privacy, but they were always aggregated data. Needless to say about genomics, because there was a tremendous mess there. With this I give some examples of an extremely critical moment for the country, in which there was a mandate from the President of the Republic, but even so, in that context it was super hard to achieve. There was a lot of friction, and every time we asked for new data they gave us the runaround.

MS. SANGUINETTI.— You are the academics and for us you are valuable sources of input on comparative legislation. If you know of countries that have made progress in the right direction in this regard, we are open to receiving the information. Thank you very much, everyone.

The meeting is adjourned.

(The time is 18:03).

Montevideo, Uruguay. Legislative Branch.