



SPECIAL COMMISSION ON FUTURES (*Session held on August 23, 2022*).

MR. PRESIDENT. -If there is a quorum, the session is open. (*It is 16:13*).

- Good afternoon.

We begin a new session of the Special Commission on Futures of the General Assembly.

The coordination of this session is in charge of Ms. Legislator Sanguinetti and Mr. Legislator Melazzi, who will connect via Zoom.

MRS. SANGUINETTI. -We are delighted to welcome the experts Ms. María Inés Fariello, Ms. Cecilia LLambí, Ms. Mercedes Aramendía and Ms. Lydia Garrido, and the experts Mr. Juan Bogliaccini, Mr. Guillermo Dutra, Mr. Felipe Miguez and Mr. Bruno Gili to address the theme "New capabilities for the 21st century: Lifelong learning". We welcome them and thank them for their presence in this area.

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 that this traditional segmentation that existed before between work, skills and work capacity as independent spheres is now becoming blurred because everything is being mixed, joined or merged. Societies are moving towards what is lifelong learning, that is, towards learning to learn and relearn; it is the attitude that we must have, especially our young people throughout their career.

I think it is important to point out that we are in this at the same time as a transformation in education is being promoted. In fact, we thought it would be a good idea to have Adriana Aristimuño present at this session – we would have loved it and it would have been much more interesting than the speaker – but unfortunately her schedule is crazy. In fact, this commission was going to take place at another time, but she could not attend either.

In short, much of what is being done and what is being promoted through educational transformation has to do with this paradigm shift. I invite those who are not familiar with the national curriculum framework to look at it because I think it is a very valuable document that is being studied by the different groups and sectors of society. In reality, it is aligned with what is proposed in this third axis and is so necessary for our country.

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

(The connection via Zoom with Mr. Melazzi begins).

– Since you have been able to connect, we welcome Mr. legislator. Melazzi, to whom I told that I was introducing the topic and was going to start with the questions.

MR. MELAZZI. -Good afternoon everyone, greetings to the Chairman of the Committee, the legislators and the experts.

Since I just connected, I want to know if the legislator Carmen Sanguinetti has already spoken.

MRS. SANGUINETTI. -Yes, I made a brief introduction. **MR.**

MELAZZI. -Perfect. Thank you!

I simply want to make a brief, more earthly introduction, that we have the experts who will be able to expand on the subject in some way.

First of all, I say good afternoon to everyone.

As mentioned above, on this occasion we are going to address Vector three of the document, “The future of work and the work of the future”, which emphasises the need for lifelong intensive learning. Training must be actively available throughout a person’s life and for the whole of society.

In this context, our country faces challenges during the 21st century that push it to continue thinking about the development of capacities, skills and competencies for the future of work. In this scenario, we find that the figures that have been handled for this year regarding the growth of the global economy are around 3.2% worldwide; however, in Latin America the economy will grow only 0.6%. Therefore, we should ask ourselves what are the reasons why, in some way, we grow so little. There may certainly 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 increasingly worth more than manual work and that the *commodities*-like oil, among others – will be worth less and less. It is for these reasons that Asians have created an educational meritocracy where students study more and better. However, in Latin America education is becoming increasingly behind and distant from the real world.

In our region we continually talk about the heroes of the past in terms of education, which seems very good to me, because we are this present 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 by the future, we Latin Americans live guided by ideologies and are obsessed by the past. As an example – I have heard it several times – our currency is compared to theirs. For example, in Latin America our coins have heroes of independence and in Singapore their currency shows the university with a

teacher, his students and you can read the word “education.” That is to say, while we venerate our heroes of the past, they venerate the innovators of tomorrow.

I just wanted to make this little introduction. I appreciate the opportunity. And I hope that we can move forward to have a more just society and generate opportunities for all. I believe that this commission was formed with that in mind.

Thank you very much, Madam President.

MRS. SANGUINETTI. -If you like, we can move on to the question that says: What are the main challenges that Uruguay faces in keeping up with the changing context and its requirements for individuals, groups, and companies to perform in the world of the future of work? What capacities, competencies, and skills?

MR. DUTRA. -Good afternoon.

It is really a pleasure to be here to discuss this issue. The last meeting at the event that I attended marked a vector of transformation: lifelong learning as a vector that could bring about the transformation that the country must face for sustainable development, with the implications that this concept requires.

Perhaps permeated by the role I am currently playing as a director from Inefop, my vision and my contributions can be complemented by those of the other experts. I would like to address the issue of the definition of lifelong learning to be clear about what we are referring to and where we want to go. This is a concept that 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 in the interest of sustainable development.

Lifelong learning challenges us to recognize the formal education, non-formal training spaces and even informal training. Clearly, these are components that complement each other; we have to recognize those areas where learning is generated: the classroom, the company, the community. Ultimately, these learnings are what will enable – to the extent that they can be accumulated and recognized – the exercise of citizenship and employability.

So, I think that the goal of lifelong learning leads us not only to view the issue from the educational perspective, but also to try to integrate other actors and other areas in its approach, in its governance and in the reform processes. It is that complex and challenging, but that is what is being demanded of us today.

Legislator Melazzi set very tough standards for our production, that is, standards that guide competitiveness, that demand productivity, that demand being open to the incorporation of technology. In the same way that we have these demands and this agenda, we have a demand and an agenda that present us with structural problems. There are segments of the population that really have obstacles to being included in these learning processes that are taking place. I am talking about young people who have dropped out of the educational system, rural workers, women, workers who are in the informal sector.

For now, addressing the issue of lifelong learning seems to require taking care of this scenario that poses different demands and – I repeat – whose approach necessarily requires taking into account that what we are trying to promote in the 21st 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 for 2024 and, to do so, agreements had to be reached with the trade union movement and business organizations. We had to create an agenda that would allow us to build a navigation chart for 2025.

The first strategic objective was to promote lifelong learning with a focus in transversal competences in order to facilitate the mobility of workers in the workforce. Here are several points that begin to set the agenda for us.

When we talk about lifelong learning, we are focusing on people and not limiting 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 must acknowledge something that is new and difficult to work on, but which undoubtedly requires us to have more and more definitions in this regard. I am referring to 21st century skills and, as I have already pointed out, soft skills. Clearly, society is demanding answers from us, which are those that enable people to face change, to stay in training circuits and to build training itineraries.

I can tell you that in the case of Inefop we put together an agenda of ten transversal competencies to be able to address the issue. They complement each other, but take into account everything related to attitude, work culture, the ability to work in a team, to be able to communicate, to assume change and to be flexible in the face of conflict.

The identification we made of this first package of ten transversal competences, which we translated into a glossary, taught us to start including it in all the training that we are buying from Inefop to our suppliers. That is, we must relate specific training with the development of transversal competences and for that we bring this first reference of the glossary of ten competences that we are promoting with 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 a greater impact in the interior.

I think this is an issue that raises strong questions about formal and non-formal education and, from the perspective of employability, we are being asked for and prioritized in relation to specific training.

I will leave my intervention here; I will return to it later.

MRS. SANGUINETTI. -Thank you so much.

We now give the floor to Cecilia Llambí.

MRS. LLAMBI. -Thank you.

I wasn't sure if the idea was to make a presentation or not, because last time we had a conversation; anyway, I had put something together and I take this opportunity to share it.

(Presentation is displayed).

- Actually, in this first part I was thinking of referring to the main challenges that Uruguay faces in keeping up with changes in the world of work and, then, in a second round, I imagine that we will address the second topic.

The idea of this first part is to present, in broad terms, what are the aspects involved. Although there are many things that I believe are known by everyone, I think it is convenient to have a summary about where the main gaps are that we need to know and face in order to think about a context of lifelong learning in Uruguay.

The first - and most obvious, perhaps - is the fact of low capital accumulation. Uruguay has. That, in itself, is a restriction if we are thinking about lifelong learning and adult learning and retraining. That means that Uruguay, in comparative terms with Latin America, has a lower educational level of its population. As an example, I point out that on average in twenty-two countries in Latin America and the Caribbean, for those born in the eighties, 50% of the population has completed secondary education, that is, they already have at least complete secondary or university education. 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 a major challenge.

There is another aspect that is also relevant, which has to do with the above - although Not only that - and also, Uruguay's slow progress - which has been going on for decades - has not closed the gap between people in the lowest and highest income quintiles.

What you can see are graphs of the ratio of quintile 1 and quintile 5 of average years of education of the population aged twenty-one and thirty for several Latin American countries. Ultimately, what is important here is to note that, while in several countries in the region this ratio has been increasing, that is to say that it has not tended to close, but at least to reduce the gaps in years of education of the population between the lowest quintile and the highest quintile, this has not happened in Uruguay. This is another restriction that we must consider when thinking about policies for lifelong learning.

I want to point out, very synthetically -since it is not exactly like that-, that we have two population groups, groups 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 a certain upward educational mobility, but it is primarily among children of parents who completed secondary education. It is like the upper middle tail of the educational distribution that is advancing. This had to do with the expansion of offers in the interior and so on.

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

If the gentlemen legislators observe the celestial graph, they will see that in the region There has been some upward mobility, some reduction in educational gaps, and in Uruguay there is a fraction of the population for whom this has not happened. This is another restriction to take into account when thinking about lifelong learning policies.

When young people are asked why they drop out of the education system, There are two main reasons that I think are important. There is a first group that appears at the top of the graph. These are economic or work-related reasons, mainly expressed by men, and reasons for caring for children or family members, mainly expressed by women. In reality, they refer to restrictions in terms of opportunity costs that these young people are facing in order to continue studying. Any policy to encourage the training of young people in some vulnerable contexts must somehow be able to address these opportunity costs of not working or continuing to study and facilitate the care of children and family members, mainly for women.

There is another group of reasons that has to do with the educational system in I am referring to learning difficulties, preferences for learning different things, lack of motivation, perception that it is too much for the achievement that is going to be obtained, this is not useful to me, and so on. We must analyze what is the pertinence and relevance of what is being taught in our educational systems. This has to do with what Mr. Guillermo Dutra mentioned regarding what skills, knowledge or competencies we should be thinking about teaching young people that constitute a motivation and that increase their perception that they will serve to insert themselves in the labor market and in society.

Returning to what Mr. Guillermo Dutra said, it is not only in the There is also the educational system where skills are formed; there are other areas such as non-formal education, education at work, vocational training, etc. What we do know is that without completing formal education, job opportunities are greatly reduced, not only in terms of the quality of work and the possibility of being able to find a job in a formal company or a large company, but also in terms of the chances of receiving training at work. Work is a source of learning and large companies or companies of a certain size have training policies. *in house* of its workers and their retraining, but that does not happen with all companies. In addition, if the less well-trained young people or those who have dropped out of school do not join these companies but others, then their chances of continuing to accumulate skills are more limited. I will add another fact: if we compare Uruguay with Latin America, we see that, on average, the transition from education to work 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 this ratio is higher than in the rest of Latin America according to CED data.

There are many other issues, but in my opinion these are the main aspects to take into account when we think about the options or training models and the elements that we must consider to generate lifelong learning.

MRS. SANGUINETTI. -Actually, this is the second question that was in this one, what are the capacities, competencies and skills, and the one that has to do with educational systems and models is the second question that we can leave for later.

Thanks a lot.

Regarding what Cecilia Llambí commented on the perception of the In order to obtain the opinion of students about how useful they considered what they were learning, I think it is pertinent to tell you that a massive survey of students is being conducted at ANEP about these perceptions. We were recently told in the Education and Culture Committee that these results are going to be public, so for many of those who are here, who are academics and researchers on these topics, this is going to be relevant and significant information.

MR. BOGLIACCINI. -First of all, I would like 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 that I have had the opportunity to read.

(Presentation is displayed).

- The problem is not being few, but not being prepared and, although it is going to rain I want to give a different perspective on some things. I am going to talk about three issues. Firstly, what we are discussing in this meeting, which is about adapting, about lifelong learning, there is a question before this one that is very important: adapting based on what assets, because no human being can do it in the air.

Secondly, I would like to highlight the role of the political system. You are alone, you are like the Lone Ranger, and I will explain why later.

Thirdly, I would like to mention the proposal for a new social contract, which has two components and which I do not want to leave without explaining.

In Uruguay and in the world we have an aggravation of the shortage of workers. In our country it is obvious and the same thing is happening in the world. For a while the demand for labour will increase, but the supply of labour will tend to decrease. What can we do?

(Zoom connection is interrupted).

- Thank you all for your patience.

I'm going to mention automation, the promotion of immigration - many countries are trying to do this -, the increase in the retirement age, which is a discussion that Uruguay is having at the moment, including many more women in the workforce or what is called the reserve army and the maximization of skills development in the workforce. I'm going to talk about these last two issues. What does this imply about adapting? It implies that in the coming years there will be an abundance of women.

The problem is that there is a shortage of unskilled labor and a shortage of skilled labor. So, there are two problems to adapt to: the shortage of labor supplies plus the mismatch between available skills and required skills. This is a big problem for us. Adapting – and I want to focus on this – requires our own tools that are first acquired in the educational process. The use of our own skills is a prerequisite for adapting to the future or for innovating. Therefore, when we reach a certain point in our life, we have to think about what our portfolio of activities is, what are those assets that, if they are scarce, determine that our capacity for adaptation is diminished, as well as the capacity to intuit ways of change. Why do I want to insist on this? In reality, today we have two Uruguays: the one that is within the educational system and the one that is outside. They are two halves. Mrs. Llambí said it and now I am going to try to emphasize it. This is an exercise. This is the index of potential human development 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 are, and on the right side there is an adjustment for educational inequality. Regarding this, I ask that you look at the slope of Uruguay, which is gigantic. It is one of the countries with the greatest loss of human development due to educational inequality.

MRS. SANGUINETTI. -Sorry, but I don't see which one is Uruguay.

MR. BOGLIACCINI. -It is the penultimate one. It was a bit small. The orange one is Costa Rica and below, at the end of everything, is Uruguay in blue. It is important to see the slope. This is an exercise, but we went from 79.5 to 64.2 due to educational inequality. This means that looking backwards 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 of all, the economy is not going to help us, because due to the productive matrix itself, the demand for social labor or the most thriving sectors is scarce. Our export sector is primary. We have few specific skills. Mrs. Llambí said that in some companies they train workers, but in Latin America this is extremely marginal. Specific skills are not required in these labor markets and in relation to specific skills by sector, such as construction, for example, we have great difficulties in generating that training because if the person is trained and the company next door takes them away, a problem is created. Our construction sector is extremely successful at this and we can then talk about that example. This low demand for skills produces a *tracking* very weak towards the formal education system and this generates few incentives for training by companies because there is a high risk, as I said before. There is a bottleneck to boost dynamism in new sectors. They will suddenly appear, but we do not know when. For example, the development of the *software* Today we find that we do not have people to employ. Today we can think about the *software* and be very worried about the programming, but the truth is that I am worried about what is coming, which we do not know what it is or when it will come. We know that we do not have a workforce and that we do not have the people trained. We do know that. 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 problems in the south, which, although known, are still important: poverty, lack of skills and low productivity.

Public opinion is not going to help us either, and this is very important. Many times, a driving force of our political system – of any political system – is to have a public opinion that pushes for change. There are some incipient studies on this that are very interesting.

It is well known that educational reform has concentrated and immediate costs, but dispersed and long-term results. So, we are going to assume the costs, we are going to heat the kettle – so to speak – but someone else is going to drink the mate. Public opinion has a greater influence when the political system is vocal, but on the basis of high prominence and consistent attitudes. So, when the political system is aligned, public opinion is also aligned.

On the other hand, when problems are prominent – as often happens in Uruguay – and the attitudes of the political system are in conflict, even if the signal in public opinion is strong, noisy, political parties tend to have more influence in policy formulation than public opinion. Therefore, public opinion does not help me. Do you understand?

Now, when the political system does not vocalize the educational problem in a consistent manner – this is the third circumstance – the salience of the issue is low and interest groups are dominant in determining policy. These are the universes in which neither the labor market nor public opinion will help the political system to process these reforms.

There are some instrumental nodes to address the problem that seem to me. There are many key points. One of them is that we need much more data for a fluid diagnosis. In Uruguay there is a reckless shortage of data and the little we have is not provided. Sometimes the Government does not provide it to 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 school, Aristas in primary school, but we are not going to have PIAAC – it is the PISA of permanent skills –, even though we have been talking about permanent 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 up some – but this data problem is not at all minor. Sometimes I think that Uruguay should be in the OECD for one reason only: it is obliged to have its statistics in order 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 to those of others.

I think we need a new social contract.

(Dialogues).

– First of all, we must end child poverty. The first thing we must do is The question to ask is why we have child poverty and attack it with economic transfers in *cash* the mother-child binomial between the ages of zero and two. Child poverty is a political decision and a limitation to neurocognitive development, with partially irreversible delays.

So, I return to the first slide. Who can adapt? Let's look at the trajectories of the children and then ask ourselves if we are all capable of adapting or if these dialogues - which are important - do not often fall exclusively on the farm of those who arrived. As Cecilia Llambí said, only a few go to the workshop.

In the two graphs that I have and that appear on the screen - you can't see much -, We have Uruguay -the graph on the left- and Norway. The two lines below are the transfers in *cash* throughout life; the last is retirement. I particularly point out the yellow part, which is the transfers that Norway makes, *cash*, to mothers from poor homes. 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 be expensive to grow and is key to avoiding a set of problems - neurocognitive delays, child nutrition problems - that are extremely difficult to match, no matter what we do years later.

Uruguay can do this because it has a welfare structure extraordinary. We have been doing this for generations, but we need to - and I'll leave the second component here for everyone - eliminate child poverty.

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

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

We were discussing some things at the last meeting. I have a very bias. Of course, towards education, towards young people and the labour market; therefore, I will try to get out of there a little bit.

I was thinking about the same idea that Cecilia Llambí and Juan Bogliaccini were conveying. I would like to add some more nuances to add complexity to the analysis.

The first thing I say is that Uruguay is not starting from scratch; that is the first thing difficulty. Uruguay does not build on vacant land, so to speak, but on a lot of things that already exist. Mainly, there is the low level of human capital, but it tends to concentrate very strongly on young people.

An economist from Cepal spoke of unemployment, of flow and of *stock*. The Young people become unemployed because they are young and they are going through the space of taking flight, the right of way, or whatever it is called, and then they get a job. That is seen and as we increase the age, the specific unemployment rates are falling. I also spoke about another idea of unemployment *stock*: young people who are not employable today 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 clearly sets the tone for future educational paths, because there is a *stock* of very unemployable people.

A study has not been done, but we are trying to do it with the Center of Development Studies. In the last twenty years, in Uruguay almost half of the

The unemployed population, a little more or a little less, between twenty and twenty-four years of age had a maximum educational level of basic cycle. They faced unemployment with a maximum educational level of basic cycle, from twenty to twenty-four years of age; therefore, the probability of their reintegration into the educational system had already fallen considerably.

I add another element; more than two, I would say that there is a third Uruguay. We have Uruguay is outside the educational system, but with those who are within the educational system we have two more: those who are learning and those who are not learning. There are many kids who are within the educational system and are not learning because the educational system is not able to focus on the proposal that is being made to them. I think that there we have a third population that I think is good to incorporate.

I also add another challenge that is institutional and cultural – which go hand in hand – and that is that for Uruguay to move towards this idea of lifelong learning that, 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 proposal. Developed countries have enrollment rates in technical education – which here would be UTU or UTEC – very close to half. Here in Uruguay, although it is the only educational offer that has grown, enrollment is far below that.

The other day, while working at a youth centre in La Cruz de Carrasco, I was surprised. I thought that the idea of option B was much more for the higher socioeconomic levels. If someone says, “My son didn’t go to university, he went to UTU,” they reply: “Oh, what a pity he went to UTU.” Many mothers at the youth centre said: “I don’t want him to go to UTU; I want him to go to secondary school.” I was very shocked and I thought it was very interesting to bring it up. This cuts across the cultures or images that we have to break within the educational system itself in order to work on this issue.

Another challenge that is gradually emerging is that of institutional design: How are institutions designed to be relevant, to focus on quality, to make decisions quickly, to not delay? This is an immense challenge that Uruguay has in general, but in education it seems to be very clear, very powerful. I’ll give as an example the time it takes us to modify an education program. As the world changes five or six times, we have only just reached a more or less agreement on whether the curricular framework was prior, was subsequent, was in the middle, on the way, if it was a martyr document or what.

This difference in speed is also rooted in designs institutional factors that sometimes make it a bit difficult not to run at the speed of the job market – because it is impossible and I don’t think it is even desirable – but to be a little more agile and move more along those lines.

That leaves the idea of *path dependence*, the past that determines the future, and it is difficult for us to break the notion of how the educational system is structured.

Regarding lifelong learning, it is a topic that I like very much and I’ve been reflecting on this. In general, I’m overwhelmed by the idea of lifelong learning, because it’s a lot of time that’s quite different and I like to think of it in terms of

different stages. One – and I am very glad that Juan Bogliaccini has also brought this up – is the one that goes from zero to three years. The first permanent learning begins there and maybe even before the child is born, in the care of the pregnant woman; there we are already setting some limitations, some ceilings, for young people in that sense.

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

Finally, there is a slightly longer stage of relearning and *upskilling*, in which you learn new things to move transversally and also vertically in the job market. In this regard, I come to very few conclusions about what it is and what it should imply because I am overwhelmed by the feeling that lifelong learning encompasses a number of concepts; there is a lot of stuff said but not clear and, in reality, it seems that we all agree, but when we go to refine them, we do not all understand the same thing. So, these concepts are a bit tricky.

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

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

Also, lifelong learning is essentially self-managed, meaning that those who are going to make lifelong learning decisions are adults who do so autonomously. At the same time, how could clear and precise information systems and incentives be designed so that people continue to learn? The job market is extremely unfriendly to this. We have to see what is in demand and what skills are required, such as JavaScript, HTML, Blockchain and logistics of I don't know what. Well, what is in demand is the person who helps others understand all this. This is taught here and the learning is of high quality. Therefore, it is necessary to know how we generate clear and precise information 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 large number of spaces that have to start to be recognized. Formal education has to be able to say: "If you have been working as an electrician for ten years, you do not have to go to UTU to study Electricity I. You clearly know Electricity I, so prove it to me and continue. I do not have to hold you back here any longer." The same should happen in the job market, and education should recognize the evaluations that are made within a company. If the company says that the person knows how to do something and that he does it very well, education has to be able to say: "That's fine, it is a skill that he acquired." In other words, the company is an absolutely definitive part of this process.

On the other hand, lifelong learning does not have a favorite path. We always think about the training path, but it is something totally cultural that we must break with: school, basic cycle, high school, tertiary studies and employment. In reality, what the data show us is that half of Uruguayans get a job between seventeen and twenty-two years old, and that the only quintile that manages to postpone that decision to enter the labor market at that stage is the fifth. That is to say that the first, second, third and fourth quintiles behave the same, so that –this was also mentioned by Cecilia Llambí and it is very good to interpret– that need to enter the labor market just because the family needs money is not so clear to everyone. The third and fourth quintiles make decisions about entering the labor market just like the first and second; that is to say that there is something else at work that I find interesting to analyze. This also tells us that they face the job market – that is, the last stage of this lifelong learning process – with what we basically gave them in secondary education; those who are luckier, with a year of tertiary studies. So, here we have to give them tools. Why do I focus on this stage? Because the paths that are cut short here or that are lost here are more difficult to recover later. The first job, in terms of quality and formality, has a huge impact on the quality of the job that is obtained later. The educational paths that are cut short there – Juan Bogliaccini shared a story in which this idea was seen – that is, those who do not finish the basic cycle, are much less likely to finish as the years go by. Imagine, for example, a twenty-four-year-old person who has been working for a while and has not finished the basic cycle, who has to go sit and listen to a Spanish Language class again. That's asking a lot, I don't know, but we're asking it. Now, luckily, there is a test called AcreditaCB, which for me is huge news for the education system, because with just one test in three modalities it allows the person to validate and accredit the basic cycle.

I think Uruguay has the enormous challenge of considering how to think about the future, but trying to incorporate people who have already been left behind. This is a very complex task to manage.

From that side, I think there are several challenges for Uruguay, but they exist. There are very powerful cultural elements and institutions – I had never seen the perspective that Juan Bogliaccini gave – that require much more powerful and precise consensus, and consensus brought from the population. There are a lot of high schools that do not have Math teachers until June or July; if I were a parent, I would be saying “bring teachers.” These mechanisms are not in place, because the information that Juan Bogliaccini referred to is not clear to those who evaluate the educational system, formal or non-formal. Therefore, I think that in this there is a set of challenges that we must continue to think about.

MRS. SANGUINETTI. -Thank you very much, Felipe Migues. The truth is that many questions, concerns and desires to delve deeper into some concepts arise, but we are going to continue with what we have planned.

MRS. FARIELLO. -I always feel a little embarrassed to speak after listening to them because, in addition to the fact that they investigate these things, my work is always in a smaller universe, more focused on university students. Of all

shapes, I started looking for some numbers because, coming from mathematics, it is difficult to talk without numbers.

I was always struck by what Felipe Migues said: that, of the Of those entering university, 25% are already working, and of those, 30% work more than forty hours a week. We always talk about how many enter university and how few graduate, and there is a certain anger towards the university because of that. It seems like I've chosen the wrong committee, but no, I know which one I'm on, although with many of the things I'm going to say, you're going to think that, I repeat, I've chosen the wrong committee.

So, I think we have to think about these populations. Once we get them into university and knowing that university graduates have such low unemployment rates, we have to think about those we lose along the way and how to, for example, accredit their training. There are many who simply do not finish university because two years of university training are enough for them to enter the job market, but I had a hard time finding numbers that quantify these situations. We know what percentage of university graduates are employed and what percentage are not, but we do not have the quantification of those who did two or three years because there is no data on that. It draws my attention because it is always presented as a binary variable, which it is not. In France, for example, they are classified as having a baccalaureate +1, +2 or +3. In other words, university training is not "university" or "non-university", but rather how many years of university training one has. Maybe it would be good to rethink that so that we can say, "I'm not a university graduate, but I still have a university education," and that's super important.

We recently spoke with the people from the Ceibal program, Jóvenes a Programar, and they told us about the installation process and what the business owners expected. At first, the business owners expected young people with training equivalent to the first two years of Engineering School. It is a totally different plan and, well, they adapted to what was required. This has to do, precisely, with how to prove that +1 or +2, which is super important, and also with the way of quantifying 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 PhDs. What I saw is that in Uruguay we have approximately 4.5 PhDs per 10,000 inhabitants. If we compare this with the member countries of the OECD, we will see that it is very few: in Turkey there are 10 and Germany there are 70 per 10,000 inhabitants; this represents 1% of the university population of Uruguay. Anyone who has ventured into science cannot help but always remember Clemente Estable's phrase "With great science there is no small country", and if we dig a little deeper, "A country is poor because scientific research is not carried out as a fundamental concern of the State." In this, the issue of causality always appears, the issue of where it can be seen if there will be more PhDs. Therefore, I looked at the graph of how many researchers there are in a country based on 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 it goes The per capita income is increasing, but the curve that represents the number of researchers remains almost flat, we can see a slightly positive slope. We can compare ourselves with Germany, of course, but the slope of South Korea, for example, is incredible. What people who are a bit more into the subject told me is that South Korea decided that its export product was going to be knowledge. At the moment when South Korea considered what it had and saw that it did not have so many raw materials, that the ones 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 OECD countries, when they cannot afford to produce doctors, they create programs to attract doctoral students. I was one of them, because my doctorate was fully financed by the French government and without asking me for anything in return. However, when we finance a Uruguayan to go abroad for a scholarship, we tell him: "Go, but you have to come back no matter what." "How?" "It doesn't matter, because there are no postdoctoral scholarships afterwards, there is nothing." "You go 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 have doctorates learn research methodology and statistical analysis, as two of the main characteristics. I don't know if 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 frontiers of knowledge in whatever area it was; if you don't push the frontiers of knowledge a little further, you can't get a doctorate; original knowledge is required as part of that.

So, when I started studying for a PhD, it seemed like training painters so that other painters would like them. I always thought of science as that, as the most ethereal part, but what is happening today is that companies are increasingly absorbing PhDs. We are experiencing the opposite, at least in the area where I work, which is related to artificial intelligence – although I don't like to use that word – where the data analysis part is in high demand. In that sense, after finishing a PhD, you say: "Perfect, I'm going to have a person who is going to help me train others," but suddenly they leave. It also happens that they are recruiting other scientists when before, for example, it was thought that a mathematician only knew how to do mathematics. Instead, now, they say: "Did you do mathematics?" "Well, come and analyze this." "But I don't know statistics." "It doesn't matter, but with your training you learn it right away." So companies train people who are very eager to acquire training quickly, because that was their training.

Although I know that I am at the other end of what we were talking about, I think that we always have to pay attention to two things: the urgency, on the one hand, and the future, on the other. We were saying that today is the *software* what we need, but we don't know what that might be tomorrow. I think the idea is to say: if I have a lot of 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 very clear about how the movements there took place; what I can say is that they are people who can quickly change from one topic to another, beyond the basic training. The fact that the

The fact that training has not been in a company, faced with a practical problem, but in other situations, helps them a lot to adapt.

MRS. SANGUINETTI. -I think that towards the end he said something that, it seems to me, is an inherent tension in this commission. Precisely, since we live in a country that still has some urgent matters, this commission poses this tension between addressing the urgent matter and addressing 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 this matter of having the possibility of having all of you who are experts in your different areas and sharing your visions with us, but in parallel we have urgent matters such as, for example, early childhood. That is where we have that tension. Luckily, we have the support of so many experts. I repeat: it seems to me that the crux, if you will, of this commission is that tension between these two realities. We also have to take care of the feedback, because if we do not focus on the future, the urgent matter will become more and more urgent. There is a very interesting relationship there.

MRS. ARAMENDIA. -Good afternoon. Thank you very much for the invitation. It is a pleasure to be able to join you.

I actually took a very different approach, so I am grateful to have had the opportunity to listen to the previous presentations because I learned a lot, they are all very interesting and we certainly have a lot of work to do on these issues.

When thinking about the questions I focused them more than anything on the future of work, analyzing which skills were most in demand, especially given the current demand, with the digital transformation, the new ways of working, what offices are like today, and everything that is needed as a response from the market.

As we know, everything is changing very quickly. Uncertainty is the norm these days, and being able to respond appropriately is key. To do this, we undoubtedly need to be able to adapt, be flexible, and constantly learn and relearn, as those who spoke earlier said.

Basically, people should be put at the centre, based on the fact that education will give them more freedom and the possibility of being more flexible, adapting, being able to do other new, different tasks or going deeper into them. We have many different aspects on which we must identify what the urgent needs are in order to find specific solutions.

In terms of education, there needs to be more and better quality, both formal and informal. This is focused on digital technologies. As far as early childhood and young people are concerned, we must ensure that from a young age they begin to have education in new digital skills and harder skills such as robotics, programming, etc., but we also have to focus on what are the digital skills that we need the rest of the population to develop, especially due to the issue of job reconversion. It is important that people can learn about the tools, their uses, that they understand them, that they know what the risks are, as well as the various challenges that we are currently facing, such as misinformation, cybersecurity, the challenges that are

They present privacy, the importance of addressing human rights, as well as what is linked to ethical standards.

On the other hand, the issue of teaching methods is very important, because we need teachers who are well trained, with specific skills to be able to help and teach, both children and people who need to retrain so that they can adapt and join the workforce. In this area we always have a challenge. At the university we are working on the subject of digital transformation and law, and we generally find that there are no people who are trained in the subject. So, without a doubt, in this area we need to create synergies between companies and universities. Companies need trained labor that, suddenly, already exists and, in turn, they can help us with the training of more human resources so that they can later be properly inserted.

It is also a challenge to develop and universalize the necessary infrastructure. And I'm not just talking about quality connectivity, but we also need equipment and content in languages because, frequently, when we train in new technologies, the texts are usually in English or other languages, and that is a barrier. The fact of having easy, quality and accessible content is an issue that we have to address. We have to take advantage of what the pandemic left us, in the sense that people got used to distance learning and using these tools. I think that is, in a way, an advantage that made us overcome a barrier, because before, people did not see online education as something so natural.

Motivation is key to learning, because many people – as shown in the graphs – said why they were going to finish high school if it was not really useful to them. So, having motivation and being able to apply what they learn is key.

In this regard, I repeat, it is important for universities and companies to meet, that is, between various actors in the economy, so that individuals have a real motivation, see how to apply their knowledge and not forget it. Three years ago I took a programming course, I did not apply it again and today I do not feel capable of working in that subject because I forgot it. The same happens with a language; I learned Portuguese, I did not continue studying, I did not speak it anymore and I forgot. The possibility of really applying knowledge, I think it is something very important, it helps to motivate people and to see results in the short term, focused on needs. Here, without a doubt, for what is research, development and innovation, I think the joint work between the Government, universities and companies is key and one of the elements that will help us to address emergencies and what is important, achieving changes quickly. As for the Government, I think it is important to develop clear policies and agendas that encourage and facilitate work, as well as investment in certain areas, in order to create new industries, products, services, as well as to understand the needs that exist, both scientific and technological, focusing efforts to address them because, suddenly, if we start studying things that are not applicable, we begin to generate disagreements.

Also, I believe that innovation comes from people, so we need trained human resources to create this knowledge, understand innovation and continue developing it, like a wheel. I also believe that it is important to help companies *startups*, to entrepreneurs, to SMEs, so that they can develop, meet needs and generate more work, more research, more development and more innovation.

On the side of universities, it is important that they promote research in terms and in areas where industry and public interest require greater efforts. In this way, I believe that resources will be focused and it will be easier to obtain funding, motivation, application, transfer, as well as absorption of resources. I understand that if there is sharing with industry and joint efforts between universities 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 also addressing real needs. We must not forget that today we have real economic and social needs.

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

On the other hand, also from the point of view of universities, it is important to create alliances between them at national, regional and international levels, as well as with companies, to facilitate development and allow exchanges, so that students can learn about other realities and then bring that knowledge back to the country. This helps us all to continue developing.

As far as the productive sector is concerned, I understand that it is important that more and more is invested in research, development and innovation, in entrepreneurship, in *startups* I think we are still in the early stages of these issues, but if we need specialized human resources – and companies, universities, the country need them – it is important that they have job placement and that while they are training they also have the opportunity to apply their knowledge, to be more motivated, to address real problems, with the consequences and benefits that this brings.

On the other hand, I understand that it is important for industries to be clear about what their needs are, that they are open and actively contribute to developing projects together with universities in order to deepen research and so that human resources can be absorbed by the market. Training and constant learning are important for this, and I think that some models that can be given are, for example, with mentoring or internships, through agreements made between universities and companies. In this way, students can apply their knowledge, have real job opportunities and are more motivated. For example, when I was studying in the United States, I had a group of

It was a multidisciplinary, cross-disciplinary job – there was a programmer, a network architect, an MBA; I was a lawyer studying technology – and we worked with a company, with Bill Gates' foundation, to solve a specific problem they had with application workers. So, we had a real problem and we were trying to find solutions. This, without a doubt, fulfilled us much more.

I think we have to work proactively as a society, reducing What are the gaps? I understand that we need new skills. We must have the ability to respond appropriately to uncertainty. We must be able to adapt, be flexible and develop new complex skills from an early age, but also promote the retraining of people who suddenly did not have that education, so that they can take part in various projects and multidisciplinary teams, all contributing from different areas.

Education is really the best tool we have to respond. in the face of new challenges and the future of work, and I believe that the key to responding better is, precisely, creating synergies and developing relationships of trust between the various actors in the ecosystem, mainly between the Government, universities and companies.

MRS. SANGUINETTI. -We have about half an hour left to address question number two. We have five minutes per expert, but I suggest we let it flow based on how the conversation is going and not be so rigid.

The second question is: "What educational systems and models can facilitate learning that accompanies permanent change?"

I don't know who wants to start with that question.

MR. DUTRA. -I can start, if you agree, because you have actually shared with us several things that motivate one to intervene immediately.

I think we are at a juncture that forces us to manage this tension between the immediate and the future. Undoubtedly, with a very pragmatic criterion, we have to start to find a way to face this future that is being pointed out to us, for example, by the IT sector, in the sense that in 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 keep in mind that, without prejudice to the fact that we face a series of solutions for this, such as signing agreements with Microsoft, with Amazon; addressing level one of digital skills or the development of a line aimed at accrediting *bootcamps* in the country, etc., in the 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 the GDP, is successful, exports and is even impacting the productive diversification of other sectors. That is a very strong signal that requires us to find answers today. We are finding them, but we must know that that is where the compass is going and that we have to keep moving forward.

This immediately opens up two points on the agenda, which have to do with the culmination of cycles and with languages.

The IT sector is clearly telling us that it is incorporating young people who have completed secondary education. The responses that we can implement are for those who reach this level. At that point, we give them specific training in programming and we can quickly insert them. In other words, the completion of cycles is an issue that should be on the agenda. It is an issue that is not limited 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. The 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 Basic Tutored Cycle or the Proces, are tools that we should activate, promote and project in this direction.

The second point that opens up the IT sector, which is also linked to the issue of diversification and orientation towards the foreign market has to do with languages. This issue was addressed today by the Board of Directors of Inefop. It is a huge gap that Uruguay has. So we have to resolve it and enable mechanisms that quickly solve or facilitate the resolution of this educational gap.

There is also an issue that I believe we have been handling in a very isolated and disjointed manner, and that we have to address in a more integrated way, much more effectively and with a higher 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 must be mechanisms that facilitate people being able to accredit their knowledge, whether acquired through training or experience. Today the country has mechanisms that are limited to a limited reality, such as what we are doing with the certification of competencies in Inefop, within the framework of Uruguay Certifica; what the Technical Professional Education Council is doing in terms of accreditation of knowledge or what ANEP is doing with the accreditation of the basic cycle. This has to be much more articulated and available so that people can resolve this issue.

I'm going to give some headlines. Here we have said that the trajectories and the Training itineraries must be much more flexible, but that is possible to the extent that there are educational-work guidance mechanisms available to people. We are taking a very strong line in relation to the completion of cycles because we believe that it must end with support in terms of educational-work 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-work guidance. I remember that with Juan Bogliaccini and Felipe Miguez we worked on the design of a mechanism that would allow us to articulate what happens in the orbit of the UTU, the ANEP and the Inefop. It is a kind of portal that helps people build their own itinerary and occupational project in accordance with the reality in which they find themselves.

MR. BOGLIACCINI. -I'll be brief.

I just want to look at the big picture again. This is the Special Commission on Futures and if we look ahead to 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 secondary school.

This graph shows the completion of secondary school for the population between twenty and twenty-four years old. We are the red dot at the bottom, only above Guatemala; a few years ago it reached 41.6%, which means that four out of ten students complete it. This includes people who previously could not access university and are now studying, and also those who have parents who finished secondary school. Everything you said refers to these four out of ten, but we must remember that the remaining six out of ten are not here and companies do not want them because they did not finish secondary school. Why does this happen to us? We already know! This happens to us because we have a gap and dropouts. The gap strongly discourages the effort-achievement binomial – on which our society is built – and delays satisfaction, starting from study. Dropout – 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, zero transfer to three years. I clarify that I am talking about serious transfer; I am talking about \$30,000 per mother with a child from zero to three years old; I am talking about getting them out of poverty. We must also lower the repetition rates. Let us have a social contract! Let us see what the average is in the OECD; I am not saying that we should eliminate it. Is it 2%? Fine. Let us do 3%, but not 35% in the first years of the basic cycle, because it is one in three. This is the Uruguay of the future.

Based on everything we've been talking about – I have some slides – to also talk about the other thing – we have already left people out. So, we are as good as a country as the one that is the worst off of all of us. We need everyone to come. There are no developed countries with net secondary school graduation rates below 95%. There aren't any! The best in Latin America is Chile, with 82%, and look at the conflicts they have in terms of education, partly because it is progressing unevenly, it is progressing poorly, but in our case we are leaving them out. We don't know – María Inés Fariello said that she hadn't found the figures – how many university students we have with more than one year, two years or three years. The data was not found because we don't have it.

There are many other things that are extremely important, such as four-day work weeks, designing instruments to impose on robots and promoting educational certification plans, among others. It is very important to look back, but those who come after us are not coming. The only thing we have to sell to the world is knowledge. The sustainability of the country depends on this. We cannot insist on this any longer.

Thank you so much.

MRS. LLAMBI. -Several of the things I had to say have already been said. I will try to focus on a few others.

In my opinion, there are two major areas to work on. One is the training of the new generations: children and young people who are –or will be– within the educational system. Another is, in parallel, the training and retraining or *reskilling and*

upskilling of all adults or young people who are already in the labour market, but outside the educational system. These are two populations that are the subject of different types of policies, although some of them may be touched upon at some point.

Within the educational system, he had pointed out some aspects worth highlighting. One is that, in addition to the enormous challenge that our educational system already faces – as has been pointed out here – in terms of access, quality, school dropout rates and equity, among others, if we are thinking about the future, we are now faced with the challenge of identifying and defining curricular priorities in a changing world.

A new curriculum framework is now being developed, which is an important step forward, but perhaps that also needs a mechanism – as Felipe Miguez already pointed out – that is a little more agile in terms of planning, so that it does not take us years every time we want to change a curriculum framework. We must have a framework of skills and competencies that address the development of fundamental cognitive, transversal, socio-emotional, digital competencies and skills and everything else that we must have. That is the first thing. In addition to the curriculum framework, it would be highly desirable to go into the how and establish what types of activities should be developed so that children and young people acquire these key skills, that is, what strategies should be followed. Clearly, some strategies need to be changed.

You can look at studies done abroad, but there are also some here. One of the Ineed recently identified the educational centres that had better results than expected – you already know this – in relation to the socioeconomic context of the students they serve. What we see there are some strategies, such as encouraging autonomous learning, developing activities that have greater cognitive demand, etc. This is generating better results. So, we should focus on how to develop these strategies within the educational system to motivate the learning of some skills and learning to learn.

It is also important what it is made of; it is not just the other thing. You have to offer resources and spaces for collaboration. If one wants to facilitate project-based learning and other types of strategies, one also has to offer resources for educators and spaces for collaboration for learning. I am touching on the subject of educators and teachers, which has already been mentioned, 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 changes in initial teacher training –and there is a work by Vaillant that points this out–, since there is a fragmented curriculum, a high school format and a lot of things that need to be changed in that initial teacher training, as well as in in-service teacher training. Uruguay has one of the lowest coverage rates of in-service teacher training, according to data from PISA and Ineed.

For me, there are two important points to address. One concerns the policy of teacher professionalization. We must have a policy that encourages promotion based on academic training, in-service training, incorporation of innovative initiatives in their practice. There must be something that motivates and there must be a policy of professionalization.

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

There are essential skills that they need to know or learn in order to transform their educational practice. Firstly, there are transversal skills. 43% of teachers say that it is essential to have these; that they do not know them and that they should have them. There are also digital skills and work with heterogeneous groups, as Juan Bogliaccini pointed out; if we have classes with different types of skills, they have to be able to work with them. In turn, there is socio-emotional learning, etc.

I totally agree with what you already mentioned about young people and the Adult education. First of all, we need to extend and strengthen programmes that incorporate work as an area of training. It cannot be the only alternative because we may not have a market for it, but I do think it has many advantages.

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

MRS. SANGUINETTI. -Thank you very much. If you agree, the presentations could be circulated afterwards, as there is a lot of relevant information there.

MR. MIGUES. -Justo Cecilia Llambí brought up two examples of how institutional design dictates the possibilities or decisions that people make. In the report that talked about Ineed, the elements that characterize educational centers and the elements that cause educational centers to be better are distinguished. I am not going to discuss statistically what the difference is, but one characteristic of educational centers that perform better is that they have many teachers who have worked in the same center for many years. The system of choosing hours – it has been validated for years and we all know it – encourages teachers to rotate in the most critical contexts and not stay there for many years. That is a first example. The second that comes to mind is that of teacher professionalization. What is the incentive for teachers to train? Where is it expressed in their teaching hierarchy? In what way? With what power? 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 decided just like them. The problem is that the rules of the game and the educational system are not prepared to reward those who are excellent and improve those who are doing poorly by supporting them and giving them a hand so they learn how to give better classes.

There are two or three points that I think are very interesting to mention here. Some examples. First, the future of learning is bilingual and, as Guillermo Dutra said, it is not by giving students a quick bilingual high school course, but rather from the CAIF, from a very early age. Language is learned much better and much easier from an early age. That is a very interesting point.

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

In the research we were doing with CAF and the ILO, he said that they are thinking of training plans that last four years, in which only the first three are designed; the fourth is blank until the third comes along, and only then is it designed. Otherwise, if I make a person study for years on something that I predicted today, I condemn it. These kinds of things, which seem like science fiction to us and to the Uruguayan educational system, are happening in the world and are ways of facing the problems in the region.

Regarding the school-work transition, there is the idea of incorporating the market. We have to leave the school for good so as not to waste too much time in discussions about incorporation. In Uruguay we still have many discussions about whether we train for the job market or to think critically, as if they were two different things. It's the same, because we all think critically about work. So, we waste a lot of time on things that we should resolve quickly. It's dual; not only is the modality dual, but when adults go to train, they do so by working. Therefore, this training must be incorporated into the educational offer that is made, in the schedules, in the modality and in the workload that is proposed. We must train teachers so that in a while –hopefully– they will receive in grades, even in high schools, people of eighteen years old, but also of forty-five, who return to study a career. What is that class like? It's very rare, because there is a person who has been working for a long time and suddenly a colleague appears who has just joined. How we combine that is also a mystery, but if we do things well, that is the class of the future. So, that's where you have to take that.

There is another issue that has to do with rethinking what we understand by diversified and diversified high school. As I said a while ago, UTU has twenty-two options for fourteen and fifteen-year-olds. I don't know what decisions you made at fourteen or fifteen, but I'm drowning between twenty-two options; Humanities, Science and Biology were already extremely complex and also decisive; that's what's important. When you choose one of these options you walk four years ahead. I think that in training there are many more options, because there are students choosing subjects and paths that are quickly discussed – a little technical, a little university, a little job market – and the teacher no longer teaches the subject, accompanies the kid in individual learning processes, helps them not to get frustrated and to design strategies.

MRS. FARIELLO. -There is one thing that Felipe Miguez said that I think is key, which is to raise the profile of formations like UTU.

It often happens that technology is an alternative to end the formal baccalaureate, which brings students much faster to the job market. This is not only the case with technology but also with all the others. I think it is a very serious problem for the country to undervalue this type of training. I don't know if it is through a campaign of *marketing*, but their profile needs to be raised a lot.

On the other hand, I see that there is something that is repeated quite a lot. It seems to me that we must to educate bilinguals. I personally did the experiment with my daughter. For five years I let her watch cartoons only in English. Today she told me: *Mum, I'm trapped*. He has been attending German School for two years, but he still cannot speak that language.

So, we have to look at how we think. That is, not thinking about high schools. Bicultural, but sometimes there are strategies that are extracurricular. The issue is how we transmit them, how we diversify them. That experiment obviously works in my house, but maybe a person who is worried about going out to eat is not going to worry about whether they have Netflix in English and whether they are forced to. That leads me to think that what is proven is that we talk a lot about the curriculum in school success, but we don't refer as much to the communities. One of the most important variables in that success is how much parents get involved with their children's schools. There are a number of articles about that. At the same time, we see it in public schools on a daily basis. These are schools in contexts where parents have better training and are very involved in development committees. They work much better than those located in other contexts where, suddenly, parents don't have that time. This happens in Uruguay. I also saw the same thing happen to my friends in France when they started teaching at university and, based on points, they had to see where they could choose. They always got the *Parisian suburb*, that is, on the outskirts of Paris. They spent some time there and, as soon as they could, they left. This means that the same thing happens here and in the rest of the world.

MR. MIGUES. -This is strictly linked to the permanence of permanent teachers in schools.

MRS. FARIELLO. -Exactly. **MR. MIGUES.** -It is a more difficult counterpart.

MRS. FARIELLO. -I totally agree. And if it is a critical context school where there is a hostile environment, no one is going to want to continue working there. So, we need to think about the curriculum, but also about how we get the communities around the school involved with it.

On the other hand, we talk a lot about how to train teachers. Before they said It would be great if someone who works in Java went to teach at a high school. In fact, it's the other way around: it would be great if a high school teacher could go and do an internship at a company and learn to program. The thing is that they have to have time for this. It seems to me that the context of many is that the class load they teach is too great. We want to demand that teachers train, that they be creative and that they do project-based learning, but we have to see when they think about that and when they can get out of the way of teaching. That is, if I only teach all day, the only thing I can do is repeat year after year because there is no way, no matter how much will I have. Therefore, I repeat, we have to see how we do that.

I would like to briefly refer to a very useful tool, which is the Ceibal Plan. Some time ago I was thinking about this thing called Jóvenes a Programar and how rural schools could function as a community centre to be, for example, a place of training for 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 these rural schools and, often, they have to stay at home, in the fields, doing things. Women are not only the labour reserve, but they have many capabilities.

So, we would have to find a way to make it compatible that school that often serves only two or three children, and see if that place

- which is already up and running - can also be used as a learning place for other people in the community who will never come to the city, the university or UTU to receive training.

MR. MIGUES. -I would like to refer to one more aspect.

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

MRS. FARIELLO. -At Pedeciba we do the Acortando Distancias program, which consists of internships that take place 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 for one of them and there was a really good experience with a girl who was a mathematics teacher and who did an internship in what I was researching, related to mathematics applied to biology. She told me: "This is great for me because I can interact with the other teachers and start training." So, sometimes an internship doesn't have to last a year but can be planned for the summer - although that's when they can rest - particularly in the month of February, which is a good time of opportunities to combine those things. It's a nice program, although there are few of us who say "this year I'm going to do that" because it demands a lot. However, if we rotate, we get through it little by little.

MRS. ARAMENDIA. -In closing, I want to emphasize what was just said, regarding what I mentioned before: the importance of working between universities and companies. Of course, that also applies to the needs of high school students. 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 encourage companies to give up hours of their staff to train and work both in high schools and universities, I think, can be a tool based on the incentive for new joint work.

On the other hand, I want to highlight four points and then develop a few final comments.

We certainly need continuous learning throughout our lives, But I think it is important to keep in mind that this should be the responsibility of each one of us and that we have to be proactive in this. Our role in the family, with siblings and friends, and in the community, should be to collaborate so that others also become aware of this.

In this regard, I want to emphasize the importance of raising awareness. Sometimes my friends - who are professionals - tell me that their sisters do not know

what to study or who are unemployed and when I ask them why they don't study something in IT, where there is a great demand, I realize that they didn't even have it on their radar. So, I think that there is still a lot to be universalized regarding the fact that there is a real demand there and that with a little knowledge it is already possible to achieve a job insertion, and then continue to go deeper. I think that this is still not known and that people do not have a good idea of it.

On the other hand, I would like to highlight the experience of Estonia, a country that has always I have as a reference how it was quickly updated and brought the future to the present, especially with an emphasis on digitalization and technology. Among the keys they used for educational transformation, they obviously took many measures, but I will highlight some.

First of all, they were based on equality of opportunity. I mean that they made education compulsory throughout the country – that is, also in rural schools – and paid great attention to children with certain special needs. They also gave importance to languages and to the teaching staff, which is highly valued. They sought to ensure that the latter received continuous, focused training and that innovative practices were implemented.

Secondly, the aim was to create a highly technological education. Here we are talking about programming, learning related to the creation of video games and virtual environments. This means that the aim was to awaken the scientific curiosity of the students.

On the other hand, emphasis was placed on creativity and critical thinking. They work with real problems. Outside of the classroom, they are expected to work on projects that are not necessarily academic, but that can be applied in practice.

Finally, we would like to stress the importance of ongoing research and training. We must be aware that at all times in our lives we must train ourselves to adapt, be flexible and respond appropriately to new needs.

Thank you.

MRS. SANGUINETTI. -Before closing, I would like to point out that at the beginning of the meeting I forgot to thank Lydia Garrido and Inés Fynn of the UNDP, who are supporting us in this work of the commission.

Many valuable and relevant things have been said, but I would like to close. with a concept. Undoubtedly, here we are thinking big and macro and, if you want, we have the possibility of influencing what has to do with the construction of large 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 to be well-oiled. Therefore, I believe that in this sense there is a very important path to take. While we think big and drive those big changes, there are also small issues that may seem insignificant but that we can drive from this legislature.

There was a lot of talk about data. Last year I had to share a panel with a A person who told me a phrase that stuck with me. The person speaking to you works hard

in 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 for 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 finding themselves with a lack of data.

Mr. Bogliaccini said that there is data that is not shared. While we dream and think big about those issues that we have to push forward, there are small steps that, perhaps from our place, we can help move forward. That is why today those of us who are part of 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, again.

MRS. 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 that data is shared, then the flaws will be exposed. Obviously the flaws will be exposed. Personally I had a very bad experience being at the GACH. The president of the republic had ordered that all the data that the GACH needed be given to him, but that was not the case. In other words, they gave it 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 to do. The agreement said that they would give us the data but that we could not say a single conclusion in public. We could not even say that the pandemic was in a certain age range at one time and in a certain age range at another time, things as insignificant as that. Not to mention mobility data by telephone, which was an agreement with Antel, but on a person-to-person basis. It was achieved, but obviously there is a commercial part. The way the data was requested was extremely aggregated and did not reveal data on telephony, but on people's mobility. A lot of care had to be taken because of a lot of existing regulations on people's privacy, but it was always aggregated data. Not to mention genomics, because there was a huge mess there.

With this I give some examples of a very critical moment for the country, in which there was a mandate from the president of the republic, but equally in that context it was extremely difficult to achieve. There was a lot of tension and every time we asked for new data they went round in circles.

MRS. SANGUINETTI. -You are the academics and for us you are valuable input into comparative legislation. If you know of countries that have made progress in the right direction in this regard, we are open to receiving information.

Thank you all very much. The

meeting is adjourned.

(It is 18:03).

Montevideo, Uruguay.Legislative Branch.