## The State of Technology-Enabled Education Around the World: Canal Futura as an Open Source Experiment

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Good morning, everybody. First of all, I'd like to thank Richard for this wonderful invitation. I think I'm one of the few people here who is a non-academic. I'm a mere journalist. But I have been lucky enough to run this channel completely devoted and dedicated to education. So it's a pleasure to be here, and a privilege to learn so much from all of you.

So let's talk about Futura. I feel very happy to be surrounded by people who know Brazil and Brazilian education scenarios so well. So maybe they can help me answer the questions afterwards, such difficult questions. First of all, let's browse through some Brazilian data in three specific scenarios – a general scenario, education, and IT scenarios.

For those who are not familiar with the country, people say we are the seventh economy in the world. We have a continental area, almost a continent, and a population of almost 200 million people. I'm mentioning here the nonprofit sector. It's responsible for 5% of GDP, because Futura is a result of the nonprofit sector. This last data is important for what we do, television, because television is loved by Brazilians. It's the second most consumed appliance, just behind the stove and before the fridge!

In terms of the education scenario, we have almost a country population of students enrolled in basic education, 50 million, and almost 2 million teachers. But when you include university teachers and also social educators, who are very popular, who work in grassroots Brazil, we reach almost three million teachers. In Brazil 7.9% of the population is illiterate. But when the calculation includes what we call "technical illiteracy", this number rises to 20%.

The average years of schooling is around 7.3, whereas in the United States and I think Sweden, around 12 years of schooling. In Brazil 35% of the population have not concluded elementary school. This is for me very impressive and, unfortunately, very sad data. We have 2.5 million youngsters who do not study and do not work.

This is, I think, a national tragedy and we must tackle this subject immediately. For you to have an idea, the other day I was listening to a testimonial of one of these youngsters. He is a dropout and he said, "I have not abandoned school. School has abandoned me."

It's very dramatic, and it's true. Because most of the youngsters, they are not interested in school. There is a problem of being interested in school. They feel that school was not for them and that's tragic. Only 39.4% of the population finishes high school. This is a very low number. But you see that the other day, I was looking at other research that said that 62% of the Brazilian population trusts education. They feel education will get better in this next decade. So we count on this very important asset in order to develop our education scenario. Of course, the most vulnerable are the youngsters and the low-income segments and the African population, indigenous peoples, people with disabilities.

In the IT scenario, well, Brazilians love technology, love television, love novelties. We have almost 40% of the population connected to Internet. We reached 100 million wide band connections and 52 million people have access to the Internet on their cell phones. Brazil estimates all these sales in tablets; tablets are the preferred means of navigating the web. Among the poorest 10% percent, only 0.6% has access to the Internet. But this is changing very quickly. And of course, we have still a regional gap. The South and Southeasters are much more covered by Internet connections, and people that are included in this digital world. The Northeast and the North, the Amazon region, are still far behind.

So what is Canal Futura? If I could describe it we are a very strange animal in the television educational TV scenario, we are like a frog. Why? Because, let's say, we operate in the "long tail" and in the "short tail", still going on the animal metaphor. We are on air, we are broadcast television; and we are on Earth, through outreach initiatives. So this is our "long tail" through which we deliver to specific publics, audiences, specific material in order to make our content used by different groups. We are funded by private foundations and companies. But we have a public nature.

We are a kind of meeting place, a hub for different sectors of society to dialogue. We make TV, but our intention is mainly to make a difference. We are a public concession of educational TV. We were created 15 years ago, and are managed by Roberto Marinho Foundation. For those of you who are not familiar with Brazil, Roberto Marinho was the founder of Global Organizations, which is the fifth largest communication group in Brazil. So they have commercial operations in Futura. We are not maintained by Global. Global TV is one of our funders. We have 11 other companies and foundations.

So there is a kind of consortium, a nonprofit consortium around Futura, funding its operations. So as I told you, we are in the "short tail", let's say, so we are an open source strategy as every broadcast TV is. In turn, I will here highlight some features of our work. Our content production mode process is completely collaborative. It's cooperation among different sectors of society. As I told you, we dialogue. It's the main word for what we do.

We are connected to more than 30 universities all over Brazil, through which we transmit our programming and we produce content.

For every series we start in Futura, we promote a thematic forum; inviting people from different sectors to dialogue and to tell us what should be tackled in these series. What are the themes that are more urgent? How can we make a difference? How can we be more effective with those contents? And we also co-produce a lot with students and NGOs. For you to have an idea, we are connected to more than 2,000 NGOs all over Brazil. And in terms of reach, we reach nowadays 94 million people. This is our technological coverage. Two million are teachers, and by teachers here I'm talking also about social educators.

In the research, they declare themselves as teachers. Although sometimes, they do not have a pedagogy diploma. But they act in grassroots situations with our material, and helping people organize activities for children, for teachers, and so forth. And from these educators who watch Futura, approximately more than 70% say that they use our contents for either classroom activities or out-of-classroom community activities. Now, we recently researched the profiles of these educators in order to fine tune, let's say, our delivery to the education environment. And the teachers, they declared that Futura is very useful for them to broaden the worldview of their students, to address cross cutting issues, to broaden the students' cultural universe.

Public schools are of course full of children who come from low-income backgrounds. So enriching their cultural universe is something very important, to make education a more rich process. The programs also support them in coping with problems and conflicts in classrooms. Of course, we asked them, how could we improve our contribution? And they say they want more content designed for practice in the classroom, and also to learn and get acquainted to new teaching techniques. We did this research with 2,000 teachers and principals in order to improve our insertion in the education scenario, although we already work in different projects with the Minister of Education, with government, and secretaries of education from different governments.

So now let's see a little bit of this distribution beyond TV. I got to know many different strategies and very sophisticated ones, but we cannot forget also the simple technologies. It's not because they are simple, they are not technology. So we try to assemble all the strategies we can, all the technology we can in order to deliver our material. And when you consider regions so remote as the Amazon, sometimes you cannot count on the broadband. So we need different strategies.

One of the most successful strategies we have is the Futura Suitcase. Futura Suitcase is a kind of thematic organization of our content, for example, the environment. We have a suitcase totally dedicated to environment issues. We do a kind of organization of our best programs on environment. We develop teacher's guides. We develop suggestions of activities. And we also put together material that comes from referenced institutions.

For example, in our environment suitcase, there is material from Greenpeace, from WWF, from different institutions that are dealing with these subjects on a daily basis. I will show you a small video, a 40 second video. Because last year, we completed 15 years and then we taped some stories of people, teachers and students, who have been connected to Futura along these years. I show you the story of a boy, who is now a professor, but he tells how his relationship with Futura has been.

So this piece is among a collection of 20 pieces that we did with different people who have been using Futura in this "long tail" way. Futuratec, we are the only channel in Brazil to have a video library through which teachers can download and tape our programs. We have more than 750 hours of programming in different themes. Usually television has many copyright issues. They do not allow their programs to be taped. But in general, they are like pirate activities. So we are pirates of ourselves. So the teacher has just to register as a teacher and say what is his institution.

Afterward, we ask him for feedback. How he used that material, what problems he found in that material, what we should do to improve, what would you do? And now, we are starting to change the platform. Because still, it takes quite a long time to download and tape. And I'll talk about that later, how we are going to renew it.

Besides that, we developed teacher's guides for our main programs, for the main series we have on TV. I'll show you some pages only of these guides. They are available on the Internet, also. And this is a very funny series about financial education for youngsters. The name is "Money in Your Pocket." Here is the teacher's guide where we suggest activities that may be played in the classroom. The show is a game show for youngsters. We do it in partnership with the stock exchange of Sao Paulo, and it's very successful. The World Bank has been with us, watching what we do. We are in the third year of production.

Now the Central Bank of Brazil has recently called us in order to develop a project for financial education for Brazilians who are coming out of poverty. Because what's happening is people are coming out of poverty and are getting to have a lot of debt. They are spending a lot of money. So they want us to develop a project, design it for the low-income people who are starting to get more money and getting out of poverty. It's in Portuguese and here are some of the activities and also information, where they can expand the knowledge they receive from the program.

In addition to that, another technology is Futura Room. Futura Room is equipment that we have built together with communities, inside the communities. For example, in Rio, we had Futura Rooms in 80 favelas. The room is possessed by the community and usually it's a club or it's a school. We provide all these videos, all the content. We train local teachers to use the room, developing activities with children, with students, or even for training teachers. For example, in Favela da Mare, they have a wonderful project for

training teachers and they use most of our content to do that. In Brazil, we now have around 18, if I'm not mistaken, 18 Futura Rooms are scattered all over the country.

Now, we are starting also a community on Facebook to improve our relationship with teachers. As I told you, this is a strategy we have, how we can improve our contribution to education, especially to be together with the teachers. We have now 10 beta testers, and our idea is to have an environment of exchange with the teachers. This is a place where they can inform and exchange experience about the use of video in classroom activities, where they can evaluate our programs, where they can give us ideas. It's when Futura listens and not speaks. We want to improve our ears, and not only the way we speak.

We also have a channel on YouTube, a distribution channel for our programs. And we have MIT BLOSSOMS classes. In our partnership, we hired a professor who mirrored the BLOSSOMS classes in our curricula to make the choices. And then we subtitled the classes. They are broadcast very early in the morning, if I'm not mistaken, 5:00 in the morning. But they are available in the Futuratec, and they are available on the Internet.

Now, we are enlarging our menu of classes. Because they are very useful for Brazilian teachers, and also for a youngster like Wendel, like you saw in the video, who are preparing to enter university. Now, this is a documentary we did, just to show you one strategy, where we showed the documentary before on the Internet and showed it one month later on television. And why did we do that?

The documentary, just for you to have an idea, is a very touching documentary about four atypical days in the lives of four convicts from Rio de Janeiro during their temporary leave on Christmas. We had four teams accompanying them and it's incredible. I say that every person who has the small intention of committing a crime, if they see the documentary, gives up. Because really, it's the value of liberty, the value of freedom, and how much they miss when they are imprisoned. This was the result of a pitching process, a public pitching. We do this a lot in Futura. We invite independent producers to show us their ideas, and then we choose one.

We did this exhibition on the Internet. We advised people who are interested in this theme, in public security and human rights, we asked them to watch the documentary and produce opinions that, afterwards, we streamed along with the broadcast. So that in the broadcast, there was already a community that had seen the documentary and that had opinions about the documentary. Then we put everything together in the broadcast.

I brought an example of our contribution, very direct contribution, to the education scenario. And this is a series we did about PISA, about the OCD assessment that assesses the performance of countries. Brazil is the 53rd, although it's getting better. It's improving, but it's still lagging behind. And I was really getting fed up of hearing people comparing Brazil with Korea, with Finland. We should do this, do that. And then I said,

well, let's see what these people do. So we went, and we had educators with us, because we are communicators. We needed the educational approach. We needed people who know the situation, what happens, what goes on in schools. So we invited NGOs to go with us to Finland, to Korea, to Canada, to Chile, and to Shanghai in China to check directly what was going on there.

Mostly, we wanted to understand what is the value these societies give to education, and how their policies derived from these values. We wanted to understand this, and see how Futura could support this kind of turning. Because we feel that Brazil still needs to put education in the center of the debate, and we want to give a solid contribution. Because everybody talks about Korea, and nobody went there to see how they made it, and to what extent we should copy them or not, and what should we value in what they did. So we did these documentaries. All of them are led, are conducted by 15 years olds from these different countries and we produced seven documentaries, 50 minutes each.

Of course, we did one about Brazil. Because this would be very useful for discussion, for the debate. Our intention was really to foster the debates, to give a contribution. We produced 2,000 kits like this, printed material about PISA and about the countries, and also the DVDs. And we delivered them for pedagogy courses. Now we are collecting the results of different professors in different universities that have been using this material for enhancing the debate inside the classroom. So we are now trying to do the second series about the countries that did better in the last few years, although they are not top of the rank. But still, they are doing, they're investing their effort in order to change their position in this achievement.

Brazil has a big challenge that is education. I always say that we cannot to be the seventh or the sixth economy in the world without education. There is no wealth that can be sustained without education. So this is really very urgent for the country.

We at Futura have our own challenges and they are:

- The digital conversion of our archives. We have done this for the last two years, but we have still 13 years behind us. We need to put everything digital so that we can make everything available, more and more.
- The digital conversion of our signal. The Minister of Communication set up a schedule through which in two years, we must be digital. Of course, that's wonderful. But it will demand a lot of money, and we have a very short budget.
- The update of an institutional site for use as a portal. We are on the way toward doing that. Because we have many different initiatives on the Internet and we want to assemble everything under only one umbrella.

- As I told you, with Futuratec, we are migrating from BitTorrent to VOD. We want to create virtual schools, where virtual content is directly associated to learning. We want to develop implementation guides. By this I mean that we are now in the process of crossing our series of programs with the curricula so that we can make more direct recommendations for how teachers of the specific subjects can use our material.
- We have to update and empower the teams to meet the educational challenges. That means that I have to train my team to be more effective in the education priorities.
- Review the channel's operational model. Of course, empowering much more new forms of content use and distribution.
- We have now many pilots of e-Books and Apps where we are transferring what we did in the programs for these new models of production and distribution.

Well, that's all. And I'm here, available for your questions. Thank you very much. Thank you, Richard.