10 e-education/e-training

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Tele-classrooms

The principal problem of the younger generations in Brazil's large cities is not illiteracy - though this *is* present in significant percentages in older age groups- but rather high drop-out rates from primary and secondary schools, where they receive, in general, low-quality teaching. In the state of Rio, 1,102,509 youth between the ages of 15 and 24 have dropped out of primary school during the 5th to 8th grade¹⁹, which corresponds to 29.2% of the total. In the Rio metropolitan region, 757,613 (26.5%) youth are out of school, and in the city of Rio 332,043 have dropped out (22.2%). The majority leaves] school so that they can work and help their families. As time goes by, they end up not going back to school and, without a diploma, they remain outside the job market, which increasingly requires, at a minimum, completion of secondary school. Unemployed, and with little chance of entering the labor market, these youth are easily attracted by drug trafficking, becoming likely targets of violence.

One of Viva Rio's main projects is the "Community Telecourse" program, based on the Telecurso 2000 long-distance education program developed in Brazil by the Roberto Marinho Foundation, with funding from the São Paulo State Federation of Industries (Federação de Indústrias do Estado de São Paulo, FIESP). Telecurso 2000 is made up of a series of videos, accompanied by textbooks, and was originally designed for television broadcast. The Viva Rio Community Telecourse was launched in 1995 in partnership with the Roberto Marinho Foundation, as well as the National Confederation of Industry (Confederação Nacional da Indústria, CNI), the National Service for Industrial Learning (Serviço Nacional de Aprendizagem Industrial, Senai-DN) and the Brazilian Ministry of Labor. Later, the project was expanded to include partnerships with municipal and state governments. Viva Rio's role is in training course monitors, providing pedagogical supervision, identifying local partners, and providing general administration.

The classes are administered in classrooms within the target communities, in partnership with local institutions. The only required materials are a television, a VCR, and the videotapes containing the classes. The classes cover topics such as citizenship, sex education / AIDS, and advice on entering the job market. More than **60,000** students have benefited from the

¹⁹ As indicated previously, in Brazil, pre-college education is divided into two levels: elementary (*ensino fundamental*, previously known as *primeiro grau*), which has eight "series" or grades and corresponds to elementary and middle school in the U.S.; and secondary (*ensino médio*, or *segundo grau*), which corresponds to high school and/or prep school in the U.S..

initiative. A Learning Guide, who provides individual help to students and oversees the exercises provided in the tele-classes, administers the classes, which are given daily between 6:00 and 10:00 p.m.. The Learning Guide also promotes student integration by encouraging group work. The complete elementary education course lasts ten months; the secondary education course lasts eleven months. The Community Telecourses are open to students age 15 and up.

To complement the tele-classes, Viva Rio has created, in partnership with the Roberto Marinho Foundation, the Telecurso 2000 On-line Question Database for Primary Education, aimed at projects for both youth and adult education. With the Question Database, Viva Rio also hopes to detect areas in need of reinforcement and revision. It offers students access to general and subject-specific tests to check their knowledge. The program evaluates the learning process of students, and also permits them to perform self-evaluations over the Internet. In addition to on-line tests in the disciplines Mathematics, Geography, History, Science, and Portuguese, the program produces certification examinations that are compatible with the telecourses. By taking an examination organized by the Ministry of Education, the students can obtain diplomas for elementary and/or secondary school.

The success of this undertaking is precisely in the simplicity of the program. Normally the initiative comes from within a community itself, through the requests of local representatives. The first step is to choose a physical location for the tele-classroom. The space must be large and open enough to accommodate the students, but other than that will depend largely on the specific conditions in each community. Tele-classrooms have been installed in community centers, lunchrooms, churches, residents' associations, sports centers, libraries, public schools, and private homes. Once a space is chosen, the basic materials must be installed: tables, chairs, a blackboard, a television, and a VCR.

The students who enroll tend to come from all walks of life: construction workers, manicurists, servants, etc. The classes, which have about 30 students each, are largely composed of the unemployed or those working in precarious conditions in the informal sector. Between 1999 and 2001, the participants of the Community Telecourse program for primary education were divided nearly equally between men (50.7%) and women (49.3%). The best-represented age group was students between the ages of 21 to 29 (34.2%), followed by youths under 21 (30%), 30 to 39 (19%) and over 39 (16.8%). According to survey of participating students, 38.1% describe themselves as mixed²⁰, while 37.5% describe themselves as white. 21.7% described themselves as black, while only 1.9% described themselves as Asian, and 0.9% as indigenous. 56% were single, 23% married, and another 21% described their marital status as "other". 36.5% described themselves as heads of families, 49.1% as dependents, and 14.4% as contributors to family income.

²⁰ It is common in Brazil to ask poll-takers to identify themselves racially. The categories usually presented are: *branco* (white), *negro* (black), *pardo* (mixed), *amarelo* (asiatic) and *indígena* (indigenous), but there are more than one hundred denominations to identify one's skin color. In national censuses, *pardo* is consistently the most common category.

Among the students who participated in the survey, 41.3% reported having a monthly income, while 58.7% reported no steady income. Of those with a monthly income, the following income levels were reported:

150 – 200 R\$* per month	9.8%
200 – 300 R\$ per month	14.8%
300 – 400 R\$ per month	14.8%
400 – 500 R\$ per month	11.7%
500 – 750 R\$ per month	12.5%
750 – 1000 R\$ per month	9.8%
not reported	26.6%

* 1 R\$ = around 0.30 U\$ dolar

Of those students who passed in all five subjects, 56.3% were women, while 43.7% were men. 32.1% of those who passed identified themselves as white, while 67.9% identified themselves as non-white.

In 2003, at least 250 Community Tele-course classrooms will be installed in 18 municipalities in Rio de Janeiro states, benefiting some 6,200 youth. Thanks to a joint effort between Viva Rio, CNI, Senai-DN, the Ministry of Labor, The National Plan for Professional Education (Plano Nacional de Educação Profissional, PLANFOR), the Worker's Aid Fund (Fundo de Amparo ao Trabalhador, FAT), the Roberto Marinho Foundation, and the Supplementary Education Center (Centro de Estudos Supletivos, CES) of the Rio de Janeiro State Secretary of Education, this new phase of the Community Telecourse program also offers 50 course hours of computer classes. Viva Rio has prepared the first Future Stations to receive students from the Community Telecourses, so that when they finish the course, they already have a basic understanding of programs like Windows, Word and Excel.

Through a partnership with Senai-DN, Community Telecourse has also invested in professional courses; students with the best grades in the primary and secondary education courses are invited to participate in professional training courses in technical areas. Community Telecourse students can also use Future Stations to access on-line libraries and the Telecurso 2000 website, where they can find answers to frequently asked questions, print course exercises, read additional material on the themes covered in the classes, check the date and locations of tests and exams, and learn how to obtain a Ministry of Education-certified diploma.

A partnership with Telemar and the Multiplar Institute has allowed Viva Rio to award those professors who have stood out in the Community Telecourse project. The initiative, called "The Test of Success" seeks to provide recognition of and incentives for the efforts of professors in the education of students from low-income communities. For each student who passes a discipline with an above-average grade, the professor receives a bonus of 20 *reais*. In 2001, R\$700,000 were distributed among 316 professors.

Another important partnership was with the *O Globo* newspaper during the first quarter of 2003. The “Social Subscription” program contributed a portion of each subscription fee to the Telecourse program, providing one student’s funding for every two subscriptions.

Recently, Viva Rio was responsible, at the request of the Brazilian Ministry of Foreign Relations, for the training and installation of a Community Telecourse-style program in East Timor.

Information Technology Clubs

Before the Future Station program was conceived, the Information Technology Clubs were Viva Rio’s first effort in the fight against digital exclusion. In 1998, the IT team from Viva Rio developed and administered, as part of its Civil Service Volunteer and Opportunities for the Future projects, the first courses in Windows, Word, Excel, Access, Publisher, and the Internet. At that time, 6,200 youth were trained.

In light of the warm welcome the project received in low-income communities, Viva Rio invested in the area, and created the first Information Technology Clubs, which have trained, on average, 20,000 students per year. To make the project possible, Viva Rio sought out partners in the communities themselves. Representatives from a community institution take responsibility for choosing and preparing the building that will house the Information Technology Club. The spaces chosen are of all shapes and sizes. In the Morro do Alemão *favela*, the IT Club is located in the residents’ association headquarters -a common arrangement-, while in the community of Sepetiba a day-care center houses the IT Club. There is an IT Club based in a Spiritualist Center²¹ in the Ingá neighborhood of Niterói, and others based in Catholic, Methodist, and Presbyterian churches. In Queimados, the IT Club functions year-round with an average of six classes per semester, operating in partnership with the Citizenship and Solidarity Institute (Instituto Cidadania e Solidariedade), a philanthropic organization.

In order to ease the implementation of the program and adapt it to the financial and physical conditions of each community, Viva Rio developed three basic program options. The first, Basic or Minimal, has a small infrastructure -an average of five computers- and is focused primarily on professional qualification. Only basic courses and printing services are offered. Internet access is only available on Club computers during class hours, or when they are otherwise available.

The second option, the Plus or Expanded model, offers a 10-computer classroom, a separate space for building and repairing computers, and regular Internet access. In addition to basic courses, advanced courses are offered in specialty software such as AutoCad, Linux, PageMaker, Photoshop, HTML, Front Page, Delphi, Visual Basic, Corel Draw, Networking, and Web Designer).

²¹ Spiritualism, as introduced by Frenchman Allan Kardec, is relatively widespread in Brazil.

The third option, the Master model, led to the creation of the first Future Stations. In this model, the Club functions as a true center for integrating services that go beyond computing, often housing other community projects managed or implemented by Viva Rio, such as Fair Trade, Electronic Commerce, Micro-credit, and the Citizen'Counter.

In all of these models, Viva Rio acts as manager, assigning a professional to oversee administrative functions. Viva Rio supervises Club activities, trains and evaluates professors, offers consultation on how to build and equip an IT Club, prepares timelines for Club courses, provides teaching materials, and provides certification for graduating students. The courses, which last about a month (16 course-hours), use a simplified language so that students new to the world of computing can learn quickly and easily. The prices of both the courses and Club Internet access are accessible to low-income students: 10 to 20 *reais* (US\$3-US\$6) per course, plus books, which are sold at cost.

Like the Future Stations, the IT Clubs were designed to be self-sustaining. Viva Rio conceived the project, from its inception, as a business that could be transformed into a franchise. Easy to position, with personalized service and an attractive infrastructure, IT Clubs have the characteristics of a product that can be transferred over private initiative.

Cisco Networking Academies Project – Network Technician Training

One of Viva Rio's newest programs is the Cisco Networking Academies (CNA) project – a high technology laboratory that is part of a training and education program for youth from low-income areas. This partnership with Cisco, with the support of the Inter-American Development Bank, was designed to work together with the Viva Rio project Viva Micro, which facilitates the purchase of computer and equipment by residents of low-income areas. The program is due to be inaugurated in 2003.

The goal of the CNA project is to train, with the help of the Internet, the most qualified and motivated students from the IT Clubs to work with computer networks. Students who have completed computing courses at Future Stations and IT Clubs will be able to continue their education through e-learning, i.e. web-based courses. In this way, students will obtain professional training at low cost and without having to leave their communities. As a form of incentive, Viva Rio will offer scholarships to outstanding students in the basic and advanced courses at Future Stations so that they can become network technicians.

Excellence in Education Program for Low-Income Youth

Youth from low-income areas have few chances to be selected in the highly competitive entrance exams at Brazil's public universities.²² When they do enter, they often find themselves unprepared for the level of study expected of them, and perform poorly. A new Viva Rio program, just launched with the support of Light²³ and the Rio de Janeiro State Secretary of Education, aims to improve their academic performance both during entrance exams and at university. The program will select from 66 public schools in 7 municipalities a total of 200 students between the ages of 15 and 18. They will receive scholarships of R\$60 (twenty dollars) and tutoring for the university entrance exams. This educational reinforcement will be offered by 50 university students, also chosen on a merit basis, who will receive R\$400 (130 dollars) each. The funding for the program has been guaranteed by Light, and Viva Rio will, among other things, oversee the selection of the scholarship winners, and monitor the quality of the tutoring.

Virtual Libraries/Future Libraries

In the tele-classrooms of the Community Telecourse program, and on Viva Rio's website, students are urged to complement their education using the city's 21 public libraries. In addition, the city also possesses two "libraries on wheels", known as the Monteiro Lobato and Carlos Drummond de Andrade libraries, which circulate through low-income communities, as well as on-line libraries.

Viva Rio is a partner in the Virtual Library Project of the Brazilian Ministry of Science and Technology's Information Society program. The goal is to stimulate the habit of reading and learning as a part of good citizenship and a complement to education and professional training.

The Future Libraries provide research facilities, public Internet access for research, professional support, special resources for the handicapped – such as an extensive Braille section – and a large collection of works available for use by local schools. The first Future Library was inaugurated at the Hope for the Children Center in the Cantagalo *favela*, and Viva Rio's goal is to build other Future Libraries, with all the same services in infrastructure, in other low-income communities throughout the city.

Another Viva Rio project in this area is the Brazilian Students' Virtual Library, developed in partnership with the AT&T Foundation and the School of the Future at São Paulo University

²² In Brazil, students' score on an extensive entrance exam known as a vestibular solely determines entrance to public universities, which are tuition-free and in general considered to be the best in the country. The exam is so difficult, and the stakes so high, that most middle- and upper-class students will spend up to a year on expensive courses aimed at improving one's score on the *vestibular*. On the other hand, low-income students cannot generally afford these courses. Their family environment is likely to be less conducive to academic success and they normally have the handicap of coming from public schools, which offer generally lower quality education than the more expensive private schools attended by middle class students. For these reasons, their rate of acceptance at public universities is extremely low.

²³ The state electric company.

(Universidade de São Paulo, USP). With the support of the International Council For Distance Education (ICDE), the Roberto Marinho Foundation, and the São Paulo State Federation of Industries (FIESP) the Brazilian Students' Web Portal (www.portaldouestudante.com.br) offers a number of distance learning services.

With a simple and practical design, the Brazilian Students' Web Portal can be accessed, without charge, by students and professors from secondary school to university-level. Within the portal, they can find the full text of over 3,800 works of Brazilian and foreign literature, periodical and academic articles, official documents, images and sounds. In line with the program's goal of facilitating distance learning, the textbooks and examinations of the Telecurso 2000 courses are also available on-line, offering the same labor market-oriented curriculum as in the tele-classrooms.

Through this agreement between the Virtual Library and the Roberto Marinho Foundation - which develops the telecourses -, the tele-classroom students can consult previous courses, clear up their doubts, do research, and complete exercises and examinations using the Internet. This allows them to receive quality education from their own homes, or from the Information Technology Clubs and Future Stations located in their communities.

Virtual libraries are also very important resources for those studying low-income communities themselves. The Cultural Studies Virtual Library, for example, maintains a large collection of texts, periodicals, academic articles, and other publications, as well as a list of researchers, publishers, and books that deal with issues of contemporary culture. Organized by the Advanced Program in Contemporary Culture (Programa Avançado de Cultura Contemporânea, PACC) at the Federal University of Rio de Janeiro (UFRJ) the Cultural Studies library is part of the National Research Council's (CNPq) Prossiga program. Within the library, one can learn about, for example, the history of the Hip Hop Movement (a rhythm adopted by youth from low-income communities, especially those on the periphery of São Paulo, as a form of social expression), and find links to the website of Real Hip Hop!, an organization that uses the VivaFavela.com portal to publicize its tribe's philosophy and news. In this way, a resource that was originally intended for students of contemporary culture can also be accessed by people interested in learning more about the cultural history of their own communities.

Distance University

A consortium of Rio de Janeiro state's public universities, with the support of the Rio de Janeiro State Secretary for Science and Technology and the State Center for Science and Higher Education through Distance Learning (Centro de Ciências e Educação Superior a Distância do Estado do Rio de Janeiro, CECIERJ), have developed a higher education distance learning program for the state's rural municipalities.

Viva Rio has joined this effort, proposing that these distance-learning courses be held in highly visible public spaces. A pilot version of the project has been installed in an unused railroad station space in the city of Campo Grande. Viva Rio's intention is to transform and adapt under-utilized but heavily trafficked public spaces into centers for higher education. Christened the Candido Portinari²⁴ Center for Higher Education Distance Learning, this distance university offers undergraduate courses in Mathematics, Education, Physics and Biology. Viva Rio hopes to expand the project to other spaces, such as shopping centers on Rio's periphery, and, by the end of the year, to have created a completely digital, web-based, integrated distance learning program.

Villa Lobinhos / Nós do Cinema (We in the Movies)

Among Viva Rio's special projects are the Villa Lobinhos project, which promotes high-quality musical education for young instrumentalists from low-income families²⁵, and Nós do Cinema, which offers classes in film production and journalism for low-income youth. Both programs were created in 2000.

Villa Lobinhos offers young people from ages 12 to 20 extra-curricular classes in music theory, as well as individual and group lessons. With support from the Moreira Salles Institute and the Villa-Lobos Museum, the program has enlisted professional instructors, and aided some 25 students at an average monthly cost of 780 *reias* per student.

Nós do Cinema grew out of the making of the 2002 film *Cidade de Deus* (City of God). Before pre-production began, the films' directors, Fernando Mereilles and Katia Lund, set up an acting workshop, offering a four-month course to 200 youth from low-income communities, and eventually selecting the films' actors from this pool. When filming ended, they created the Nós do Cinema Center as a permanent cinema school for low-income youth. There are currently about 50 students enrolled at the center, where they receive classes in script writing, directing, photography, cinematography, production, sound, art direction, wardrobe, set design, editing, and post-production. With the help of Viva Rio, the project plans to create a Journalism Center integrated into the Viva Favela Web Portal. The idea is to produce news reports for television based on articles researched by Viva Favela's community correspondents.

Education through Sports

Youth from low-income communities often have little or nothing to do with their free time. With this in mind, Viva Rio has invested heavily in projects that spur young people to

²⁴ Portinari is Brazil's most renowned modern painter.

²⁵ Named after Heitor Villa-Lobos, Brazil's greatest classical composer. *Lobinhos* means, literally, "little wolves".

practice sports of all types. In conjunction with the Rio de Janeiro State Secretary for Social Action and Citizenship, as well as the Globo Television Network's "Children's Hope" campaign, we have created the "Hope Games" and the "Peace Games": a series of state-wide athletic championships. This program also receives support from UNESCO, the Ayrton Senna Institute, Coca-Cola, Unibanco, and the Federal Secretary of Human Rights at the Justice Ministry.

The Hope Games are open to all youth. Once teams have been formed, matches can be held in all types of locales: in public squares, sports clubs, schools, or even police and army barracks, always under the supervision of a professor of physical education connected with Viva Rio. Medals and trophies are offered as a form of incentive. In its first year, 1999, the Peace Games had 49,000 participants, with 20,000 youth present at the opening ceremonies, and 2,508 matches organized in 5 events. In 2000, there were 72,000 participants in 3,499 matches. The Hope Games, held throughout Brazil in 2001, had a total of 250,000 participants. Unfortunately, the 2002 games were cancelled due to a lack of sponsors, but it is expected that the games will be held again in 2003.

Luta pela Paz (Fight for Peace), another of Viva Rio's sports projects, with support from the AfroReggae Cultural Group and the Parque União Residents' Association, consists of a boxing academy, registered with the Brazilian Boxing Federation, with some 40 students age 12 – 25. In addition to training in pugilism, students receive weekly lessons in citizenship and peaceful conflict resolution.

Box K - Information Technology in the Community

Higher Education

19 years old, Renato Vasquez, a Literature student at Rio de Janeiro Federal University (UFRJ), has been supervising the students of the Community Telecourse at the São Cristóvão Future Station for a year now. Determined to volunteer, Renato took Viva Rio's tests for Telecourse supervisors, and now monitors 25 students between the ages of 15 to 50, all enrolled in the Elementary Education course. "They are short on attention. They arrive tired from work, but they leave motivated by the lessons," says Renato, who considers himself an educator. "They have to understand the lessons, not just memorize them, so I try to teach in the most dynamic way possible," he explains.

A New Beginning

Community Telecourse student Silvio Diniz never misses a class. "I arrive on time and always study the lessons well," says Silvio, who likes to sit in the first row and is considered one of the best students in his class. Silvio's story is a sad one: he suffered from alcoholism and drug addiction for years, and dropped out of school at an early age. Today, he manages a treatment center for drug addicts, and has gone back to school. "Nobody grows in life without an education," says Silvio.

Dream Internship

Augusto Cesar Bonfim, 17 years old, saw in the Information Technology Club his chance to improve his résumé and get a job. "You need to know how to use computers to get anywhere in life, don't you think?" he argues. After completing courses in Windows, Word, Excel, Access, and Internet, Augusto ended up winning an internship at the Future Station where he took these classes. A dedicated student, Augusto now dreams of working in computer maintenance. "I am going to enroll in the Cisco project's Maintenance course and learn to install programs, fix hardware, and make a living off it," he says. When he isn't working, this youngster likes to enter chat rooms and talk with friends. "I did these courses, and my friends came and did them too, so now we all have e-mail. We talk by computer," he says.

A Place to Study

The Future Station in Macaé offers more than just computing courses and Internet access. Located next to the bus station, what draw the attention of passersby are the 38 tele-classrooms there. "Before, people looked at this place with suspicion, trying to figure out what it was. Now people hang out all day," says Paulo Dias, who works in the city's petroleum industry. "We come here so often, to study, to take classes, to use the Internet, we end up making friends with the staff," he jokes.