

Enhancing Quality and Lessening Inequity

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Abstract: Quality learning has become a focal point in Brazil in recent years, both for innovation in the education system and for efforts to open up greater opportunities for disadvantaged groups. To achieve this, the Brazilian Ministry of Education proposes a set of initiatives, one of them is the construction of an international repository. This project intent is to offer teachers and students free and open access to quality educational resources. The repository will support the Teacher's Portal, where teachers will find a variety of tools and examples of best practices to improve the teaching/learning process. Hopefully the easy access to quality educational content integrated with the other government programs will improve learning in Brazil.

Digital inclusion and learning improvement

In an increasingly information dependent global economy, access to information technology and information skills are crucial factors to determine the success of a society. The socio-economic inequities in Brazil strongly contribute to prevent a significant portion of country population to benefit from the access to modern information technologies.

According to studies, (Waisenfisz, 2007) more than 31 million people had internet access in Brazil in 2005. However, this represents only 17,2% of Brazilian population. These results put Brazil in the 76^o position among the 193 surveyed countries. In Latin America its rank is behind Chile (28,9%), Costa Rica (21,3%), Uruguai (20,6%), and Argentina (17,8%). The inequity of access among Brazilian regions and groups of people are even more dramatic. State of Alagoas rates were of 7,6%, while the Federal District presented 41,2%. The low-income group presented 0,5% access rate, in opposition to the higher income group with 77% access rate.

When it comes to help a society to become more democratic, enhancement of educational quality is central. Quality is understood as the enrichment of the educational process, participation of the subjects and appreciation of differences in order that educational opportunities become real understanding and development of potentialities, knowledge and competencies (MEC, 2007). Through education, social exclusion is to be reduced in order to avoid social inequality. To achieve this, the Brazilian Ministry of Education proposes a set of development programs in different but integrated directions. Some of these programs are: equipping schools with necessary structure to use computers and internet connection; enhancing teacher education and training stressing the development of information technology skills; providing open and distance learning opportunities; and offering free and quality digital learning resources.

In order to take advantage from the information technologies individuals need to have access to information and knowledge production. However, in order to have access, it's necessary to know how to use these new technologies. The currently policies for education sector deal not only with the increasing of digital access but also with the learning skills required to use and make the most of information technologies.

The National Program for informatics in Education – Proinfo plan for the next three years consists of supplying 138.405 public schools in Brazil with computer labs and broadband internet connection, and offering training on educational technology for K-12 teachers of all parts of the country. Proinfo is a result of a partnership among the federal government, states and cities to equip schools with computers. A variety of digital content is brought to school with the new computers, such as: educational videos, multimedia learning objects, hypertexts, and opens source software.

Empowering teachers

Teachers are at the center of education revolution; without them, quality is impossible. Teacher will change their practice as they build up confidence using technology and, as they have easy and open access to digital content. The Ministry of Education action plan includes the training of 240 thousands teachers until 2010. Equity of access to information instruction and technologies in schools will help to overcome economic barriers to achievement. It will also help educators reduce barriers that prevent some students from developing their full potentials.

Open University of Brazil (UAB)

New learning opportunities to geographically isolated communities and individuals might well be the most important element to promote inclusion and citizenship. The Brazilian Ministry of Education – MEC mainly efforts aims to enrich the teaching / learning process and support individuals participation and diversity. Distant learning programs seem to be the best alternative to provide opportunity for students who, because of background or economic conditions, do not have access to education in their community.

The Open University of Brazil – UAB is an initiative resulting from partnership among public universities, states and cities governments, and coordinated by MEC. Its primary concern is the formation of public school teachers, both initial and continued training; and to bring higher education into cities where there is no offer or the existing one is insufficient to assist the population.

In order to offer distance courses, each city must set up a learning center including a library and labs for computer, physics, chemistry, and biology. The learning center is also to offer the students a face- to-face tutoring. The public higher institutions are responsible for the courses development as well the instructional materials.

Free and open access to quality digital resources

The open access movement makes possible to everyone to find a variety of educational resources in the web. It represents a significant option to increase democratic access to knowledge and instructional materials. Open educational resources are teaching/learning materials freely available in the web for anyone to use (Wiley, 2006). The open access adopters see in this approach a way to enrich learning comprehension through reuse, adaptation, and free dissemination of digital educational content.

Digital Educational Repositories

Any digital resource with educational application can be stored in educational repositories, and they usually are: software, multimedia activities, texts, e-books, quizzes, course syllabi, courses, simulations, presentations, audio and video files, etc. The term learning object is frequently used in literature referring to digital educational resources, which are developed within certain standards so it is possible their reuse at different educational contexts. Learning objects are stored in educational repositories, and they must be catalogued, so users can easily find them.

One of the first initiatives in Brazil to provide free digital learning material through the web was the Interactive Virtual Education Network - RIVED, a Ministry of Education project. And this was the pioneer attempt in the country to use learning object concept and open standards to produce and publish digital material (Nascimento, 2003). RIVED learning objects consist of problem-based multimedia interactive activities, covering diverse topics, mostly aimed for high school level.

The learning objects are stored in a repository, and users can find them by using a search engine. When users access the search results the full description of the materials are available, and also a teacher's guide. An important feature for assessment and recommendation is implemented for those who access the resources. RIVED sponsors multidisciplinary teams at universities for research and production of learning objects. Consequently, the project major benefit is the development of a culture of digital learning resources production for free dissemination and reuse, in the Brazilian universities. While the teams support the creation of resources to feed the repository, they also help to enrich the pre-service teachers training by having them as team members.

The Portal of Public Domain is another repository MEC implemented to provide anyone the free access to literature, academic papers, audio and video files, among others. Many videos produced by TV School are stored in this repository and available for use.

The international bank of learning objects

Although the web has a great amount of content, it is time consuming for a teacher to search everywhere for published resources. And many educators go into MEC web address hoping to find easily the learning material, but they have to navigate in different pages looking for what they need. Considering all these, the idea of a major gateway for locating and using varied format of learning objects was the natural progress. Therefore, a new project has been developed to bring together, in the same repository, the whole digital educational resources produced or sponsored by MEC, besides all the other ones identified in Brazil and other countries, intended for the sharing and reusing. The repository, named International Bank of Learning Objects, is to support the Teacher's Portal, where teachers will find examples of how to use the digital resources, will have access to open source software, and will be able to assess and know other people opinions about each learning object. The public learning resources will support K-12, vocational and higher education in diverse knowledge fields.

The project is a collaborative endeavor of member countries in the Latin America Educational Network Portals – RELPE, Organização dos Estados Ibero-americanos – OEI, and other participant countries. The goal is to offer access to educational resources to stimulate the sharing and dissemination of experiences to improve learning.

Besides integrating the Ministry Education Plan, the development of the International Bank supports the RELPE report, which stresses the importance of collaborative initiatives for the exchanging of best practices, scientific research, and technological innovations. The expected result is the promotion of a leveling among participant countries, by having countries with significant advancements in some fields helping the other ones to achieve the same stage of technological development.

The Brazilian proposal to meet RELPE objectives is to develop an integrated management system that enables the publishing, evaluation, searching and maintenance of a learning object collection. DSpace is the software selected to implement the repository. It is an open source platform developed by the Massachusetts Institute of Technology – MIT and Hewlett-Packard – HP.

The construction of a collaborative network to supply the International Bank can facilitate the access to a significant amount of resources. This might spring many innovations in educational practices of Brazilian teachers.

The Teacher's Portal

The idea for the Teacher's Portal is to integrate the whole public system of K-12 education. Therefore, it will connect in the same virtual environment decision makers, academics, teachers and students. With this solution MEC expects to aggregate and offer the teachers all important information to improve the learning

process in schools. In addition, the portal will provide the means for teachers to share experiences and exchange instructional materials.

Hopefully, the combination of all initiatives will improve education in many aspects, including the teaching and learning quality; the school drop out; teacher's training and lifelong learning; and digital divide.

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