The Without Frontiers Digital Literacy Project

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Good practices for the accessibility of people with Special Needs, through assistive and adaptive technologies. The Biblioteca Municipal Aquilino Ribeiro, of Vila Nova de Paiva, develops an integrated system of services, in public and private partnership which associates: inclusive conversion of computer posts at a Documentation Centre, Itinerant Library and School Library (with technologies of augmentative communication, voice synthesis, optical character recognition and universal interface design); acquisition and edition of Digital Talking Book and website accessibility content under DAISY specifications; an official training and certification program in ICT basic skills. We draw the outline.

1. Introduction

At the heart of Dão-Lafões subregion (NTS III), the Municipality of Vila Nova de Paiva is composed by seven freguesias, in a total area of 175,2 km2, and with 6141 inhabitants, of which 1403 residing in the see. Rural matrix, eroded and moderately humanised landscape characterize the Alto Paiva plateau – 'Lands of the Demo' in the evocation of the Library's patron, Aquilino Ribeiro.

Calouste Gulbenkian Foundation is at the origin of local reading services. Since the middle 60's, departing from neighbour Moimenta da Beira Municipality, an Itinerant Library served a limited territory, but with great appeal. The Biblioteca Municipal Aquilino Ribeiro (BMAR), opened in January 1988, at the centre of the village. For a short period, in May 2003, BMAR moved to a larger edifice, better situated, in the perimeter of the School Park. The building would be deactivated in March 2005, to give place for a new library, of the Rede Nacional de Bibliotecas Públicas. Opening is due to take in 2008. Minimal reading services are currently ensured by an embryonic Documentation Centre, located in the bivalent Auditorium and Municipal Museum, and by the Itinerant Library and Iniciativa Bibliocaixas (circulation of selected collections and educational activities among 16 primary schools).

2. Cultural background and ICT implantation

A number of structural barriers delay the social communing of Knowledge, particularly in depressed rural areas. According to 2001 Census, analphabetism livens up to 16.6 % of local population, just recently alleviated with adult scholarisation campaigns. What is more, functional illiteracy owes to a history of early school abandonment (yet 2 % in January 2006). Known desertification and demographic aging phenomena (2315 inhabitants, 38 %, above 50 years old) are consequent of short economical resources, employment opportunities and revenue; youth and new adult migration trend. INE National Statistics Institute informs that Employment and Economical Activities development indicator of Vila

Nova de Paiva was 51.9 % in mid 2002. Unsustained cultural policies and the incipience of technological infrastructures restrain quality of life and the access to Knowledge Society.

The 2005 ICT survey by UMIC Knowledge Society Agency and INE reveals that penetration of personal computers in Portuguese homes meets 42.5 %, while Internet connection is below one third (30.4 % in Centre Region, NTS II). Low value perception of Internet services persist among many users as one of the reasons for not sticking to its advantages. 58 % of PC owners didn't manifest interest or sufficient awareness of Internet possibilities. Correlation with education and demography indicators suggests an exacerbated scenario for inland rural areas such as in Vila Nova de Paiva. Unequal access to computers and late introduction of ICT in elementary classes were aggravated by broadband unavailability before 2005. Here Internet access is territorially uneven, in social or economic perspective.

It requires a special effort of Local Administration towards promotion of digital cohesion, through mobilising and deconcentrated action. While multifaceted information-education-culture agencies, libraries are set to combat illiteracy and info-exclusion, that constitute, after analphabetism, the larger obstacles to the communities' social and technological emancipation. Such mission is realised through equality support in information access.

3. Territory approaches

Territorial cohesion demands some degree of physical approach, in ways to sediment recreational and informative practices, as to create new publics for Information and Knowledge Society.

The modern paradigm of information technological systems bears a conceptual evolution of traditional libraries. These no longer remain limited to a place of people's encounter with tangible objects. Be front conventional archetypes related with the physical library, such as bureaucracy, custody and preservation, digital libraries oppose the premise of ride-free information access and collaborative networking. The accent is on the services delivered to a user. BMAR / Documentation Centre underlines the path towards hybrid environment, as where coexist a mixed collection of digital and classical materials and the ability to organize and diffuse variant informational recipients.

Integration and rulement of broadband services at library systems, as in our Documentation Centre, establish alternative user behaviour when compared to Internet points. Whereas heterogeneous user groups are uncommon to dedicated technological environments, libraries favour social and holistic appropriation. There crosses intergenerational attending whereby adults, adolescents or children naturally cohabit in access both to ICT and usual resources: printed editions and non-book material, multimedia, knowledge bases, reference services, tertiary fonts.

Engagement of crosswise strategies in cultural and social services of Local Administration drives to technical cooperation in deconcentrated actions. EMA vehicle (acronym of Mobile Space of Animation) features diversified valences, including tourist information and library services, operating at alternative contexts – school net and health centre, swimming pool and fluvial beaches, senior care facilities, juvenile occupational centres and public squares.

Itinerant Library enhancement with celular broadband (Wi-Fi and HSDPA) and energy accumulation technologies carry Internet mobile services to the six Municipal freguesias other than the see, corresponding to 164 km2 and approximately 4500 inhabitants, otherwise excluded of public access to the Internet.

From our experience it is imperative, as difficult and rewarding, to facilitate the use of Internet in variant places, especially in approach to 'unconnected' potential user groups, and in ways to sustain recurrent access. Present multi-age adhesion to Itinerant Library services (at a weekly passage basis), having experienced ICT skills, hold the attribute to divulge broadband services throughout. That will in return increase e-government operation expectancy while typical broadband access delivers a higher standard insight of Local Administration: increasing data transfer rates mean better access to information, majorated tasks and time and resources economy.

4. Digital Inclusion

The development of Knowledge Society forwards the double challenge of innovative opportunities and offspring issues to info-exclusion. Digital cohesion is guaranteed when use of ICT and access easiness contribute to economical and social inclusion, associating specific strategies for people with disabilities.

After radio and television broadcasting, also the generalization of the Internet represents a giant step in information access by the visually impaired.

Common use of audiocassette recorded literature had its course in the late 70's and following decade. Talking books arrived briefly and at less expense than braille. The 90's introduced digitalization, optical character recognition and voice synthesis technologies, braille displays and magnifying resources. 21st Century breakthrough of digital accessible information systems (ANSI/NISO Z39.86-2002) engaged new possibilities in relation with reading. It features usability easiness (friendly software that allows in source navigation and content indexation), portability (with special CD players) and in real time audio streaming over broadband connections. The operative functionality of the digital format ensures a more advantageous archival typology – in economy, preservation and transferability (accompanying technological evolution).

Attentive to foster new communities of users, in approach to Citizens with Special Needs as a niche beyond physical or administrative boundaries, BMAR / Documentation Centre is funded by Calouste Gulbenkian Foundation and the Knowledge Society Operational Program to develop an integrated system of services, in public and private partnership, alongside a social intervention project (IDEIA.PT) and the Agrupamento de Escolas Aquilino Ribeiro (Primary Education school net). The Without Frontiers Digital Literacy associates: inclusive conversion of computer posts at the Documentation Centre, Itinerant Library and School Library (with technologies of augmentative communication, voice synthesis, optical character recognition and universal interface design); acquiring and edition of Digital Talking Book and website accessibility content under DAISY specifications; an official training and certification programme in ICT basic competences through assistive and adaptive technologies.

Besides financial cooperation, the IDEIA.PT project assigns individual diagnosis, selection and recruitment of trainees, and, as a sustainable factor, guideness to personal

candidacies for disability aid, such as digital adaptive equipment. There after a second phase of the training programme, to be held in the last quarter of 2007, and majorly driven to the same user groups, will disclose a b-learning curriculum (presential and long distance through Internet), with informational, technological, social and educative modules, in addition to the possibility of acquiring European Computer Driving Licence.

Due to lack of Special Reading services in the Dão-Lafões subregion, the Without Frontiers Digital Literacy project targets the visually impaired of Vila Nova de Paiva and beyond, at a wide geographic range, based upon three transmunicipal services: recognition of basic competencies in ICT and associated awarding; loan of Digital Talking Books, exempt of postal costs; itinerant activities with other public and school libraries.

According to ACAPO (national association of the visually impaired) and INE (National Statistics Institute) annual data, the blind or low vision population is in excess of three thousand individuals up to a distance of 35 km from Vila Nova de Paiva's administrative boundaries.

BMAR / Documentation Centre have picked beginning agreements with Bibliosoft (library software), prominent Special Reading services of Biblioteca Nacional de Portugal and Biblioteca Sonora da Biblioteca Pública Municipal do Porto, the Viseu delegation of ACAPO, the Associação Promotora do Ensino dos Cegos (teaching for the blind) and the Associação Promotora do Emprego para Deficientes Visuais (employment for the visually impaired). Participation of people with disabilities and their representative organizations, in a project to them destined, promotes evaluation, transparency, shared responsibility, partnership feedback and reassurance.

5. In the end

Dissemination of assistive and adaptive good practices for Information and Knowledge universal access conjoins training and certification at alternative contexts, in a Life-Long Learning project by which Citizens with Special Needs establish new relations with reading.

Nothing about people with disabilities without people with disabilities. We understand that constructive involvement of a solidarity network in the development of a library system designed to habilitate the info-excluded is a factor of sustainability and multiplying effect.

The incipience of Special Reading services in district Public and School Libraries and on the other hand the possibility to achieve internal synergies and a public-private partnership, representative in transversal domains, prefigure an understated niche of intervention for a small village reading services to fulfil it's mission, while a sound opportunity for illiterate and visually impaired users to find basic tools and accessible contents.

Give the efficiency of the project, from target user groups to Local Administration management, employers (consider telework) and ICT market stakeholders alike – every participant wins, and that is social cohesion.

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