Open Development in Latin America: The participative way for implementing knowledge societies

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Abstract

Aspects for the collaborative development of information and knowledge societies in Latin America are discussed: the design and coordination of national and regional agendas, networked learning with the support of social networks, regional cooperation in networks of government institutions - such as the procurement or recycling of electronic waste. Based on these experiences, the collaborative model of open development is outlined. The examples of development processes with openness as an additional degree of freedom demonstrate a realistic perspective, but the limits of euphoria as manipulation, control and surveillance in social networks must be answered by laws and social discourse. Here, Latin America is institutionally well positioned for the global process of developing Internet principles.

Content

Introduction

The Latin American countries have overcome the lost development decade of the 80s and the economic turmoil in the early 90s. Economic growth and poverty reduction are a priority in all countries today. Only towards the end of the nineties, the Latin American countries have taken the technically induced opportunities of the use of new information and communication technologies (ICT[1]) in their national policies, such as through the development and communication of digital agendas, but without falling into the agitated competition in the race to information societies between the U.S., Japan or the European Union. One reason for this can be seen in the decades of intensive regional discussion and research on impact and implications of information and knowledge societies in Latin America. As an example may be mentioned the Latin American Council of Social Sciences[2] that promotes for decades the scientific analysis of the topics of

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[1]   Abbreviation for ICT in spanish and portuguese: TIC
[2]   Spanish: CLACSO. Consejo Latino Americano de Ciencias Sociales. See www.clacso.org.ar

communication and new media in the subcontinent.

The European Union published with the Bangemann Report (1994) its "neo-liberal manifesto" (Krempl 1997, p. 1) on the Information Society, which to a large extent reads like a copy of the action paper of the Clinton/Al Gore[3] Administration for the creation of a National Information Infrastructure (NII). In the NII, the market is celebrated as the sole factor in achieving the information society, with priority to the liberalization of telecommunications. The Green Paper 'Living and Working in the Information Society' (EU Commission 1996) is understood as a social response to the Bangemann Report: "The Commission has sought advice from some of the most prominent experts in Europe on how to promote job creation, social solidarity, equality of opportunity and access and the preservation of Europe's cultural diversity in the Information Society" (EU Commission 1996, p. 4).

The Latin American countries are aware of their different economical and sectoral performance. The differences are reflected in the design of information and knowledge societies and are setting the direction, just as it was the case for Europe: "The benefits, in the form of prosperity, and the costs, in the form of burden and change, are unevenly distributed between parts of the Union and between citizens" (EU Commission 1996, S. 2). Central for the winnings of the population is a representative participation in the determination of the objectives and the necessary investments to ensure transparency and acceptance. After a preliminary study of the ECLAC data from 2008, the digital economy contributes in the four countries Argentina, Brazil, Chile and Mexico with an average of 3.2%[4] to the economy. Thus the digital economy with the components of broadband network infrastructure, the ICT industry and the issues of the end user already has a significant share achieved in comparison to the average of the European Union of 5% (ECLAC, 2013, p. 17).

The World Summit on the Information Society with two phases in Geneva and Tunis (see final report WSIS 2005) had a strong impetus for the entire Latin American region to find the link to the global development of information and knowledge societies. The countries of Latin America have successfully embarked on the road of South-South cooperation to build their information and knowledge societies based on national agendas and intergovernmental mechanisms, supported by the United Nations Economic Commission for Latin America and the Caribbean[5] and the European Union. The information and communication technologies are to be used with the clear objective to solve the particular structural problems of developing and emerging countries for business, health care, but especially for education and research. This is done through inclusive access to information, through networking of projects and experts as well as by the participation of the population in policy formulation, which thus may contribute to the participatory implementation of development goals. As relevant examples for the involvement of networks in the development process, national and regional agendas are outlined to stimulate the construction of information and scientific societies, the potential for change in education and training through networking is highlighted as well as the involvement of relevant social groups in Internet governance. In the field of development cooperation, Open Development is potentially a viable model for most countries of Latin America with the need to elaborate the approach further.

In Brazil, on the streets and through the media it was clearly visible that on the occasion of the football World Cup, which will be held in Brazil in mid-2014, nationwide protests of all social groups have already been initiated in 2013. Government spending on stadium buildings and their related transport infrastructure is growing exponentially, although their sustainable social use is not ensured. In contrast, much needed investment to improve health care and the education sector have been neglected for decades and were repeatedly postponed, according to the tenor of the protest

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[3]Al Gore coined as U.S. Vice President the term Information Superhighway
[4]   Extrapolated to the entire region of Latin America and the Caribbean, resulting with 2%.
[5]   ECLAC, spanish CEPAL. See www.eclac.org

movement (Alves 2013). Obviously it was neglected to generate with the new sports facilities a basic consensus on the public investment by involving citizens in the sport arena towns and to communicate transparency by appropriate means. During these major sporting events nation-wide protests will be expected again despite a massive security force - and despite the enthusiasm for football.

Investment of public funds in the information and knowledge societies must also prove that they suggest possible solutions to serious social upheaval. Many Latin American countries are particularly looking for the containment of violence in cities e.g. between rival factions of drug cartels. The mara youth gangs (Valladares 2010), which have their origin in Central America, are dissuasive expression of uncontrollable violence by drug and arms trafficking. Currently, interactive statistics in the network can, for example, contribute by showing foci of violence, at least for policing purposes for the prevention of crime and detailed identification of dangerous zones. But also for the demonstration of misdirection, bad investments, corruption in local government and in the political class as such provide reprocessing and attractive visualization of open data, along with independent media measures to control spending and decisions by the public. Transparency and openness are the demands of the hour with a historic reference, because the ideas are from the perspective of elected politicians not new, but got through the use of ICT a new and greater chance of serious implementation.

Tools for the network society

The tools for social networks, supported by ICT, have to be moderated as open and at the same time result-oriented networks in local, national and regional development processes. As examples of widely-used networks in Latin America (see Acevedo 2013, pp. 185f.) can be seen in the field of communication (1) the network of the World Association of Community Radios (AMARC) to exchange views on legislation, technical issues and program design to radio broadcasting, or (2) the network of the Association for Progressive Communication (APC) on issues of human rights and communication[6]. In the network society, Capurro called for to broaden the human right to communication accordingly to interactive media: "New ICTs are increasingly used as a means of political participation, for example by protest groups, or liberation and peace movements. At the same time digital communication networks offer new structures of political surveillance, censorship and control of individuals and entire societies. Digital ethics should address the question of human rights on communication" (Capurro 2011, p. 7 [translation by the author]). Human rights must be extended to the requirements of interactive media, as Capurro calls consequently: "The Internet has become the local and global, fundamental, social communications infrastructure. Free access should be handled similar to the basic principles of free speech or free press. Some of the rights mentioned in the Universal Declaration of Human Rights, such as freedom of thought, freedom of conscience and freedom of religion, the right to freedom of expression and the right to peaceful assembly must be new reinterpreted in this regard and must be defined with inclusion of the new and unique requirements of digital media" (Capurro 2011, p. 7 [translation by the author]). The implementation of human rights for the network society in the national legislation in Latin America can only be performed by local groups with international exchange. The networks AMARC and APC offer this concrete support, and the research network RELEI[7] for information ethics.

For vocational training, the courses and information offered by the regional vocational training center CINTERFOR[8] of ILO (UN International Labor Organization) are exemplary. Other examples

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[6] For an overview on links of relevant networks see www.instkomm.de/12-0-Wissens-Dialoge.html
[7] Red Latinoamericana de Ética de la Información. http://redeticainformacion.ning.com/
[8] CINTERFOR means in spanish Centro Interamericano para el Desarrollo del Conocimiento en la Formación Profesional. www.oitcinterfor.org

of an intensive cooperation in networks are the formulating of the regional agenda for information and knowledge societies[9] (ECLAC 2014) and the network project on public procurement RICG[10] (Inter-American Government Procurement), which consists since 2003 of government institutions that are responsible in their countries for the regulation, the management and modernization of public procurement. The network Red-GEALC (e-Government in Latin America and the Caribbean) was initiated in 2003 by the OAS and IDRC, with the aim to create equal cooperation through the exchange of experiences and experts. All Latin American countries formulate the claim to organize the service to their citizens more efficient and also cost-efficient. The States respond with efficient management of public finances and management transformations, largely funded by the American Development Bank (ADB). A first model for Latin America was the introduction of information and communication technologies in the U.S. administration since the 90s.

It is interesting to compare the approaches and results of e-government in the herein three most successful Latin American countries: Colombia, Panama and Uruguay (Porrúa 2013, pp. 129ff.) The choice of these three countries was based on the improvement in rankings over the years[11]. As common elements for success in e-government can be identified in the three countries (Porrúa 2013, pp. 133f): the support of the highest political authority, a massive training of personnel, the availability of a solid financial and international exchange of successes and failures. These three countries are in accordance with the importance of e-government in their countries also most active in the network Red-GEALC. Supplying all administrative institutions with increasing broadband capacity remains a continuous and cost-driving task in all states. Continuous investment in broadband infrastructure will be necessary to ensure the quality of services. Parallel grow the demands of citizens and inter-institutional cooperation at the service of digital administration. In the order of the world's first 50 states with internet broadband share[12] 2013 from Latin America only Uruguay on the 47th and Chile on 50th place were found (Porrúa 2013, p. 134).

In the context of e-Government the experience of Brazil must be given worldwide the top place regarding ICT in elections. This is because in Brazil over 400,000 electronic voting machines are used in nationwide elections. Electoral fraud has not been claimed in a single case[13]. In the other democracies in Latin America, the use of voting machines in the polling booth is not imaginable, mainly for safety and legal reasons.

In the euphoria of the success of e-government implementers it is quickly forgotten that the use of ICT alone is useless if no transformations of the administrative procedures with respect to administrative simplification, new functionalities and citizen-requested services can be realized. At the same time the protection of personal data must be assured for interactive services. Martin/Bonina (2013) emphasize in the usage the risk of invasion of privacy: "Government programs that encourage and promote openness must simultaneously consider the identity infrastructures that enable such interactions and transactions. If appropriate infrastructures and policies are not put into place, the shift toward these more open spaces, in particular where personal information is concerned, could result in widespread privacy invasions, information security breaches, harmful surveillance, discrimination, or worse" (Martin/Bonina 2013, S. 237).
This is even more important as emerging and developing countries, in general, cannot build on a grown digital tradition in information security and data protection. Therefore, the protection of

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[9]   The eLAC process itself is nominated 2014 for the WSIS prize in the category International and Regional Cooperation.
[10] RICG stands in spanish for Red Interamericana de Compras Gubernamentales. RICG is financed by the Organization of American States (OAS), the Interamerican Development Bank (BID) and the canadian International Development Research Centre (IDRC). See www.rics.org
[11] According the assessment with Networked Readiness Index (NRI) of World Economic Forums (WEF) and the overview on e-government of United Nations Department for Economic and Social Affairs (UNDESA).
[12] According Networked Readiness Index 2012
[13] See Superior Electoral Court Brazil: www.tse.jus.br/internet/ingles/index.htm

individual rights of access by digital identity in the development of e-government systems has to ensure: "Achieving the goals of increased transparency of (and collaboration and political participation in) governance processes (i.e., open government) requires far more than simply adopting new technology. Harnessing the power afforded by ICTs, and particularly mobile telephony and more recent Web applications such as social networking tools, will require additional infrastructure and policy development, particularly in the closely related areas of privacy and identity. These complex infrastructures do not yet exist in many countries. Where legal protections do exist, they are often either overlooked when it comes to practical implementation or there is little enforcement" (Martin/Bonina 2013, pp. 223f.). If e-government concepts are introduced without sufficient planning, new threats to the citizens may arise: "The fear is that if developing countries create these systems haphazardly they may result in new vulnerabilities, including increased threats to citizens' privacy, greater information security frailties, and more sophisticated means of government surveillance. Such vulnerabilities would challenge the positive and democratic side of open government initiatives" (Martin/Bonina 2013, p. 224). Thus, the critical areas are identified in the implementation of e-government structures that require special administrative and legal thoroughness with the assessment.

The growing awareness of environmental responsibility in the cycle of ICT products also includes the recycling of electronic waste in Latin America as part of a digital ethics (Capurro 2003). The regional platform RELAC serves the intergovernmental coordination of the management and recycling of e-waste. RELAC was developed by the Chilean SUR Corporation of Social Studies and Education, the Swiss EMPA[14] and the Canadian IDRC. On the situation and the problems of e-waste recycling in Latin America, particularly in Argentina, Brazil, Paraguay, Peru and Uruguay, as well as on legislative solutions, the results of a two-year regional project offer an entry point (Cyranek/Silva 2010). Global co-operation with governments, electronics manufacturers, scientific institutions and environmental organizations is organized in the program StEP of the University of the United Nations, but according to the annual report 2012-2013 (Kuehr 2013) only two institutions from Latin America are involved: a consulting company from Ecuador and the regional platform RELAC.

Agendas for information and knowledge societies

Invited by the UN Economic Commission for Latin America and the Caribbean ECLAC and the Brazilian government, delegates of Latin America governments have signed the Florianopolis Declaration (2000) that focused on ICT for development processes. This declaration marks the start of regional strategies in Latin America, to push economic growth and social development through ICT potential. The stated purpose was, to become until 2005 a full member of the global knowledge economy (ECLAC 2000).

The pioneering role of Chile in the "race for information society" (Klumpp/Schwemmle 2000, p. 50f.) has become evident at an early stage. Chile introduced in 2007 as the first Latin American country its digital agenda, other countries followed in 2010 or even later. The countries of Latin America continually update their national digital agendas[15], the relevant time frame (the validity of the current plan is in the following examples in brackets): Chile (2013-2020), Costa Rica (2011-2014), Colombia (2010-2014), Uruguay (2011-2015) and in addition the regional agenda eLAC (2013-2015) . The process to build consensus on the models and in the wake of the implementation of a national agenda with a clear transnational orientation to cooperate with ministries, civil society, academia and industry, has been established to achieve medium-term goals to the information and

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[14] EMPA Research Institute Materials Science and Technology, ETH Domain Zurich. See www.empa.ch
[15] For an overview on digital agendas in Latin America see www.instkomm.de

knowledge society and not to be dependent on current political events.

Mansell (2006) outlines a bridge from the MacBride Report (MacBride 1980) and its consequences to the formation of the World Conference on the Information Society (World Summit Information Society (WSIS)). As a result of the two WSIS conference-phases in Geneva in 2003 and Tunis in 2005, the countries of Latin America and the Caribbean (LAC) have agreed immediately, to initiate a structured process, called eLAC, through specific measures for building information and knowledge societies, including the participation of civil society. As early as the first phase in Geneva, the civil society had its vision of a humane, inclusive and equitable Information Society formulated and demanded its inclusion in the WSIS documents: "Working together both on-line and off-line as civil society entities, practicing in inclusive and participatory use of information and communication technologies, has allowed us to share views and shape common positions, and to collectively develop a vision of information and communication societies. At (...) the first phase of the Summit, (...) our voices and the general interest we collectively expressed are not adequately reflected in the Summit documents. We propose this document as part of the official outcomes of the Summit" (WSIS 2003, p. 2). This was a shift in the WSIS accents of technology-stressed ITU-positions on issues of content. Following Verena Metze-Mangold, the creation of knowledge societies requires "efforts in education, in science, in the cultural sector as well as advancement in securing of freedom of expression and access to information and knowledge. Modern knowledge societies are seen as just, open and participatory. Their composition is based on four pillars, which are central for the entire work of UNESCO in the field of information and communication: (1) Knowledge building, (2) Knowledge preservation, (3) Knowledge acquisition, and (4) Knowledge exchange" (Metze-Mangold 2012, p. 7, translation by the author). Ten years after the World Summit, the conferences WSIS+10 are worldwide organized to evaluate the meanwhile implemented WSIS activities (WSIS 2013).

Today, the priorities for the development of an information society towards a knowledge-based society in Latin America are regularly updated in the previously mentioned regional action plan eLAC at ministerial level and at least until 2015, the planning horizon for the eight UN Millennium Development Goals[16]. For the Action Plan eLAC2010 with the horizon 2008-2010, an indicative and participatory approach has been adopted: a five-stage Delphi study with over 1400 contributions by experts was evaluated (Hilbert/Miles/Othmer 2009). Thus, future priorities for the implementation of information and knowledge societies were identified by broad participation that served as input for the intergovernmental negotiations for the Action Plan eLAC2010. Up to date, this Delphi process can be considered as the most extensive part of an interstate and regional planning process in developing countries. This has shown how by offline and online tools a public decision on development policy for information and knowledge societies could be successfully organized – in a participatory and transparent manner. The authors (Hilbert/Miles/Othmer 2009, see pp. 902) observed two practical consequences resulting of the experience with the Delphi study: Once, the governmental recognition paid tribute to the collective intelligence performance in the Delphi study by civil society, academia, and the private sector. On the other way, a new advisory and facilitation role for the United Nations and other intergovernmental organizations was successfully demonstrated in the field of international participatory policy in the digital age, including cost-effective methods to assist member countries in the implementation of regional, public policy agendas.

The fourth Ministerial Conference on the Information Society in Latin America and the Caribbean in Montevideo, Uruguay, organized by ECLAC, set 2013 the goal "to examine the achievements and challenges regarding the regional information society in order to contribute to the

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[16] For MDGs see www.un.org/millenniumgoals/

universalization of broadband, achieve a transactional and participatory electronic government, improve access to ICTs, promote regional integration through ICTs, and universalize access and expansion of new technologies for health and education" (eLAC 2013). Participants were in addition to government officials, the United Nations with its theme-specific organizations[17], regional intergovernmental organizations, observers of the eLAC process[18] and NGOs.

The result of the fourth ministerial conference included the Montevideo Declaration with the updated action plan (eLAC2015) for the years 2013-2015. For the signature countries, this action plan stipulates as priorities the support for discourse on Internet governance, ensuring human rights in the digital world, the promotion of broadband infrastructure development, the implementation of open government, the inclusion of the disabled, new solutions for e-waste recycling, and the expansion of virtual learning opportunities.

Although progress in the formulation of regional and national action plans and priorities have been achieved, ICT broadband access and the innovative identification of applications for development processes remain weak points for the implementation of information and knowledge societies in the region (Betancourt 2013, p. 171). In particular, the broadband Internet access for educational institutions and new didactic content must receive emphatically high priorities, coupled with the budgeting of necessary investments.

Education and training

To meet the requirements of the educational objectives and content in the 21st century, all Latin American countries undertake great efforts to modernize public schools and higher education through curriculum reform and use of the computer as a medium.

Uruguay was a pioneer in the nationwide integration of web-linked computer support at school, followed by Chile with an emphasis on computer classrooms and learning transfer, several provinces of Argentina, a model experiment in Brazil with 300 schools, cities and later the mountain regions of Peru, the notebook use for all students in Venezuela. The successful exchange of learning objects in Latin America is supported by the regional education portals Relpe[19] and Educared[20]. The plan CEIBAL[21] in Uruguay is internationally regarded as a successful modernization project of school learning - as an integral part of implementing the information and knowledge society (Cyranek 2010a). Uruguay, with its three million inhabitants, has implemented an ambitious plan to equip all Primary Schools with school servers and Internet access, as well as providing all students their personal laptop - in line with the concept of One Laptop Per Child (OLPC 2014).

Thus, in Uruguay 98% of primary school students have Internet access at school, but also at home by networking through the laptops itself, using mesh-net technology. The targeted broadband connectivity was continuously implemented and improved. The demonstrable success was possible once by the commitment of the municipalities, secondly, by self-organized networks of volunteers

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[17] e.g. International Telecommunication Union (ITU), United Nations Development Program (UNDP), United Nations Educational, Scientific, and Cultural Organization (UNESCO)

[18] e.g. Association for Progressive Communication (APC), Asociación Iberoamericana de Centros de Investigación y Empresas de Telecomunicaciones (AHCIET) ; Internet Address Registry for Latin America and the Caribbean (LACNIC)

[19] RELPE: spanish for Red Latino Americana de Portales Educativos. www.relpe.org

[20] EDUCARED Education Portal of the Telefónica Foundation. www.educared.org

[21] See www.ceibal.edu.uy

to solve technical networking issues, and last but not least by support of universities through student managed projects in local communities. Organizational and logistical details are not insignificant: the state-owned delivery company (correios) was responsible for the initial shipment of laptops to the schools, later for their repairs, the state paid-up the fee. The state-owned telecom ANTEL is by law committed to connect the rural areas. The topography of Uruguay facilitates communications engineering at a cost-effective and comprehensive networking using fiber optic and radio links. High costs are resulting through countless small communities.

The homework for Uruguay are the expansion of broadband Internet connection for all schools - even for remote rural areas of the country, up to date teacher education followed by continuing and further teacher training with regard to requirements of an inclusive information and knowledge society, the implementation of an information and media literacy education and the development of pedagogically meaningful interactive learning objects - freely available under open content licenses. In addition to the review of the cost of computers and infrastructure of schools, critics of the plan Ceibal call for comprehensive evaluation methods and evaluation studies in order to promote the use of computer for transfers into other disciplines such as foreign languages, mathematics and natural sciences. Of course, the students learn how to use computers and the Internet. They use interactive learning objects in all school subjects and interdisciplinary projects. But whether and if so how they do manage learning transfer is controversial. But that would be the prerequisite to specifically offer computer support by national projects.

In the global context, Pedró accuses (2012) developing and emerging countries, despite scarce resources, inexplicably to invest in ICT at school, although there are no educational scientific evidence that computer use has a demonstrable positive effect in the core subjects. The investments will be made thereafter, shortened expressed, only by opportunism of politicians: "Technology policies in education are far from being based on evidence. The limited scope and scarcity of the existing knowledge base would certainly support this conclusion. Moreover, in the absence of a robust knowledge base and appropriate monitoring and evaluation arrangements, there is no way to inform policymaking with empirical evidence. As the title of this chapter suggests, policymakers may be trusting an unknown. However, they may be doing it for a reason: by prioritizing access to technology they convey a very simple message - that they are using taxpayers' money to modernize schools in a way that can be actually seen and touched. What use schools and teachers make of this modernization opportunity it is a different issue that can be addressed only if more powerful accountability systems are in place" (Pedró 2012, p. 145).

The databases for computer use in schools and its evaluation are insufficient if they only store the number of computers available per school, the minutes of computer use per week or the bandwidth of Internet use quantitatively and qualitatively. It would be important to know how the teachers integrate the computer in order to achieve their educational goals: "Because educational phenomena are quite complex and multi-faceted, the right questions are not about whether or not to use technology at all, but about which technology solutions can best suit the evolving learning requirements that each individual teacher has to manage in the classroom. Equipment may shine and speak for itself, but unless it is properly used no educational effects will be ever seen" (Pedró 2012, p. 145).

With the progressive implementation of knowledge societies in Latin America, teaching information and media literacy gets more importance. An integration of information and media literacy in teacher education and in curriculum development is required. The German Commission for UNESCO already recognized in 1999 in a resolution the importance of information and media literacy for knowledge societies (DUK 1999). The UNESCO headquarters in Paris has published guidelines for ministries and identified ways to promote information and media literacy at national and regional level. Moreover, UNESCO emphasizes for governments the importance of information

and media literacy in the development cooperation (UNESCO 2013). The potential of communication in the development process is so far an underestimated factor for the sustainable success of development projects. Examples of Uruguay show the range of possible initiatives of communication for positive social change: from video workshops for young people on HIV/AIDS to graffiti contests for the Millennium Development Goals of the United Nations (Cyranek 2010b).

In addition to the school sector, the public tertiary education will need urgently a quantitatively and qualitatively enhancement by virtual study programs. As an example, the virtual University of the State of São Paulo UNIVESP may be called, which is the result of a partnership of three public universities. However, none of the three participating universities USP, Unicamp and Unesp provides open content licenses (see the Guide of Kreutzer 2011) for their educational materials. Until now, only a few initiatives and educational institutions use in Latin America Open Educational Resources [22] (OER) which are freely available with open content licenses. With open content licenses in OER, copying, restructuring and completing is legally possible. Rosas (2013) documents the current state of OER initiatives in Brazil. The objective of the OER movement is, however, to offer courses for a whole study year up to cover entire study programs online to transform implement the virtual learning opportunities that become possible through ICT into real educational opportunities, realizing as economically justifiable.

As a best practice model, the Parliament in the State of São Paulo, the richest of the 26 states of Brazil, adopted a law on the use of Open Educational Resources (REA 2013). Also textbook publishers were encouraged to initiate new business models for teaching materials. The necessary investment in the printing of school books and textbooks should now be transformed to create and improve the quality of already online available open educational materials. The governor of São Paulo, however, vetoed the law with the argument that open educational content should be part of the policy on ICT regulation and Internet access. However, curricula are not part of Internet or network infrastructure, but probably part of the discussion about the use of public funds for any content, for inclusive access to knowledge through open educational materials for adult education and for people with special needs (see position of the initiators in REA 2013). The topic of open educational content is increasingly part of the public debate about freedom of education and inclusion in the information and knowledge societies.

Power control and global Internet principles

The revelations by Snowden made the mobile phone surveillance of the President of Brazil by the National Security Agency (NSA) of USA public. It led to sharp government protest, addressed at the government in Washington. As a result, even a planned state visit to the U.S. government was canceled. As a consequence of the NSA scandal, Brazil organized the global Internet conference NETmundial[23] with the two thematic tracks *Internet governance principles* and *The roadmap for the further evolution of the Internet governance ecosystem*. This conference in São Paulo (April 2014) discussed new ethical guidelines and technical solutions. With an open development process in mind, UN agencies, Internet institutions, government representatives, industry, and representatives of civil society were invited. The contribution of the German Foreign Ministry proposed a list of Global Internet principles (Brengelmann 2014). The topics of Internet Governance, the mobile Internet world and the necessary rules of power control in corporations and government agencies promise to establish worthwhile research objectives for the cooperation

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[22] Abbreviation for Open Educational Resources (OER) in spanish and portuguese: REA.
[23] NETmundial - Global Multistakeholder Meeting on the Future of Internet Governance. April 2014 in São Paulo, Brazil. See netmundial.br

between Germany and Brazil.

Openness for Open Development

The international development cooperation in Latin America promotes and opens up towards Open Development (Girard/Perini 2013). After Open Access, Open Data, Open Education, Open Educational Resources or Open Source Software, the development organizations just follow with the development model Open Development the buzzword open, too? Open Development will draw advantage on the experience and models of all these aspects of openness. Open Development studies tested models of openness for a possible adaptation into the development process, e.g. models of production of Free and Open Source Software (FOSS): "A good starting point for the origin of ICT-based open models is the open source software production model that took advantage of microcomputers and early networked connectivity" (Reilly/Smith 2013, p. 15).

The concepts of open government and open data are becoming structural elements for transparency of government action, for fiscal expenditure control, for participative priority setting, decision-making and project development. By improving the transparency of mechanisms of corruption by decision-makers, open government can be attributed to a supportive and relevant role in improving governance. Manageable and efficient models of participation are being sought to promote social inclusion through participatory priority-setting in education and training, health care system, the nation-wide communication infrastructure or transport infrastructure.

Under Open Development is understood in their implementation processes initially on increasing the participation of experts and interested citizens in the selection of priorities for projects and participation. The definition of Smith/Elder/Emden is associated with fundamental research questions: "Open development refers to an emerging set of possibilities to catalyze positive change through open information-networked activities in international development. While there is evidence to support the observation that these changes could be coming, we are only now beginning to glimpse their potential for developing societies. Consequently, embedded in this theory are a high level research question and hypothesis. The hypothesis states that these new models of net-worked activities can lead to development outcomes that are both inclusive and transformative" (Smith/Elder/Emden 2011, p. iii). This will also involve a broader understanding of the functions and effects of information and communication technologies in the development process[24].

Openness of development processes is central to this understanding. Openness for Open Development can be understood, at least in three dimensions: as openness of content, openness of the parties and openness of the process structure (Smith/Reilly, 2013, p. 10). According to Smith (2013), openness is not necessarily linked to the use of ICT, e.g. it has to be distinguished between open educational resources (OER) and ICT in training. The qualitative gain through openness is in the example of OER the combination of both: "Technology used in the classroom, for example, can include OERs but doesn't have to. What makes OERs special is the value added by free access to content, or the ability to remix, reuse, repurpose, and redistribute that content. This is a case of technology plus openness" (Smith/Reilly 2013, p. 6).

Buskens sees openness as a collective and continuous process of development: "Openness is (...) best understood as a collective process that is continuously under development and review, rather than as a fixed endpoint that can be constructed" (Buskens 2013, S . 292). The potential of open

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[24] Common is the abbreviation ICT4D for Information and Communication Technologies for Development.

development processes[25] lies precisely in the unexpected, unforeseen and creative developments, analyzes, applications, as experience with OER or open government data shows: "The power of opening up OERs and government data to bring about positive change comes in part from positive outcomes that emerge from unanticipated local uses and adaptations. Complexity isn't a bug, it's a feature" (Smith/Reilly 2013, p. 11). Buskens adds the personal intention as an important element for Open Development: "The most significant characteristic of open development, albeit not expressed in words, but in actions, is individual, personal intent. (…) most of the work is self-initiated and unpaid. This makes it all the more imperative to give human intent a prominent and explicit place in the concepts, measures, and strategies that aim to do justice to open development initiatives, whether it refers to design, research, practice, or participation. But I also think that creating an explicit place for human intent in processes of initiating, reflecting, and communicating will go a long way in assisting open development initiatives as conceptual constellations to withstand co-option or colonization by the mainstream econocentric worldview" (Buskens 2013, p. 341f.).

Of course, by the intended participatory processes in Open Development there is also the danger that they may be used only as a formal show event, without taking the concerns of the participants seriously: "What limited social justice within decision-making processes was not the opportunity to participate, but rather the dominant legitimating framework within spaces where decision making took place, where "modern science" overrode tacit knowledge, knowledge of local ecosystems and cultures, and ethical or cosmological constructs as the arbiter of legitimate choices for the future of a community" (Reilly 2013, p. 313). Reilly defined Cognitive Justice as equality in decision-making: "Cognitive justice can be broadly defined as the search for equality in processes of decision making that shape development and change. But the argument for CJ emerged in a very particular context, and this means that it is usually defined in a much narrower way that highlights the struggle between hegemonic, scientific legitimating frameworks for processes of decision making, and diverse local processes of knowledge production" (Reilly 2013, p. 312). But without this equality in decision-making processes, Open Development cannot achieve additional freedom degrees and new development horizons.

Open Development does not follow the current mainstream of development organizations that are committed to results-based management. The scarcer the resources of donor countries for international development projects are, the stronger is the pressure in project implementation to deliver the expected and in advance detailed results. To allow open models, this model runs counter to: "Embracing uncertainty, however, does run counter to the results-based management paradigm that dominates international development, which lays out a series of preplanned outputs and intermediate outcomes on the path to a project's impact. Diversion from the plan is a risk to be mitigated and managed. In contrast, open models are, ultimately, a process that makes possible a diversity of co-created development paths, rather than a predetermined evolution from less developed to more developed states. It is both a structure and process for development" (Smith/Reilly 2013, p. 11). Thus, the model Open Development builds on existing experiences. But Open Development wants to be more than the sum of its parts, more than the examples presented in Latin America for the network society.

As an interim balance can be stated: The Latin American countries have adopted an independent role in further developing their dynamic development of knowledge societies through regional and global cooperation. Supporting elements are the will to overcome the economic crisis, the need for innovative modernization of the state, business and management, the willingness to regional cooperation. However, it cannot be overlooked that the economic integration in Mercosur[26] despite

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[25] Jungk supported already in the 70s the creative potential of citizens and developed the method of future workshops together with Müllert. See Jungk/Müllert 1981.

[26] Mercosur means Southern Common Market, in spanish: Mercado Común del Sur. Mercosur was founded in 1991 by

increasing number of Member States is at a standstill for years. For Latin America are of great importance, not at least due to the greater cultural and linguistic proximity, inter-state relations with the former colonial powers Spain and Portugal. The emerging country Brazil is cooperating increasingly with the EU towards the objective to reduce the ICT dependence of today's major powers, the USA and China. The conference NETmundial in Brazil on Internet Governance should show whether the EU (and specifically at the initiative of the Brazilian President towards Germany) is capable to respond with a substantial partnership in the design of a global Internet governance.

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Argentina, Brazil, Paraguay and Uruguay with the Headquarters in Montevideo. Since 2012 Venezuela is a full member, Bolivia is on its way for membership. Chile, Ecuador, Columbia and Peru are associated members. See www.mercosur.int

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