What do we know about Douala? Access to information in and about the largest Cameroonian city

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Abstract

Access to knowledge and information are critical issues in Africa. Previous studies have tackled barriers to accessing information in Africa, and brought to the forefront aspects such as the lack of physical access to communication technologies, low literacy and digital literacy, and the importance of orality in knowledge production. This paper focuses on the specific case of Douala, the largest city of Cameroon, and the challenges of accessing written and digital information within and about the city itself. Drawing on the results of a recent qualitative study, the paper indicates that limited access to information is conditioned by a substantial lack of tools and infrastructures that can facilitate production and distribution of information about the city amongst its dwellers and outside the city walls. This portrayal is marked by a series of salient aspects emerging from the analysis: (1) the discrepancy between the rich knowledge held and transmitted orally by inhabitants and the scarcity of written information about the city; (2) the rise of digital media over print media as prevalent means of information access; and (3) the growing role of private institutions in information production and distribution. These findings indicate important priorities in dealing with the transition to an information society for Douala as an emblematic case of a developing context marked by poverty and predominance of oral means of knowledge production and distribution.

Keywords
Access to knowledge, access to information, Africa, orality, Douala, information poverty

1. Introduction

Access to knowledge and information are critical issues in Africa. According to Shaver and Rizk (2010) access to knowledge refers to the process of creation and exchange of human knowledge, including knowledge-embedded goods and tools for the production of knowledge and/or information, such as the Internet and Information and Communication Technology (ICT). An analytical distinction is made between knowledge and information. According to Christie, (2004), knowledge is contextualized, alive, embedded in social practices and produced in performative settings, while information is a set of representations or abstractions of prior episodes of knowledge production. This perspective emphasises the representational nature of information and its emergence from knowledge production. Yet, information is also paramount to the process of knowledge production. While information deals with how reality is represented thanks to semiotic codes, knowledge happens only when information is accessed and interpreted by an intelligent being (Fonseca, 2010; Lor & Britz, 2010). Previous studies engaged with barriers to accessing knowledge and information in Africa, and brought to the forefront aspects such as the lack of physical access to communication technologies, low literacy and digital literacy, and the importance of orality in knowledge production (Nyamnjoy, 1996; Obijiofor, 1998; Unwin, 2009).

This paper focuses on the specific case of Douala, the largest city of Cameroon, and the challenges of accessing written and digital information within and about the city itself. The paper draws on the results of a qualitative research conducted in Douala in December 2012 and January 2013 for the project Mobile Access to Knowledge: Culture and Safety in Africa. It focuses on the role of communication technologies (print, analogue and digital media) in facilitating information production and distribution, as well as access to knowledge within and about the city of Douala. Mark Warschauer’s (2002, 2004) model of access is adopted to analyse challenges and tendencies in providing access to information through print vs. digital media. The paper concludes that digital means of information production and distribution take precedence over print media, indicating a tendency to transit from oral to digital with almost no intermediary stage of the written as characteristic of the trajectories taken by Western societies towards the information era.

2. Related work

In the last decade the term access to information/knowledge has been used for different purposes. In a first attribution, it can refer to the way the following elements are distributed in society:

- Human knowledge (education, skills, know-how and human capital);
- Information (including news, data, and information of public concern, such as data about government and its activities);
- Knowledge-embedded goods (such as software);
- Tools for producing knowledge and knowledge-embedded goods (e.g. communication technologies) (Shaver & Rizk, 2010)

Second, it has become a global movement driven by the tenet that providing access to knowledge is a fundamental element for “promoting human rights, economic and cultural development, innovation, individual freedom and creativity” (Yale Law School, 2008).
To depict the complexity of the concept and the role played by ICT, it is necessary to make an analytical distinction between knowledge and information. Turnbull’s (1997) concept of “knowledge spaces” can be useful in this respect. These are spaces in which knowledge is assembled through the concurrence of various agents who make use of their skills and available resources, employing forms, structures and standards inherited from the past and circulated through channels set in place by tradition. The performative dimension of knowledge is instantiated in these spaces, in which knowledge production activities are organised and regulated, rules for validity are outlined, and the roles of agents producing knowledge are defined. An example is the space of production of scientific knowledge, marked by the activities of skilled researchers that engage in research work standing by the rules and standards for the production of scientific knowledge in a given discipline, and employing its resources. Information stands for the representational side of knowledge and is the product of such activities. Christie (2004) argues that what communication technologies can handle is not knowledge, but information. Knowledge is always produced in a context, embedded in social interaction, nurturing connections with the social and natural world. The data stored and transmitted through human-made media, are, on the other hand, just representations or abstractions of prior acts of knowledge production.

In Africa, limited education and literacy, restricted copyrights laws, and diffused oral cultures have a notable impact on the access to knowledge and information. These issues have been addressed in recent years by scientific research as well as through the advancement of standards, programs and actions by international development organisations. From a global perspective, the Millennium Development Goals (UN General Assembly, 2000) address the issue through the following objectives:

- Achieve universal access to primary education, as education and literacy are at the basis of access to information, contributing to the development of human resources and knowledge production;
- Develop a global partnership for development, especially “in cooperation with the private sector, making available the benefits of new technologies, especially information and communications”.

From the World Summit on the Information Society organized in Geneva in 2003 (ITU, 2003) a “plan of action” was issued with the goal of building an inclusive knowledge society and defining roles and accountability of stakeholders in pursuing access to information and knowledge development. According to this plan, governments are the foremost actors that can motion positive trends by developing and implementing national e-strategies and making available necessary resources (including infrastructures, tools, and human resources). Second, the private sector is paramount in the production and distribution of information as well as in the development of ICT for a sustainable development context. Finally, the involvement of the civil society is extremely important in order to create equitable and sustainable access in the development of ICT-related initiatives.

Access to knowledge and information is also explored from a law perspective (Armstrong, De Beer, & Kawooya, 2010; Kapczynski, 2008; Malcolm & others, 2010; Shaver & Rizk, 2010). Opening the barriers of copyright restrictions may increase the sharing of information at a global level, which is at the basis of the production, innovation and development of knowledge.
This study can be positioned amidst these international efforts aiming to increase access to human knowledge and capitalize on it in order to foster societal and economic development. In particular, we focus on the role of communication technologies (including print, analogue and digital media) for enhancing access to information. To this purpose, we introduce the related notion of access to communication technology, and in particular access to ICT. Van Dijk and Hacker (2000) point that access to ICT is a multidimensional concept, inclusive not only of physical access, but also of psychological factors such as motivation, sets of skills needed to handle ICTs appropriately, and the usage that is made of them.

In this study, we employ a model of access to ICT that takes into account the interplay between ICT and social practices, drawing on the writings of Mark Warschauer (2002, 2004). The model outlines four sets of resources that are needed for the integration of ICTs in social practices: physical (technological infrastructure), digital (content and materials made available online), human (skills, especially literacy), and social (the social and institutional infrastructure that supports usage of ICTs). These four categories of resources are on the one hand conditions and enablers for effective ICT use, and on the other the outcomes of effective use, so that if handled well in the long run they can contribute to development and social inclusion (2004: 46-8). Warschauer’s model of access is used in the paper to compare challenges and tendencies in accessing information through print and digital media in the city of Douala.

3. The case of Douala

This paper draws on a qualitative study conducted as part of the international research project Mobile Access to Knowledge: Culture and Safety in Africa (Mobile A2K). The study investigated relations between cultural production and perceptions of safety and security in three African cities (Douala, Johannesburg and Luanda), and assessed the conditions for improving citizen access to information. Results from the study conducted in Douala, Cameroon, are presented hereafter.

3.1. Context

Douala is the largest city of Cameroon with three million inhabitants and it is the economical capital of the country. The city has gone through a dynamic commercial development since 1960, during the independence period. Nonetheless, in 2000 the International Monetary Fund and the World Bank qualified Cameroon as a Heavily Indebted Poor Country (IDA & IMF, 2000). The main causes can be traced back to a major financial crisis, which started at the end of the ’80s, and brought the Government of Cameroon to firstly reduce public expenses, then to close parastatal firms, and finally, in 1994, to devaluate the currency (XAF) by 50%. These measures generated dramatic social consequences and widespread poverty. World Bank statistics suggest that 40% of population in Cameroon is below the national poverty line (World Bank, 2007).

The field of education has been one of the first sectors deteriorated by the cuts in public expenses. The financial crisis produced a deficit of more than 30.000 teachers and a downgrade of public educational infrastructures, so that in many cases more than 200 students were hosted in a single classroom (Ngonga, 2010). A high level of competition between public and private educational institutions escalated together with diffusion of...
corruption among educators (World Bank, 2013). At present, Cameroon does not fulfil the
Millennium Development Goals of providing universal access to grade 1, and does not
achieve a 95% completion rate in primary education. Indeed, only 60% of students
complete the 6 years of primary education without repetition, while the dropout rate
surpasses 10% of enrolments during the first years of study (Ngonga, 2010).

3.2. Methodology
This paper attempts to frame what “access to knowledge” means in the city of Douala,
through the description of challenges and tendencies in the production and distribution of
information. Data has been collected through two different strategies. Before the fieldwork,
a desk research was conducted (mainly scouting digital resources) looking at information
about the cultural and safety context of the city. This was followed by an ethnographic
study in the city of Douala (done in the period Dec. 2012 – Jan. 2013), in which data were
collected through a multi-method approach.

The results presented herein are based on the analysis of data from three sources: 1) the
ethnographic observation of public and private primary schools, private and university
libraries, the municipal archive of Douala, contemporary art centres, bookstores and
telecentres; 2) qualitative interviews with primary school teachers, scholars, cultural,
municipal and telecommunication operators, artists, and community members (n=40); and
3) a questionnaire (n=200). Interviews were used to assess the access to print, analogue
and digital media used to produce, distribute and access information in Douala, and about
the city itself. A questionnaire on the use of mobile phones has been submitted at the end
of the fieldwork with local inhabitants living and working in two popular neighbourhoods of
Douala: New Bell and Bessengué.

The questionnaires presented a total of 52 closed and open questions and they were
divided in four sections aiming to evaluate (1) mobile phone usage and communication, (2)
knowledge and perception of public art, (3) impact of public art on security and life style;
(4) security problems and requests for improvement. This paper considers only the results
emerged from the first section of the questionnaires on mobile phone usage.

4. Results
The goal of this section is to discuss what access to information means in Douala, by
defining challenges, accountabilities and potentialities in accessing information and
producing knowledge. The first part delineates the predominance of orality in the
production and distribution of local knowledge. In the second and third parts Mark
Warschauer’s (2002, 2004) model of access is used to outline challenges and tendencies
in accessing information through print and digital media.

4.1. Knowledge embedded in the oral tradition
Available documents about the city of Douala in its present and historical dimensions are
scarce and incomplete. This contrasts with the rich and vivid knowledge held by local
inhabitants. People living in the popular neighbourhoods of Douala preserve the history of
the city in their memory. When engaged in interviews, members are able to tell, explain
and trace back meaningful events, which have marked the past of the areas that they are
inhabiting. The role of the local people as guardians of knowledge and history is crucial not only for the content they provide, but also for the fact that this knowledge can be accessed almost exclusively through their storytelling. Written information about the history, cultural identities, and the process of urbanisation of Douala is poor and difficult to access. This is because most of these areas (except for the settlement around the coast) have grown up spontaneously. Some of them are not even located on maps, as the city has been expanding horizontally, and local authorities have little control over the management of these lands. Dwellers are therefore positioned as primary sources of information on their neighbourhoods’ history, spatial expansion, and the underlying processes explaining the current ethnic composition of the population.

The knowledge held by locals is at times incongruent with official information about the city. For instance, in Douala, as in many African cities, the way places and streets are known and called by locals does not correspond with the official names written on maps. Learning how to move around the city is a way to learn about the city itself, as the name of streets, crossroads and landmarks clearly depict the history of those places. Toponyms of Douala can provide information on the name of the family which owned the land, on physical and natural elements of the area, or on events that have marked and injured that site (Philémon & Foondé, 2011). This information is part of the local knowledge existing only in the memory of inhabitants, inaccessible to the global information society flows.

Often urban landmarks report violence like Carrefour trois morts (Three dead crossroad); Carrefour trois voleurs (Three thieves crossroad); Bepanda Double-ball (Double-shots in Bepanda). Some suburbs witness a reality of alcoholism and prostitution, like Quartier Non-glace (No-ice area), Rue de la joie (Street of happiness), Trois Bordelles (Three brothels), and Rond point j’ai raté ma vie (Roundabout I-Miss-My-Life). Some others, like Nylon, Brazzaville, Lagos, and Congo, indicate the provenance of immigrants stating the process of foreign immigration, and city urbanisation. The precariousness affecting Douala is given by the name of the areas, e.g.: Mille problems (Thousand problems) and Venez-Voir (Come and see). However, people’s positive look on the future is not excluded, showing citizen aspirations to welfare in districts like Vie Tranquille (Quiet Life), Petit-Paris (Little Paris), Denver, and Santa Barbara.

Local inhabitants need to portray the historical and cultural ramifications of these living places, in order to fix the past and to frame their identity. Several media initiatives active in the city attempt to capitalize on this predominantly oral knowledge pool, and facilitate inner-city cultural production and communication. Informal radios and TV channels are trying to capture present-day communication flows and make them accessible to local communities through official and informal communication media. Since 2000, following the law liberalizing the audio-visual sector, Douala has become the location of a number of informal and low-cost audio and video-productions, producing and distributing information on Douala through the so-called “fait divers” (gossips and events into the city), “cinema du quartier” (self-financed movie series in French played by local actors of Douala and distributed only on local TV channels), and contemporary local songs depicting the reality of the city and mainly addressed to its citizens (Santanera, 2013).
4.2. Access to written information

Physical resources

Challenges

In Douala access to physical resources producing and distributing written/printed information is challenged by the limited presence of libraries, editorial houses, archives, and bookstores. This implies that books, due to their rarity, are extremely expensive goods. The city does not have a public library. Public infrastructures providing access to information include:

- The Centre of Documentation and Information (Fig. 1): the municipal archive of Douala hosting urban, national and international public documents (projects, official communication), and newspaper clippings.
- The student library of the University of Douala, primarily furnished with students’ theses and (obsolete) academics French books.

Figure 1. Centre de Documentation et Information (Archive)
Office 211 at the Municipality of Douala (Communauté Urbaine de Douala)

In the private sector, the French Institute of Cameroon hosts the biggest library of the city, with a collection limited to 12,000 documents (including books, journals, videotapes, CDs, DVDs, films), and a public subscription of 1770 members (IFC-Douala, 2011), corresponding to 0.06% of the population. Other private initiatives are focused on specific subjects: the open consultation library of Doual'art provides books, journals and videotapes specialized on the arts and urban fields; the documentation centre of the Port Autonome de Douala focuses on maritime practices and right; and the France-based association “Kalati, on lit au Cameroun”, builds small private libraries addressed to primary and secondary school students in the poorest neighbourhoods of Douala.

Concerning the market, instead, there are only three bookstores furnished with manuals for primary and secondary schools and some readings for pleasures in French language. Bookshops specialized on academic publications don’t exist. Only one Cameroonian publishing house, the recent installed Afrédit, is active into the city. Others include the French-Harmattan, and two religious ones: the catholic Librairie Saint Paul, and the

protestant Clé editions.

**Tendencies**

Current initiatives for providing access to tools and infrastructures for print media come from the civil society and the private sector. At the level of the public institutions, despite the presence of a public municipal archive, there is not a clear system of organization of the collected material. The archive content is roughly divided by topic (like *security, culture, education,* etc.) and, as the archivist declared, “(t)here is no standard of relevance in the research and selection of content: pieces of information are picked up from national journals and international magazines and added to the related shelf” (personal communication). One major issue affecting the development of public institutions for information access is the lack of financial resources. For instance, the public university library of Douala has extremely poor equipment due to a permanent lack of budget for the acquisition of new didactical material and trained personnel to provide access to it.

Editorial houses, even the local one, do not receive any public financial support. Since funding is scarcely available from other sources, Cameroonian publications are generally published in limited editions due to the high costs of production (Pape-Thoma, 2010), leading to a poor commerce of books in Douala. To cope with the high costs and limited access to books for study, primary and secondary students generally make use of second-hand manuals. Differently, university students, to prepare for exams, rely on the free documentation found on the Internet, or on students’ theses archived in the university library.

An important aspect regards the infrastructure policy. No policy, law or official text regulates the issue of libraries and books. This leaves space for the private sector to play a more predominant role. The biggest efforts in providing access to physical resources are done by foreigner and private initiatives. Local institutions need to count on the financial collaboration of international stakeholders through project-based activities, while the organization and management of the collections is usually done autonomously.

**Content**

**Challenges**

Access to *information* about Douala is challenged by the scarcity of written documentation about the city produced and distributed into the city. For example, the public archive provides no historical information regarding violent episodes of the past in which the government was responsible (such as the *Ghost Cities* period of 1991, the *Operational Command* attack of 2001, and *Emeuts de la faim* of 2008). Accessible written documentation mainly concerns reports of national and international research and development programs, students’ theses and few local published books. Newspapers are the most diffused media documenting the present of Douala, but they are strictly controlled and censured by the government (Reporters Without Borders, 2013).

**Tendencies**

Tendencies in the production of content on the city of Douala are marked by the involvement of external parties, researchers and international associations. Documentation produced by foreign researchers and edited by foreign publishing houses and journals, is often stored in international libraries and archives to guarantee their preservation (e.g., the


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Doual’art, a contemporary art centre of the city, has promoted an interesting project produced locally. The project, titled *Douala: Ville d’art et d’histoire*, consists in the installation of *Arches de la Mémoire* – iron design sculptures conceived by Sandrine Dole – aiming to mark historical sites of the city dating back to the colonial period (19th century). Eighteen sculptures have been produced at present. The relative descriptive panels have been nestled into the sculptures providing the picture of the original building as well as written information documenting the history of the place. The goal of these site-specific installations is to preserve the public memory of citizens as well as to promote and valorise the history and cultural heritage of Douala.

A second interesting initiative promoted by Doual’art is the Liquid Journal. In the frame of SUD 2010 – Salon Urban de Douala – i.e. a triennial festival of urban art dedicated to the theme of “water”, many scientific research activities and artistic projects have been conducted all along the year 2010 in the poorest neighbourhoods of the city. Scientific results and step-by-step development of art projects have been documented in six bi-monthly publications freely distributed in the neighbourhoods where research had been conducted. These journal issues have been an important source of information on the city. For local communities, they served to inform and update them on the safety conditions and public art development. For the global society, they contributed to raising the level of written information on issues that are otherwise transmitted only orally, as well as to documenting cultural and safety issues of the city.

**Human resources**

**Challenges**

Widespread corruption and the cut of expenditures in education generated a lack of trained personnel specialized in the production and distribution of information. This phenomenon is especially poignant in the education sector. Since the economic crisis of 1987, the government of Cameroon has not been able to guarantee an adequate number of teachers in public schools, so that often classrooms reached 200 students. Among the major consequences of the crisis, there was an unexpected and disproportionate reduction of public salaries of respectively 30% in January 1993 and 50% in November of the same year (Konings, 1996), which promoted a pervasive corruption among teachers and administration officials (World Bank, 2013).

Apart from the low financial capacity, personnel in information-provision centres often assigns little importance to the collection and cataloguing of written materials, so that most of the time information remains on disorganized paperwork. The lack of a meticulous archivial work is characteristic as well of other public institutions, and produces in turns problems of communication between departments and a consequent slow bureaucracy in managing relations with citizens.

**Tendencies**

Since 2001, one of the main national strategies to achieve the MDG of providing universal access to primary education is to strengthen the administrative capacity and governance, so to ensure better and more transparent use of limited public resources (Stratégie du Secteur de l’Education 2000). To support this strategy, four years later the World Bank


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funded a project on Education Development Capacity Building aiming to improve the educational information system, the monitoring of activities, and the inclusion of the private sector in decision-making processes. However, in February 2013 the World Bank rated the Government performance as moderately unsatisfactory, due to little administrative accountability, commitment, and no clear progresses demonstrated by the ministries of education in driving the project activities (World Bank, 2013).

At the same time, the private sector gains increasing importance in education. A comparative analysis (Ngonga, 2010) of key performance indicators for education revealed that students' performances are higher in private schools. It is estimated that 25% of parents, despite the high cost of schooling, make efforts to guide their children in private institutions where classrooms host no more than 70 students (ibid.).

**Social resources**

*Challenges*

From the field research it emerged that public institutions appear to lack both interest and initiative in offering access to information in and about Douala. At the same time, the government does not provide any incentive to encourage the development of physical, written and human resources, such as for example the provision of scholarships for research development. As declared by two doctoral students in International Law, “access to information for education in Cameroon is a personal affair” (personal communication), as students should find their own ways to pursue their researches, both in terms of economic efforts and in accessing bibliography.

*Tendencies*

The lack of public policies in fostering access to written information interplays with a general poor interest of the local community toward reading activities. While local and international institutions are doing some efforts in this direction, they tend to invest more in digital rather than in traditional resources, which are more expensive and less accessible to local communities. On the other hand, the civil society demonstrates an increased engagement in informal activities for filling these gaps, especially with respect to education and training. Some examples are the organization of repetition courses by university students, or assisting children or adolescents in studying and doing homework. This is a common strategy for higher education students to pay university fees or fund their researches.

**4.3. Access to digital information**

**Physical resources**

*Challenges*

Expensive computers and absent or low-bandwidth Internet connections are the main challenges in accessing ICT resources. In 2007 the access and usage of ICT was relatively poor, with a penetration rate of computers in the Cameroonian public administration of 6.2%, and Internet access of 9.2% (MBA, 2007).

Infrastructures and tools providing access to ICT, like the Internet and computers, are still luxury goods for most of the population of Douala. The monthly cost of an ADSL Internet...
connection corresponds approximately to the fee of renting a house in a popular district. In addition, the quality of the service is poor, due to the extreme slowness of the connection, with a bandwidth reaching maximum 512 kb. Cameroun Telecommunication (CAMTEL) is the parastatal firm providing fibre optic all around Cameroon. Since 2006, it has shared the market with the two main mobile providers: MTN and ORANGE, opening the access to mobile Internet solutions.

**Tendencies**

To benefit from computer and Internet access, local people adopt several strategies, among which going to telecentres, buying second-hand computers, and using Internet keys and 3G mobile solutions for connecting. Unfortunately, the challenge of bandwidth is not yet resolved. People having access to electricity and computers generally access the Internet through GSM modems, which allow them to subscribe to an Internet provider, and to pay only actual usage. The Internet fee is paid by recharging the SIM card of the modem or of a smart phone. Private access to the Internet is an increasing practice, in particular among university students and scholars. However, the most widespread popular alternative is to access through the numerous telecentres located around the city, which are generally the cheapest solution (one hour of Internet access corresponds to the cost of a taxi fare).

Despite limitations regarding private access to the Internet and computers, access to mobile technologies and smartphones is increasing at high speed. Mobile phones are the most diffused and integrated ICT in Douala. From the survey conducted in New Bell and Bessengué, it emerges that 94% of respondents own a mobile phone, which often is a smartphone (60%). Mobile connectivity continues to be expensive (one day of mobile Internet connection corresponds to one week of average cost in mobile traffic expenses) and slow (e.g. it often does not allow to upload images on Facebook). Nonetheless, results from the questionnaire show that 16.5% of respondents access the Internet via mobile phone.

**Content**

**Challenges**

Online information provided on Douala is poor and does not satisfy the most basic criteria that a common user/visitor would expect, such as finding information about the history, the culture of the city, as well as tourist information on hotels, restaurants, and touristic activities. The online presence of Cameroonian institutions is very poor. For instance, the Ministry of Culture of Cameroon does not have a website. Others, such as the website of the Ministry of Education and that of the Urban Community of Douala present a clear information architecture, yet in July 2013 most sections turned out to be completely empty (including the categories “education”, “environment”, “culture” and “tourism”).

Up until autumn 2012, the information provided on Douala on Wikipedia described the city quite poorly. An Internet research conducted before the fieldwork, in October 2012, did not present any information about the history, the geography, and the cultural and educational context of the city.
Tendencies

At the end of 2012, the telecommunication company Orange started a collaboration with Doual’art under the project WikiAfrica Cameroun, aiming to enrich Wikipedia with information about history, cultural heritage, tourism, and education. Nowadays, the page of Douala has been updated with new categories of information including: History, Name, Geography, Cityscape, Architecture, Culture, Contemporary life and See also. Also other relevant sections have been enlarged and modified, like the introduction of the city, Climate, Education in Cameroon, Transportation and Points of interest. A second objective of the project is to create and make accessible on Wikipedia all the needed didactical materials to obtain the diploma of primary school, contributing in this way to reaching the Millennium Development Goals. It is to be noted, however, that most of the content uploaded on Wikipedia has been written by foreign researchers and practitioners, while local perspectives and voices continue to remain absent.

At the local higher education level, online resources are fundamental, and constitute often the only didactical material available to students to prepare their exams. Persee.fr is among the most used web portals providing Open Educational Resources in French, including scientific articles and international theses.

Human resources

Challenges

The production of online digital resources is particularly challenged by the limited digital literacy and the lack of specialized personnel working in public offices. In 2007 the Inspectorate of Pedagogy in Charge of Computer Science in Education conducted a survey on the state of ICT and human resources capacity in primary schools and teacher-training colleges. It emerged that:

“(B)oth teacher trainers and in service teachers are computer illiterates; illiteracy at the school level (teachers and head teachers) was estimated at 96%. There is no public or private ICT pedagogic training centre within the national territory, conducting training for educators at various levels.” (Ndongfack, 2007, p. 10)

Tendencies

Some attempts to integrate ICT in Education have been done by the ministries of Education for primary schools, through the Strategy for implementing the basic education sector ICT policy in Cameroon 2007-2012; and for secondary schools through the Programme officiel d’informatique pour le premier et le second cycle de l’enseignement général et les ENIEG (Ecole normale d’instituteurs de l’enseignement), 2010 (Tr. Official Informatics Programme for the First and Second Education Cycle and the Schools for Teacher Education). However, from the fieldwork it emerged how the implementation of these programs is marked by confusion and lack of homogenous treatment both in private and in public schools.

Concerning the integration of ICT in public administration, and the development of adequate human resources, in 2011 a National Program for Governance and strategic management of the state has been definitively launched. However, in Douala the lack of human resources competence and know-how hinders the provision of substantial online

information on public websites, contributing in this way to further slow down the bureaucracy.

At the university level, the University Technology Institute (IUT) of the University of Douala, the Douala Institute of Technology (DIT), and the Superior Institute of Technologies and Industrial Design (ISTDI) are the main higher education institutions offering bachelor and master courses in related fields.

From the private sector, some projects, like the above-mentioned WikiAfrica, include in their programs training activities aiming to increase capacity building of public and private employees in producing and distributing information. Moreover, the civil society is also included in the WikiAfrica project through the Wiki Loves Monuments training program. The goal of this workshop is to provide local communities with digital skills enabling them to participate to the international photo contest Wiki Loves Monuments organized each September by the Wikimedia Foundation. The contest aims to enrich open licensed written and visual documentation on the world cultural heritage.

Social resources

Challenges

Social infrastructures, such as no-profit organizations and telecentres, have to deal with problems related to slow bureaucracy and poor Internet connection. These permanent barriers, in turn, generate a reduction of motivation in the demand of information as well as in the production of new pieces of info.

As declared by a member of the project WikiAfrica in charge of the training:

“One of my major concerns is that – will we be able to put in the minds of people that it is important to use a computer, it is important to work on Wikipedia, it is important to promote and share knowledge via the Internet? Because the real challenge here is changing minds, it’s to change public opinion. That is my concern.” (Interview transcript)

Tendencies

An important step in opening access to digital information has been realised by Orange, which since the beginning of 2012 has provided free Internet access to Wikipedia through mobile phones, as well as low cost Internet solutions to access social networks.

In the last years two Asian companies, Techno and Itel, have entered the Cameroonian market of mobile phones offering low-cost smartphones, equipped with offline options. Mobile devices include, for example, an antenna allowing users to receive radio and TV signals, and are equipped with photo and video editing applications. Indeed, besides traditional mobile phone functions such as calling and texting, results from the survey indicate that people use their mobile phones mainly for leisure activities that do not require internet connection, like storing music (49%) and videos (24%), taking photos (45%), and listening to the radio (43%) (Zainudeen & Ratnadiwakara, 2011).

The diffusion of smartphones has also stimulated telecentres to broaden their activities. The owners of telecentres usually download music and videos from YouTube and create digital libraries of songs, which can be transferred to their young costumers’ devices in a fast way through a Bluetooth connection.
Discussion

This section discusses the findings on the current status of information access in and about Douala, highlighting the following elements: the predominance of orality in relation to the role of the civil society; the interplay between information production and its access; the transition from orality to digital means of information production and distribution; and the role of public vs. private institutions.

1. The predominance of orality and the role of the civil society.

One of the most significant findings of this study is that there is a clear discrepancy between the rich knowledge about Douala held by its inhabitants, and the scarcity of mediated information on the city. The inhabitants of Douala witnessed the city growth or were informed about events from previous generations. This rich knowledge has not been represented in forms that can enhance its distribution in writing or digital form. The role of the civil society as holder and custodian of this knowledge becomes therefore central to any efforts engaging with expanding the pool of information on Douala for its own inhabitants or for the world at large. Some international research projects, such as Verba Africana (eg. Merolla, 2012) have tried to blend African oral traditions with digital media, especially experimenting with digital storytelling and video production. However, there is little evidence on how these digital productions are accessed by the local and international audience.

2. The interplay between information production and information access.

While the focus of the study was on access to information, it has been noticed that this cannot be treated separately from information production. This approach is consonant with that advocated by Shaver and Risk (2010), who argue that the best access policies are those that increase “the total production of information and knowledge goods and distribute them in a more equitable fashion”. The scarcity of available information about Douala parallels poor infrastructures and resources for both producing and accessing it. There is a need to invest in documenting the city in its historical and contemporary dimensions in parallel with efforts for bettering access to information. Importantly, efforts for information production need to be sustained from a holistic vision, which looks in the long run at how this information will be distributed, for whom, and through which channels. Recent initiatives on information production about Douala have been carried out through initiatives of the private sector, demonstrating a preference for digital media production, and relying often on external funding (such as the Ville et histoire and the WikiAfrica projects). There is a lack of a unified strategy for information production, which in the long run can result in discrepancies between the type and location of the content produced and the possibilities of accessing it by people within and outside the city.

3. From oral to digital and the written media gap.

An overall tendency can be noticed to migrate from a predominantly oral tradition of knowledge communication to a digital one, without going through the written media step characteristic of Western societies. As confirmed also by Scott (2012), access to written information is limited by factors ranging from low financial resources for the printing and distribution of written materials to the lack of a proper policy infrastructure for regulating public libraries. Some studies (e.g. Gilbert & Mayer, 2012; Nwaerondu & Thompson, 1987;
Vannini, Rega & Pucciarelli, 2013) have demonstrated, instead, the potential of local broadcast media and in particular radio as a vehicle for transmitting oral contextual knowledge toward the society and for the active engagement of local communities in divulging educational content. However, the distribution of information through local broadcast media presents some drawbacks. In particular, it has only a limited scope of outreach, so that information continues to be kept within the confines of the city without reaching the global information society.

On the other hand, the role of computers and the Internet is becoming increasingly important in Douala. Despite high costs and a still frail infrastructure, several aspects can be highlighted, which indicate a tendency to reduce the information gap through digital means:

- Investments in digital production of information take precedence over those in written media;
- Local people are interested to access digital content over the Internet using private connections as well as public access venues such as telecentres;
- Access to information via mobile phones is increasing.

Concerning the last point, it should be noticed that the study on Douala indicates that mobile phones are mostly used for accessing leisure content, such as video streaming and music, which once again suggests synergies with an oral culture. Only few people accessed learning content and used advanced services such as online banking.

Summing up on these tendencies, it can be predicted that in the long run digital media production and distribution will grow, while the role of written media may even decrease.

4. Private vs. public access.

The role of private institutions overrides that of public institutions for both information production and distribution. This is due to an overall advantage in human resources, expertise, and financial resources (often relying on international projects). Gillward (2010) stresses the fundamental role played by international institutions (such us the World Bank, International Telecommunication Union - ITU, the United Nation Conference on Trade And Development - UNCTAD, etc.) in creating and making accessible structured data and information on the Global South, against the few and premature efforts done by African governments. However, the work of private local institutions in the production and distribution of information is generally threatened if pursued as mere commercial activity. Evidence from Douala suggests that the rise of private and no-profit educational institutions is an important factor as well, functioning in the long run to take precedence over public institutions in educating the local population and gaining legitimacy in its eyes.

Conclusion

This paper approached the issue of access to information in developing contexts, presenting the city of Douala as an illustrative case. Based on recent findings from a qualitative study, the paper depicted the challenges in accessing information in and about the city of Douala. Warschauer’s (2002, 2003) model of access was used to highlight the place of print and digital media in the production, distribution and access to information. The analysis indicated that the limited access to information is conditioned by a substantial
lack of tools and public infrastructures for the production and distribution of information about the city amongst its dwellers and outside the city walls. Douala is marked by a poor educational system, the absence of a public library, and the existence of only few, non-specialized bookstores, editorial houses and archives. Access to tools for the production and distribution of information is also difficult. Books are expensive for their rarity and high production costs. Computer and the Internet are still luxury goods, even if their usage and diffusion has considerably grown thanks to the numerous telecentres located throughout the city. Online information on Douala is poor and incomplete, and the challenges in using the Internet as an information production and provision platform are further marked by low bandwidth and high connection costs. On the other hand, the diffusion of mobile technology is on an ascending curve, reflecting the trends verified for Cameroon and Africa in the past years. The growing role of mobile technology in facilitating access to information is marked as well by initiatives taken by mobile network operators, for instance through provision of free access to information-provision sites such as Wikipedia.

This portrayal is marked by a series of salient aspects emerging from the analysis:

- The discrepancy between the rich knowledge held and transmitted orally by inhabitants and the scarcity of information about the city;
- The rising of digital over print media, marking the tendency to go through a huge leap from oral to digital with no intermediary stage focused on print media, as characteristic of Western societies; and
- The growing role of private institutions in information production and distribution, while public institutions struggle with corruption and severe lack of financial resources.

These findings indicate important priorities in dealing with the transition to an information society (Webster, 1996) for Douala as an emblematic case of a developing context marked by poverty and predominance of oral means of knowledge production and distribution. In particular, it points to the importance of involving the civil society in information production efforts and of adopting a holistic view, by which information production and distribution are to be seen in their interplay with information access.

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