Outcomes based measurement of public access computing in public libraries: comparative analysis of studies in Latvia and Lithuania

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  Abstract: Capturing impact is one the most ambitious fields of performance measurement of libraries' services. In the fight for public resources and funding it becomes vital to prove the benefits users gain from the interaction with libraries services. The same applies to the public access computing (PAC) in public libraries. The benefits that users can gain from using PAC in public libraries include access to ICT, technology training and assistance, expanded employment opportunities, conducting commercial transactions, access to and assistance with local, state and federal government electronic services, support to learning, communication and personal identity. The paper presents a methodology of measuring the outcomes of public access computing as well as acquaints with main results of studies conducted in Lithuania and Latvia.
  Keywords: library impact assessment, public access computing, social impact, economic impact, library performance measurement

1. Introduction

Past ten years a lot of money has been invested into public access computing (PAC) in public libraries. Most of libraries successfully used attempts of the governments to expand access to information and communication technologies (ICT) to the citizens; others have installed public workstations with the support of various funds and initiatives, dealing with information society development, digital divide, equal access and other. For certain period the value of PAC in public libraries for the individual and for society has been considered self-evident. However, as the penetration of Internet in homes increases, the benefits gained from funding PAC in libraries are being questioned not only by funding institutions but also by the public. In the competition for resources it becomes vital for libraries to have accurate, credible, trustworthy, valid and reliable data that describe the use and benefits of their PAC services. The questions most often raised are:

- What are the tangible, demonstrable effects arising from the use of PAC in public libraries?
- Do such effects serve the goals of the funding institution?
- Does investment into libraries' PAC represent value for money?

Lithuania and Latvia are both implementing PAC projects for public libraries, funded by national governments and Bill and Melinda Gates Foundation Global Libraries program. Within these projects large scale impact assessment studies were implemented to measure the impact of library PAC and demonstrate the benefits of the projects to their beneficiaries. The paper describes an approach and framework and gives an overview of methods used in impact focused research into PAC in public libraries as well as presents the main results.

2. Approach to Impact Assessment

Measuring of inputs, outputs as well as the quality of the services has always been the domain of libraries. But quantity of use and quality of performance do not yet prove that users benefited from their interaction with a library. Measuring impact or outcome means going a step further and trying to assess the effect of services on users (Poll, 2005, 2006).

The impact can be defined in different ways, but in the context of library services it may be thought of as any effect of a service on an individual or group (Brophy, 2006), which may be:

- Positive, negative or neutral;
- Intended or unintended;
- Short, immediate or long term;
- Trivial or critical.

A variety of methods can be and are used to collect the data on the impact of PAC in libraries (Eve, Brophy, 2001, Brophy, 2005, Bertot et al, 2006, Bertot, 2006). The most of existing studies on PAC in libraries combines quantitative and qualitative methods in different stages of the research. Acknowledging that qualitative and quantitative approaches in program evaluation can help yield insights that neither approach would produce on its own (Rao, Woolcock, 2004), projects in Lithuania and Latvia used a multi-methodological orientation. The studies kept a balance between process and outcome analyzes as well as a combination of both primary and secondary data. To overcome the weaknesses of methods and to increase the credibility and validity of the results the methodological triangulation was used.

3. Impact planning and stakeholder engagement

To draw an impact assessment framework both in Lithuania and Latvia different project stakeholders were engaged already at the impact planning stage. Several workshops were organized to understand expectations of project implementation teams, library specialists, librarians and other stakeholders. Authorities responsible for collection of library statistics were also presented at the discussions. The scope of the workshops was to introduce the concept of "impact assessment", to get feedback to the framework proposed by the project implementation team, to discuss suggested methodology and instruments as well as to discuss national and local priorities in accordance to the goals of the projects. Stakeholder discussions were also focused on taking into account all the relevant national and European Union policies as well as national, regional and local priorities regarding development of information society that includes issues like e-governance, e-inclusion and others.

As a result of stakeholder consultations desired outcomes of the projects were formulated. The studies were answering research questions by examining the progress of the projects towards outcomes, such as:

- The social and economic benefits gained;
- Expanded equitable access to people who do not otherwise have access;
- Improved IT skills of libraries staff and users;
- Improved access to locally-relevant content and services;
- Increased capacity and motivation to create the local content;
- Increased community engagement;
- More positive political will and public support towards the libraries.

It has been decided to look at potential impacts in the areas of employment and

income, education, communication, culture and leisure, health and e-governance.

3. Study design

Both quantitative and qualitative methods are used in the studies. Both studies include multi-perspective, longitudinal design and nationwide samples.

To gather baseline data for further impact assessment purposes and to capture situation before computer delivery to libraries as well as before training of librarians and library users, and to report on situation as complete as possible, both studies integrated the perspectives of nearly all groups that participate in library activities or are engaged in library work. At the same time since one of the projects' goal is to attract potential library users, both studies are looking also to those who do not use library service. Hence, the following groups were surveyed in the studies:

- Library directors / managers,
- Librarians,
- Library users,
- Library non-users,
- Children,
- Various stakeholders / opinion leaders that includes leaders of local government, government officials, media representatives, entrepreneurs, NGO and professional associations' representatives),
- Different hard-to-reach groups accordingly to the priorities defined by countries that includes people with disabilities (mainly blind and people with limited vision), elderly or retired people (in Latvia especially those people over working age who live alone), children (especially children from large families and families with only one parent, children from social risk families, in Latvia including Romas, in regions where it is specific, in Lithuania – also children from families were parents emigrated to work in another countries).

Research instruments (questionnaires, interview scenarios, FDG scenarios a.o.) where developed specifically for each group and various data collection mechanisms were used including web tools where possible. Questionnaires for the individual target groups were kept parallel in the focus areas of assessment to enable a multi-perspective analysis. For instance, instruments used for survey of librarians as well as instruments for the library users and children were kept parallel.

Since both countries are trying to find answers to questions concerning change the study design is not limited to a singular assessment in terms of cross-sectional study. Instead, both countries focus on the change of communities and people's lives as well as on development of library field over a period of time. The same studies will be performed and the same target groups will be assessed several times during the life of the projects as well as after implementation of projects.

In both countries studies cover all regions of country. In order to ensure comparability with other nationwide research studies surveys are performed accordingly to the statistical regions approved by the government.

Performed studies rely on nationwide samples. Sampling methods include both random sampling and target sampling.

4. Findings

The representative population survey showed that 34 % of the Lithuanian

population and 28 % of the Latvian population have used the Internet in a public library. Though a typical user of public Internet access would be hard to describe, demographic features defining occupation and social status are most suitable to describe an average user. More often public Internet access is preferred by specialists and civil servants, and by students and pensioners.

Almost half of the surveyed say they have a possibility to use the Internet at home (45 % in Lithuania and 41 % in Latvia) or at work (31 % in Lithuania and 24 % in Latvia). Meanwhile, in Lithuania 41 % have no possibility to do it either at home or at work, with 28 % having no alternative access whatsoever. Representative survey of inhabitants in Latvia shows that number of population without alternative access is even higher (39 %) that can be explained with lack of information about public Internet access in public libraries (at the time of survey more than a half of population in Latvia (52 %) haven't heard about free Internet access in public libraries).

Survey of PAC users in Latvia shows an importance of public library as an Internet access point (97 % of the users indicate public library as the main access point) while less used places are homes (34 %), friend's homes (37 %), and work (24 %) or school (25 %). 16 % of PAC users pointed out that they use more than one public library to access the Internet. In Lithuania 79 % of the PAC users regard a library as the principal place of Internet use. Less usual places for them are home (43%) and work (29%). Accordingly, most frequently named places of the Internet use for them (respondents could mark only one answer) are libraries (43% in Lithuania and 38 % in Latvia), homes (32% in Lithuania and 23 % in Latvia) and work (16% in Lithuania and 12 % in Latvia). The Internet at a library is used daily by 9% of respondents in Lithuania and 6 % in Latvia, several times a week by 27% of respondents in Lithuania and 12 % in Latvia, and at least once a week by 17% of respondents in Lithuania and 26 % in Latvia.

Both in Latvia and Lithuania most of the respondents say they do not have the Internet at home because of restricted financial possibilities. In Latvia at the time of survey another reason not having Internet access at home is lack of technical infrastructure in some regions that do not allow citizens to connect broadband Internet at home. Part of these respondents uses their mobile devices to access Internet but this way of connection doesn't allow accessing a lot of e-services and content that is available for computer users. For them a possibility to go on the Internet for free is at the same time the basic reason for accessing it at a library. Other important reasons include a possibility to use other services, convenient place and staff assistance. The latter is preferred by a third of the users in Lithuania (with 11% using it regularly, 20% frequently). As regards the assistance, 31% of the users apply to librarians sometimes, and 35% feel quite confident to use it on their own (16% among them never and 19% seldom ask for assistance). In Latvia six of ten respondents (63 %) say that they choose to access Internet in library because it is free of charge. Other reasons that follow are possibility to use other library services (42 %), convenient location of library (33 %) as well as welcoming environment of library (28 %). Every second PAC user (21 %) prefers accessing Internet in library because they can receive assistance from library staff if needed. In relation to assistance of librarians, more than a half of PAC users (59 %) have used this possibility during their Internet access sessions (with 9 % doing this regularly, 24 % frequently and 12 % sometimes).

The principal activities, which users of public access use the Internet for, are similar to those among the population. It should be noted, however, that use of some services in libraries is higher. In the leisure and culture area use of digital heritage is to be mentioned. As concerns studies, users of public Internet access much more actively refer to library e-catalogs and electronic databases. Educational video broadcasts and studies in distance courses appear to be slightly more popular as well. Besides, significant differences were noticed in the e-government area.

The children survey in Lithuania shows that Internet access is provided for quite a high number of children: 91% of respondents can use computers with Internet access at school, and 74% at home. Just 2% have no access to the Internet either at school or at home. At homes in urban areas the Internet permeability is on average higher. Public libraries provide Internet access to 42% of respondents.

The computer and Internet have become the most popular leisure activity for the majority of children (28 %), outstripped only by the communication with friends (36%). At the libraries provided with the Internet access, children look for information related to their studies (68%), explore the Internet websites (62%), search for the information on leisure and hobbies (52%), correspond with friends and close ones in Lithuania (44%) and look for new friends (40%). As many as 20% of the respondents use Internet telephony (Skype charts or quick messages) or correspond with friends residing outside Lithuania (14%).

The qualitative data show that, according to a large number of children, they started frequenting libraries when finding out, from their friends or parents, about the Internet access provided free of charge. This is different as compared to the adult users, the majority of whom were actively attending libraries even when the Internet access was not provided. The largest share of them found out about the access to the Internet at these very libraries.

The majority of children in Lithuania state that they come to the library only for the reason that their home computers are engaged or broken, or temporary out of the Internet connection, or they want to meet their friends, or need to print something, or merely spend their free time between the lessons or waiting for the bus, etc.

Children survey in Latvia shows that public library services are quite heavily used among children of different age. If compare to adults (60 % of respondents haven't been to public library and haven't used any library service during the last year prior to the survey) 92 % of children 5th to 9th grade and 67 % of children 1st to 4th grade use public library for various reasons. The most popular library service in both age groups still is the issuance of books (72 % for children 5th to 9th grade and 67 % for children1[st] to 4th grade). With regard to their Internet access points high number of children use computer with Internet access at home (88 % of children 5th to 9th grade and 77 % of children 1st to 4th grade) or at friend's home (48 % of children 5th to 9th grade and 38 % of children 1st to 4th grade). In both age groups public library goes in the third place for accessing Internet (37 % of children 5th to 9th grade and 24 % of children 1st to 4th grade). At the same time in both age groups every second respondent uses Internet access at parent's work. School is not a very popular place to access Internet for children 1st to 4th grade (12 %) while almost four of ten respondents (37 %) from 5th to 9th grade access Internet at school at the same frequency like in public library. It can be explained by fact that in Latvia children receive IT skills training at school only starting from the 5th grade.

An Internet plays an important role for children in fulfillment of their information needs. 90% of children 5th to 9th grade and 50% of children 1st to 4th grade explore Internet websites to find information for their studies as well as for leisure and hobbies. There is an important impact of public access in library in the area of communication for children since 64 % of children 5th to 9th grade and 44 % of children 1st to 4th grade use Internet at public library to connect various social networks to communicate with their friends or to find new ones. More than a half of respondents (56 %) in 5th to 9th grade and 27 % of children 1st to 4th grade use library public access computer to mail to or to chat with their friends and relatives.

With respect to children training needs respondents show quite high request for training in various issues of information literacy like how to find information on Internet for their studies and projects (33 %), how to compose paper (41 %), how to prepare presentation (42 %) or how to find information and data bases and electronic catalogue of library (27 %).

The qualitative analysis of children drawings collected during the survey shows important differences in perceptions of public library between children and adults. If the majority of adults (72 %) associate public library with books and traditional services like service of issuance of books, children see bookshelves and computers at the same arena.

The surveys show that the most popular library services among the population are the following: issuance of books – 96% in Lithuania and 84 % in Latvia, periodical press for reading free of charge – 62% in Lithuania and 55 % in Latvia, and free Internet access – 27% in Lithuania and 33 % in Latvia. There are significant differences between usage of several library services between countries like issuance of other library items (language-learning programs, CD, DVD, art publications, music notes, etc.) – 30% in Lithuania and only 6 % in Latvia and access to the Internet databases – 18% in Lithuania and 8 % in Latvia. At the same time Latvia shows quite high usage of library services like printing and scanning (24 %), library reference services (20 %) and librarian's consultation of IT related issues (15 %).

New library functions relating to up-to-date technologies are more popular among younger professionals and office workers with higher education as well as students and schoolchildren. "Traditional" services are more favored among the elderly and unemployed respondents and the retired people.

Since the surveys have showed that the Internet accessibility is quite high, libraries are rather an alternative access facility. On the other hand, they are the major access facility for the majority of the Internet users at the libraries. The reverse relationship between the frequency and the place of the Internet access may be observed: those who use the Internet less frequently do it more often at the libraries. It allows drawing a conclusion that libraries serve more passive users of the Internet.

Users in Lithuania relate the benefits provided by the Internet access at the libraries, first of all, with saved resources (60 %). Users save for the sole reason that they do not have to pay for the Internet connection when using it at the libraries. On the other hand, users point out to other ways helping them to save: instead of buying newspapers or journals, they read them on the Internet and at the same time receive an opportunity of access to a wider spectrum of publications, find the information, which previously was usually obtained by

phone (office hours of agencies, etc.), use e-banking, download films and correspond with the close ones free of charge. According to 21% of respondents in Lithuania, the Internet access at libraries helped them to earn benefits. Users also mention the time saved as well. In Latvia the leading area in which users benefit from usage of Internet access at library is education (44 % of PAC users point out that use of Internet in public library have helped them in their studies). More than four of ten respondents (41 %) say that library public access computer have helped them to use e-services that draw attention to quite high impact in the area of e-governance in Latvia. 7% of respondents say also that using Internet at library have helped them to reach and contact state or municipal institutions. The significant number of PAC users (38 %) say that use of library Internet access have helped them to save their financial resources and even earn money (10 %). For 10% of respondents library Internet access was beneficial in the area of employment as they say it have helped them to find a job. Online shopping is also the way users have saved their time and money since 8 % of respondents say that library Internet access have helped them to do fulfill their shopping needs.

Users relate the social benefits of the Internet access at libraries, first and foremost, with the more meaningful leisure (85 % in Lithuania and 64 % in Latvia) and almost likewise underline the improvement in communication with friends and close ones (67 % in Lithuania and 58 % in Latvia). In Latvia an area of education is the second most important for users since 59 % of respondents say their educational activities have improved as they can access Internet at public library. As many as 64 % of the respondents in Lithuania point out that the Internet access at the library enabled their better work performance, while 47 % started learning, studying or taking care of their health. In Lithuania users feel the least benefits in the area of communication with central or local authorities (19 %) while in Latvia an area of e-governance has quite high impact (57 % of respondents feel benefits from communication with government and municipality as well as from usage available e-services from the computer at library).

A further benefit evidenced by the users is the opportunity for gaining computer literacy, help and consultations. The library is frequently mentioned as the place for getting acquainted with the basic usage of the computer and Internet as well as improving the knowledge. It is associated with the opportunity to learn using the computer and Internet, but this is more readily perceived as a personal and individual service (librarians personally invite to take part in the courses) rather than a consistent and continuous process. According to the librarians in Lithuania, the opportunity for gaining computer and Internet literacy skills is the major benefit provided for by the public Internet access facilities – this is pointed out by 67% of staff members serving the public Internet access facilities and 75% heads of libraries.
Librarians' consultations and help are relevant to one-third of the users in Lithuania, 11% of them are constantly asking for staff's help while using the computer or Internet, while 20% does it frequently. Older and rural people more often seek help relating to the computer or Internet usage.
With respect to the user training needs survey in Latvia shows the great demand for training on how to use full-text data bases (33 %), how to search for information on Internet (25 %) as well as how to use electronic catalogue of library (23 %). Basic IT skills training is requested only by 23 % of users in Latvia (40 % of them would choose individual consultation by librarian, 16 %

would prefer training in groups since only 4 % of respondents would be able to participate in online training organized by the library).

The data received from the qualitative survey evidence that both urban and rural users are interested in the opportunity to get "office" services of scanning, copying and printing. These services are one of the factors attracting the users because they do not have an opportunity to do this in other places.

4. Conclusions

Measuring impact is an ambitious field of library performance measurement, which usually has a multi-methodological orientation, combination of different methods and both primary and secondary source data and requires an observation of the same items over long periods of time.

The studies on PAC in public libraries' gives quite a good picture of *why* people use various computer and information services, and the *usage* rates of these services. However most of them lack deeper analyzes if connection between use and the social and economic benefits arising from this use, which is essential to prove libraries contribution towards improved peoples' lives.

Studies in Lithuania and Latvia tried to look at both positive and negative impacts arising from the use of PAC in libraries. It is evident that internet is domesticated at homes and work only by 30-40% of population in both countries. Around 30% of population uses Internet in libraries and almost one third of users have no any alternative place to access ICT's. For PAC users libraries are principal places to access computers. It is especially relevant to elderly people, rural populations. Main reasons for choosing library as a venue to use Internet are: no cost service, ability to use other (sometimes complementary) services and to get support from staff. Help of librarians is required and very much appreciated by more than 30% of PAC users.

Among the benefits received by users both social and economic effects are indicated. In the economic field ability to save money and time is mentioned most often. More than 60% of respondents in both countries note financial savings as a result of PAC use. High impacts are also seen in social field were improved leisure and culture has to be mentioned. Nevertheless important is field of education were libraries help users with their studies, provide information on formal and informal education, facilitate e-learning. In addition to that improved communication including email and internet is mentioned by more than half of users.

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