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4 Public Libraries' Contribution to Sustainable Development Goals

Gathering Evidence and Evaluating Practices in Portugal

Abstract: Initiated in November 2016, the project Bibliotecas Públicas e Sustentabilidade: Recolha de Evidências da Contribuição para os ODS [Public Libraries and Sustainability: Gathering Evidence of Contribution to SDGs (Project PLS)] aims to develop a framework for evaluating public libraries' contribution to Sustainable Development Goals (SDGs) and tailor it to Portuguese public libraries. This paper discusses the role of impact evaluation practices and competencies in the processes of gathering evidence and advocacy towards libraries' contribution to the UN 2030 Agenda, focusing on the project's first stages. After presenting the research background and general methodological frame, the relevant approaches, methods and tools for assessing libraries' contribution to sustainable development (SD) are examined, particularly the impact evaluation perspective. The resulting Model for Evaluating Public Libraries' Contribution to SDGs is discussed as well as the alignment process with SD goals and national priorities by using the SDG# Mapping Tool. Finally, some key aspects of the ongoing research are presented.

Keywords: Public libraries; Sustainable Development; Environmental impact analysis; Portugal

Introduction

Despite being an old concept shaped by evolving contexts (Giovannoni and Fabietti 2013; Kidd 1992), sustainability (or sustainable development[1]) has become a buzzword over the last two decades, nurtured by discussion about man-made global warming and resource protection.

This paper is an updated version of that presented at the 83rd IFLA World Library and Information Congress, Wroclaw, Poland (Pinto and Ochôa 2017).

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1 Although some researchers argue that there is a conceptual difference between sustainable development and sustainability, in line with Gray (2010, 53) as well as Giovannoni and Fabietti (2013, 22), we use these concepts interchangeably since we consider that both entail the same parameters and implications in terms of policy and strategies.

The most commonly quoted definition of sustainable development[2] stresses the meeting of needs and puts a clear focus on intergenerational equity along with responsibility in a broad sense. In September 2015, the adoption by United Nations member states of the 2030 Agenda for Sustainable Development set the global, national and local framework for putting that responsibility into action. Achieving the seventeen Sustainable Development Goals (SDGs) and one hundred and sixty-nine targets will mean that "no one was left behind", but also reflect the progressive and cumulative engagement of countries, communities, sectors, public and private organisations as well as citizens in the process (United Nations 2015). Within the quest for global sustainable development, the Library and Information Services (LIS) sector should be a key partner and active contributor. To be recognised as such by stakeholders, the LIS sector needs to promote libraries' role as development agents, namely by gathering evidence and evaluating their contribution to implementation of SDGs.

In this context, a team of researchers at the Faculty of Social Sciences and Humanities of the Universidade Nova de Lisboa (Portugal), willing "to think globally, but act locally" and looking for an answer to the question "How can public libraries gather evidence and evaluate their contribution to Sustainable Development Goals?", has initiated a research project in November 2016 entitled *Bibliotecas Públicas e Sustentabilidade: Recolha de Evidências da Contribuição para os ODS* [*Public Libraries and Sustainability: Gathering Evidence of Contribution to SDGs* (Project PLS)]. The Project PLS aims to develop a framework for evaluating public libraries' contribution to SDGs and tailor it to Portuguese public libraries. As recommended by the report *Worth Their Weight: An Assessment of the Evolving Field of Library Evaluation* (Imholz and Arns 2007, 32–34), the project strategy intends to strengthen library advocacy efforts through evidence-based results and a comprehensive research agenda that promotes systematic evaluation of libraries' contributions, conceptual models as well as analytical tools to make a unified and full case for public libraries.

This text aims to respond to as well as, where possible, translate these needs into productive suggestions for future research and evaluation of ongoing strategies and alignment processes.

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2 Published in 1987, the Brundtland Report states that "sustainable development is development that meets the needs of present without compromising the ability of future generations to meet their own needs" (United Nations, World Commission on Environment and Development 1987, 43).

Background and General Methodological Framework

Since 2012, researchers at the Faculty of Social Sciences and Humanities of the Universidade Nova de Lisboa have been pursuing a line of research that intersects LIS performance evaluation with sustainability transitions management[3] and competences development. During 2013 and 2014, this intersection was put into practice in co-creation workshops on "Building a Sustainability Assessment Framework", targeted at students of LIS courses. These interdisciplinary experiences led to the definition of a draft conceptual framework for assessing the sustainability and impacts of LIS, which was further consolidated (Ochôa and Pinto 2014) and expanded by introducing the standard 16439 of the International Organization for Standardization [ISO] (2014) as well as media and information literacy evaluation perspectives (Ochôa and Pinto 2015).

The intensification of advocacy initiatives of the International Federation of Library Associations and Institutions (IFLA) towards global sustainability after 2013 (for example *IFLA Statement on Libraries and Development* 2013; *Lyon Declaration* 2014), international adoption of the *Post-2015 Development Agenda* (United Nations Office of Drugs and Crime [UNODC] 2013) in September 2015 and release of the *Final List of Proposed Sustainable Development Goal Indicators* (United Nations 2016) in June 2016 made clearer the need to provide the LIS community with methods and tools for measuring as well as evaluating its contribution to sustainability. Since 2016, these initiatives have been developed at a national level by the participation of the Associação Portuguesa de Bibliotecários, Arquivistas e Documentalistas [Portuguese Association of Librarians, Archivists and Documentalists] in the International Advocacy Programme (IAP), addressing sustainability issues in several partnerships (namely FEBAB), events (seminars and regional meetings) and specialised webinars.

Evaluation research and evidence-based theory provided the general framework for Project PLS. The research question was addressed through an eminently qualitative methodology supported by the combination of two principal methods: literature review and construction/application of conceptual models as well as tools for analysis.

The Project PLS is structured in five principal stages:
- (1) Identification of relevant approaches, methods and tools for measuring and evaluating LIS contribution to sustainable development
- (2) Alignment with SD goals, targets and indicators

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3 Transitions are complex and long-term processes comprise of multiple actors and changes.

- (3) Development of a framework for evaluating public libraries' contribution to SDGs
- (4) Pilot test (group of Portuguese public libraries)
- (5) Final report

During the first stage, the literature review process was complemented by a questionnaire that analysed Portuguese public libraries' involvement in SDGs international, national and local initiatives.

Libraries and Sustainability: Approaches and Methods of Evaluation

Within the broad *corpus* of sustainable development and sustainability evaluation, the literature review on the LIS/sustainability topic and further application of an analytical tool led to the identification of three main approaches:
- greening libraries and reducing their environmental impact;
- culture as the fourth pillar of sustainability, largely driven by UNESCO;
- the libraries' contribution to global (sustainable) development goals, fostered by IFLA.

Although these areas of theory and practice are frequently interrelated, for analytical purposes they were separated.

Concerning the intersection of LIS with evaluation and sustainability, the *corpus* analysis showed that adopting an impact assessment perspective would provide an adequate model, methods and procedures for gathering evidence on LIS contribution to SDGs. Within this broad *corpus*, two approaches stood out:
- Markless and Streatfield's model of library impact evaluation (2006) and, particularly, the *Impact Planning and Assessment (IPA) Road Map* developed for the Bill & Melinda Gates' *Global Libraries (GL)* initiative (Bill & Melinda Gates Foundation n.d.; Streatfield and Markless 2009). In 2013, the GL approach produced a Common Impact Measurement System (CIMS) based on data collected by public libraries grantees (Streatfield, Markless and Cottrill 2015) and later a public library impact data hub, a GL *Data Atlas* (Schrag et al. 2015).
- The ISO 16439 standard on measures and procedures for assessing the impact of libraries (2014), which provides guidance to the LIS community on that matter as a "response to worldwide demand for specifications of library impact assessment" (vi).

Avoiding the discussion about the conceptual distinction between evaluation and assessment (see, for instance, Streatfield and Markless 2009, 135), both were considered as synonymous, referring to the process of determining the merit or value of something or result of that process. In line with ISO 16439 (2014), impact is here defined as "the difference or change in an individual or group resulting from the contact with library services" (4). LIS impact evaluation, therefore, is the process of gathering evidence of changes or benefits to individuals, institutions and/or society, which have resulted from library services or products.

As Streatfield and Markless (2009) emphasise, change is the essential element of impact: changes in individuals' knowledge and skills, attitudes and perceptions, behaviour as well as broader social or economic change. The GL IPA Road Map suggests six principal areas (dimensions) where public access to information in libraries can make a difference: culture and leisure, education, communication, economic development, health and government as well as governance (e-government) (Streatfield and Markless 2009, 138). Later, the CISM added one more area, digital inclusion (Schrag et al. 2015, 4–5). In the IPA process, data is collected using two related measurement systems: Performance Metrics (PMs), using twenty-one required and two optional indicators for measuring technology and services provided; and CIMS, using forty-one required and fifty-three optional indicators for measuring impact on the lives of people (Bill & Melinda Gates Foundation n.d., 28–31). Within this assessment process, evidence "can be any type of information piece of data that people use to help them answer a question" (Bill & Melinda Gates Foundation n.d., 8), which "becomes evidence when you use it to build a case about the impact of public libraries" (n.d., 8), with an indicator "a specific statement against which achievement or progress can be quantitatively measured" (n.d., 9).

The ISO 16439 standard (2014, 14–17) presents a set of methods and procedures for assessing the impact of LIS considered to be the most heavily used and that have proved most effective for that purpose. The type of effects of LIS impact is synthesised in Table 1.

Table 1: Type of effects of LIS impact (based on ISO 16439).

Effects of LIS impact	
Individuals	Changes in skills and competences
	Changes in attitudes and behaviour
	Higher success in research study or career
	Individual well-being

Table 2: (continued)

Parent institution or community	Higher institutional prestige and rankings
	Greater and more positive visibility of the library
	Increased institutional funding, research grants, donors
	Attracting top researchers, academic staff, students
	Attracting other research entities, business, NGOs
Social	Social life: 1) Social inclusion; 2) Social cohesion
	Participation in information and education: 1) Free access to information; 2) Free Internet access; 3) Education and lifelong learning
	Local culture and identity
	Cultural diversity
	Community development
	Individual well-being
	Preservation of the cultural heritage
Economic Value	Return on Investment (ROI)

According to Streatfield (2002, as cited in International Organization for Standardization 2014, 21), in most cases LIS impact cannot be captured directly, so can be collected in the following ways:
– Inferred through
  – output data (for example attendance at events, levels of service use, results of examinations)
  – library performance indicators
  – user satisfaction levels
– Solicited (through questionnaires, interviews, focus groups or other methods for requesting information or opinion)
– Observed (through structured observation, informal observation, self-recording, tests)

Frequently, the combination of different methods provides a richer set of findings, leading to a better understanding of LIS impacts.

Model and Tools for Evaluating Public Libraries' Contribution to SDGs

By incorporating this impact assessment perspective into the Project PLS, it was considered that evidence of public libraries' contribution to SDGs should be collected through impact assessment methods that could be aligned with sustain-

able development goals and targets. In this context, the contribution concept plays a leading role: on the one hand, it emphasises the focus on goals (SGDs) and on the other embodies the assumption that public libraries in general, like the grantees using GL IPA Road Map, have "contributed to the changes identified and ha[ve] 'added value' but there may be other influences involved so we do not seek to prove causal relationship" (Streatfield and Markless 2009, 136).

The impact assessment perspective was the cornerstone of the Model for Evaluating Public Libraries Contribution to SDGs represented in Figure 1. Being driven by an evidence based approach, the model also emphasises an aspect that is crucial for the assessment process: the existence of adequate evaluation skills. Building on previous research on impact evaluation competences for cultural organisations (Ochôa and Pinto 2017), the essential competences for implementing the PLS assessment framework were identified and grouped around six domains: reflexive practice, technical practice, situational analysis, management, interorganisational and interpersonal (285–286).

For the alignment with SDGs and national priorities, we created a SDG# Mapping Tool with six columns, organised in two groups. The first group is called SGD# and has two columns: targets and indicators. The second group is named "Methods for Gathering Evidence of Public Libraries' Contribution" and comprises of four columns: change dimensions, type [of method], indicators/other [methods] and sources. When planning the mapping process, we prioritised the analysis of SDGs and targets aligned with present Portuguese strategic priorities towards the 2030 Agenda, namely SDGs 4, 5, 9, 10, 13 and 14 (Portugal 2017, 10–12).

Table 2 exemplifies the process by presenting the results of SGD 4 mapping. It should be noted that all targets were thoroughly analysed even though this figure only shows those that will be integrated into the framework for evaluating public libraries' contribution to SDGs.

In what specifically concerns the methods for gathering evidence about public libraries' contribution to education/digital inclusion, the SDG indicator associated with target 4.4 was found to be too narrow: by focusing on Information and Communications Technology (ICT) skills it leaves out other "relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship" (United Nations n.d., Target 4.4). Considering the EU context and growing influence of the Digital Competence Framework for Citizens (DigComp), the Portuguese National Statistical Institute (INE) formulation of the correspondent indicator (4.4.1)[4] was adapted to comply with the SD target and DigComp's

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4 According to INE (Instituto Nacional de Estatística n.d.), the indicator 4.4.1 refers to the proportion of individuals between the ages of 16–74 that can perform ICT related tasks (%) by type of task (annual).

five domains: information and data literacy, communication and collaboration, digital content creation, safety and problem solving (Vuorikari et al. 2016, 12–16).
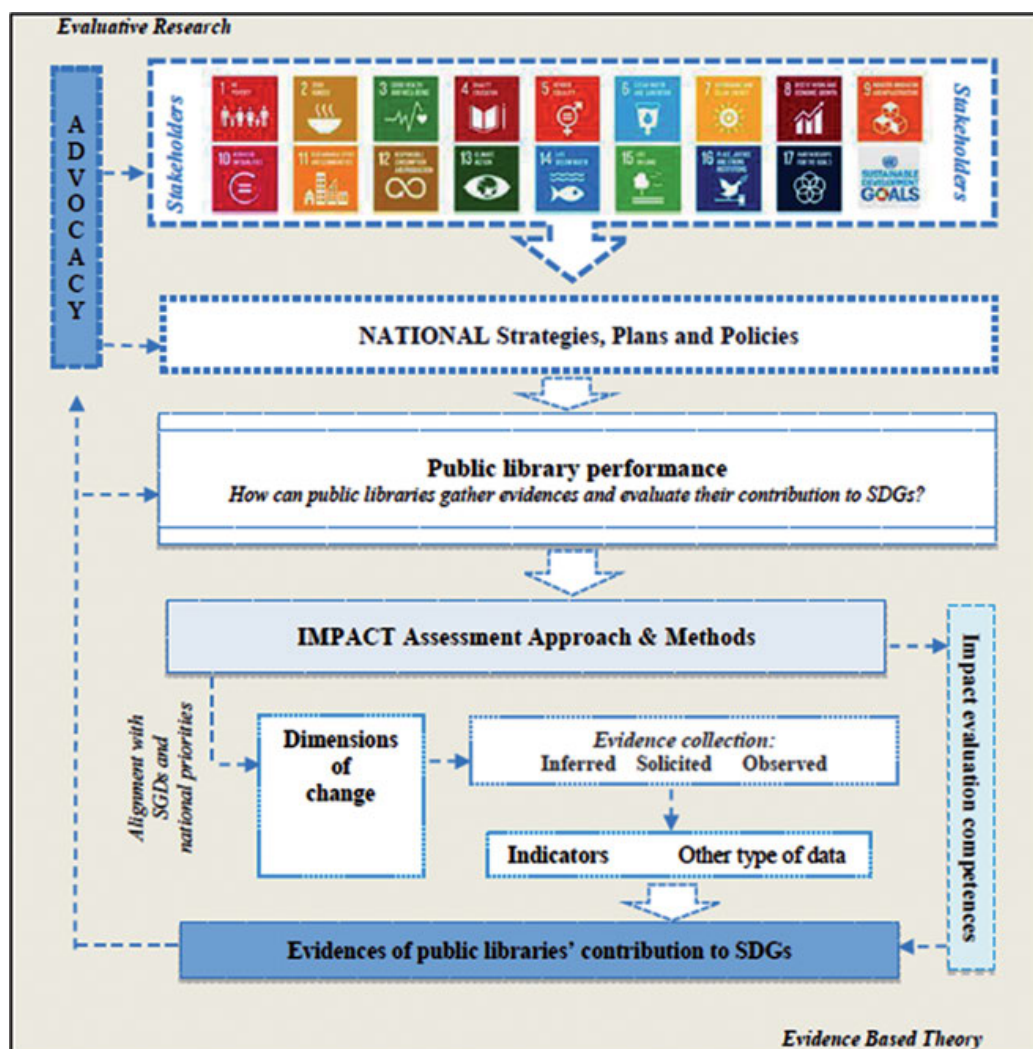

Figure 1: Model for evaluating public libraries contribution to SDGs. © L. G. Pinto and P. Ochôa.

Table 2: SDG# mapping tool.

SDG #	Ensure inclusive and equitable quality education as well as promote lifelong learning opportunities for all				
				METHODS for gathering EVIDENCE of public libraries' contribution	
Targets [10]	Indicators	CHANGE *Dimensions*	Type	Indicators / Other	Sources & Notes
4.1 By 2030, ensure that all girls and boys complete free, equitable as well as quality primary and secondary education leading to relevant and effective learning outcomes	4.1.1 Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by gender	*Education* [Competences]	Solicited [Questionnaires]	Number of students who use public library services (for example WIFI, computer, Internet, physical space, tutorial programme) to complete their homework, by education level and gender	Adap. GL CIMS indicator 17
4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by gender	*Education* [Competences] [Participation in lifelong learning]	Inferred [Output data] [Library performance indicators]	4.3.1a Participation rate of youth and adults (ages 18–64) in formal and non-formal training at the library (%) in the previous 12 months, by gender	Adap. INE proxy indicator 4.3.1 Adap. ISO 11620, B.2.2.5 [number of user attendances at training lessons per capita]
4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	*Education* [Competences] [Participation in lifelong learning] [Digital inclusion]	Solicited [Tests] [Questionnaires]	4.4.1a Proportion of individuals aged 16–74 that attended ICT training at the library and have basic or above basic skills (%), by skill domain and gender	Adap. INE proxy indicator 4.3.1 Adap. ISO 11620, B.2.2.5 [number of user attendances at training lessons per capita] Adap. DigComp and DESI

Table 2: (continued)

4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship as well as appreciation of cultural diversity and culture's contribution to sustainable development	4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	Solicited [Questionnaires]	Number of library visitors who are qualified to get a job as a result of educational or job-related training opportunities they accessed using public library services (for example online education opportunities/programmes, training and assistance, workshops, study groups or learning circles)	Adap. GL CIMS indicator 19
	Education [Competences] [Attitudes and behaviour] [Promotion of sustainable development]	Inferred [Output data] [Library performance indicators]	4.7.1a User attendances at library events aimed at knowledge and skills needed to promote sustainable development	Adap. ISO 11620, B.2.2.4

Final Remarks: Relevant Aspects that Might Become Learned Lessons

Up until now, this research concentrated on drawing a Model for Evaluating Public Libraries Contribution to SDGs and mapping tool that facilitate public libraries' understanding of sustainability transition management strategies. The core of our final report (expected to be presented in March 2018) will be a measurement, learning and advocacy strategy that can help Portuguese public libraries demonstrate how they contribute to local, national and global sustainability. Some aspects that might become learned lessons are worth mentioning:

– If there is already a national alignment and monitoring system of indicators for the stated goals and targets we should use, whenever possible, the national indicators, aligned with a public library focus and integrated into the library performance evaluation system. We should also add other specific indicators that can provide stakeholders with evidence of public libraries' contribution to the Agenda 2030. In this context, we recommend:
    – Better leverage of existing data among the statistical agencies to allow for consistent estimation of contributions
    – Increased access to data, in order to facilitate more robust library evaluation research
    – Identification of gaps in impact data and how they might be filled
    – Convening international workshops/forums to discuss evaluation drivers, impediments and enablers
– Since many of the SDG indicators are targeted at specific age groups and/ or gender, breaking down data by group age and gender is a useful guiding principle.
– Being in an EU Member State, Portuguese public libraries should pay attention to the final list of EU SDG (European System of Sustainable Development Indicators, EU SDI set), which will be annually monitored from 2018 onwards.
– Specifically in areas concerning education and digital inclusion, using DigComp as reference for assessing public libraries' contribution to digital competences development will be imperative. Since 2015, DigComp is used in the EU for self-assessment and curriculum development (Europass) as well as in the construction of the Digital Skills Indicator which is part of the Digital Economy and Society Index (DESI).

Finally, it is important to mention that public libraries, to raise awareness of the role they can play in the near future, need to show proof of their contribution to UN 2030 Agenda and SDGs by measuring and gathering evidence of their perfor-

mance, namely in relation to access to information and knowledge, access to ICT infrastructures and media as well as literacy competences development. At the same time, library workers' participation and engagement in the ongoing advocacy process must be boosted by providing them with adequate sustainability evaluation competencies.

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