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# [ A holistic model for the analysis of the functioning of libraries at higher education facilities: the assessment of functionality, users satisfaction measurement, assessing the impact and value

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DOI: <http://dx.doi.org/10.18778/0860-7435.29.01>

**Abstract:** Traditional models of library quality and functionality assessment are mainly based on the use of statistical data and indicators. The need to expand these patterns started to be noticed, taking into account both the recipients of the services, as well as the environment in which the libraries function. The comprehensive analysis of libraries should cover all areas and components of their functioning. The aim of the article is to present a model that is constructed within the framework of the project Performance Analysis for Polish Research Libraries. The model includes: the assessment of functionality by the means of using statistical data and indicators, opinions and evaluations obtained in user satisfaction surveys, as well as the impact and value assessment. Libraries at higher education facilities have been using functionality indicators since 2001, since 2011 work has been carried out concerned with the addition of an indicator (introduced to the forms in 2017), the study of the impact and value of libraries is a new issue. Knowledge on this subject can be derived from international recommendations (ISO 16439) and projects implemented in other countries.

**Keywords:** Performance Analysis for Polish Research Libraries, academic libraries, performance measurement, “User satisfaction” indicator, library user research, assessing the impact and value of libraries

## **Introduction**

In the Act of 20 July 2018, *The Law on Higher Education and Science* (Dziennik Ustaw [Journal of Laws], item 1668) libraries are directly mentioned only twice: Art. 11, item 1 and Art. 49, item 2 (*Act...*, 2018). No more accurate information on the specificities of the functioning of the higher education libraries is present. Moreover, librarians were not included as a separate group of the university staff (as it has been, so far). This raises many questions about the academic libraries future and their place in the university structure.

The next few years will be a period of the new Law’s provisions being implemented. Universities must reformulate their statutes and courses of action in order to adjust them to the regulations under the new Law. Oftentimes, in the process of organizational or structural changes, libraries fall victim of ‘budget cuts’, constraints of surface area or employment reduction (Oakleaf (Ed.), 2010, p. 11). To avoid this, they will have to be presented to the organizers as functional, useful and beneficial for the university. This is not only equal to proving that libraries fulfill assigned tasks and meet their objectives, but moreover that they do so in a manner that is efficient (fully employing given resources), profitable (the best results at the lowest cost), optimal (the highest scoring under strict conditions), operational (organized properly) and effective (giving the expected results) (Wojciechowska, 2006, p. 320). For that, concrete evidence is needed, i.e. figures capable of persuading the superiors and the public opinion (Derfert-Wolf, 2012, p. 23). Methods and tools used in the collection, presentation and correct use of numerical data which holistically illustrate the functioning of libraries, will be described during the review and analysis of the literature on the management and research quality in libraries.

## **The criteria for assessing library functioning**

The functional analysis of libraries should cover all aspects of their operations. It must not be limited only to the measurement of the per task rate of performance, it must also regard their quality and efficiency. Assessing the functionality of a non-profit institutions in the public sector (libraries, in this case) requires precise and well-defined criteria (Szmigielska (Ed.), 2017, p.11).

The first models were created in the 1970s, specifying the recommended criteria for the operating of libraries assessment. (Głowacka, 2015, p. 20). In 1977, J. Barton Cunningham identified the following criteria: achieving the objectives, optimal resource distribution, appropriate organizational processes, harmonization of organizational elements, organizational structure adapted to set objectives, social outcomes, cooperation and outreach, and customer satisfaction (1977, pp. 463–474). In 1980, Rosemary Ruhig Du Mont highlighted four areas of efficiency assessment: achievement of goals, optimal resource efficiency, effectiveness of operation, employee satisfaction and user satisfaction (Głowacka, 2000, p. 53). In 2009, by contrast, Roswitha Poll's paper based on the work of other researchers at that time, had three key areas of library assessing indicated (Poll, 2009, pp. 61–67):

- functionality assessment,
- assessment done by users and
- assessment of effects and value.

Functionality assessment relies on the use of statistics and functional indicators. Collecting of statistics of own resources and services by libraries has been long in operation (e.g. the compulsory national reporting for central statistical offices). In 2001, a project determining functional indicators based on statistics (largely in line with those reported to the Polish Central Statistical Office, *GUS*) was created for the AFBN (Analysis of the Functionality of Research Libraries project) in Poland. These indicators allow library expenditure referencing (financial, personal, spatial, material) to the effects of operations in progress, as well as the real demand (of the user community). Currently, the AFBN project is part of a greater venture by the Association of Polish Librarians (*Stowarzyszenie Bibliotekarzy Polskich*, SBP) known as the Analysis of the Functioning of Libraries (*Analiza Funkcjonowania Bibliotek*, AFB). In addition to scientific libraries, public libraries (a subproject titled Analysis of Public Library Functioning – *Analiza Funkcjonowania Bibliotek Publicznych*, AFBP) are also involved and pedagogical libraries in the same way, (Analysis of Pedagogical Library Functioning – *Analiza Funkcjonowania Bibliotek Pedagogicznych*, AFBE).

Since 2011, work has been carried out for the addition of another indicator to the set. However, that indicator has been significantly different from others in how it would be determined and interpreted: namely, the 'User Satisfaction' indicator (added to the AFBN form in 2017). The issues of user opinions or needs as well as surveying and measurement of their satisfaction was a significant factor in all of the cited collections of library assessment criteria. Users are also a focal point in many institutional TQM-type (Total Qual-

ity Management) strategies. Ewa Głowacka (2000, p. 75) reports that a TQM approach to libraries and information systems has raised the role and importance of users.

Additionally, the key concept of *quality* in this strategy is defined as fulfilling users' expectations or needs, while the assessment of the operational quality of an institution is measured through the relative satisfaction of users of the services provided, collected resources and solutions to or forms of servicing. For a TQM approach, it is deemed necessary to systematically study the library users response. This can be done using a variety of techniques; analysis of data, surveys, interviews, etc.

The third fundamental of a study of functionality of libraries is measuring their effects on the community and the benefits of its existence. This subject has garnered much attention in the 1990s, (Głowacka, 2017, p. 23), and the turning point was the 2014 establishment of the International Standardization ISO 16439 *Information and documentation – Methods and procedures for assessing the impact of libraries*.

According to Roswitha Poll, the concept of assessing libraries covers all aspects and areas of their operations. This model can be described as holistic, due to the comprehensive manner of the conducted analysis. Such a view does not only constitute a sum of separate assessments of the separated three bases, but also refers to their mutual relation and complementarity.

## Standards

After assessing the institution's operations, another question is whether the received results are satisfactory? Standards and norms will grant us the answer. They will indicate the optimal, expected level of institution's functioning. The standard is a point of reference, to strive and to achieve it: a model of a kind, of the best action and the best solution. (Szmigielska (Ed.), 2007, p. 7) The norm refers to a fixed, generally accepted operating principle: a state that is not diverging from the average (Szmigielska, 2011, p. 51).

However, is it possible to create one universal pattern (standard) for all libraries in Poland? Definitely not, which is related to a large variety of library types, their tasks, size, funding sources, serviced user community, or organizational-legal status, etc. It cannot be expected of a public urban-rural library offering service to a community of 5,000 users to meet the same operational standards as a higher education public library serving a community of 35,000 users. Therefore, institutionally characterizing and differentiating factors should be taken into consideration when creating standards and norms.

Operational standards for libraries should be set on the basis of concrete methodology and reliable data. Long-term, systematic and comprehensive research into how libraries function, based on library statistics, indicators, user surveying and the effects and value of libraries can lead to a development of standards applicable in self-assessment and comparison between libraries. The formulation of such standards is one of the overarching operational objectives of the AFBN project (Analysis of the Functionality of Research Libraries project). Based on the data provided by the libraries participating in the project, a summary has been published, presenting measures of central tendency (median, arithmetic mean) of the functionality indicators for all libraries or given institutional group (type-distinct: university libraries, technical, medical, economics, art, physical education). This data is a good source for individualized assessment through comparison with an average national level.

There are currently three key standardization documents that determine how library statistics are conducted and how research is done that verifies the functioning of the institution. These recommendations aim to standardize the methods and techniques of gathering and using qualitative or quantitative data which are the basis of the description and assessment of library operation. We possess the following norms:

- *PN-ISO 2789:2016 Information and documentation — International library statistics* (pol. *Informacja i dokumentacja – Międzynarodowa statystyka biblioteczna*) (definitions of statistical terms, guidelines for gathering, analyzing and interpreting of statistical data),
- *PN-ISO 11620:2017 Information and documentation — Functionality indicators of libraries* (pol. *Informacja i dokumentacja – Wskaźniki funkcjonalności bibliotek*) (a description, techniques for setting, the meaning of functionality indicators which aim to assess the quality and efficiency of the libraries' functionality),
- *ISO 16439:2014 Information and documentation – Methods and procedures for assessing the impact of libraries* (methods and procedures for assessing the effects and value of libraries on individuals, institutions, economic or social environment).

### **The assessment of functionality**

Traditional models of library functionality assessment are based on the use of unprocessed statistical data. These are usually absolute values which describe the volume of a given event, namely the quantity, e.g. the number of employees, the state of the collection, the budget, the surface area, the num-

ber of registered users, etc. They are referred to as input data (*inputs*) (Głowacka, 2015, p. 43). They show what the library possesses and offers. Financial, material and personal investments (input assets) undergo a string of different actions and processes (*processes*) in order to produce creations, products and provide services. Exemplary processes which use input assets might be: accumulation (inter alia, the purchase), cataloguing and developing of materials, incorporating them into the assets, followed by sharing and providing information. Investments are transformed into services (e.g. outside loans, loans for in-house use, training programs, sessions in databases) expressed in specific numbers. They are the output data (*outputs*). Statistical data serves to monitor the actual state. It describes how the investments have been transformed (through processes) into results. They maintain descriptive and informative functions and can be compared over time but only within a given institution.

It is already known that the use of the statistical data alone is not enough for the assessment of how libraries operate. It is crucial to supplement the set of statistical data with indicators which are numeric, symbolic or verbal expressions taken out of library statistics (Szmigielska, 2011, p. 57). Through the introduction of indicators, we receive information about the quality of service, the relationship between investments and creations (*products*), relation to the demand for specific service (*Outcomes* – effects, score, results). They act as tools for assessing the quality and efficiency of operations, make it possible to create summaries and comparisons for nationwide averages or averages in groups of institutions (with similar parameters), also in a specific timeframe (Derfert-Wolf, 2012, p. 26).

### **The assessment done by users**

Both statistical data and indicators focus on the institution and are generated from the same organization (input and output data). They are of an objective nature and the manner of their measurement and setting has been standardized and thoroughly described through norms (PN-ISO 2789:2016 and PN-ISO 11620:2017). On the other side of the spectrum there are clients, that is, users of the services and resources of libraries – their presence and operations are described by data defining the results and effects of work of a library (*Standards for Libraries in Higher Education*, 2018). Functionality indicators highlighting the behavior of users and their use of services can indirectly help to determine the level of their satisfaction with how a library works. However, simple analogies such as: “users are loaning books, which means that they are satisfied with the resources of the library” are an unacceptable

simplification. The understanding of the opinions, demands and expectations of the recipients of services and resources as well as the assessment of the performance of an institution done from their perspective poses as an extension of and complement to the analyses conducted using statistical data and indicators. Extraction of information from the users makes it possible to characterize their community (its demands, expectations, socio-demographic characteristics) and expansion of knowledge about the function of library coming directly from the users.

Among a set of indicators recommended in the norm PN-ISO 11620 the “User satisfaction” indicator can be found. However, it is determined in an entirely different process than the other measurements. Satisfaction is an abstract term; therefore, it is relatively difficult to measure and articulate it in a numeric, verbal or symbolic manner (which is how indicators are expressed). Satisfaction is an emotional reaction, a subjective feeling. The same aspect can evoke a feeling of satisfaction in one subject but not in the other. It arises from meeting the expectations, demands, satisfying the need (Stoma, 2012, p. 34). It is connected with: feeling positive emotions due to the results; the observation that the proportion between the costs and profit is appropriate; as a consequence of performed comparisons (Balon & Maziarczyk, 2010, pp. 11–27). A range of factors can influence its occurrence: personal (mood, state of health), situational (weather, directly preceding events), factors originating in the service provider (communication and the image of institution) (Strzelczyk, 2017, pp. 144–145).

The development of methods and tools enabling the satisfaction measurement focus mainly on establishing if and to what degree the needs of the clients have been met. There are also known techniques involving the determination of differences between the expected and the received service (Servqual), methods of studying the key events (the method of sequential, critical events), the measurement of complaints (Sidor, 2005, p. 50). Satisfaction can be studied using direct methods (surveys, interviews) or indirect ones by checking the indicators that reflect the behavior of the users in the library environment (e.g. traffic indicators) (Kędzierska, 2015, p. 188). Research tools can refer to objective criteria or subjective opinions, pertain to a specific aspect/area or a global approach to the functionality of the institution (Stoma, 2012, p. 58).

Satisfaction is a term that lacks objectivity as sometimes the user might feel pleased with the use of a low-quality service. This could be a result of their modest expectations, no comparison with other institutions or lack of awareness about the norms and standards that concern the optimal level of

service implementation (Strzelczyk, 2017, p. 145). For this reason, the satisfaction assessment should be regarded with a lot of reserve on the grounds that the opinion is too subjective and human nature is variable. However, it is important to observe that the studies on user satisfaction carried out using the research techniques based on scientific theory make it possible to obtain accurate and reliable data and the conclusions drawn on their basis can provide a lot of valuable information.

### **Studies on user satisfaction in AFBN**

The need to add the “User satisfaction” indicator into the set of functionality indicators in the AFBN project has been seen almost from the very beginning of its existence. Work on this aspect lasted for a few years, which was due to the necessity to test the research instrument (the construction of questions and the list of possible answers in the questionnaire), the technique of choosing research sample (random and non-probability sampling have been tested), designed tools and instruments for data analysis.

The method of determining the “User satisfaction” indicator, which was a result of the AFBN project, is based on questionnaire surveys conducted among the users of libraries (visiting the library in person or making use of its services remotely). The data is collected using a standardized questionnaire. Questionnaire templates (different layouts) were prepared for print together with a digital template designed through Google Sheets. Quota selection of the sample for the studies has been recommended (a spreadsheet facilitating its calculation and the making of a quote analysis have been prepared) which is to ensure subject representativeness – the structure of the sample is congruent with the structure of population according to the selected variables. The collected data can be analyzed through the spreadsheet showing the pooled data, charts and cross tabs. All of the stages of research on user satisfaction have been described in a self-help book *How to do research on user satisfaction. A self-help book for librarians* (pol. *Jak przeprowadzić badania satysfakcji użytkowników. Poradnik dla bibliotekarzy*) (last update: November 2018). Some research was already conducted as part of a national initiative in scientific (Derfert-Wolfand et al., 2018), public (Sobięga & Strzelczyk, 2017) and pedagogical libraries (Zawalkiewicz, 2017).



### **The impact and value assessment of libraries**

Libraries do not operate in a vacuum and their functionality is not limited to meeting the needs of individuals but it also leaves traces in a much broader social or economic environment. Looking for these traces and examining their size and stability is the focus of research into library impact and value.

An impact, according to *The Universal Dictionary of Polish* (pol. *Uniwersalny słownik języka polskiego*) (Dubisz, 2003), is an influence on someone or something and the result of that influence. In other words, an impact is a change resulting from the operations of people, institutions, etc. It includes both the likely and unlikely, real or potential (for future generations), negative or positive, long-term or short-term results (Wainwright, 2003, pp. 9–10). It can be immediate (obtained information, a solved problem) or its effects can be observed after some time has passed (habit changes, the increase in level of national education) (Głowacka, 2013, p. 433). The effects of the influence can be more or less extensive, can concern many areas of human life or how the institution works or only its narrow fields. The results of impact can be hard or soft in nature. The first is an achievement, e.g. of material or financial advantage. Soft results are the changes in attitudes and behavior of people, mainly psychological or behavioral in nature, e.g. the development of knowledge, gaining new skills (Wainwright, 2003, p. 9).

Examining the impact is about searching for causal and effect connections which have a difficult nature to capture and they are not subjects to simple arithmetic rules. (Wojciechowska, 2006, p. 24). Changes resulting from the impact (of something or someone) are often indirect and intangible, so they can be difficult to identify and classify. In addition, the impact of an object is usually not the only one as well as it is not exclusive, the influences can also come from other sources which often interpenetrate and connect with each other.

Methods of examining the impact can be classified as follows: those requiring inference (e.g. functional indicators), those user interaction (e.g. surveys, interviews), those requiring requiring observation (ISO 16439, 2014, p. 21). When examining the impact, the first step to identify the areas of operation of libraries that cover in the study (e.g. training offer, use of library space), enunciate the expected areas of impact (increase in knowledge and skills, development of social bonds), then collect data that will confirm or indicate its absence (Creaser, 2018).

The value of libraries can mean both an intangible value (validity, meaning, role) and a value from an economic perspective (also known as an economic impact). Then, operations of the institution are analyzed in terms of its cost-effectiveness (Głowacka, 2015, p. 151). Methods of measuring the eco-

conomic value (or impact) of libraries focus not on how much the library spends and on what, but what the losses (lost financial benefits) would be if the library was liquidated (Głowacka, 2012, p. 16) or in the collation of costs incurred together with the achieved benefits (Grygowski, 2014, p. 167). To measure this aspect, libraries borrowed and adapted to their needs tools which were used to study phenomena in commercial markets.

An exemplary method for measuring the economic value of libraries is CEA – Cost Effectiveness Analysis which consists in combination of costs incurred with obtained benefits. Sometimes these benefits can also be preposessed, similarly as costs, in monetary units (then we use the CBA method – Cost-Benefit Analysis) (Grygowski, 2014, p. 167). Another example is a conditional assessment, which checks what costs respondents would be able to incur to keep the library and be able to use it (Głowacka, 2011, p. 221). The definition of proxy process is to determine the quantity of fees that users could pay for use of the same services and resources that the library provides, except that in the commercial market – the so-called “calculation of replacement costs” (Głowacka, 2015, p. 186). The most common technique is ROI referred to as a Return of Investment (Głowacka, 2011, p. 227). This value is determined as a ratio of total economic benefits of the library to total funds it invested. Items included in benefits (expressed in money) are not only the library's offer (value of services and resources), but also benefits for employees, local authorities and cooperating companies.

The interest in studying the economic impact of libraries is growing in situations in which they must seek funding or to repel allegations of “excessive” absorption of public funds. This kind of analyses has a strong marketing message, and slogans such as “every invested money brings 5 times more in return” are catchy. However, methods for determining the value of services, achieved benefits or savings sometimes turn out to be very questionable and based on uncertain conditions (e.g. determination of the value of provided information, saved time, etc.). Dariusz Grygowski (2014, p. 169) recommends as the main method of examining the cost effectiveness of libraries using functional indicators (taken from ISO 11620) to verify that a specific level of funding a library affects measurable effects of its work. The presented CBA/ROI methods may complement conclusions drawn from analysis of the indicators, but their estimated nature should be taken into account. Thus, the most appropriate solution for researching the influence and value of libraries seems to be using several methods of measurement simultaneously (quantitative and qualitative), using statistical data and indicators, conducting surveys or interviews, supplementing them with cost analyses.

### **Assessment of effects and value of libraries in AFBN**

Establishing an international norms ISO 16439 – Methods and procedures for assessing the impact of libraries, which harmonized terminology and presented a coherent method of measuring the impact of libraries, resulted in development of work carried out on these issues also in Poland. As a part of work of the Team for studying efficiency of libraries<sup>1</sup> was prepared content *Study of social and economic impact of public libraries. An overview of methods and practices used in the world*, which describes dozens of studies, projects and initiatives carried out in different countries (Derfert-Wolf, 2018a). The development of the project to study impact of libraries on users as well as the social and economic community would be the culmination of the AFBN project and creation of the holistic (holistic and comprehensive) system for assessing the functionality of libraries for schools offering higher education. Lidia Derfert-Wolf (2018b, p. 301) points to the considerable potential of the AFBN project, which can be successfully used to design a study on impact and value in Poland. However, work is needed to select relevant data and indicators, location and determining the availability of other necessary information (e.g. from universities), developing areas of research, defining problems, preparing tools for measurement and testing the entire method.

The scope of impact of academic libraries is very wide, they can influence (ISO 16439, 2014, p. 16–17):

- Individual users: students, university staff (academics, teachers, researchers, administrative staff, outsiders) or groups of persons (e.g. employees carrying out a research project, course participants, etc.).
  - The effect of the impact may be: solving a problem; execution of a task; the evaluations obtained; changes in knowledge, skills, attitudes, behavior; achieving greater success in research, science and career; graduation; obtaining a grant, rewards; saving time and money;
- The home institution and the cooperating institutions.
  - Effects: increase in prestige of the university; position in rankings; rank in the environment; reputation; attracting scientists; financial benefits (earnings) for cooperating institutions; development of accompanying services e.g. catering, entertainment;
- Society, economy, culture.
  - Effects (noticeable in the long term): the protection of cultural heritage; increase in the quality of education; cultural diversity;

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<sup>1</sup> <http://afb.sbp.pl/>

countermeasure to digital exclusion; building social capital; local economic development; decrease in unemployment.

According to Głowacka (2015, p. 152–186), different areas of impact of school libraries and types of impact can be identified:

- Teaching and information
  - Areas of analysis: education of students, information skills, search skills, obtained assessing, graduation, finding a job, continuing education, preparation of classes by didactics, etc.
- Research
  - Areas of analysis: support of scientific staff, obtained grants, patents, implementations, awards, research projects, publications, academic degrees, citation, etc.
- Culture
  - Areas of analysis: access and protection of cultural creations, use of digital libraries and repositories, development of interests, cultural aspirations, promoting reading, digital education, new technologies, etc.
- Environmental
  - Areas of analysis: integration of the local environment, counteracting exclusion, integration of foreigners, building social capital, eliminating barriers, etc.
- Economic
  - Areas of analysis: Financial situation (savings) of the users, the quality of the service on the commercial market, earnings of associated and collaborating companies, etc.

Surveys are methods which can be used in research of library influence (mainly on individual users). They can provide information about negative or positive consequences of contact with a library (library usage – effect – consequence) declared by users. A library's impact on the behavioral and cognitive sphere of the users is then measured. The surveys can also be used to estimate the economic value by asking about acceptable costs borne by the users for the sake of the library (conditional evaluation) or alternative/competitive places and forms (and costs) of using the services offered by the library (replacement costs) (Derfert-Wolf, 2018b, p. 293). Surveys should be supplemented with data from other sources: library statistics, data (exam grades, assessment of the scientific achievements, etc.), or qualitative studies. Only a compilation of several measurement tools provides valuable information about the influence of the libraries.

## A holistic model for the analysis...

By making use of the achievements of the AFBN project (statistical data, functionality indicators, user satisfaction surveys) it is possible to try and capture a wider impact of the libraries on the various aspects of social, economic and cultural life of the users, other institutions or the society. Data and indicators can be used to detect progress and changes which show the impact. For example, by using financial indicators it is possible to learn about the economic impact of the libraries. Indicators showing resources and their usage point out didactic and informational impact and indicators related to the infrastructure – the cultural or environmental impact. The information derived from the indicators should be supplemented by data from user satisfaction surveys carried out in accordance with the method developed for the sake of the project. In addition, these analyses are worth expanding to include surveys, interviews and other methods of obtaining information from recipients of services where re-search focuses strictly on measuring the influence and impact of the library (Salisbury & Peasley, 2018, p. 110). Analysis of the economic impact and value of the libraries can be carried out by estimating the cost-benefit ratio (CBA/ROI).

How can the analytical process of capturing and measuring the influence of the university libraries work by using the AFBN project? It can, for example, examine the influence of the traditional resources offered by the library on the process of studying (the identified area of library operations). We are trying to answer the following questions: does using traditional resources make getting good grades easier, increase the amount of knowledge, develop skills, or save time and money? (formulation of the expected areas of influence). We have access to indicators regarding the number of collections and acquisitions per student and their level of usage (borrowings per user and usage of the study room collections per student). We supplement analyses with assessments of said collections made by carrying out user satisfaction surveys (regarding completeness, usefulness, number of available copies, how current they are compared to the expectations) and information about the importance of the purpose of the visits among other main purposes of using the library indicated in the survey. Asking the students direct questions (in surveys, interviews, focus groups) regarding the usefulness of the traditional resources and results of their usage during the course of studies will complete the analyses. One may also be tempted to estimate the economic influence of the traditional re-sources on the financial situation of the students, e.g. by estimating the costs of replacing (the value of books on the commercial market) or conditional evaluation.

Another area of analysis may be the study of the environmental influence of the libraries on the academic community. We ask questions: whether the

library is seen and used as a meeting place, a place to spend your free time, one that develops interests and provides cultural entertainment; is staying there beneficial to the development of the social ties and integration of the community? You can use indicators related to the area, number of visits, event participation per user. Additional information is provided by user assessments in user satisfaction surveys. The following things are assessed: location assessment and readability of the labeling in the library, equipment, opening hours, cultural events. The analysis of the most frequent purposes of the visits and the number of indicated answers *NU – not using* regarding these aspects allows to determine whether these services are known and used. Supplementing analyses with cost effectiveness may rely on the assessment of the renting costs or organizing events on the external market. University library may also influence preservation of cultural heritage (influence on the society) through participation in the process of digitization of the resources. We possess indicators regarding the numbers of digitized documents, figures of the items maintained and protected as a percentage of the number of collections.

All the aforementioned assessments are analyzed in relation to each other (Głowacka, 2012, p. 13). Limiting yourself to only one tool or area of analysis when examining the effects and value of the libraries may prove to be insufficient, and the results obtained superficial and incomplete.

### **Summary**

University libraries are included in the new organizational and legal reality (*Act...*, 2018) and they must re-establish their place and position there. Many things depend on the libraries themselves and how they will prove their usefulness and effectiveness regarding their work.

A complete and comprehensive assessment of the functionality of libraries should apply to all areas of their operation. The presented model recommends the usage of statistical data and functionality indicators, user satisfaction surveys and assessment of effects and value of the libraries for the users as well as for home institutions and the wider milieu. The model has been described as holistic to emphasize the fact that the assessment of the functioning of the institution should not be the sum of analyses of the various areas or components of the system, but should refer to a holistic view in which the data obtained from the analyses of the aspects shall be supplemented with information from other sources or obtained with the use of other techniques. For example, effectiveness indicator analyses complement the data acquired from user satisfaction surveys, while estimating the economic influence should not be carried out without referencing financial indicators.

Carrying out a full and broad analysis and assessment of the libraries allows for a description of the actual work and executed activities, verifying the resources and achieved results, control of the effectiveness and profitability of the work, support for management processes and reacting to the changing environment. The expectations of the authorities and the general public are clear: libraries will not avoid such assessments. Currently it is not enough for the libraries to show how they function and how they use their financial, material or personal resources. They are required to show that the operations that are carried out are efficient, needed and effective.

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The text is a translation of the article:

Strzelczyk, E. (2019). Holistyczny model analizy funkcjonowania bibliotek szkół wyższych: ocena funkcjonalności, pomiar satysfakcji użytkowników, ocena wpływu i wartości. *Acta Universitatis Lodzianis. Folia Librorum*, 2(29), 13–29. DOI: <http://dx.doi.org/10.18778/0860-7435.29.01>