ANALYTICAL PRODUCTS IN LIBRARIES TO SUPPORT RESEARCH



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Annotation: A systematic and integrative reviews as the types of analytical information products are studied. The presented data on the publications dynamics of systematic and integrative reviews showed their high relevance as analytical information products, especially in the field of medicine, biochemistry, social sciences.

The essential comparative analysis of the concepts «systematic review», «integrative review» has shown that these types of reviews have both common features (generalization, synthesis, combining data from primary sources on the review topic, scientific methods of data evaluation and methods of information analysis, scientifically based conclusions) and distinctive features (data source selection strategy, methods to assess data, nature of conclusions and others). Their knowledge can increase the involvement of library staff in preparing these types of reviews.

It is shown how research libraries could participate in these processes in the framework of their scientific and information activities. Thus, libraries can expand their list of analytical information products and services that they provide to scientists and specialists.

Key words: information analytical products, systematic review, analytical review, integrative review, research library

Аннотация: Изучаются систематический и интегративный обзоры как виды обзорно-аналитических продуктов. На основе анализа публикаций показано, что особое внимание при создании этих видов обзоров уделяется методике их подготовки. Проводится анализ динамики документопотока по систематическим и интегративным обзорам, который позволил показать распределение обзоров по отраслям знания, организациям, принимающим участие в написании систематических и интегративных обзоров, и выявить определенные тенденции в развитии данного вопроса. Дается сущностный анализ понятий «систематический обзор», «интегративный обзор». Проведенный сравнительный анализ систематического, интегративного и аналитического обзоров показал, что эти виды обзоров имеют как общие черты (обобщение, синтез, объединение данных из первоисточников по теме обзора, научность методов оценки данных и способов информационного анализа, научно обоснованные выводы), так и отличительные особенности (стратегия отбора источников данных, методы оценки данных, характер выводов и др.). Показано, как научные библиотеки могли бы участвовать в подготовке систематических и интегративных обзоров в рамках своей научно-информационной деятельности.

Ключевые слова: информационно-аналитические продукты, систематический обзор, аналитический обзор, интегративный обзор, академическая библиотека

The transition to digital culture, including science as a communicative structure, raised the question of the role of research libraries in the research process. The study of information needs and information behavior of scientists and specialists showed a significant interest in information review and analytical products, due to the exponential growth of the world documentary flow in the electronic environment, the increase in duplication and dispersion of publications on the topic, the

rapid obsolescence of scientific information in some areas, etc.

As is known there is an alternative to the flow of numerous primary and secondary documents which are to be searched and assessed. It is review and analytical products, which systematize and summarize the results of many studies. They allow scientists and specialists to be aware of research results, due to the functions they may perform – integrative and evaluative ones. This determines the value of analytical products for information research support.

Bibliographic, abstract and analytical reviews and methods of their preparation in research libraries and information centers, that is, by specialists in the field of library science and informatics are well known and described in detail. The general issues of systematic and integrative reviews are also well studied, but by specialists in various subject areas, especially in medicine, as well as in pedagogy and education, natural and economic sciences, etc. [1–11 and others]. The advantages of integrative reviews for research, for example, overcoming interdisciplinary connections, identifying the main problems in the area under studying, are reported in [12–14]. As for the systematic reviews is concerned, if the right method for preparing this type of the review for a particular case, then it will always be the most accurate and reliable source.

Analysis of publications on the preparing systematic and integrative reviews revealed that the methodology of their preparation is given special attention [1, 2, 6–19]. These papers, among other themes, provide practical guidelines for the preparation of systematic and integrative reviews and meta-analysis, explain how to formulate a topic (a question), to find studies for including in the review, extract and evaluate data, etc.

The necessity systematic reviews is proved by the fact that there appeared such a type of information products as a review (or overview) of systematic [20, 21].

All this indicates an increased interest in the review and analytical information, which can be linked to its capabilities and functions, and the most relevant are now integrating and evaluative. This determines the value of survey and analytical products for information support of scientific research and application of their results in practice in any field of activity. Besides this, it is necessary to raise the question about the role of library-information specialists in the process of preparing a systematic and integrative reviews.

It is known that each type of review has its own characteristics. However, there is no evidence of the dynamics of the preparation of systematic and integrative reviews and factually proving their high relevance, the distinctive features of analytical, systematic and integrative reviews are not quite clear.

1 Methods and the analysis of the dynamics of information flow on a systematic and an integrative reviews

On 8.10.2018 in Scopus more than 268 thousand documents on the request “systematic review” in the titles of articles, short descriptions and keywords and more than 3 thousand – on the request “integrative overview” OR “integrative review”; in the Web of Science – more than 174 thousand publications and more than 2,6 thousand documents, respectively were found.

Data obtained in Scopus and Web of Science data on the number of publications for each year (figures 1, 2) indicate that the number of such publications increases annually, steady growth of systematic reviews, began since the 1990s, and that of integrative - since the 2000s.

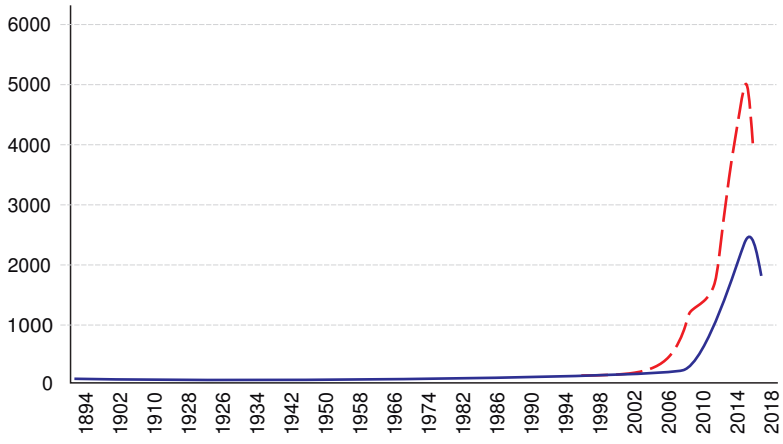


Fig. 1. The Dynamics of systematic reviews and publications on then in Web of Science and Scopus

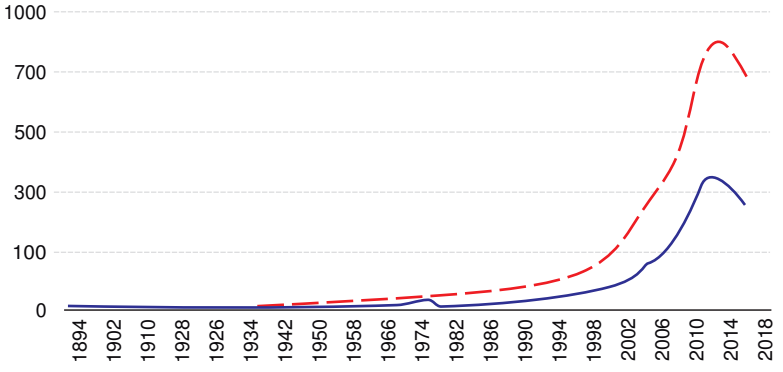


Fig. 2. The Dynamics of integrative reviews and publications on then in Web of Science and Scopus

Table 1. Distribution of systematic reviews by knowledge domain in Web of Science and Scopus

Scopus		Web of Science	
Medicine	207389	General internal medicine	16 816
Biochemistry, Genetics and Molecular Biology	29348	Neurosciences, neurology	13 323
Nursing	14978	Surgery	12 920
Pharmacology, Toxicology and Pharmaceutics	12757	Public environmental occupational health	12 207
Social Sciences	12646	Health care sciences services	10 207
Neuroscience	11709	Oncology	9 275
Psychology	11476	Psychiatry	8 414
Health Professions	9779	Cardiovascular system cardiology	8 307
Agricultural and Biological Sciences	9512	Pharmacology pharmacy	7 117
Engineering	7648	Psychology	6 580
Immunology and Microbiology	7075	Gastroenterology hepatology	6 156
Computer Science	6490	Obstetrics gynecology	5 785
Environmental Science	5160	Orthopedics	5 310
Dentistry	5037	Science technology other topics	4 927
Business, Management and Accounting	3875	Pediatrics	4 760
Arts and Humanities	2992	Rehabilitation	4 661
Physics and Astronomy	2606	Business economics	4 336
Chemistry	2488	Endocrinology metabolism	4 205
Earth and Planetary Sciences	2018	Urology nephrology	4 196
Mathematics	1953	Dentistry oral surgery medicine	4 116
Materials Science	1814	Engineering	4 070
Chemical Engineering	1590	Sport sciences	3 900
Decision Sciences	1364	Nursing	3 781
Economics, Econometrics and Finance	1271	Nutrition dietetics	3 529
Energy	1235	Infectious diseases	3 434
Veterinary	1146	Computer science	3 413
Multidisciplinary	759	Research experimental medicine	3 257

The analysis of document flow by knowledge domain (directions of research) showed that systematic and integrative reviews predominate in the field of medicine, a significant number of publications can also be observed in biochemistry, nursing, psychology, sociology, etc. (Tables 1, 2).

The information presented in Web of Science and Scopus allowed to obtain data on the affiliation of authors taking part in writing reviews under investigation (tables 3 and 4).

Tables 3 and 4 provide the rating list (only 10) of authors' affiliations in the Web of Science and Scopus databases involved in the preparation of systematic and integrative reviews. All in all Scopus gives authors from 160 organizations participated in wring systematic (78% of them being universities) and integrative (91% of them being universities) reviews. Web of Science gives authors from 40 484 organizations participated in wring systematic (18% of them being universities) and 2126 organizations participated in wring integrative reviews (52% of them being universities).

As one can see, educational institutions, including medical universities prevail in the lists, there are no libraries in them, however, a more detailed analysis of the publications themselves, content analysis of affiliations of all authors allow to discover that employees of libraries of foreign universities take part in the preparation of reviews [22–32].

2 Discussion

1.1 Typological analysis of systematic and integrative reviews

Among the publications on reviews there are three categories of documents: 1) reviews themselves; 2) articles on library and information research (preparation of reviews and analytical products on science and practice in library science and informatics) [23, 25, 27–29, 32]; 3) publications on the contribution of librarians as research partners to scientific activities (including the role of a librarian in the working group on preparing systematic and integrative reviews) , written by specialists, not dealing with library science and practice and informatics [22, 24, 28, 30].

However, practically there are no publications on features and, most importantly, comparative analysis of analytical, systematic and integrative reviews. Understanding species differences is essential for librarians involved in the production of these types of information and analytical products. Therefore, a typological analysis of systematic and integrative reviews was carried out.

Table 2. Distribution of integrative reviews by knowledge domain in Web of Science and Scopus

Scopus		Web of Science	
Nursing	1580	Nursing	1348
Medicine	1153	Psychology	250
Social Sciences	431	Public environmental occupational health	181
Psychology	351	Business economics	141
Business, Management and Accounting	183	General internal medicine	126
Neuroscience	100	Health care sciences services	124
Biochemistry, Genetics and Molecular Biology	85	Education educational research	123
Arts and Humanities	82	Neurosciences neurology	98
Computer Science	66	Psychiatry	97
Agricultural and Biological Sciences	60	Oncology	86
Health Professions	52	Pediatrics	75
Engineering	41	Geriatrics gerontology	54
Environmental Science	39	Social sciences other topics	51
Economics, Econometrics and Finance	37	Obstetrics gynecology	50
Mathematics	36	Rehabilitation	38
Pharmacology, Toxicology and Pharmaceutics	28	Cardio-vascular system cardiology	32
Physics and Astronomy	19	Behavioral sciences	31
Decision Sciences	17	Science technology other topics	30
Immunology and Microbiology	13	Computer science	29
Dentistry	6	Environmental sciences ecology	26
Earth and Planetary Sciences	5	Life sciences biomedicine other topics	26
Chemical Engineering	4	Surgery	23
Multidis-ciplinary	4	Infectious diseases	22
Veterinary	4	Nutrition dietetics	22
Energy	3	Pharmacology pharmacy	22
Materials Science	3	Respiratory system	21
Chemistry	2	Endocrinology metabolism	20

Table 3. Distribution of the quantity of systematic review publications in Web of Science and Scopus among authors' affiliations

Affiliations	Quantity of publications in Scopus	Quantity of publications in Web of Science
University of Toronto	3 512	5,186
McMaster University	2 554	3,743
The University of Sydney	2 399	3,310
University of Oxford	1 827	3,213
King's College London	1 789	2,888
UCL (University College London)	1 666	3,394
Harvard Medical School	1 575	2,923
University of Amsterdam	1 529	1,484
University of Melbourne	1 528	2,258
Mayo Clinic	1 505	1,984

Table 4. Distribution of integrative review publications in Web of Science and Scopus among authors' affiliations

Affiliations	Quantity of publications in в Scopus	Quantity of publications in Web of Science
Universidade de Sao Paulo – USP	171	132
University of Technology Sydney	53	51
Griffith University	51	46
The University of Sydney	44	42
Universidade Federal de Santa Catarina	40	24
University of Alberta	37	26
Universidade Federal do Ceara	33	24
University of Illinois at Chicago	33	
University of Pennsylvania	32	39
Medical University of South Carolina	32	30

From the words themselves - "systematic review", "integrative review" – it is clear that they are a kind of overview information. Therefore, there is a need to compare them with the analytical review.

For this purpose, the definitions of the concepts "systematic review", "integrative review" were considered. The settled definitions were not found. Therefore, the authors of the analyzed publications give their interpretation of terms, trying to reflect in them essential characteristics and that, that differ them from other types of ▶

Table 5. Essential analysis of the concepts "systematic review", "integrative review»

Definition	The essence	Reference
A systematic review is the analysis (secondary study) of all published and unpublished scientific papers relevant to a given research topic	- the use of data from both published and unpublished sources; - application of strict principles of data selection on the relevance of a given topic	[10]
Systematic review *(systematic review, systematic overview)* – is a special kind of scientific research, carried out by a specially developed method, the object of which are the results of other original research. Analysis and generalization of the research results included in the review can be carried out using statistical methods and without them.	-belonging to scientific research; - availability of specially developed techniques; - application of statistical methods of data analysis and synthesis (meta-analysis)	[33]
A systematic review is aimed at a comprehensive identification and synthesis of studies on a particular question, using transparent and replicable procedures at each step of the process. The methodology for preparing systematic reviews minimizes potential errors and avoids bias. A systematic review is prepared under the Protocol (detailed plan), which defines in advance its main objectives, concepts and methods. All steps and decisions are carefully documented. Meta-analysis can (and should) be built into a systematic review, but this is not always done.	- focus on identifying and summarizing information;- specification of the question under studying; - reproducibility of procedures;- minimization of possible errors wi*th the help of the chosen method;* *- accuracy in following a pre-established Protocol;* *- mandatory documentation of all steps;-* *application of meta-analysis*	[3]
A systematic review is a synthetic study in which, using modern methods, the search for all primary studies that measure the effectiveness of the analyzed is made, the quality of these studies is evaluated, and then, by synthesizing the results of best studies, the final evaluation of the intervention is derived.	- the choice of only primary studies; - obligation to ensure completeness; - selection of high-quality research;	[34, p. 122]
An integrative review is a special review method that summarizes previous empirical or theoretical literature to provide a more complete understanding of a particular phenomenon or a problem. To achieve reliable results, it is necessary to strictly follow the rules of a research.	- generalization of empirical and theoretical literature; - strict rules of a research	[30, 35]
Integrative review is an approach that allows to include various studies (experimental and non-experimental), a large amount of heterogeneous data and promotes the integration of different points of view. The method of integrative review may include various techniques to cover the context, processes and subjective elements of the topic.	-combining several different studies; - study of a large variety of data; - combination of different techniques.	[14]
An Integrative review accumulates modern knowledge on a specific topic, it is carried out to identify, analyze and summarize the results of independent research on the same topic. *An Integrative review* is a methodology that provides a synthesis of knowledge and the applicability of the results of significant research in practice.	-generalization of the results of various studies; - applicability of the results of significant studies in practice.	[13]

information and analytical products. The most characteristic definitions of systematic and integrative reviews are given in the Table 5.

The analysis of the table and comparison of the essence of systematic and integrative reviews with that of analytical[1] and abstract[2] ones showed that both systematic and integrative reviews have the features of these reviews: the abstract component is determined by a clear systematization of the selected material, and analytical – in obtaining new data, original conclusions.

In order to clearly distinguish systematic and integrative reviews from the analytical one, the study of publications on the method of their preparation [1, 2, 6, 10, 13–15, 30, 35–38] was made and identified the following categories: purpose, topics, compilers, data sources, search strategy, principles of data selection, methods of evaluation of data, methods of information analysis, synthesis and presentation of data, findings and results. The results of this work are reflected in the Table 6.

A comparison of the main characteristics of the analytical, systematic and integrative reviews revealed common and distinctive features of these types of information and analytical products.

The common features are:

1. Generalization, synthesis, integration of data from primary sources on the subject of the review.

2. Only highly qualified specialists can be their compilers.

3. Adherence to the principles of completeness and comprehensiveness when searching data for the review.

4. Scientific methods of data evaluation and methods of information analysis.

5. Scientifically grounded synthesis and presentation of data.

6. Scientifically grounded conclusions.

Distinctive features are:

1. Data sources for the analytical review are publications (and theories, scientific views, described trends, i.e. scientifically meaningful and revised research results are analyzed and synthesized), for the systematic review - published and unpublished results of empirical research, and for the integrative review - published and unpublished results; empirical and theoretical research.

2. The authors of the analytical review should be competent in the subject matter of the review and their range is usually limited, as personal authoritative authorship is required, and systematic and integrative reviews can be prepared by a group of authors of various specialties, including professional statisticians.

3. In preparing the analytical review, the principle of completeness is maintained at the stages of data search and selection, and the selection of sources is mandatory and subject to strict criteria for the preparing a systematic review.

4. Methods of data evaluation and information analysis when preparing an analytical review may not be specified, and when preparing systematic and integrative ones they are strictly fixed.

5. In the analytical review generalization and presentation of data are, as a rule, qualitative and descriptive, in the systematic one – rather quantitative with the use of graphical forms of data presentation, in the integrative one – quantitative and descriptive.

6. In the analytical review the conclusions are subjective, in the systematic one they are strictly objective, excluding system errors, in the integrative one - due to the large amount of heterogeneous data sources and the use of different techniques, there may be inaccuracies and subjectivism.

1.2 A comparative analysis of a librarian functions at different stages of information analytical products preparing

Very little experience has been found in the literature describing the involvement of library staff in preparing systematic and integrative reviews. For example, the author of [30] considers a librarian as a member of the team of specialists ready to conduct the meta-analysis and preparing an integrative review. He determines his (or her) possible functions at each stage of the research process (cited from to [36]): (1) problem statement, (2) data collection, (3) data evaluation, (4) analysis and interpretation, and (5) public presentation of the research results.

The paper [24] analyzes the role of an expert librarian in each of the seven steps of preparing a systematic review, which are defined in the Cochrane community guidelines: (1) formulation of the task, (2) search and selection of studies, (3) evaluation of the quality of research, (4) selection of sources (5) analysis

1 *An analytical review* is a document that is the result of a comprehensive analysis of primary scientific documents, containing a reasoned assessment of the material and giving reasonable recommendations on the prospects for the development and use of relevant achievements in science and technology. Analytical reviews can be treated as a research and often constitute an important part of this work [42].

2 An abstract review is based on the extraction and systematization of certain data from primary scientific documents [42].

Table 6. Comparison of the main characteristics of the reviews

Aspect	Characteristics		
	Analytical overview	Systematic review	Integrative review
Purpose	To summarize the main trends of scientific thought, a scientific school, theories, views [39], make recommendations, make a comparison, express author's views on the issue on the basis of the collected and generalized information.	To synthesize available data of specific researchs [3, 7, 34]. To summarize the results of experimental studies and to move them to practice [7, 10, 34]. To analyze central trends and differences in research results. To eliminate errors and bias in the study of the issue [7].	Synthesis (generalization) of evidence from numerous qualitative primary studies [14]. To combine the findings of various studies [14]. Apply research results in practice [13]
Thematic coverage	A wide range of problems related to a certain topic [40] or a definite topic related to a complex problem, often rather wide [39]	In-depth analysis of a specific issue [10, 41]. The research question is well focused and relevant.	Specific phenomenon or a problem.
Compilers	One author or a group of experts, authoritative in this field [39, 43]	Often a group of specialists in different knowledge domain [10]	Interdisciplinary research group [30]
Data source	Published scientific papers	Published scientific works and unpublished studies [10, 34].	Empirical and theoretical studies [35], published and unpublished studies [30]
Search strategy	The search strategy is not always specified.	The search strategy is accurately stated and recorded.	Clearly defined strategies of literature search [14].
The data selection	The exhaustive completeness of the documents on the topic, the use of outdated or questionable information is not allowed [43]	Strict criteria applied to all data in the same way (research methods, the number and list of participants, sources of funding, outcomes or results), that do not allow variants in the selection of literature and changes initiated after the start of the search [41].	Selection criteria should ensure the representativeness of the sample, be important indicators of the reliability and reliability of the results [13]. The selection process is well documented [14, 36].
Data estimation methods	Different or not specified at all	Rigorous, critical evaluation methods	Evaluation methods vary depending on the sample structure (empirical or theoretical studies). Theoretical studies can be evaluated using the methods of theoretical analysis and criticism [11, 14].
Methods of information analysis	Different or not specified at all	Agreed and objective for each case	Multiple comparisons between primary data sources, pre-ordered, coded and classified [17–19].
Data synthesis	Often qualitative synthesis	Quantitative (meta-analysis) synthesis	Qualitative and quantitative synthesis (may include meta-analysis) [4, 14, 17, 30]
Data presentation	Various, more often descriptive presentation	Statistical with the use of evaluation tables or graphical forms for data presentation [6, 10]	Statistical and descriptive presentation. Data display - in the form of matrices, graphs, charts, tables, presentations [13, 14].
Conclusions	Scientifically grounded, but subjective, because they are based on the compiler's own judgments, its critical attitude to the primary information [40]	Scientifically grounded, system errors are excluded [41]	Scientifically grounded, generalized conclusions from numerous studies, which, due to the large amount of heterogeneous data sources and due to the use of different techniques, may have disadvantages: lack of rigor, inaccuracy and bias [14, 35]
Result	Characteristics of the current state and prospects of the subject of research. Motivated conclusions for each section. General conclusions on the topic of the review and proposals for further study [43]	Objectively generalized large amounts of information. Identified lacunae in scientific research [5]. Combined results of several studies [34]	Description of complex concepts, theories, or problems. Analysis of each subgroup of studies with the identification of important elements and conclusions. Integrated summation of a topic or a phenomenon into a comprehensive description through synthesis of important elements or conclusions [14]

Table 7. Comparative analysis of a librarian functions engaged in preparing different types of reviews basing on the algorithm or stages of reviews preparing

Systematic and integrative reviews [24, 30]	Analytical reviews [44]
Problem statement. Solving organizational questions	
A researcher determines a theme, problems and questions to be discussed in the review	A research library or an information centre determines relevant themes of the review and potential authors.
A researcher forms the group of authors (subject specialists, a specialist on meta-analysis, a librarian (specialist in information search and bibliometric analysis, a statistic).	A research library or an information centre determines the authors of the review and forms the group for preparing the review (specialists in preparing information analytical products, information search, references description, editing).
A librarian participate in development the criteria to determine relevant information sources. The librarian has an opportunity to put specific questions, for example, what period of time is needed? Are there specific aspects of the topic that should be present in each study? Are there any language or types of information sources restrictions? etc.	The development of the so called plan-prospect of the review.
Data collection	
A librarian selects data bases and develops search strategy taking into account search opportunities of different data bases.	Data bases selection and search strategy development taking into account search opportunities of different data bases.
Forming the set of keywords and search requests, their possible correction	Forming the set of keywords and search requests, their possible correction
A librarian makes complex information search and gets a full sources list. This stage is the most intensive one for a librarian. It is at this stage that comprehensive searches are conducted to obtain as many relevant research articles and other information sources as possible. A librarian can offer a standard list of journals or remote information resources in the area of interest to a researcher group. All professional skills of a librarian – knowledge and experience of work with full-text and bibliographic databases, indexing, identification of added information, use of the controlled vocabulary can be well shown at this stage.	Information investigation of the theme: making retrospective, current and perspective searches.
Detection of doublets in information sources and preparing data on all information sources for further selection by the subject specialists (selection is also fixed by a librarian).	Detection of doublets in information sources.
Full-texts search of selected information sources	Full-texts search.
Fixing the final list of selected information sources after full-texts investigation.	–
Presenting data on information search, selection, including and excluding as diagrams and statistical report to be used in the review (and for possible reproduction of searches).	–
Further renewing of searches (in case it is necessary to return to the theme of the review.	
Data, fact, conceptions, etc. evaluation	
A librarian practically does not participate in this stage.	
However, at this stage, the librarian can update the data collected in the previous stage to identify «elusive publications» (for example, an unpublished study suitable for the review was found). Among all tasks tracking unpublished researches is the most difficult one.	
Analysis and interpretation, writing the text of the review	
A librarian practically does not participate in this stage.	
The librarian's interaction with the research team is also minimal, but his function can be significant, as at this stage the results of statistical processing are treated. It is rather a complicated process, and as the librarian is somewhat distant from the review project, he can help in organizing the discussions of the team members and act as a mediator in the discussions.	
References editing	References editing
Public presentation of the research results	
Identifying journals appropriate for publishing the review and taking into the consideration its interdisciplinary nature.	Preparing the text of a review for publishing.
-	Choosing a research editor and reviews.
-	Preparing an electronic version of the review.
-	Arrangement of the electronic version in external electronic resources.
Help in organizing an electronic access to the review	Help in organizing an electronic access to the review

and presentation of results, (6) interpretation of results, (7) update of results.

For many years the authors of the article were dealing with preparing analytical reviews on environmental problems [44]. Thus, we can compare functions of a librarian engaged in preparing different types of reviews basing on the algorithm or stages of reviews preparing (Table 7).

As one can see in the Table 7 a librarian has his important niches in preparing systematic and integrative reviews, although his role is usually minimal at the stages of Data evaluation and Analysis and interpretation. In case of systematic and integrative reviews a librarian is in the author group, and in that of the analytical one he just participates in information search, references editing. And only a subject specialist can include a librarian's name to the authors' list. But it is a library or information centre that can initiate an analytical review and survey its preparing.

Conclusion

The presented data on the publications dynamics of systematic and integrative reviews showed their high relevance as analytical information products, especially in the field of medicine, biochemistry, social sciences.

It was determined that analytical, systematic and integrative reviews as a type of analytical information products have both common and special characteristics. The knowledge about them can increase the involvement of library staff in preparing these types of reviews.

Moreover, it is supposed that combined with the bibliometric methods of research fronts determination a research library could offer the themes and problems for systematic and integrative reviews and organize authors teams for their preparing. Certainly, a librarian included in such a team should possess very high knowledge in the essence of information analytical products and information analysis and high skills in heterogenic information search.

Thus, libraries can expand their list of analytical information products and services that they provide to scientists and specialists.

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