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BIBLIOGRAPHIC DATABASES:
A USABILITY CASE STUDY BASED ON TEHCNICAL TRANSLATION RESEARCH

Translation research data can be accessed online – via contemporary bibliographies. Usability should be taken into account in this respect as the measure of how effectively bibliographies can be utilized. The goal of this paper is to compare the usability metrics of the Bibliography of Translation and Interpreting (BITRA) and the John Benjamins' Translation Studies Bibliography (JBTSB). First of all, an analysis of the BITRA and JBTSB is to be performed in order to identify metrics relevant for assessing the usability of the databases chosen. Then, a comparative study of the metrics is to be carried out. This paper is the first comparative study of the BITRA and JBTSB based on the material of technical translation research. The conclusion is that the BITRA provides more options with regard to user-defined search. The results may be used to enhance the usability of translation databases. The scientometric approach applied to measure technical translation research has helped to differentiate between two points of view on the technical text as an umbrella term for different kinds of specialized texts such as legal science, medicine, etc., and as a specific genre of specialized texts covering the domain of technology.

Keywords: bibliographic database, usability, scientometric approach, technical translation, specialized translation.

Introduction

Translation and interpreting studies have come a very long way to transform into an accurate science meticulously dealing with measurable research data. Today, translation studies data can be accessed and measured online – via contemporary online bibliographies or databases of translation and interpreting.

However, the number of such databases providing user-friendly at-a-glance access to translation and interpreting research data is still rather limited. Among such online bibliographies can be mentioned the following ones: the Conference Interpreting Research Information Network (CIRIN) [6]; the Bibliography of Translation and Interpreting database (BITRA) [2]; the John Benjamins' Translation Studies Bibliography (JBTSB) [8].

Providing data online, these bibliographies serve as a powerful hands-on instrument of disseminating the knowledge about translation and interpreting research to end users whose purpose is to get access to insights in no time and within a click of a mouse. This is when the usability of such online sources becomes of paramount importance.

The goal of this paper is to compare relevant metrics for assessing the usability of the two online translation bibliographies, namely the BITRA and the JBTSB. Since the CIRIN provides research information on interpreting only, it is not relevant in this case. The following objectives are set to accomplish the goal. First of all, an analysis of the BITRA and JBTSB interfaces is to be performed in order to identify metrics relevant for the purpose of assessing the usability of the databases chosen. Secondly, a comparative study of the metrics is to be carried out.

Categorization

According to J. Byrne, "the effectiveness of a user guide is to establish how effective it is in achieving its purpose and how easy it is to use" [4. P. 94]. Another definition of usability by J. Byrne was that "usability is the measure of how … effectively people can use something" [4. P. 97]. This definition of usability as effectiveness can be rightfully applied to online translation and interpreting bibliography databases under study, with their interface features being the primary aspect to focus on since they make databases effective and easy-to-use.

The search will be performed for research papers dealing with the problems of technical translation which as A. Tavast noted "only half jokingly called 'real' translation because of its market share. Instructions, user interfaces, packaging text, product information, marketing material, etc. – briefly, materials that global enterprises produce with the direct or indirect purpose to earn income, whereas this purpose is the same in all countries and translation only has to remove the obstruction arising from the multitude of languages. Referring to … and Kingscott [9], Byrne [5] reported that "technical translation amounts to some

90 % of the world's total translation output, which being the subject of only 9.3 % of research publications as listed in the multilingual bibliography of translation researcher (BITRA)" [11. P. 26]. Technical translation was also differentiated from other translation studies as the one servicing the sector of technology [10].

The following usability metrics have been selected for consideration in this paper as a result of the BITRA and JBTSB analysis: categorization, search operators, number of search results returned, response time, ratio of search results returned to the total number of database entries, and search accuracy. This paper is the first endeavor to study the BITRA and JBTSB usability metrics.

First of all, categories available to users of such databases should be investigated. The BITRA is a free online bibliography of interpreting and translation featuring over 71,000 entries as of 2018. The database is produced and maintained by the Department of Translation and Interpreting, University of Alicante, and edited by Javier Franco.

Figure 1 below shows a screenshot of the BITRA-powered search categories, namely: all fields, subject, author, year, title, language, and keywords:

Fig. 1. BITRA search categories

Users can drill into further subcategories such as: place, publisher/journal, pages, language, type, ISBN/ISSN/DOI, series, availability, contents, abstract, comments, CITID, acknowledgements, and impact. In addition, a search can be performed by keyword to make it much more refined and targeted as the keyword section features the following subsections: interpreting (consecutive, simultaneous, signs, community), author, work, profession (initiator), teaching (textbook, theme), documentation (dictionaries, internet), machine translation, history (earlier and modern with further subcategorizations being available), genre (audiovisual, religion, reference, literature, tourism, music, journalism, advertising, technical, comics), problem (coherence, interference, metaphor among many others), research (corpus), and theory (bibliography, criticism, descriptivism, skopos, translatability among many others).

As of 2018, the JBTSB contains about 28,000 annotated entries currently incorporating the former Translation Studies Abstracts database. Being edited by Yves Gambier and Luc van Doorslaer, Amsterdam, it can be accessed as a 90-day free trial and for a fee. The JBTSB provides basic and advanced search options. Figure 2 below shows a screenshot of the JBTSB advanced search categories.

Via the JBTSB advanced search features, users can search by: all fields, author/editor, title, keyword, abstract, publisher, and search string. Each of the aforementioned categories allows for drilling down even further, into subcategories such as: language of publication, source language, target language, pivot language, person as subject, title as subject, series, journal, date before, date after, and date equals.
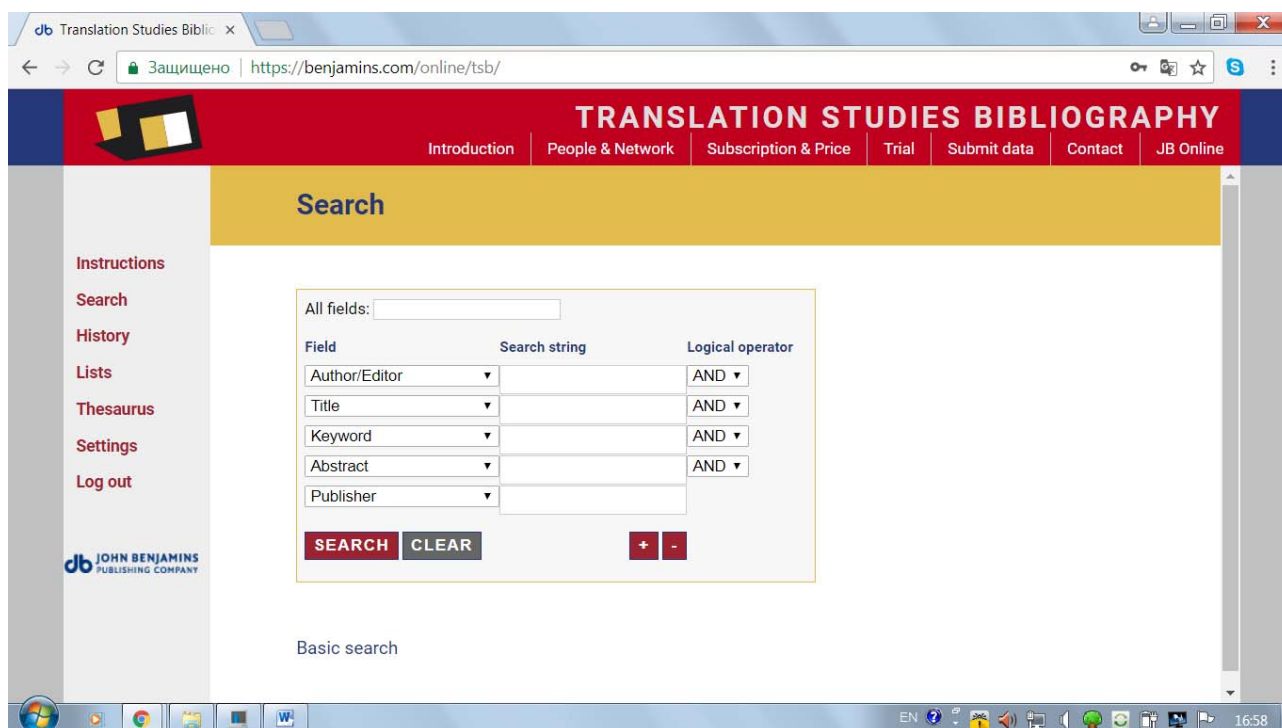
Fig. 2. JBTSB advanced search

Despite some minor differences in categorization, the both BITRA and JBTSB provide an extensive and detailed list of categories for users to choose from, with the keyword field being available for a custom search.

However, it should be noted here that the BITRA database features more categories in the *Keyword* section to make a search more specific and refined with regard to translation history, theory, problems, genre, and so on, what is – undoubtedly – of help to users.

Search operators, search results, and response time

To measure number of entries devoted to technical translation, the scientometric approach is used in this paper. "The two most fundamental features of scientometrics are first, that it studies research production data and second, that it measures them. Its potential, therefore, strongly depends on what production data are measured, the quality of the data, and what measurements are made. Scientometrics is known for its focus on citation analysis, but in translation studies, in view of its fragmented nature, production analysis regarding the volume of different types of texts in different countries and by different authors is also very informative", D. Gile emphasized in his article "Analyzing translation studies with scientometric data: from CIRIN to citation analysis" [7. P.2; see also 1]. So, with regard to translation studies, the scientometric approach has a viable potential for being applied to measure research production data as opposed to measuring any research activity.

As demonstrated in the categorization section above, both the BITRA and the JBTSB provide a detailed list of categories and combinations thereof for users to choose from. The databases also feature logical operators for simple and enhanced searches, which we intend to consider below.

For the purpose of the research into technical translation, up-to-date and comprehensive research information is needed, so our search will cover dissertations and journal articles devoted to technical translation aspects and spanning a period of twenty years from 1997 to 2017 inclusive. The subject of our search is technical translation; dates set are from 1997 to 2017 inclusive; dissertations and journal articles are the material to draw upon.

In general, there are some search operators available to users. "The most useful operators are double quotation marks (""), which enable us to search for an exact phrase, an asterisk (*) which replaces any single word, and double full stop (..) which is used to search for a number range. We can also formulate complex searches with the aid of Boolean operators (AND and OR) and parentheses", V. Brezina gave a summary of the most functional operators in the publication "Google scholar as a linguistic tool: new possibilities in English for academic purposes (EAP)" [3. P. 4].

Table 1 below provides a summary of search options available to users and examples we intend to use in order to perform our custom search across the BITRA and the JBTSB databases:

Table 1. **Simple and complex search options**

Operator	Explanation	Search string
Simple search		
Keyword/category	by keyword/ category	• technical • dissertation • journal • 1997–2017
Double quotation marks ""	exact phrase search	• "technical translation"
Asterisk *	any word within a phrase	not relevant in our case
Complex search		
AND		
OR		not relevant for our search
NOT		

First, we performed a search by the keyword *technical*, with the results returned as follows: the BITRA contains 8,329 entries featuring the word *technical*, while the JBTSB returns 1,240 hits.

This simple search by keyword is not sufficient since a lot of the search hits in this case feature the word *technical* which does not necessarily refer to technical translation. That's why we have also used combinations of keywords and categories to search for dissertations in a more user-defined and custom manner. Table 2 demonstrates the dissertation search results and the respective database response time, with the BITRA returning more results again:

Table 2. **BITRA and JBTSB keyword and category search for technical translation dissertations**

BITRA	
Keyword: technical Year: 1997-2017 Type: dissertation	Hits: 340
Response time: 6 seconds (100mb/s Internet)	
JBTSB	
Date after: 1997 Keyword 1: technical Keyword 2: dissertation	Hits: 3
Response time: 4 seconds	

In order to make use of all the search options available, an exact phrase search has also been performed for technical translation dissertations as shown in Table 3 below; and the BITRA returned more entries again:

Table 3. **Exact phrase search for technical translation dissertations across the BITRA and the JBTSB**

BITRA	
All fields: "technical translation" Year: 1997-2017 Type: dissertation	Hits: 35
Response time: 5 seconds	
JBTSB	
All fields: "technical translation" Date after: 1997 Keyword: dissertation	Hits: 0
Response time: 5 seconds	

Then a search for journal articles devoted to technical translation was undertaken as demonstrated in Table 4, with the JGTSB returning no results:

Table 4. **BITRA and JBTSB keyword and category search for technical translation articles**

BITRA	
Type: article Year: 1997-2017 Keywords: Technical	Hits: 2,878
Response time: 5 seconds	
JBTSB	
Date after: 1997 Date before: 2017 Keyword: technical Keyword: article	Hits: 0
Response time: 4 seconds	

As can be seen from above, the JBTSB provides complex search tools which are not as flexible as those of the BITRA since the BITRA returns more hits in this respect while the JBTSB returns 0 although it does feature technical translation entries. That's why the following type of the exact phrase search was carried out across the JBTSB without specifying the years, with all the results returned being journal articles on technical translation as demonstrated in Table 5 below:

Table 5. **Exact phrase search across the JBTSB without specifying the years**

JBTSB	
All fields: "technical translation" All fields: "technical"	Hits: 268 Hits: 1,240
Response time: 4 seconds	

So, according to our search results by a number of search combinations, the BITRA provides more custom and refined options with regard to complex, user-defined search operator and category combinations as compared to the JBTSB.

The number of technical translation entries by the main keyword – *technical* – is also higher in the BITRA being 2,878 as compared to 1,240 entries of the JBTSB.

The both of the databases feature articles devoted to technical translation. The search for technical translation dissertation across the BITRA returned 35 entries while three hits were shown for the JBTSB. The average response time is very similar with regard to the both of the databases falling within the range of 4 to 6 seconds.

As compared to the JBTSB database providing no style or genre categorization and leaving it up to the user to search by keyword – the BITRA database features the keyword *Technical* in the GENRE keyword section, what demonstrates the understanding of technical texts as a specific genre. Within the BITRA database, the *Technical* genre comprises subgenres such as *Business*, *IT*, *Legal*, *Medicine*, and *Localization* listed under the *Technical* genre as seen in Figure 3 below:

This is when two approaches to technical texts adopted in the international translation research should be differentiated between:

1) the word *technical* can be used as an umbrella term for specialized texts referring to different sectors such as IT, medicine, and so on [11];

2) and vice versa – that is, technical texts can be considered as a type of specialized ones so texts are differentiated according to the area/sector they stem from. Under this approach, texts covering the area of technology are technical ones [4; 10], texts referring to the legal sector are legal ones, and so on.

Let us consider the two points of view mentioned above one by one. In the dissertation defended in 2008, A. Tavast noted that instructions, user interfaces, packaging text, product information, marketing material, and so on – briefly, materials that global enterprises produce with the direct or indirect purpose to earn income – constitute a considerable proportion of translation [11].
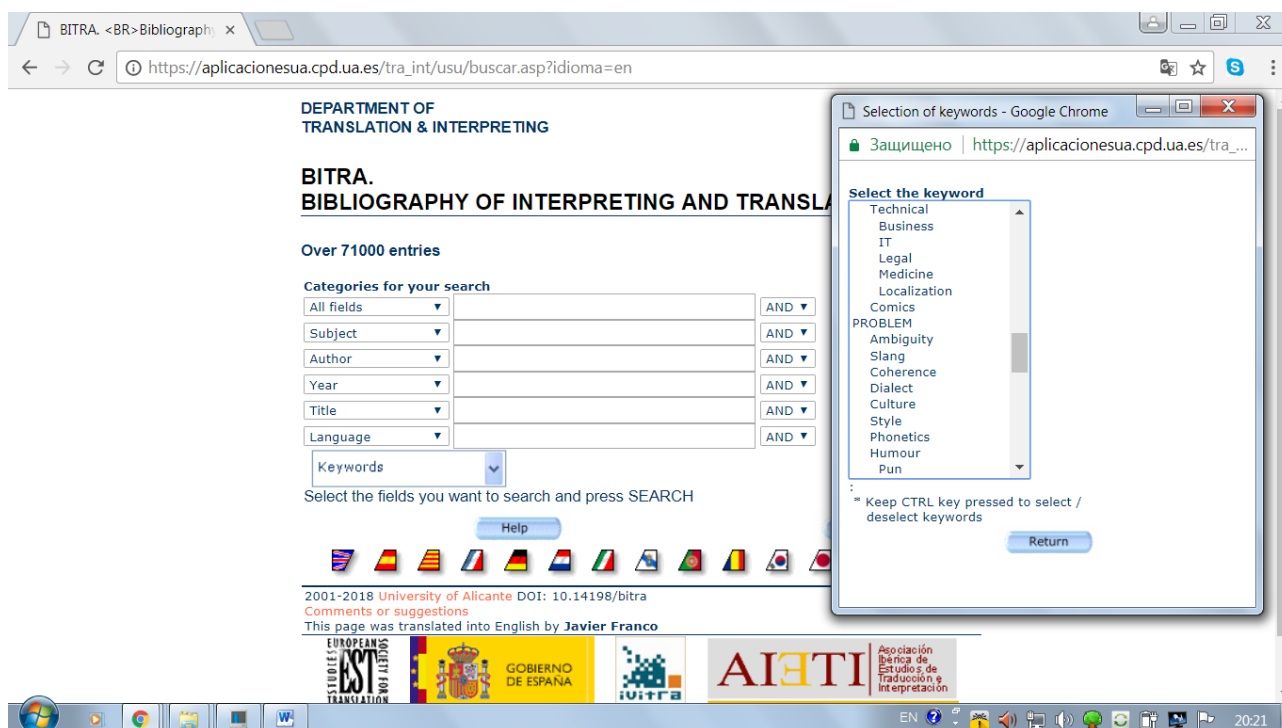
Fig. 3. Technical genre and subgenres according to BITRA

This is a very interesting interpretation of technical texts as those ones describing products, produced by businesses with the purpose of earning income, and – as we can conclude – aimed at consumers of the products manufactured by businesses and covering different aspects of using products from the moment a would-be client gets hold of a marketing leaflet to the moment this client reads his or her user manual. However, this understanding of technical texts leads to a broader treatment of technical texts as belonging to different spheres of the business sector such as legal, financial, and marketing ones – to mention a few – as we have seen in the BITRA database where *Business*, *Legal*, and *Medicine* subcategories are listed under the *Technical* category.

The opposite point of view is presented by J. Byrne [4; 5] who considers the aforementioned tendency to include business, legal, economic, and marketing texts into the *technical text* category to be a misconception. As J. Byrne emphasizes, "technical" means precisely that, something to do with technology and technological texts. Just because there is a specialized terminology, it doesn't make something technical" [4. P. 3]. For example, religion has a very specific terminology and very definite conventions, styles and document structures but it cannot be regarded as "technical", J. Byrne adds [4. P. 3].

This paper adopts the approach differentiating between specialized texts depending on the sector they stem from, so technical texts can be defined as texts that refer to the sector of technology while technical translation deals with eponymous texts.

Ratio of search results to the total number of entries and search accuracy

As of 2018, the total search numbers for all the category combinations considered above are as follows for the BITRA and the JBTSB, respectively: BITRA – 3,253 entries; JBTSB – 1,508 entries. Below is Table 6 demonstrating the ratio of the overall hits to the total number of the BITRA and JBTSB entries:

Table 6. **Ratio of overall hits to the total number of the BITRA and JBTSB entries**

Database	Overall technical translation search results, by category combination	Total number of database entries	Percentage ratio
BITRA	3,253	71,000	4.6
JBTSB	1,508	28,000	5.4

The results clearly show a lack of insight into the topic of technical translation, with the percentage of the overall number of the topic-related entries being within the range of five per cent as compared to the total number of the database entries – over 71,000 entries for the BITRA and 28,000 ones for the JBTSB.

In this paper, "search accuracy" means a ratio of entries returned as compared to the total number of entries returned. Table 7 below provides a summary of complex search accuracy results for the searches which returned hits exceeding 0-3. As can be seen from Table 7, the BITRA "*technical*" search returns a proportion of specialized and technical translation dissertations as a result of the categorization adopted within the database and using the keyword *technical* as an umbrella term for specialized texts:

Table 7. **Complex search accuracy results for searches returning more than 0**

BITRA	Hits returned	Accuracy
Keyword: technical	Hits: 340	Percentage of specialized vs. technical translation dissertations: 88 vs. 12 %
Year: 1997–2017		100 %
Type: dissertation		100 %
BITRA		
All fields: "technical translation"	Hits: 35	Percentage of specialized vs. technical translation dissertations: 24 vs. 35 %
Year: 1997–2017		100 %
Type: dissertation		100 %
Keywords: technical		100 %
BITRA		
Type: article	Hits: 2,878	100 % (both specialized and technical translation entries)
Year: 1997–2017		100 %
Keywords: technical		100 %
JBTSB		
All fields: "technical translation"	Hits: 268	100%
All fields: "technical"	Hits: 1,240	100%

The search was affected by the discrepancies in treating texts as "technical" and "specialized": specialized (medical, etc.) texts are regarded as "technical" in the databases what can be considered as a misconception.

Discussion and conclusion

Contemporary translation studies bibliographies are capable of providing even more search benefits due to their transformation into a fully-fledged hands-on search tool. And today, as more and more translation research data goes online, the task of delivering easy-to-use information to researchers turns into a challenge of primary importance. This is when usability should be taken into account which is understood in this paper as the measure of how effectively end users can work with online bibliography data [4; 5] so that usability in this sense is equivalent to effectiveness.

This paper is the first endeavor to study the BITRA and JBTSB usability metrics, and listed below are the metrics of translation database usability differentiated between and considered in this paper with regard to the Bibliography of Translation and Interpreting database (BITRA) and the John Benjamins' Translation Studies Bibliography (JBTSB): categorization, search operators, number of search results returned, response time, ratio of overall complex search results returned to the total number of database entries, and search accuracy.

Both the BITRA and the JBTSB provide a list of categories to fit different user needs, with the number of BITRA- and JBTSB-featured categories being 33 (including genre and style keywords) and 18, respectively, what makes a custom search across the BITRA much more effective.

A complex search by a number of categories was performed for technical translation-related dissertations and articles in this study. The complex search options turned out to be more efficient in returning relevant technical translation-related entries. The search was performed by a combination of categories such as

keyword, year, type of work in the BITRA and date after, date before, keyword in the JBTSB, with the BITRA returning much more entries for this type of search as compared to the JBTSB. So, according to our search results by a number of search combinations, the BITRA provides more custom and refined options with regard to complex, user-defined search operator and category combinations as compared to the JBTSB.

As for the material of the study – technical translation research – the ratio of the overall complex search results to the total number of the database entries shows 4.6 and 5.4 per cent for the BITRA and the JBTSB respectively. The results obtained evidence a lack of insight into the topic of technical translation, with the percentage of the overall number of topic-related entries being within the range of five per cent as compared to the total number of the database entries – 71,000 and 28,000 respectively.

It should be noted here that the scientometric approach applied in the paper to measure technical translation research has also helped to differentiate between the two points of view on the technical text as an umbrella term for different kinds of specialized texts such as IT, localization, medicine, and so on, and as a specific genre of specialized texts covering the domain of technology. The approach to technical texts as a synonym of specialized ones is adopted in the BITRA influencing the choice of categories and search accuracy as the search for technical translation papers returns entries devoted to specialized translation (legal, medical, and so on). This paper adopts the approach differentiating between specialized texts depending on the sector they stem from, so technical texts can be defined as texts that refer to the sector of technology while technical translation deals with eponymous texts.

The results obtained may be helpful in further enhancing the usability of online translation studies databases as well as other databases and allowing for a more efficient search due to selecting effective combinations of complex search options. The findings can be also representative of different points of view on technical translation.

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БИБЛИОГРАФИЧЕСКИЕ БАЗЫ ДАННЫХ: ОЦЕНКА УДОБСТВА ИСПОЛЬЗОВАНИЯ НА МАТЕРИАЛЕ ИССЛЕДОВАНИЙ ПО ТЕХНИЧЕСКОМУ ПЕРЕВОДУ

Доступ к исследованиям в области переводоведения возможен в режиме онлайн благодаря современным библиографическим базам. При этом следует учитывать удобство при работе с ними, так как это служит мерой того, насколько эффективно могут использоваться данные библиографические базы. Цель данной работы – сравнить удобство и простоту использования библиографии письменного и устного перевода (BITRA) и библиографии переводоведения издательства John Benjamins (JBTSB). Прежде всего, необходимо провести анализ интерфейсов BITRA и JBTSB для выявления параметров, с помощью которых можно оценить удобство использования данных баз, а затем провести их сопоставительный анализ. Данное исследование представляет собой первое сопоставительное изучение библиографий BITRA и JBTSB на материале исследований, посвященных техническому переводу. Выявлено, что библиографическая база BITRA предоставляет пользователям больше параметров для поиска. Результаты исследования могут быть использованы в целях повышения удобства использования переводческих библиографических баз. Применение в работе наукометрического подхода для оценки объемов исследований в области технического перевода также позволило выявить две точки зрения на технический текст: как общий термин для различных специальных текстов, например, из области юриспруденции, медицины и т.д., а также как особый жанр специализированных текстов, относящихся к сфере технологий.

Ключевые слова: библиографическая база данных, удобство использования, наукометрический подход, технический перевод, специализированный перевод.

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