Classification System for Knowledge Organization Literature (CSKOL)
Its Update, a Pending Task?

Abstract:
Dahlberg created the Classification System for Knowledge Organization Literature (CSKOL) to classify the Section Knowledge Organization Literature of the International Classification journal, later known as Knowledge Organization Journal (KOJ). Three editions of the CSKOL have been published in the KOJ (1985, 1993, 1999). Formally, the CSKOL is a classification system specialized in KO. It is also a decimal faceted classification scheme. The CSKOL has not experienced significant changes. Nevertheless, KO literature has been classified with this system for 45 years. Authors perceive KO as a dynamic and interdisciplinary field, with various research lines and trends, continuously incorporating new concepts. There is some tension between the evolution of KO and the relative immobility of the CSKOL schemes. This paper suggests a revision of the CSKOL to update the terminology, prepare a classification tutorial and publish a complete and up-to-date official version.

1.0 History and editions of the system

Three editions of the CSKOL have been published so far:

i) First edition: published in 1985 (ICJ volume 12, issue 3), under the title of Classification Literature Classification (CLC). The outline of the scheme is simple: it shows the development of nine classes (numbered from 1 to 9). In most classes, there are no subdivisions beyond the third digit.

ii) Second edition: published in 1993 (KOJ volume 20, issue 4). In this edition, – under its current title–, the system is an appendix to an article where Dahlberg laid the foundations for Knowledge Organization (KO) (Dahlberg 1993). In this instance, the author presented three tables: a first summary with ten main classes, a second summary with one hundred divisions, and finally, the extended scheme, with the complete system. In that same article, Dahlberg published a summary introducing the one hundred major divisions of the Information Coding Classification (ICC), an autonomous, universal classification system she created (Dahlberg 2008), and conceived as a complement to the CSKOL.

The ICC allows defining many subjects specific to KO, by subdividing those subjects by discipline. For instance, it is possible to add to the class number 82 of the CSKOL (“Data Classing and Indexing”) the class number 24 of the ICC (“Electronics”), thus achieving the subject representation of information resources on indexing of documents on electronics (82-24).
When we compare the second edition with the first one, we find at least three differences: a) The addition of Class 0 (Form Divisions) to the schemes; b) The disappearance of some levels of specificity, due to the sole inclusion of topics up to the third digit; c) The addition of new topics under notations 158, 169, 199, 349, and 399, among others.

iii) Third edition: published in 1999 (KOJ volume 26 issue 4). This issue was entirely devoted to compiling the bibliography of the KOJ and the proceedings of international conferences, national conferences, and other ISKO publications. The entire bibliography was classified using the CSKOL schemes.

In a brief introduction, it is mentioned that the CSKOL is presented “as it is used by the present Literature editor of the KOJ [at that time, the specialist Gerhard Riesthuis], including some small changes made with a view to changes in the literature in the field of KO” (Riesthuis 1999, 192). No mention is made to the changes or the methodology used. One of the changes identified is the use of the asterisk (*) in those CSKOL class numbers that can be combined with ICC numbers.

2.0 Structure and principles of the system

Formally, the CSKOL is a classification system specialized in KO. It is also a facetted classification scheme, built from a top-down perspective. The consistent and exhaustive application of the facet analysis advocated by Ranganathan (1937) is noticeable throughout the CSKOL.

The CSKOL is also a decimal system, and, therefore, it has a hierarchical structure, similar to the DDC or the UDC classification systems: Class 0 corresponds to Form Divisions. Classes 1-9 are organized into three thematic groups that follow the sequence of the 'systematifier' (Dahlberg 1977).

The classification numbers have up to three digits, with a few exceptions where a fourth digit is added to some numbers. This allows organizing specialized collections with a specificity ranging from low to medium.

The CSKOL is currently divided into the following ten main classes:

0 – Form Division (form bibliographies, reviews, glossaries, textbooks, among others).
1 – Theoretical Foundations and General Problems.
2 – Classification Systems and Thesauri, Structure and Construction.
3 – Methodology of Classing and Indexing.
4 – On Universal Classification Systems and Thesauri.
5 – On Special Objects Classifications (Taxonomies).
6 – On Special Subjects Classifications and Thesauri.
7 – Knowledge Representation by Language and Terminology.
8 – Applied Classing and Indexing.
9 – KO Environment (professional and organizational problems, persons, and institutions in KO, policy, and legal questions, among others).

Dahlberg also gathered the nine thematic classes (1 to 9) in three groups:
Group 1-3: representing the constituent divisions of the field.
Group 4-6: representing the application of the constituent divisions of the field.
Group 7-9: representing the influence, application, and environment fields.
As for the terminology, expressions or phrases (generally pre-coordinated) prevail over terms or descriptors. For example: under 215- Characteristics and Kinds of Thesauri. No synonym relationships are established in the schemes; thus, the only terms included are authorized terms.

The system does not have auxiliary tables, though the decimal numbers can be complemented with the auxiliary tables of the Dewey Decimal Classification (DDC), the Universal Decimal Classification (UDC) or the Information Coding Classification (ICC). The CSKOL has no index: thus, it is necessary to look for the topics throughout the scheme. Besides, there is no classification tutorial we are aware of.

Although the CSKOL could be considered an ad hoc classification, created to organize the Literature Section of the KOJ, its use can be extended to classify collections specialized in KO in universities, research centres or private libraries belonging to researchers.

3.0 Primary approach to the system

KO literature has been systematically classified with the CSKOL for 45 years, without significant modifications to its schemes. However, authors perceive that KO is a dynamic and interdisciplinary field, with a great diversity of research lines and trends (McIlwaine 2003; Hjørland 2008; Ridenour and Smiraglia 2016) continuously incorporating new concepts. Therefore, there is some tension between the evolution of KO and the relative immobility of the CSKOL schemes.

However, the applicability of the system does not seem to have been in doubt so far, since the successive editors of the Literature Section (all of them well-known researchers) have continued using it. The amendments and modifications made are minor, as stated in various summaries of the Literature Section. These modifications do not appear in any known text, but they can be identified through the analysis of free numbers assigned to specific documents (such as the notation 949 vacant until 1999 and representing the term 'Authority control' since 2000).

The structure of the UDC was the model for the general analysis. The warrant was identified based on the list established by Barité (2019). The formal review of the CSKOL terminology was performed taking into account the principles of the British Standard BS 8723 (BSI 2005-2008).

In the first exploration, the analysis identified the following problematic issues:

a) The classification criteria used by the different editors have not been adequately spread. The only access way is through an inductive analysis of the system use over time.

b) There is no known protocol available establishing the guidelines for the revision of the schemes, and their periodic update.

c) It is necessary to add auxiliary tables (place, time, form, and others), or to expressly enable the combination with the corresponding auxiliary tables of other systems (DDC, UDC, ICC).

d) The lack of a general index of the system makes specific searches by subject difficult and is an important limitation for the analysis of the terminological coverage of the area, and the detection of gaps. It is also an obstacle to developing different research activities that need the terminology of the area as a basis.
e) The warrant used to justify the selection of the terminology is unknown; nevertheless, it is assumed that Dahlberg used her own expert opinion, a form of scholarly (or academic) warrant.

f) A complementary alternative would be to review the whole terminology of the CSKOL, in order to use subjects as descriptors. The general index could also be structured, thus becoming a list of KO descriptors.

There are two previous studies using the CSKOL: an analysis of the scientific production recorded in the Section KO Literature from 1991 to 1993 (Dahlberg 1995) and a doctoral thesis that evaluates the literary warrant resulting from this production between 1994 and 2009 (Barité 2011). In both cases, the emphasis was placed, on the production of quantitative and statistical data of scientific production in KO. Due to the methods used and the results obtained, they could be considered as two indirect ways of assessing the applicability of the system.

For example, Barité distributed the percentages of the 12,833 classifications made with the CSKOL between 1994 and 2009 in the ten classes of the system.

The classifications were distributed in four-year periods, to identify increasing or decreasing trends in academic production. Only 4 out of the 10 classes exceed the statistical 10% of classifications, three are around 10% (+/-2), and the remaining five classes are below these figures, with an unexpected value of zero literary warrant for class 5: Taxonomies (Barité 2011, 292).

This table shows the inadequacy of class 5, and the saturation of class 7 (23.3%). This may require new subdivisions or the transfer of some topics to other classes.

The use of the abovementioned sources (Dahlberg 1995; Barité 2011) and a recent one (Roszkowski 2020) may help to establish a methodology to examine the evolution of KO literature and to identify the areas of modulation and degrees of specialization of the domain (Tennis 2003), to make a new design of the CSKOL.

4.0 Conclusions

The CSKOL is a specialized classification system, created to organize by subject the documentation on KO. Therefore, it should be seen as a model system as far as its theoretical and methodological principles are concerned.

The preservation of a concept structure with minimal modifications over 45 years, while the subject field has experienced a strong change dynamic in the same period (new types of systems, new ideas, new methods, new products), compels to consider procedures of revision and update.

The two existing studies have been based on the literary warrant, as a methodology to identify - through scientific production over an extended period – the almost unused segments of the system, as opposed to others that are overused.

All these remarks might lead to justify the need for a partial revision and even a more general reformulation of the CSKOL system; this will surely imply a long-term challenge for the editorial team. Therefore, we suggest a revision of the CSKOL including the analysis of its terminology based on the literary warrant provided by the KO Literature Section, even through methodologies such as metric analysis, to eliminate obsolete terms, incorporate new ones, specify notations and turn the terms into descriptors; a tutorial on classification will also be required.
After completing the revision, the publishers should publish a complete and up-to-date official version of the CSKOL explaining the design and the classification criteria as guidance and reference for users.

References


