Universal Decimal Classification – adding value to the user experience

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Introduction

This paper will examine Universal Decimal Classification (UDC) through the lens of the International Atomic Energy Agency (IAEA) special library and discuss the pros and cons of the classification system in the context of serving this library's users. In addition, the paper will highlight a series of actions to be taken to assist library patrons to enhance their user experience through a better understanding of UDC.

IAEA Library

The IAEA was created in 1957 and is located in Vienna, Austria. The organisation promotes the peaceful uses of nuclear science and technology and helps ensure that nuclear materials are not used for military purposes (IAEA, 2017).

The IAEA Library was established in 1958 to serve the staff of the Agency as well as the staff of the Permanent Missions to the IAEA and researchers around the world. The collections of the Library are highly focused and relate directly to the core purpose of the IAEA. From the beginning, the Library has classified parts of its collection using the UDC. Currently, over 70,000 items in the Library's collections are classified using UDC.

Universal Decimal Classification

First developed in the late nineteenth century by Belgians Paul Otlet and Henry LaFontaine, the UDC was conceived to create a list of "everything that had been written since the invention of printing" (McIlwaine, 2007). Otlet and La Fontaine's decision to organise this information systematically led to an agreement to use and modify the Dewey Decimal System (DDC) to meet their requirements (Taylor, 2015).
UDC is currently used in 130 countries in 50 languages (UDC Consortium, 2017). In Europe over 140,000 libraries in 41 countries are using the UDC to classify their collections (UDC Consortium, 2017).

UDC modified and expanded DDC through adding detailed subdivisions and through using typographical symbols such as the colon (":") and the plus ("+") sign to help express "multifaceted subjects with more granularity" (Taylor, 2015).

For instance, in the IAEA Library the following classifications have been used:

621.039.58   Safety considerations for nuclear fission reactors
621.039.58:004.42   Computer programs in relation to safety considerations for nuclear fission reactors
621.039.58(410)   Safety considerations for nuclear fission reactors in the United Kingdom

The differences between UDC and DDC mainly arise from the fact that UDC was developed as a tool for retrieval and not for browsing (Broughton, 2004). UDC was originally designed to organise the catalogue to allow detailed searches rather than to organise order on the shelf which enables browsing (Perreault, 1969) and therefore the classification numbers can be confusing for patrons to navigate.

While the IAEA Library has found the UDC especially suited to its narrowly subject focused and multilingual collections it also considers the UDC as the means to facilitate the "parking" of items on shelves (Glushko, 2013) and therefore the Library is keen to ensure that its users can both search the catalogue and browse resources on the shelves with a better understanding of the classification applied.
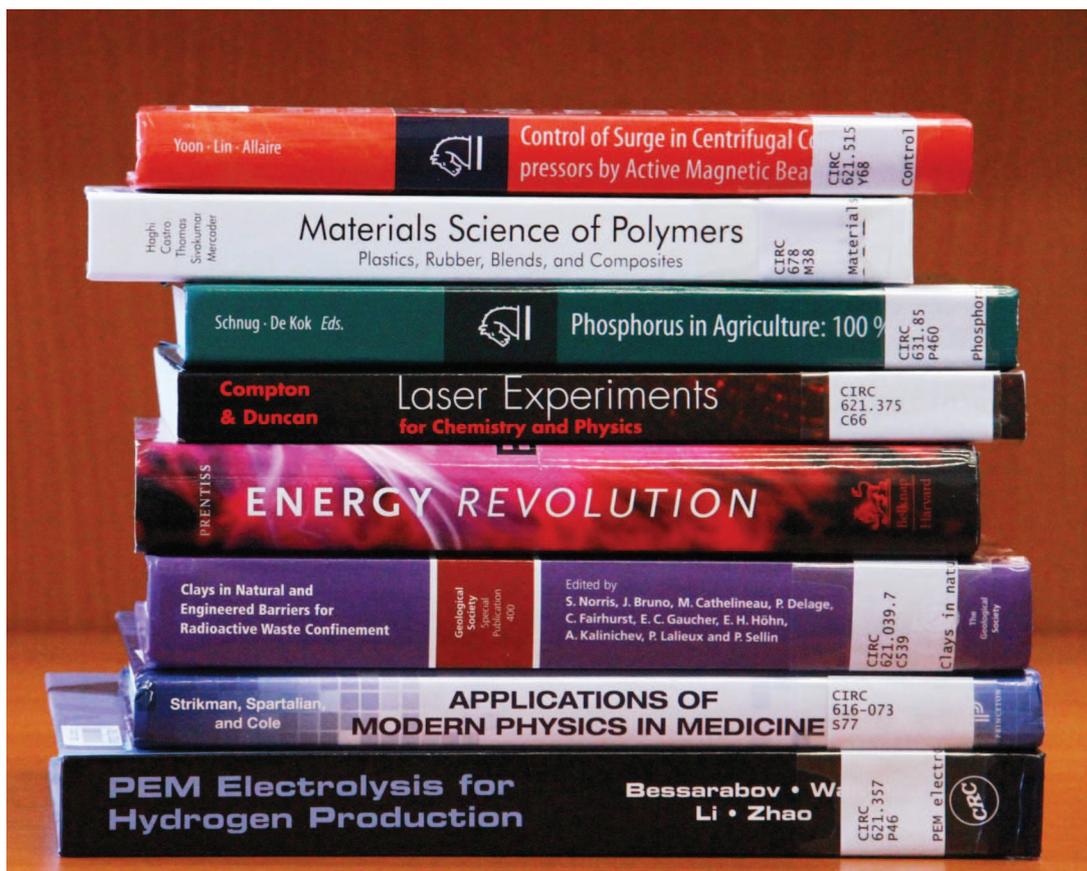
Early assistance for users at IAEA

Initially, when the ratio of Agency to Library staff was high, every new recruit met with a Librarian to discuss their work background and related areas of interest. It was recognised that the card catalogue was difficult to navigate and each new staff member was presented with a "personalized UDC schedule". For each new patron, a card was created that listed their work-related interests as subject headings next to the corresponding UDC number/s. The schedule was printed on a card and inserted into a folder with the instructions that the UDC numbers were a valuable resource in helping users find material to match their subject interests, particularly when browsing the shelves (Kepple, 1967).

Over time, the preparation of the UDC schedule was phased out. This was mainly due to the automation of the card catalogue.

Online Library Catalogues vs the Need to Understand Classification

With the advent of Online Public Access Catalogues (OPACs) the need for users to be able to understand the classification system is not as important. Users can easily search by title, subject, keyword, author, series and call number and once they have their result they are able to "browse shelf" to see what else is in the immediate vicinity of the call number on the item they are looking at. Until the user needs to collect an item they do not have to concern themselves with the UDC number at all. However, both users and library staff face challenges with UDC which the Library has undertaken to address.

User Experience

From a user perspective, the following are issues which affect ease of access to the Library's collections:

- Users do not how to use UDC to find items on the shelves.

- Users who say they will find an item in the stacks themselves often require assistance to locate that item because the filing order of items once notation is included can be difficult to understand.

- Users often ask, "what do the numbers mean?" and in effect what they are asking about was addressed by the original personalized UDC schedules - where they should look for items relating to their subject interests.

- Individual library decisions on how to use UDC can be confusing. For instance, in the IAEA Library, due to the challenges of shelving space, management books are classified in both 005 and 658. While 658 is no longer used, books on topics related to management can still be found in both locations.

Library Staff

From a staff perspective, the challenges of working with UDC include:

- Learning curve - library assistants have to be very well trained to be able to shelve books accurately (the shelving order of the notations and auxiliaries can be difficult to learn). There is a relatively long learning curve for new staff who assist with shelving.

- Time commitment - bibliographic records are downloaded from OCLC. As these records do not generally contain an UDC number, classification is still a very labour intensive exercise.

- Possible classifier bias - classification is done by one staff member. Over time who that person is has changed and therefore so has the approach to classification. While the current classifier will always look at how similar works have been classified in the past, there is not always a similar work to check and there will always be the added element of the classifier's own judgment. This has led to similar items being classified in very different ways over time.

- Availability of tools - While there is UDC online for browsing and building UDC numbers it has been difficult to find a useful tool for checking what UDC numbers other libraries might have allocated to a particular item. Often, the classifier will check a tool like OCLC Classify for the Dewey number generally allocated and then determine how that number translates to UDC. Finally, consideration is given to whether that number is appropriate and meaningful in the context of the IAEA Library's collections.

- System challenges –In 2016 the Library migrated to a new Library Management System. While this system can operate with UDC it is by default set to work with DDC so there have been some issues to resolve in terms of configuration. In addition, at the time of writing, it has not been possible to add a UDC Statistical Category Table (SCAT Table) to the system, meaning certain reports cannot be produced.

The way forward

The IAEA Library will take a multipronged approach to assist users to better access the collections. While there will not be a return to the personalized UDC Schedule, actions will be taken to help make UDC more transparent and relatable for patrons. These measures will also enable the Library's patrons to feel more comfortable in browsing and locating items on the shelves.

Studies on user behaviour indicate that, even when users do not fully understand the classification system, they will "*combine a catalogue search with subject browsing on the shelf*" (Slavic, 2006 (preprint))

With this research in mind, it is envisaged that staff will also make more use of the search facilities in the new catalogue interface – the ability to browse the virtual shelves and search by call number should assist users to take more control of their own research and, in doing so, open further opportunities for them to discover different parts of the Library's collections and resources.

The planned activities include:

- Development of a LibGuide to provide an overview of how UDC is used in the IAEA Library and outlining the content of the main classes. The LibGuide will also include basic information on shelving order of classification numbers including those incorporating notation.

- Better shelf labelling – currently the end of each stack has a notice showing only the UDC range for the items in that stack. The enhanced signs will include both the numerical UDC range and some brief information about the subjects covered by that range.

- Promotional material will include a brief UDC schedule as it has been applied in the IAEA Library – this material will be available to patrons visiting the library as well as being made available at induction and other library training programs.

- Improvement of the Library's procedures and workflows for classification and indexing. This will help to ensure that new library staff coming to the position will be able to understand and follow what has gone before – hence enabling more consistency in classification.

In addition, there will be several reclassification projects which will result in:

- Co-location of items in the same monographic series by assigning one UDC to the series. Currently, the practice is to provide an individual UDC to every item in the series meaning that these items can be far removed from one another on the shelves. Bringing the series together will be useful for both users and Library staff when assisting users or when shelving items.

- Co-location of books on the same subject which have been separated via a change in classification policy. For instance, books on management techniques are currently classified in both 005 and 658, and books on computer software can be found in both 004 and 681.

Conclusion

As Ranganathan's fourth law of library science states – "*save the time of the reader*" (Ranganathan, 1931). While this can be done in a number of ways, ensuring that library patrons can understand and make use of the classification system are important steps for libraries to ensure they comply with this 'law'.

UDC is a widely used classification system which remains relevant to the collections of the IAEA Library. There are several actions which the Library needs to take to ensure that users can better understand the meaning behind the numbers. These steps, as outlined in this paper, will enhance user experience in the Library and help to ensure that patrons feel confident to find, search and access the collections on their own.

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