The ready availability of (MAchine-Readable Cataloguing) (MARC) effectively removes the need for libraries to maintain cataloguing staff.

Dafer Omer Elmrabet

قسم المكتبات والمعلومات ــ كلية الآداب ـ جامعة الزيتونة

الملخص:

تناولت هذه الدراسة تطور الفهرسة في المكتبات، مع التركيز على مدى تأثير تقنية الفهرسة المقروءة آلياً (معيار مارك) على دور موظفي الفهرسة في المكتبات.

يُلاحظ أن التطور التكنولوجي قد أحدث تغييرات جذرية في عمليات الفهرسة، حيث تقدمت من الفهرسة اليدوية التقليدية إلى الفهرسة المقروءة آلياً، مما أدى إلى تحسين كفاءة ودقة الفهرسة وتوفير الوقت والجهد، ومع ذلك لا يزال هناك تحديات تواجه تبني التكنولوجيا في المكتبات مثل عدم توافر التحديثات التكنولوجية في جميع المكتبات وفي جميع البلدان بنفس السرعة.

وفي ضوء ذلك، ركزت هذه الدراسة علي مدى تبني التقنيات الحديثة (الفهرسة المقروءة آلياً) في المكتبات ومدى توافرها من خلال تقييم الفوائد والتحديات المحتملة لتبني تقنيات الفهرسة المقروءة آلياً، مثل تحسين دقة الفهرسة وتقليل التكاليف مقابل الحاجة إلى تدريب الموظفين لاستخدام التقنيات الحديثة.

في الختام، تبين انه علي الرغم من توافر الفهرسة المقروءة آلياً على نطاق واسع، يظل وجود موظفي الفهرسة ذوي الخبرة ضرورياً لضمان توفير فهارس مكتبية عالية الجودة ودقيقة وسهلة الاستخدام.

الكلمات المفتاحية: الفهرسة المقروءة آلياً (مارك) - موظفي الفهرسة — الفهرسة الآلية — الفهرسة — أتمتة المكتبة.

Abstract:

This study examined the development of cataloguing in libraries, focusing on the impact of MAchine-Readable Cataloguing (**MARC**) on the role of cataloguing staff in libraries.

It is noted that technological development has brought about radical changes in cataloguing processes, as it has progressed from traditional manual cataloguing to machine-readable cataloguing, which has improved the efficiency and accuracy of cataloguing and saved time and effort. However, there are still challenges to technology adoption in libraries, such as technology updates not being available in all libraries and in all countries at the same speed.

In light of this, the study focused on the extent of adoption of modern technologies (Machine-Readable Cataloguing) in libraries and their availability, and then evaluated the potential benefits and challenges of adopting machine-readable cataloguing technologies, such as improving cataloguing accuracy and reducing costs in exchange for the need to train employees and maintain the technology.

In conclusion, the advancements in technology, like the widespread use of Machine-Readable Cataloguing, have been crucial for the global presence of libraries. Nevertheless, cataloguing staff will still continue to be needed..

Keywords: Machine-Readable Cataloguing (MARC) – Cataloguing staff – Library automation – Automated cataloguing – Cataloguing

Introduction

It first became possible to make machine-readable cataloguing with the advent of MARC (Machine Readable Catalogue) in 1966 (Horner, 1970; and; IFLA, 2023). Following this, there have been many changes, such as the development of

individual versions for various countries and the change, increasingly, from storing information on magnetic tape to floppy disk (Hopkinson, 1998).

Furthermore, machine-readable records are becoming more popular. On the other hand, even in countries with ready access to the most advanced technology, not all libraries are equipped with the necessary machines (Hunter and Bakewell, 1991).

It is therefore clear that the question of whether cataloguing staff are obsolete depends as much on the availability of machine-readable records as the function of them. In view of this, this study will firstly look at how widely machine-readable records are available and then discuss how far they can replace the staff.

Objectives

The aim of this study is therefore to look at the literature review to see firstly the advantages and disadvantages in the world with regard to the Machine-Readable Cataloguing **(MARC)** and secondly discuss how far **(MARC)** can replace the cataloguing staff.

Methodology

In order to achieve objectives of the study, the desk research method was conducted, which relies on published literature review such as books, journal and different articles, periodicals, academic publications and other materials available online or in libraries, which highlights the discuss how far MARC can replace the cataloguing staff (Nooraini, 2013).

Literature Review

As stated in the Introduction, it is important to determine whether or not machine-readable records are in fact widely available in libraries around the world, because if they are not, then there is no danger of them replacing cataloguing staff.

Thus, on the one hand, according to Kokabi (1996) and Kisilu (2022), machine-readable records are now widely used in libraries. However, while some libraries may have a format such as MARC (Machine Readable Catalogue), others may have developed an internet-based system (Fattahi, 1995). Furthermore, with regard to MARC specifically, there is a variation in the systems used in individual countries around the world, such as UKMARC and USMARC (Kokabi, 1996), which may prevent information being transferred directly between them (IFLA, 2023). In other words, even if machine-readable records are indeed widely available, the differences between them suggest that staff are still needed to handle the transfer of information between institutions, for example.

On the other hand, Fattahi (1995:1) maintains that 'the card catalogue has been and still is one of the most important and widely-used manual systems' although there are other manual systems in use, such as printed books and sheaves. Furthermore, as stated in the Introduction, even countries such as the United States, which are at the forefront of technological advances, have libraries without machine-readable records. These libraries include the National Agricultural Library in the United States of America, which did not finish converting from a manual to automated catalogue until the end of the last decade (Collins,1996), the libraries of the University of Yale, where conversion to an automated system had not been completed by the beginning of this year (Dean, 1999).

From the above, it would therefore appear that on the grounds of lack of availability, cataloguing staff are not about to be completely replaced by machines. In other words, even if the machines themselves proved to be functional without people at any level, they would have to be in the libraries in the first place.

(2) Function

(i) Advantages of machine-readable records

As stated in the previous section, there are not enough machine-readable records, which is already one major reason why cataloguing staff are not about to be made redundant. However, automated records have many advantages over manual forms of cataloguing (e.g. using cards) It is therefore important to look at these advantages to decide whether they would make it possible for machine-readable records to make cataloguing staff unnecessary in the future, if every library became automated.

One advantage of the machine-readable record is the amount of information which it can hold (Williams, 2009). In comparison with card catalogues, for example, where only a limited number of words can be written on one card, a database can hold a large number of details (Fattahi, 1995; Hopkinson, 1998; Ghaebi, Shamsbod, Mansoorabad, 2010). These details may include not only general bibliographic references (e.g. author, title, ISBN) but also 'non-standard data such as summary, table of contents and full text' (Fattahi, 1995: 3). This means that automated catalogues are potentially much more useful than non-automated ones. A second advantage is that, not only does the computer database provide more space for storing data, but these data can also be stored in a way which is more user-friendly. One example of this is that details are recorded by copying the way that they are written in the original work rather than in the way that the librarian thinks is most suitable, but which might make the information more difficult to retrieve because the person searching is not aware of the changes (Fattahi, 1995: 4) (Coetzee & Skelly, 2008), Another example is the fact that information can be accessed using a much wider variety of keywords, since any word in the details could be picked up using a search engine (Worsfold, 1998; Ghaebi, Shamsbod, Mansoorabad, 2010).

A third advantage of the machine-readable record over the manual catalogue is the fact that it is much easier for library users to access information if it is held on computer. In fact, if the catalogue is held in an on-line database, it is even possible to access it in another city or country, which means in turn that the user does not have to contact the library prior to a visit to make sure that it is worth the journey (Glasgow University Library, 2023; Aalberg, T., Žumer M, 2013). Furthermore, information held on an on-line database can be found through search engines, which means that users do not have to know exactly what they are looking for in the same way as when using a manual catalogue (Worsfold, 1998).

A fourth advantage is the speed and ease with which cataloguing staff can input data and check against catalogues held at other libraries, once they have been trained to use the system, especially if the system is on-line (Fattahi, 1995; Ghaebi, Shamsbod, Mansoorabad, 2010). This is just as important an advantage as any of the above, because regardless of the advantages for the library user, a system would be less likely to become popular if the people who were responsible for inputting the data found no advantage in it. Nevertheless, this and all of the other advantages do not suggest that cataloguing staff are not needed, even if the library is fully automated (Obiozor & Nkechi, 2023).

(ii) Disadvantages of machine-readable records

As shown in Section 2i above, there are many advantages in using an automated cataloguing system. However, these advantages do not appear to include a reduction in the number of staff needed for the process. This observation has support from 'Worsfold', whose report says that one aspect of cataloguing on-line in particular (subject gateways) needs large numbers of cataloguing staff since these gateways 'require the constant input of staff who hand-pick, classify and catalogue' (Worsfold, 1998,1). The implication from this is that, even though

subject gateways may be a specialist area of cataloguing, under the current circumstances there will continue to be a need for staff at some level, irrespective of the availability of machines for cataloguing (Williams, 2009).

On the other hand, even in those areas of cataloguing where less people could be needed, at the present time their work is by no means obsolete. One example of this is in the libraries of some prominent British universities (e.g. Oxford, Cambridge, Edinburgh and Manchester), where cataloguing was held up at the beginning of the twenty-first century because of staffing difficulties. In other words, these institutions experienced problems due to staff sickness and lengthy recruitment processes, which in turn meant that work simply did not get done (Détraz, 2000). It is also therefore clear that in certain circumstances, and in contrast to Fattahi's claims (see Section 2i), cataloguing under the present conditions is not necessarily quick and easy in all areas.

Apart from the problems mentioned in the paragraphs above, another disadvantage of computers is that cataloguers have to adopt new rules (which differ from those used in manual cataloguing for inputting certain information (e.g. words such as 'a' and 'the' in book titles, and punctuation such as hyphens and apostrophes). If they do not wish to do this, additional software must be bought (Fattahi, 1995; Ghaebi, Shamsbod, Mansoorabad, 2010). This may not cause too much difficulty, but in institutions which already have difficulty updating equipment (e.g. the University of Reading), more advanced software may simply be out of the question (reading, 2023).

A further disadvantage is that in comparison with manual catalogues, automated ones cannot handle errors at either the input or output stage very easily. In addition, 'incomplete cataloguing information and illegible or handwritten catalogue entries are obstacles' (Hunter and Blackwell, 1991: 258). Like the

problems discussed in the last paragraph, it may be possible to obtain software which overcomes this difficulty (Seal et al, 1983), but as was shown above not all institutions are in a position to do this. Therefore, even if some institutions can afford both the hard and software to maintain an up-to-date system, since technology moves forward at a very quick pace (Hopkinson, 1998), it is unlikely that all institutions will be able to have a people-free cataloguing system, should one ever come into existence, for a very long time in the future.

Lastly, new systems means more training for both staff and library users (Bham, 2002; Horner, 1970; Reading, 2023). In the case of on-line catalogues, library users at first do not seem to be comfortable about using them, but they do quickly see the advantages of such a system. This may be because it is so much easier to find something without knowing all the details and because, if there are any difficulties, the system can help users to learn how to use it (Fattahi, 1995; Ghaebi, Shamsbod, Mansoorabad, 2010).

On the other hand, formats such as MARC do not have the same level of user support. In other words, although there may be a user manual, 'there is a point of view that [an automated] library catalogue is too complex and specialised a tool for a layman to understand, and that it should preferably be used by staff on behalf of the public' (Horner, 1970: 440). However, even if this is not strictly true, and a user manual could be written which would help all library users, as long as such attitudes exist on the part of librarians, cataloguing staff will continue to be needed, if only to carry out the function of advisor to the public (Obiozor & Nkechi, 2023).

.**Conclusion**

In the first part of the study, there was a discussion whether or not the Availability machine-readable records available in libraries around the world, and were they

replaced cataloguing staff. From this, it was clear that on the basis of lack of availability, cataloguing staff are not about to be completely replaced by machines.

In the second part, regarding the Function of machine-readable records, which have been divided into two aspect (advantages and disadvantages), it was clear that these factors have been important in it. Firstly, there are many advantages in using an automated cataloguing system. However, these advantages do not appear to include a reduction in the number of staff needed for the process. However, this and all of the other advantages do not suggest that cataloguing staff are not needed, even if the library is fully automated.

Secondly, within the area of disadvantages, such a new technology MARC (machine-readable records) has satisfied some staff and library users. However, it would appear from the above that this is not exactly true, and a user manual could be written which would help all library users, as long as such attitudes exist on the part of librarians, cataloguing staff will continue to be needed, if only to carry out the function of advisor to the public.

In the final analysis, the new technologies, such as the ready availability of machine-readable records , have been essential for the libraries around the world to exist. However, cataloguing staff themselves will still continue to be needed.

References

Aalberg, T., Žumer,M., (2013) The value of MARC data, or, challenges of frbrisation, Journal of Documentation, Vol. 69 Issue: 6, pp.851-872.

Avram, H.D. (2003). Machine-Readable Cataloging (MARC) Program. Available from https://typeset.io/pdf/machine-readable-cataloging-marc-program-2i51zuhqst.pdf [Accessed 30 March 2023]

Bourne, R. (1996) Common MARC, or vivent les différences? <u>Library Review</u> Vol. 45 No. 2, pp. 25 - 29

Collins, D. S. (1996) NAL Technical Services Projects Updates. Cataloguing Retrospective Conversion. Available from

http://www.nal.usda.gov/NewAlin/1996junaug/junaug1996/retrocat.htm [Accessed 4 March 2023]

Coetzee, H. & Skelly, L. (2008). Converting the card catalogue of the National Library of South Africa, Cape Town Campus, into a machine-readable format. ALEXANDRIA, 20(3): 121-131. Available from: https://repository.uwc.ac.za/xmlui/bitstream/handle/10566/514/Coetzee_Card%20Catal ogue_2008.pdf;jsessionid=27244E28FB1EE201DAA36F35E18F9706?sequence=6. [Accessed 18 March 2022]

Dean, N. (1999) OCLC converting 2 million records for Yale University libraries Available from <u>http://www.oclc.org/oclc/press/19990611a.htm</u> [Accessed 2 March 2023]

Détraz, M, P (2000) Research Support Libraries Programme Ensemble Project Cataloguing Staff Statistics 2nd Quarterly Report (April - June 2022) http://www.is.bham.ac.uk/rslp/ensemble/minutes/QR2.htm#.
 [Accessed 17 March 2022]

Fattahi, R. (1995) A comparison between the online catalogue and the card catalogue <u>Library Review</u> Vol. 44, No. 2, pp. 44 – 58

Glasgow University Library (2023) SHEFC NFF Project Available from http://special.lib.gla.ac.uk/general/projects.html [Accessed 10 March 2023]

Ghaebi, A., Shamsbod, M., Mansoorabad, E, K .(2010) "Investigation of MARC use in Iranian academic libraries", The Electronic Library, Vol. 28 Issue: 5,pp.702-708

Hopkinson, A. (1998) *Traditional Communication Formats: MARC is far from dead.* Middlesex University: London

Hunter, E. J. & Bakewell, K. G. B. (1991) Cataloguing. Library Association Publishing Ltd.:London

Horner, J. (1970) Cataloguing. Association of Assistant Librarians: London

International Federation of Library Associations and Institutes (IFLA) (2023) Universal Bibliographic Control and International MARC Core Programme. Available from http://www.ifla.org/VI/p1996-1/unimarc.htm [Accessed 17/02/23]

Jefferies, A. (1993) AACR, DDC, MARC and friends. The role of CIG in bibliographic control. Byford J., Trickey, K. and Woodhouse, S. (eds.) Library Association Publishing: London.

Kokabi, M. (1996) Is the future of MARC assured? Library Review, Vol. 45, No. 2, pp. 68-72

Khurshid, Z. (2002), "From MARC to MARC 21 and beyond: some reflections on MARC and the Arabic language", Library Hi Tech, Vol. 20 No. 1, pp. 370-7

Kisilu, Stephen. (2022). MACHINE READABLE CATALOGUING (MARC) VS ORIGINAL CATALOGUING; PRINCIPLES OF BOOK CLASSIFICATION.

Available from: https://www.researchgate.net/profile/Stephen-Kisilu. [Accessed 17/08/23]

Nooraini, R. (2013) Algorithm Analysis of Definite Integration by Using Desk Check Method. Jurnal Informatika dan Bisnis, Vol.2 No.1, pp. 50–55.

Obiozor, Roseline & Nkechi, Obiozor-Ekeze. (2023). Influence of Cataloguers' Motivation on their Job Performances in Public University Libraries in South East Nigeria. International Journal of Humanities and Social Science. 11. 2231-4911. Available

from:http://repository.unizik.edu.ng/bitstream/123456789/895/1/Ag.%20UL%209.pdf [Accessed 18 February 2024]

Reading University Library (2023) Report of the Librarian 1994-1995: Cataloguing https://search.reading.ac.uk/Search?SearchTerms=Librarian&SearchArea=web-pages [Accessed 11 March 2023]

Seal, A., Bryant, P., Hall, C. (1983) Full and Short Entry Catalogues: Library Needs and Users. Gower: Aldershot.

Worsfold , E (1998) Distributed and Part-Automated Cataloguing. http://www.sosig.ac.uk/desire/cat/cataloguing.html#1 [Accessed 22 March 2022]