

## *The Comparison of Library Classification Systems: A Survey of the Viewpoint of Professors and Librarians*

Hadi Harati<sup>1</sup>, Mojtaba Kaffashan Kakhki<sup>2</sup>

### **Abstract**

The present study aimed to investigate and compare Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Colon Classification by Ranganathan with the criteria of an appropriate classification to identify the best library classification system from the viewpoint of professors and librarians. The present study was applied in terms of purpose and was conducted using a survey method. Data collection was conducted by Delphi method. The research population included cataloging experts including professors and librarians from Ferdowsi University of Mashhad and librarians of Astan Quds Razavi of whom ten subjects were selected through targeted sampling. In order to analyze the data, descriptive and inferential statistics and SPSS software were used. The results showed a difference between the classifications with the criteria of an appropriate classification and the best library classification was Colon Classification. There was a significant difference between the studied different library classifications in comparison with classification criteria in the group of professors, librarians, and the two groups. In addition, there was a significant difference between the viewpoints of professors and librarians regarding each of the studied classifications in terms of Dewey Decimal classification but there was no significant difference between the other studied classifications.

**Keywords:** Evaluation of library classifications, Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification. Colon Classification

### **1. Introduction**

Since documents and books were collected at document center or library, the idea of organizing them involved human minds. The increased size of these documents caused more serious challenges to organize and use the documents and books. For this reason, the classification of resources has been raised since ancient times in libraries. Class refers to a group with the same characteristics. In other words, any category or form containing a set of knowledge with common characteristics is called class (Moghadam, 1994). Based on the definition of the encyclopedia of librarianship and information, classification is 1) the logical adjustment of objects according to the degree of similarity; 2) an organized scheme for the organization of books and other library materials according to their theme or form; 3) determining the correct place of books on the shelves of the library based on a classification system (Soltani and Rastin, 2000). The purpose of classification is to put together the library's information resources and to have regular and easy access to the resources and documents available on the shelves. Looking at the definition and purpose of classification, its significance in the library and information centers. becomes clear.

---

<sup>1</sup> . PhD of knowledge and information science, the information center and central library, Ferdowsi University of Mashhad; Iran. Email: harati-ha@um.ac.ir

<sup>2</sup> . Assistant Professor of knowledge and information science, Ferdowsi University of Mashhad, Iran. Email: kaffashan@um.ac.ir

Different classifications have been designed over a few years to organize library resources each having some advantages and disadvantages. The most important classifications are Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Ranganathan Colon Classification. The present study reviewed and compared these four classifications.

Dewey Decimal Classification is the most widely used classification scheme in the world which is used in most libraries especially school and public libraries of 140 countries (Majidi, 2004). Dewey adapted his scheme from William Torrey Harris with a slight change and Harris's scheme was based on Francis Bacon's scheme (Mazaheri Tehrani and Faghihi, 1977).

For designing the Library of Congress Classification, James C. M. Hanson and Charles Martel, librarians of the Library of Congress Classification at that time, studied the available classifications called Dewey Decimal Classification, Cutters' Expansive Classification, and Hartwig's scheme. Dewey Decimal Classification was not accepted because Dewey did not allow to create changes in his system to adapt to the Library of Congress Classification. Hall's scheme was also rejected due to the overwhelming influence of German philosophy. In order to accept Cutters' Expansive Classification, some changes should have been made. Cutters greatly contributed to this problem and welcomed the change in his scheme (Hayati, Jokar, and Berahmand, 2008); therefore, Cutters' scheme formed the basis of the Library of Congress Classification.

Colon Classification was made by Shiyali Ramamrita Ranganathan, a distinguished Indian librarian who is considered to be the most important theorist in the classification area. Its first edition was published in 1933 and the seventh edition, i.e. the last edition, included 34 main classes developed by M.A. Gopinath, the research assistant of Ranganathan and later a professor of librarianship research (Satija, 1989).

Bibliographic classification is an extensive classification scheme designed by Henry Evelyn Bliss, a renowned American librarian, and was first used by him at New York University in 1903. This classification was inspired by Colon Classification and was a combination of enumerative and facet schemes considering the formal, spatial, temporal, and linguistic issues (Hayati, Jokar, and Berahmand, 2011). This classification has 26 classes (A-Z) and a pre-class (1.9) for the sub-class of the figure available throughout the scheme. An important feature of this project is the provision of alternative sites for many subjects in accordance with the book's viewpoint or the specific library's requirements (Hari, Neshat and Rajabi, 2002).

Expansion and widespread use of library classifications in the present age cannot be due to the benefits of these classifications, but rather various factors that are mentioned in this study. This study, while briefly referring to the classifications, compared them with the criteria of an appropriate classification. The present study aimed to investigate and compare Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Colon Classification by Ranganathan with the criteria of an appropriate classification. Library classification should have the features which can properly accomplish their goals. This study attempted to extract these features from the relevant texts and compare the studied classifications based on the characteristics and criteria extracted from the viewpoint of professors and librarians.

## 2. Review of literature

For comparing different library classifications or comparing some of the special classes, some studies were conducted and here are the most relevant ones in the present study.

Siamak (2007), in a review article compared four classifications of Dewey Decimal Classification, Library of Congress Classification, universal decimal classification, and Colon Classification. For this purpose, the different parts of a classification scheme were mentioned and then the brief introduction of the surveyed classifications and their comparison with 15 features was discussed. These features included basic principles, theoretical principles, main structure, type of system (enumerative or analytical-combined), flexibility and expansion, dependency, spatial communication, practicality, inclusiveness and universality, distinctness, sign, memorandum arrangements, profiles and tables, support and upgrades, and functionality in the electronic environment. The results of this research provided an overall and comparative evaluation of the studied classifications.

Mokhtarpour (2009) studied the expansion of Iranian history in the Dewey Decimal classification system and compared it with the expansion of history in the Library of Congress Classification. He indicated that both expansion of history in Dewey Decimal Classification and Library of Congress Classification by an organization (National Library of Iran) and one person (Kamran Fani) had a significant difference either in terms of volume or in terms of numbers assigned to each entry. This study criticized the reasons why both the author of both expansions (Kamran Fani) mentioned the differences as well as the problems and failures that libraries may face when using the expansion of Iranian history in the Dewey system described in numerous examples. Barbara L., (1973) in her dissertation titled "Comparison and Evaluation of Two Classification of Law: Class K as the Library of Congress Classification and Class K as the County of Los Angeles Public Library" concluded that the Library of Congress Classification was more detailed and complicated than the law class of the classification of County of Los Angeles Public Library. Library of Congress Classification combines the sources of the first and second row but organizes the first row resources in KA and the second row resources in KB in the classification of County of Los Angeles Public Library. Both classification, with appropriate index, are good classifications for organizing the United States law resources.

Bury (1984) made a comparison between the National Library of Medicine classification with class H of Bliss bibliographic classification. In this study, 12 features were considered for an appropriate classification including theoretical basis, order, comprehensiveness, attractiveness, adaptability, scientific and specialized vocabulary, displaying relationships, coherence, memorization, ease of use, editing, and practical use. Bliss bibliographic classification was superior in all of these criteria except memorization. Bliss bibliographic classification gives specific numbers to issues, although this led to prolongation of classes, the National Library of Medicine classification does not give specific numbers to issues. In addition, the existence of two places for some of the issues led to a lack of coherence. Comparing the indices in the two schemes indicated that Bliss bibliographic classification has more index words than the National Library of Medicine classification.

In another study by Chang (2012) , the literature classification schemes were studied in Dewey Decimal Classification and the new classification of Chinese libraries. His research showed that Dewey Decimal Classification distinguished literature is a distinct part from language while the new classification of Chinese libraries has put two areas of language and literature into one class with all its sub-classes. Dewey's scheme focuses on English literature and regulates literary works by language, form, and period of history. On the contrary, the new classification of Chinese libraries, focusing on Chinese literature, arranges literary works based on the country and then its form. Thus, both schemes focus on ethnical literature and have many hierarchical divisions.

The studies which compared one or more library classifications with other information organization methods include:

Tajer (2004) compared the hierarchical structure of Yahoo, Open Directory, and Look smart to Dewey Decimal Classification in ten selective themes. Since the philosophy of creating thematic directories of the Internet is the philosophy behind the creation of library classification schemes, this study aimed to compare the hierarchical structure of thematic directories to Dewey Decimal Classification in ten areas of library and information science, psychology, Islam, economics, English, physics, agriculture, painting, English literature, and American history. For data collection, the hierarchy level of the themes was first determined by counting the indexing and appendices. Then, the number of sub- themes was counted in different hierarchical levels. Data analysis revealed that the hierarchical position and the frequency of sub themes are different in Dewey Decimal classification and thematic directories and the depth and breadth of the hierarchical structure in the thematic directory of Look smart is greater than the others. Furthermore, Dewey Decimal Classification has the features of generality, the existence of a hierarchical structure through numeration, linking to other thematic projects and inter-language transmissions which makes it suitable for effective organization of Internet resources. Farshchi (2005) with the view that the use and expansion of thesauri is directly related to the scientific advances of the society, conducted a comparative study on history class of Persian Cultural Thesaurus (ASFA) and the DSR class (Iranian history) and Dewey Decimal Classification. The results of this comparative study showed that the DSR class and Dewey Decimal classification provided a large number of issues to particular rulers and declarations, while the ASFA considered themes as the principle not the historical and geographical declarations. The themes in the DSR class (Iranian history) w Dewey classification follow a logical order and their alphabetic order is of secondary importance while the lack of combining different concepts is one of their general characteristics. On the contrary, the features of thesaurus and ASFA determine the depth of information in the form of terms and a semantic unity is achieved during retrieval while the alphabetic order is primarily important. In general, ASFA has operated better than the DSR class (Iranian history) and Dewey Decimal classification in terms of quantity and quality.

Kim Jeonghyen (2008) compared the knowledge classification and library classification systems in the botany field. There are two types of plant classification including Engler classification and Bentham & Hooker classification. In Engler classification, plants are regulated by the order of evolution from lower herbal growth to higher vegetation and growth, so that in this classification, the arrangement of plant groups is considered to be gymnosperms, monocots, and dicotyledon.

However, in Bentham & Hooker classification this order was reversed in the classification. By comparing this knowledge classification in the field of botany with the library classification, it was found that KDC, NDC, UDC and CC classifications were derived from Engler classification but this thematic area was organized in DDC and LCC based on Bentham & Hooker classification.

As mentioned, examining the research backgrounds indicated that the only observed article which compared several classifications based on the review of the literature was the study by Siamak (2007) in which Dewey Decimal Classification, Library of Congress Classification, Universal Decimal Classification, and Colon Classification were compared descriptively with respect to 15 characteristics, but it does not specify which classification is better than other classifications because the comparison only reviews the descriptive and comparative texts not a comparison indicating the superiority of one classification to another one. Thus, it only provides comparative information among the four studied classifications without discovering a new relationship or knowledge. The review of the literature suggests that no study has been conducted on comparing library classifications to each other to determine which classification is more appropriate. The present study used a new approach to compare the known library classifications from the perspective of professors and librarians based on the criteria of an appropriate classification.

### **3. Research hypotheses**

- 3.1. There is a significant difference between Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Colon Classification compared to the classification criteria in the group of professors and librarians.
- 3.2. There is a significant difference between the viewpoints of professors (Ferdowsi University) and librarians (Ferdowsi University and Astan Quds Razavi library) regarding Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Colon Classification compared to the classification criteria.

### **4. Methodology**

Various attributes and criteria for an appropriate library classification were cited in many sources most of which have overlapping criteria. In this study, the criteria used to compare the classifications were first collected from different sources and then consulted with specialists in organizing and cataloging resources. Finally, ten criteria of an appropriate library classification were selected and stabilized as a checklist list. Then, they were completed on this basis and the studied classifications were compared on the basis of these criteria. These criteria were shown in Table 1. The research population included the catalogers and experts of classification including the professors and librarians of Ferdowsi University of Mashhad and librarians of Astan Quds Razavi Library. In order to collect data using the Delphi method, in addition to reviewing various texts and resources, ten experts from the field of organization, cataloging and resource classification were selected through targeted sampling including five professors of Ferdowsi University and five experts working in the cataloging department of the Central library of Ferdowsi University and central library of Astan Quds Razavi. Then, they were interviewed using a check list. Descriptive and inferential statistics and SPSS software package were used to analyze the data.

Table 1. Criteria and attributes of an appropriate classification based on the review of texts and opinions of experts

Row	Criteria	Explanations
1	Normal fit with knowledge	The ordering of themes of classification systems corresponds to the actual reality of the external reality.
2	Lack of geographical, religious, political dependency	This feature makes the use of classification by all countries and geographic regions of the world with any religion, religion, belief, and any policy.
3	Having scientific and logical principles	The classification scheme is based on the principles of science and logic also accepts it.
4	Organizing and determining the appropriate resource position and facilitating the access to the book	The main goal of the resource classification scheme is to provide quick and easy access to them when needed, so finding the right place for resources is one of the key features of a classification.
5	Universality and comprehensiveness	Classification scheme contains all the subjects of human knowledge and brings up all the sub-themes in the corresponding classification.
6	Flexibility and expandability	Flexibility and expandability to new themes
7	Ease of use by resource organizers	Catalogers can easily organize various sources using the classification scheme.
8	Ease of use by users	All efforts to organize resources are used by end users, so a classification scheme should organize and classify resources that the user can easily use.
9	Having a table for numeration	Possibility to combine the facet of a theme makes it possible for sub-themes to assign their own classification number without having a massive scheme.
10	Support for growing needs	Updating and editing the classification scheme

## 5. Research findings

In this section, the four studied classifications were compared from the perspective of professors and librarians of Ferdowsi University of Mashhad and library librarians of Astan Quds Razavi library based on classification criteria (Figure 1). Then, the mean compliance of the studied classifications with the ten studied criteria was calculated (Table 2). Finally, the research hypotheses were tested. It should be noted that in Figure 1, the numbers 0 to 4 shown on the vertical axis represent the degree of compliance of the particular criterion with the desired classification while 0 equivalents to "no", 1 is equivalent to "low", 2 equals "moderate", 3 equals "high" and 4 is "completely".

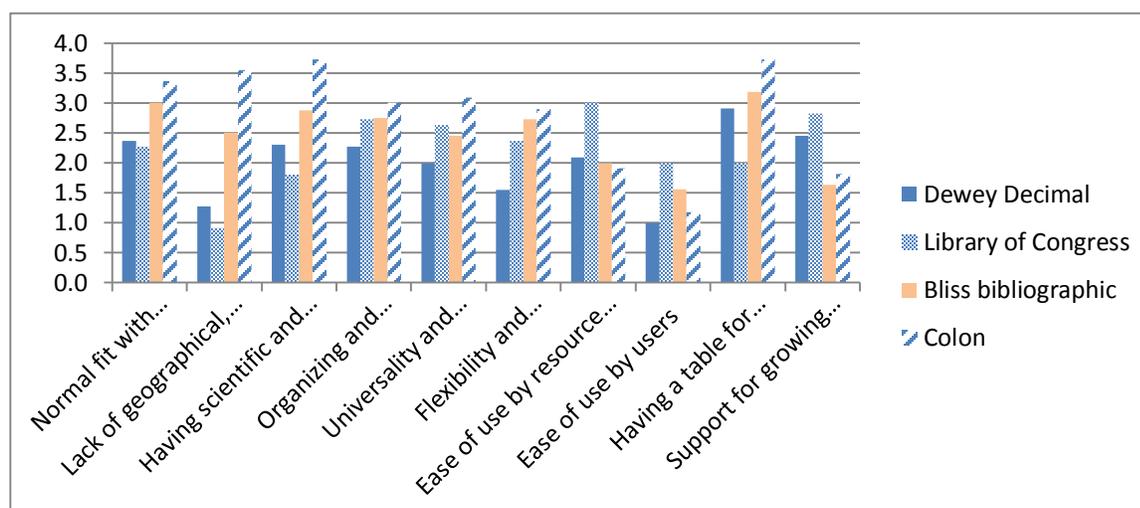


Figure 1. Comparing the studied classifications with classification criteria

Based on the features and criteria raised in Table 1, as shown in Figure 1, in criterion 1 (normal fit with knowledge), Colon Classification with a high and perfect state had the best state and the Library of Congress Classification has a slight fit with knowledge and its external manifestation compared to other classifications. In criterion 2 (lack of (geographic, religious, political dependency), Colon Classification with a state between high and completely had the best state in terms of lack of dependency while the Library of Congress Classification had the highest degree of national, regional, and religious bias. In criterion 3 (having scientific and logical principles), Colon Classification had the best state while the Library of Congress Classification with a score close to average was the lowest classification. In criteria 4 (organizing and determining the appropriate resource place and facilitating the access to book), 5 (universality and comprehensiveness), and 6 (flexibility and expandability to new themes), Colon Classification was the best classification while Dewey Decimal Classification had the lowest score. In criterion 7 (ease of use by information organization experts), the Library of Congress Classification was the most easy to use because it is the most enumerative classification. On the contrary, Colon Classification was hard to use due to its analytical-combined and facet nature. In criterion 8 (ease of use by users), the Library of Congress Classification with average scores was the easiest classification for users while Dewey Decimal Classification could not be easily used by users due to its decimal feature. In addition, Colon Classification was not easy to use due to its analytical-combined nature. In criterion 9 (having a table for numeration and the possibility to combine the faces of a theme), Colon Classification had the best state while the Library of Congress Classification with an average score was the lowest classification. In criterion 10 (Supporting the growing needs and upgrading), the Library of Congress Classification had the best state for upgrading due to the highest organizational support while Bliss bibliographic classification and Colon Classification had the least upgrading and support. The reason for the lack of upgrading by Bliss bibliographic classification and Colon Classification was probably due to the lesser use of these classifications.

The average of the compliance rate of the four studied classifications with ten criteria was calculated for an appropriate classification. As shown in Table 2, Colon Classification with a score of 2.8 being close to the high index was the best library classification. Dewey Decimal Classification with a score of 2 being equal to the average index was in the fourth place.

Table 2. Comparison of the criteria in the classifications (0 to 4)

Colon Ranganathan	Bliss bibliographic	Library of Congress	Dewey Decimal
2.8	2.5	2.3	2

The research hypotheses were then tested.

**Hypothesis 1:** There is a significant difference between Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Ranganathan Colon Classification compared to the classification criteria in the group of professors, librarians, and in general.

In order to compare the different classifications of Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Ranganathan Colon Classification with the classification criteria and with the correlation of responses and the small sample size, the non-parametric Kendall test was used.

Table 3 shows the results of this test.

Table 3. Kendall test for comparing different library classifications

Row	Statistics	Professors	Librarians	Total
1	Kendall's W	0.812	0.776	0.775
2	Kendall chi-square	12/184	11.64	23.242
3	Degree of freedom	3	3	3
4	Significance level	0.007	0.009	0.0001

As can be seen in Table 3:

1. In the group of professors, the Kendall's W's statistic was equal to 0.812 and the Kendall test's significance level was 0/007, so the null hypothesis was rejected. In other words, there was a significant difference between Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Ranganathan Colon Classification compared to the classification criteria in the professors group.

2. In the group of librarians, the Kendall's W's statistic was equal to 0.776 and the Kendall test's significance level was 0/009, so the null hypothesis was rejected. In other words, there was a significant difference between Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Ranganathan Colon Classification compared to the classification criteria in the librarians group.
3. In the total of two groups, the Kendall's W's statistic was equal to 0.775 and the Kendall test's significance level was 0/0001, so the null hypothesis was rejected. In other words, there was a significant difference between Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Ranganathan Colon Classification compared to the classification criteria in the librarians and professors group.

**Hypothesis 2:** There is a significant difference between the attitudes of professors (Ferdowsi University) and librarians (Ferdowsi University and Astan Quds Razavi Library) in terms of Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Ranganathan Colon Classification compared to the classification criteria.

If we assume that: M1 = the median of professors' attitude on different classifications and M2 = the median of librarians' attitude on different classifications, thus the non-parametric Mann-Whitney test was used to determine the difference between the viewpoints of professors (Ferdowsi University) and librarians (Ferdowsi University and Astan Quds Razavi library) on different classifications due to the low number of individuals in the sample.

Table 4 shows the results obtained in this regard.

Table 4. Mann-Whitney test results for comparing the attitudes of professors and librarians about different library classifications

Different library classifications	group	Descriptive statistics			Mann Whitney Test		
		mean	Standard deviation	Average rating	U statistics	Z statistics	Sig.
Dewey Decimal Classification	professors	3.31	0.41	7.5	2.5	-2.102	0.032
	librarians	2.82	0.23	3.5			
Library of Congress Classification	professors	3.53	0.37	7.2	4	0.071	0.095
	librarians	3.04	0.41	3.8			
Bliss bibliographic classification	professors	3.46	0.04	5.1	10.5	0.655	0.69
	librarians	3.49	0.14	5.9			
Colon Ranganathan	professors	3.89	0.29	6.1	9.5	0.519	0.548
	librarians	3.76	0.16	4.9			

The results of Table 4 show that:

1. In case of Dewey Decimal Classification, since the value of the statistics u was 2.5 and the values of statistics z was -2.102 and the significance level of the Mann-Whitney test was less than 0.05 equal to 0.032, thus the null hypothesis was rejected. In other words, there

was a significant difference between the attitudes of professors and librarians regarding Dewey Decimal Classification compared to the classification criteria.

2. In case of the Library of Congress Classification, since the value of the statistics  $u$  was 4 and the values of statistics  $z$  was 0.071 and the significance level of the Mann-Whitney test was more than 0.05 equal to 0.095, thus the null hypothesis was accepted. In other words, there was no significant difference between the attitudes of professors and librarians regarding the Library of Congress Classification compared to the classification criteria.
3. In case of Bliss bibliographic classification, since the value of the statistics  $u$  was 10.5 and the values of statistics  $z$  was 0.665 and the significance level of the Mann-Whitney test was more than 0.05 equal to 0.69, thus the null hypothesis was accepted. In other words, there was no significant difference between the attitudes of professors and librarians regarding Bliss bibliographic classification compared to the classification criteria.
4. In case of Colon Classification, since the value of the statistics  $u$  was 9.5 and the values of statistics  $z$  was 0.519 and the significance level of the Mann-Whitney test was more than 0.05 equal to 0.548, thus the null hypothesis was accepted. In other words, there was no significant difference between the attitudes of professors and librarians regarding Colon Classification compared to the classification criteria.

By comparing the classifications with the criteria of an appropriate classification from the viewpoint of professors and librarians of Ferdowsi University of Mashhad and librarians of Astan Quds Razavi, it was found that there is a difference between these classifications as can be seen from Table 2, the best classification was Colon Classification. Now, the question may arise that if Colon Classification is the best classification, why is it used less in the world relative to Dewey Decimal Classification and the Library of Congress Classification? Based on the review of the texts, three main reasons can be noted for answering this question:

1. Colon Classification never received major political and promotional support while the Library of Congress Classification and Dewey Decimal Classification were in support of the Library of Congress;
2. This classification was raised when most libraries were organized according to one of the previous schemes (Harry and others, 2002).
3. The plans which were developed on the basis of a philosophical order were less successful, but the plans having the principle of ease of action were used more (Thompson, 1987).

Based on the results of Table 2, Bliss bibliographic classification and Colon Classification are in a better position than Dewey Decimal Classification and the Library of Congress Classification. With these interpretations, the question that may arise is “what are the reasons for the wide use of the Library of Congress Classification and Dewey Decimal Classification?”. Based on previous research, the factors leading to the worldwide acceptance and expansion of Dewey Decimal Classification and the Library of Congress Classification, desire fundamental disadvantages, are:

1. Essential need: The growth of libraries due to the invention of print and paper, the increase in the volume of books and libraries, and the increasing pressure on society to get books, led librarians from the nineteenth and twentieth century to seek a way to meet their needs as soon as possible. In such a situation, Dewey presented his scheme to set books based on

general themes. Thus, the field of acceptance of such a scheme was provided. After accepting, two factors prevented the libraries from moving away from the schemes: First: Getting used and second: Repetitive costs and mental fatigue in case of changing this scheme and replacing another scheme (Moghadam, 1994).

2. Religion (church bias): The stability of towns and communities in the middle ages was provided by the church and libraries were regarded as an institution of the church. The influence of the Church's fanatical thoughts and philosophy was quite evident in the administration of libraries and even in the classification of science and such bias caused the welcoming of these schemes (Moghadam, 1994). In other words, the support of church leaders was one of the factors of durability and the use of these classification schemes.
3. The ruling power (government and politics): The power and support of the ruling governments from these schemes expanded them (Moghadam, 1994);
4. The production of philosophical foundations and philosophical issues of library science and information science in the United States and the presence of American professors in most of the developing countries became the other factors of the expansion and universal use of these two American classifications at the beginning of the formation of librarianship and information science (Matlabi, 2010).

## **Discussion and conclusion**

By comparing the desired classifications with the criteria of an appropriate classification from the viewpoint of the professors and librarians of Ferdowsi University of Mashhad and the librarians of the Astan Quds Razavi Library, it was found that there is a difference between these classifications and Colon Classification is the best library classification. In general, Colon Classification and Bliss bibliographic classification are in a better position than Dewey Decimal Classification and the Library of Congress Classification. Regarding the difference between the different classifications of Dewey Decimal Classification, Library of Congress Classification, Bliss bibliographic classification, and Colon Classification compared to the classification criteria, there is a significant difference in Dewey Decimal classification but there is no significant difference in other studied classifications. Of the ten criteria used in this study, six criteria (lack of dependence, scientific and logical principles, universality and comprehensiveness, flexibility and expandability, having a table for numeration, and updating) were among the characteristics studied by Siamak (2007). In general, the viewpoints of the professors and librarians of Ferdowsi University of Mashhad and the librarians of Astan Quds Razavi with Siamak's studies, except for the dependence criterion, were completely in line with the other five characteristics. The results of the dependency criterion indicated that the study was consistent with the study of Siamak in Dewey Decimal Classification and the Library of Congress Classification but inconsistent with the study of Siamak in Colon Classification indicating that Colon Classification has an oriental dependency. The results of the present study on Bliss bibliographic classification are consistent with the study of Bury (1984) indicating that the class H of Bliss bibliographic classification, according to the criteria under consideration, has a remarkable advantage over this class in the classification of the National Library of Medicine. In addition, the results of this research regarding Dewey Decimal classification are somehow consistent with Farshchi's research (2005) indicating that ASFA has generally performed better than DSR and Dewey Decimal Classification in terms of quality and

quantity. However, the results of this study are somewhat inconsistent with Tajer's research (2004) indicating that Dewey Decimal Classification has functions such as generality, the existence of a hierarchical structure which can be extended through numeration, linkage to other thematic projects and interlanguage transfers being appropriate for the effective organization of Internet resources.

According to the literature review, most popular classifications such as Dewey Decimal Classification and the Library of Congress Classification were developed on the basis of regional, political, and religious bias not on the basis of philosophical and rational principles or their effectiveness. The schemes based on a philosophical order had less success than the schemes which follow the principle of ease of action (Thompson, 1987). In addition, it should be noted that the change or creation of a classification - albeit completely logical, scientific and practical - is difficult and time-consuming considering the need for organizational support, changing the attitudes of librarians, and the complacency of its implementation.

Finally, it is suggested to conduct a study on the comparison of Dewey Decimal Classification and the Library of Congress Classification from the perspective of the library community, especially those using both the public library (with Dewey Decimal classification) and the university library (with the Library of Congress Classification).

## References

- Barbara L., A. (1973). *Comparison and evaluation of two classifications for law: Library of Congress Class K and Los Angeles County Law Library Class K-Law*, Thesis. Southern Connecticut State University, Connecticut.
- Bury, S. (1984). National Library of Medicine Classification compared with Bliss class H. *Health Libraries Review*, 1(4), 179–190. DOI: 10.1046/j.1365-2532.1984.140179.x
- Chang, Y.-W. (2012). A Comparison of Literature Classification Schemes in Dewey Decimal Classification and New Classification Scheme for Chinese Libraries. *Library Association of the Republic of China (Taiwan)*, 6(2), 115–137.
- Farshchi, Masoomeh (2005). A Comparative Study of History in the Persian Farsi Thesaurus (ISFA) and the DSR Classification (in Iranian History). *National Library and Information Organization Studies*, p. 64 (d): 43-60. (In Persian).
- Harri, Abbas; Neshat, Narges; and Rajabi, Mohammad Hassan. (2002). *Encyclopedia of Library and Information Science, Bibliographic Classification*. Tehran: National Library of the Islamic Republic of Iran. (In Persian).
- Hayati, Zahir; Jokar; Taheher, and Berahmand, Niloofar. (2008). *Library of Congress Classification: Theory, Development and Application*. Tehran: Ketabdar. (In Persian).
- Hayati, Zahir; Jokar; Taheher, and Berahmand, Niloofar. (2011). *Organizing the Materials 4: Emphasizing the Library of Congress Classification (Librarianship)*. Tehran: Payame Noor University. (In Persian).
- KimJeonghyen. (2008). A Comparative Study on the Knowledge Classification and Library Classification System of Botany. *Journal of Korean Library and Information Science Society*, 39(3), 369– 386.
- Majidi, Musa. (2004). *Organizing the materials 2 Classification*. Tehran: Payame Noor University. (In Persian).
- Mazaheri Tehrani, Nasser, and Faghihi, Mohammad Hadi. (1977). *Library Knowledge*. (In Persian).

- Moghaddam, Mohammad Bagher. (1994). Income on the classification of science, classification of books. Qom: General Ayatollah Grand Ayatollah Marashi Najafi Public Library. (In Persian).
- Mokhtarpour, Reza (2009). "Exploring the expansion of Iranian history in the Dewey Decimal classification system and comparing it with the expansion of the category of history in the library system of the Congress". *Library and Information Science*, 45 (April): 183-202. (In Persian).
- Matlabi, Dariush (2010). "First Speech: Library classifications and bias attitudes". *Ketabe Mah* 1 (13): 2-5. (In Persian).
- Satija, M. P. (1989). *Colon classification* (7th ed.). New Delhi: Ess Ess Publications.
- Siamak, Marzieh (2007). Comparing several classifications. *Shahab Heritage*, 48 (spring and summer): 113-140. (In Persian).
- Soltani, Puri; and Rastin, Farvardin (Aga Khani). (2010). *Library and Information Encyclopedia*. Tehran: Contemporary culture. (In Persian).
- Tajer, Pegah (2004). Comparing the hierarchical structure of the Yahoo Directories, The Open Directory (TOD) Looksmart with the Dewey Decimal Classification Scheme in the Top 10 Selected Issues. Master's Thesis. University of Shiraz, Faculty of Education and Psychology, Department of Library and Information. (In Persian).
- Thompson, James (1987). *The history of library science*. (Mahmoud Haghghi, Translator). Tehran: Academic Publishing Center. (In Persian).