



Smart Libraries and Their Applications in The Arab World

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Abstract:

The main aim of conducting this research is to identify the applications of Smart libraries in the Arab world. The Researcher relied on the documentary and Survey approach to collect information and data through the Internet, and to get to know these libraries. Then the Research came in three sections dealing with the first topic: The general framework of the study. The second topic deals with: introducing Smart libraries and indicating their types and characteristics. The Third topic dealt with the requirements of Smart libraries' application by identifying the basic components of it (Smart building, Smart Librarian , Smart devices, systems and software, Smart information sources, and Smart beneficiaries), and dealt with Smart libraries applications in the Arab world and the research came out with several results, the most important of which are :There are not Smart libraries, stand-alone, representing their buildings, holdings, and Smart services in the Arab world, but there are libraries that represent Smart electronic platforms or websites available on the Internet. Among the recommendations of the research: Our library begins to shift from traditional libraries to electronic libraries, and shift to Smart libraries with all its constituent elements, including the building, equipment, and systems, and to provide electronic and interactive resources and services with the beneficiaries.

Keywords: Smart Libraries, Smart Librarian, Smart Devices and Systems

المكتبات الذكية وتطبيقاتها في العالم العربي

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المستخلص :

ان الهدف الاساس لاجراء هذا البحث هو التعرف على تطبيقات المكتبات الذكية في العالم العربي، اعتمدت الباحثة على المنهج الوثائقي والمسحي لجمع المعلومات والبيانات من خلال شبكة الانترنت للتعرف على هذه المكتبات. جاء البحث في ثلاث مباحث تناول المبحث الاول الاطار العام للدراسة وتناول المبحث الثاني التعريف بالمكتبات الذكية وبيان انواعها وخصائصها، وتناول المبحث الثالث مستلزمات تطبيق المكتبات الذكية من خلال تحديد العناصر الاساسية المكونة لها (البنية الذكية، المكتبي الذكي، الاجهزة والانظمة والبرمجيات الذكية، مصادر المعلومات الذكية، والمستفيد الذكي) كما تناول البحث تطبيقات المكتبات الذكية في العالم العربي، وخرج البحث بعدة نتائج اهمها: لا توجد مكتبات ذكية قائمة بذاتها تمثل بنائيتها ومقتنياتها وخدماتها الذكية في الوطن العربي، وانما وجدت مكتبات تمثل منصات أو مواقع الكترونية ذكية متوافرة عبر شبكة الانترنت. ومن توصيات البحث: ضرورة بدء مكتباتنا بالتحول من المكتبات التقليدية الى المكتبات الالكترونية ومنها الى المكتبات الذكية بكل العناصر المكونة لها كالبناية والاجهزة والانظمة، وتقديم مصادر وخدمات الكترونية وتفاعلية مع المستفيدين.

الكلمات المفتاحية: المكتبات الذكية، المكتبي الذكي، الاجهزة الذكية، الانظمة الذكية.

Introduction:

The main objective of libraries is to provide information services and provide resources to the beneficiaries. These developments have contributed to changing the structure and designations of libraries (Traditional libraries, Electronic libraries, Digital libraries, Virtual Libraries, and Smart Libraries), The diversity of their resources (paper and electronic), Services and delivery inside and outside the library and required Skills of the administrators as well as the availability of Computers and accessories. The use of Systems and Software and the participation of information networks for the purpose of serving the beneficiaries and ensure the Speed of access to information and sources available.



Section One (Research General Theoretical framework)

First. Research Problem:

The research tries to answer the following questions:

1. What is the concept of Smart Libraries?
2. What kinds of Smart libraries?
3. What are the characteristics of a Smart library Building?
4. What skills does a Smart librarian have?
5. What Hardware and Software intended for the Management of Smart Libraries?
6. Are there Smart libraries and their applications in the Arab world?

Second. Research Significance:

The importance of the study in the assistant of the reader is to identify the concept of Smart libraries and their characteristics, types and applications in the Arab and foreign countries and to identify the characteristics of the Smart building of the library and the qualifications of the Smart librarian and sources of Smart information and devices and Smart systems and Smart beneficiary.

Third. Research Objectives:

1. Identifying the concept of Smart libraries and their types and characteristics.
2. Identifying the basic components of Smart libraries in terms of (Smart building, Smart specialist, Smart resources, Smart devices and systems, Smart beneficiary).
3. Identifying the applications of Smart libraries in the Arab world.

Fourth: Research Methodology and Procedure:

The researcher relied on the documentary and survey method of data through the Internet to identify the Smart libraries in the Arab world.

Fifth. Previous Studies:

The researcher found several studies and researches, some of which include:

1. Mohammed I. Younis's research ⁽¹⁾: Confirms that the RFID system is an Important part of intelligent library management systems, the researcher suggested the use of this system in the management of the library sample study because it makes the task of employees easy, Smart, convenient, automated and practical. In addition, the system allows library users to access Catalogs, lend resources and renew the loan period from books easily and remotely. The discussion discussed the user input unit, the book entry unit, the book lending and retrieval unit, the door lock unit, the book control unit and remote access.

2. *Martin Johnson's research*⁽²⁾: Discusses the characteristics of Smart Cities and Smart Libraries and Smart Librarian and refers to the importance of Smart building and some of the roles that libraries and information Services may contribute to their development. He pointed to the need for "Smart librarians" and they have a high level of skills and commitment required, and the presence of these Smart libraries in government companies and institutions make a difference to decision-makers in terms of communicating their information and making the right decisions.

3. *Joachim Schöffel's research*⁽³⁾: Discusses the Evolution of the concept of Smart libraries at the University (Siberian Ederal) as a comprehensive and multidimensional concept and the emergence of the term in several studies in China and India in 2013 and international conferences, including the eradication of informatics (ECIL) in The term was used in an uncoordinated manner and focused on technology and related work skills, and the term Smart libraries emerged as a synonym for modern libraries . Smart libraries have become part of the new and new library concepts. Libraries are moving forward and are beginning to offer their services remotely, adapting to new societal and technological opportunities and threats, and interconnecting with the urban environment of Smart cities. The application of RFID does not make the library Smart; it can be part of its Smart ness if it is included in the context of a Smart city and as an element in a multidimensional framework including aspects related to society.

4. *Ruslan Aleks and Rovich Baryshev's research*⁽⁴⁾: Discusses the Smart Library project and the development of information services and libraries in scientific and educational activities, the research aims to analyze the phenomenon of Smart libraries, which began in the 2000s, along with the development of computer technology, digital storage of the Internet and human-computer interaction. This research emphasizes the need to provide innovative services for libraries and information in universities through personal accounts of users. The research dealt with an analysis of more than 200 publications written mainly by foreign scientists. 1. It is a kind of stereotypical network based on assumptions about the total services provided by libraries in the urban environment. Focusing on the needs of modern education and science, the results of the research at the Federal University of Siberia can be used as an effective system of interaction and information exchange between the automated systems of the library and publishing complex, the machine learning management system and integrated learning environment.

5. Adel Ghazal Algerian's Research ⁽⁵⁾: discusses Smart building technology and its role in establishing knowledge cities, considering that the new role of Smart library building technologies as multimedia to provide simultaneous and renewable information, means to exchange knowledge and experiences gained, and means of analysis and distribution of data on the need and situation, as well as effective means of communication for the implementation of knowledge activities. It is also an effective means of communication to carry out knowledge and information activities. Buildings must be transformed from spaces that contain computer networks that transmit knowledge without differentiating between their beneficiaries, their activities, their communications, their daily events, and what is going on inside the building or neighboring or similar buildings in other cities and countries, into a medium of transfer and source of knowledge, identifying the type of knowledge, its impact and its need. Smart buildings interact and continue to support the building of informed knowledge cities.

6. Linda Zubair Qisim Al Sayyed's research ⁽⁶⁾: The research dealt with the development of an intelligent system of lending and supplying libraries. The questions of different beneficiaries, and be an alternative to the librarian or his assistant. The second sub-program is the program of selecting the best resource, where the program identifies the appropriate resource when buying a particular book, by comparing the suppliers, and determine the best based on prior knowledge stored in the knowledge base, while the last sub-program is the program to choose the best book, a program identifies the best books from a collection of books, when the library needs to acquire new books. 1- This is done through several questions addressed by the system to the user inquiring about the date of publication to know the novelty of the scientific material and its author if it is responsible or not, as well as the ease of checking the materials that are ordered to buy, and to know whether they are in the library or not in order to avoid Repetition, as well as the evaluation of the subject of the book and whether it has to do with the community of beneficiaries or not, and finally the researcher mentioned some previous studies that have worked in this area, and those who have done and put a guide to some sites on the Internet for the public benefit.



Sixth. The Benefit of the Previous Studies in the Current Research:

The benefit of the previous studies was to write some aspects of the theoretical study of the second research, which builds the definition of Smart libraries and indicate their origin, types and characteristics.

As for the advantage of the current study from previous studies we note that all researches and studies dealt with the definition of Smart libraries. The research (***Mohammed I. Younis***) discussed the use of RFID system in the Management of Smart libraries; (***Martin Johnson***) discussed the characteristics of Smart cities and Smart libraries and Smart Librarian ; (***Joachim Schöpfel***) discussed the evolution of the concept of Smart libraries at the University of Siberian Ederal as a comprehensive and multidimensional concept; (***Adel Ghazal Algerian***) addressed the technology of Smart buildings and their role in the establishment of cities of knowledge; and (***Linda Zubair Qsism Al Sayyed***) discussed the development of an intelligent system of lending and the supply of libraries.

This research is characterized in that it dealt with the definition of Smart libraries and their application in the Arab world, which has not been addressed in any previous study.

Section Two (Research Theoretical Framework)

First. Defining Smart Libraries:

The library is a place to store library materials from information sources, and is a “structured collection of knowledge resources available to a defined community for research, access and borrowing” ⁽⁷⁾. The ITIL defines “a set of best practice guidance for IT service management” ⁽⁸⁾ and the term “intelligence” means “flexibility, adaptation, expansion, recognition and human” ⁽⁹⁾. In (computers and information) means the ability of a machine or device to perform some activities that need Smartness such as physical inference and self-repair ⁽¹⁰⁾ and the Smart building is seeking to provide services to its users of high quality. On this basis, the Smart Library is defined as:

1. The library is equipped with technology that makes it open without staff and allows remote control technology in the library buildings, including automatic doors, lighting, self-service kiosks and public computers. It allows for the extension of library opening hours and a large number of users can use the library at their own convenience.
2. Providing an innovative platform to facilitate the access of employees of ministries and federal government agencies to a wide range of electronic knowledge resources in Arabic and foreign languages ⁽¹²⁾.

3. Integration of multiple systems to efficiently manage resources and capabilities in order to keep pace with the scientific progress in technology, communication and informatics in order to achieve comfort and benefit to the beneficiaries and workers, including the environment, productivity and services positively affect the cost ⁽¹³⁾.
4. The library uses Virtua's integrated automated system to manage the technical operations and information services provided to the beneficiaries, which satisfy them with all information and research needs by providing a round-the-clock service. The library's intelligent services range from simple and advanced electronic searches, document delivery, databases and more. Library services needed by the researcher ⁽¹⁴⁾.
5. The researcher defines Smart libraries as a library governed by intelligent systems, software and devices that are controlled by people with technical, information and office knowledge as well as a building adapted to the internal and external environment of the community.

Second: Types of Smart Libraries:

When mentioning the term Smart libraries come to mind the listener several concepts to define them and, on this basis, it is possible to identify types of Smart libraries, which are:

1. Smart stand-alone libraries represent their Smart building, holdings and services.
2. Libraries represent Smart systems and Software integrated and ready.
3. Libraries are Smart applications that can be downloaded to Smart phones and tablets.
4. Libraries are platforms or Smart websites available on the Internet and provide information in different forms and types.
5. The libraries are an interactive resource available online.
6. Libraries representing Electronic libraries, Digital libraries and Virtual libraries.

Third. Characteristics of Smart Libraries:

Smart libraries provide advanced features in the field of management and provide services and systems and electronic publishing of resources, fifteen of which are:

1. Working on all operating systems (IOS, Android, Windows, Web).
2. Supporting multiple languages in the user interface.
3. The ease of using the library application and take advantage of its features within an elegant and attractive design.
4. Quick and intelligent searching of entire library texts.
5. Supporting for more than one text or image format (PDF).
6. Viewing more than one book (with lists, shelves)
7. Viewing by "Book Categories", "Author" and "Book Title".



8. Easy navigating of the book content, with the possibility of browsing the paper book.
9. Complete reading the book from the same page that the reader stopped.
10. The ability to bookmark the book, and add notes to any part of its content.
11. Displaying footnotes in an easy way.
12. The possibility of changing the font type and size (zoom in and out).
13. The possibility of shading the content of the book in different colors, and night reading feature.
14. Supporting publishing excerpts of book content via email, text messages on mobile, and social networks.
15. Printing all the book or selected pages of it, with the ability to download for browsing on the reader.

Section Three (Research Practical Framework)

First. Smart Library Application requirements:

It should be referred to the basic components of Smart libraries, which represent the following:

1- Smart Building:

Among the characteristics of the Smart Library Building are ⁽¹⁶⁾:

Smart library buildings are mainly intended to respond to and adapt to the internal and external environment and improve the environment of beneficiaries and employees in the library by providing the following:

- Sensitive and rapid response to keep pace with scientific advances in technology and information and its various products as well as the enormous revolution of information and communication.
- Rapid responding for convenience, security and speed of communication.
- Quick response to achieve the functional needs of beneficiaries and staff within the library.
- Achieving Smart ness by introducing automated control systems and linking them with information systems to implement the requirements of beneficiaries and meet the needs of the library building as whole.

The characteristics of Smart library buildings ⁽¹⁷⁾:

- The building (as staff) knows what is happening inside and outside: through automated systems to enable the library to respond to external conditions and factors, and the information generated to know the performance of the building is stored in the central computer system.
- The building decides the most efficient way to provide a suitable and comfortable environment for beneficiaries through automated systems with management information and as aid and decision support.

- Smart building responds to the demands of the beneficiaries: through advanced communications to achieve rapid communication with the outside world using CNC and the use of fiber-optic lines, microwave and traditional satellite connections.

Some aspects of the technology of Smart library buildings ⁽¹⁸⁾:

- **Lighting**: The control of indoor and outdoor lighting modes (on - off - dimming) It senses movement. This means that once you pass through the library's corridors, the lights will turn on automatically.
- **Air conditioning, heating and cooling**: The control of the temperature level inside and outside the library at any time through a special thermostat compatible with most modern refrigerators of air conditioners or heating devices, and windows close on their own when the air conditioning starts to work.
- **Security**: The security system is well developed and allows continuous and direct monitoring of the library either from within the library via fixed screens such as television or mobile as a mobile device. The system can alert you over the phone or siren, and the system can be set to operate at certain times or call more than one number in case of an emergency.
- **Electromechanical gates and electric blinds**: These systems automatically control the entrances to the library. The curtain system is connected to the library system to open at a certain time or when you choose a special mode can work automatically to open when the sun arrives in the morning and closes in the evening.
- **Audio and Video**: The control of audio and video inside the library through the systems of distribution of audio & Video Matrix, which allows control of receivers and the operation of computers and video game consoles and the control of surveillance cameras using remote control or via mobile or the Internet where you can listen and watch in all parts of the library Through the characteristic of the so-called (active viewing).
- **Elevators, escalators and wheelchairs**: The automatic control of the movement of elevators and escalators, as well as programming of wheelchairs within the library to track the movement of the beneficiary, and the return of the chairs to their places specified after use automatically.
- **Books and information containers**: The control of determining the right place for the book on the open shelves so as not to place the books in other places not classified, and provide the right atmosphere for the book by weather systems.

2- Smart Librarian:

Intelligent man is the one who has the ability to understand, deduce, analyze and distinguish the power of his instinct and his intelligence ⁽¹⁹⁾, a



person who is eager to know information in all fields, and his questions are different from those of others and reflect deep thinking, and he can enter into the core of any subject from multiple angles that have not been discussed before, despite the subject in advance, a person who wants to know no matter how difficult or complex access, and enjoys adding new information and depth In the study of certain topics ⁽²⁰⁾ skills that must be enjoyed by the Smart Librarian:

1. Language skills so that he can handle various multilingual information vessels.
2. Technical skills related to the technical processes of indexing, classification, detection, retrieval and retrieval of information and computer applications, and other technical skills.
3. Technical skills and knowledge of all types of technology produced by the technological revolution ⁽²¹⁾.
4. Intellectual or mental skills: critical thinking skills constructive and logical analysis and innovative and creative thinking skills.
5. Management skills: There is a set of management skills that must be available in the modern library manager are: the skill of people management, problem-solving and decision-making skills, communication skills, the skill of creating and managing change, team building skill, time management skill, crisis management skill, skill related to information, and negotiation skill ⁽²²⁾.
6. Have deep knowledge of electronic information sources in order to develop electronic collections.
7. Assessing information needs and designing services to meet those needs.
8. Training beneficiaries on the use of electronic and electronic resources and systems.
9. Contribution to the creation and construction of documentary, electronic software, etc. ⁽²³⁾

3- Smart Devices and Systems:

Smart devices are interactive electronic devices that understand what their users are directed to by simple commands. Smart phones, TVs and other electronic devices where these devices are determined by their ability to connect to a network for remote sharing and Interaction. One of the characteristics of Smart devices is called the term Smart devices for any device that is connected to the Internet, be it lights, thermostat or protection devices, inventory devices for library contents and Smart storage cabinets with sensitivities to face the risk of fire. Better for the user many features not only its ability to connect with the Internet ⁽²⁴⁾.

Among the types of Smart devices that can be used in libraries include:

- Tablets portable and include laptops (laptops), and mobile computers and touch.
- Tablets "small" Tabs include Smart phones and Smart cards that contain touch screens, and support applications.
- Tablets "large size" such as Smart boards "Boards".
- Other types such as: Interactive Smart TV, projection screens, Smart watches, Smart lighting, temperature control devices, cleaning devices.

4- Smart Systems and Software:

Smart systems are the product of a group of expert minds. By providing them with a special database based on logical and intellectual relationships (25).

Among of the features and advantages of Smart systems include:

- Strong, durable, fast, responsive and adaptable.
- Easy to learn and use.
- It is characterized by the possibility of integration in most technical devices and the possibility of distribution in the natural environment.
- It is accessible from anywhere connected to the network.
- The ability to deal with real-time data analysis, organization and characterization.
- The ability to induce, diagnose and analyze complex cases, and to deal with unexpected situations (26).
- The ability to respond and make decisions faster than humans, and to initiate the best decision to deal with emergencies.
- The ability to interact with individuals and help them with decision making.

Library management systems or integrated library systems are computerized systems for the management of library assets and holdings in terms of inventory of assets, applications, borrowed materials and persons who have borrowed them.

These systems are defined as an enterprise resource planning system for libraries and is used to track existing materials, orders, invoices and users who have borrowed. The library management system usually includes a coherent database and software to interact with that database, and two user interfaces (usually graphics), one for users and one for library staff. Most library management systems software divides functions into separate programs or modules, integrated together into a unified user interface. Examples of such modules may include:

- Supply (ordering, receiving and billing items).
- Indexing (classification, classification and indexing of materials).



- Borrowing (borrowing of materials to borrowers and retrieval).
- Periodicals (follow up on the restrictions of existing magazines and newspapers).

5- Smart Information Sources:

- Interactive books that simulate the mind varied according to the science of knowledge. Written in stereoscopic format that can be adjusted to fit the reader's sight.
- Written in the form of stereoscopic images that can be interpreted simultaneously for different international languages according to the wishes of the beneficiary.
- Smart Encyclopedic books are available in multimedia format and are constantly updated.
- Smart digital newspapers where events change first Powell.
- Sources for people with special needs are interactive and take into account the needs of the blind or hearing and facilitate their access to information sources.
- Interactive films enable the user to choose the tracks of the subjects by displaying options in front of him on the screen to choose from what the user sees fit.
- Interactive images or panels that simulate the beneficiaries through virtual reality accompanied by sound and movement and dimensions, as well as provide users with information when pressed or switched to other images.

6- Smart User:

In order for the beneficiary to obtain the information sources in the Smart libraries, he must have the following qualities:

- Knowing the computers and their complete requirements.
- Knowing the Internet applications and web search strategy.
- Knowing the digital repositories.
- Knowing the systems and programs adopted by the library.
- Knowing the languages, especially English.

Second. Applications of Smart Libraries in the Arab World:

The researcher did not identify Smart libraries that represent their own intelligent building, holdings and services. But there are libraries that represent platforms or Smart websites available through the Internet and provide information in different forms and types, including:



1) *Smart Library site:*

It is an innovative platform that facilitates the access of employees of ministries and government agencies in the UAE to access and benefit from a huge range of electronic knowledge resources in Arabic and foreign languages.

It was initiated under the guidance of Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE in 2016, as a year of reading, and based on the proposals of the 100-strong retreat launched by Sheikh Mohammed bin Rashid Al Maktoum to discuss the most important ideas and initiatives to consolidate reading, as a popular youth community in the UAE society. The idea of the Emirates Smart Library project was to create a national knowledge institutional framework to embed a reading culture among government ministries and government employees by providing the knowledge infrastructure for reading and creativity.

2) *Spartech site :*

It was established in 2011, Malaysia is an electronic publishing platform that allows the publisher to present his / her publications (books, research or magazines) to the reader to be with him wherever he is. To be able to browse libraries on various operating systems Smart phones, tablets and desktops, in multiple languages, and advanced features in the field of digital libraries and electronic publishing ⁽²⁸⁾ and is characterized by the following:

- It works on all operating systems (IOS, Android, Windows, Web).
- It Supports multiple languages in the user interface.
- It is easy to use the library application and take advantage of its features within an elegant and attractive design.
- It is quick and Smart search of entire library texts.
- It supports more than one book format (text or image pdf).
- It is more than one view of books (menus, shelves).
- Viewing by "Book Categories", "Author" and "Book Title".
- Easy navigation within the content of the book, with the possibility of browsing in the manner of paper book.
- Complete reading the book from the same page that the reader stopped.
- Possibility to bookmark the book, and add notes to any part of its content.
- Displaying footnotes in an easy way.
- Possibility to change the font type and size (zoom in and out)
- The possibility of shading the content of the book in different colors, and the feature of night reading.
- It supports publishing excerpts of book content via email, text messages on mobile, and social networks.



- It prints all the book or selected pages of it, with the possibility of download for browsing on the reader.

3) *Dubai Judicial Institute Library:*

Dubai Judicial Institute Library was established in conjunction with the establishment of the Institute in 1996. This library is one of the most important specialized legal libraries in the United Arab Emirates. The library of the Institute is full of the cost of judicial principles and judgments issued by the *Supreme Courts of the State*, and the jurisprudence and principles issued by the *Courts of Cassation* in the Arab countries in addition to the latest books and periodicals legal specialist. The library uses the integrated automated system Virtua to manage technical operations and information services provided to the beneficiaries, which meet them all the information and research needs through the provision of service around the clock, and the library's intelligent services range from simple and advanced electronic search, document delivery, databases and other Library services needed by the researcher ⁽²⁹⁾.

4) *Dubai Digital Library* ⁽³⁰⁾:

Mohammed bin Rashid Al Maktoum Knowledge Foundation launched the library in early 2016 to coincide with the announcement of the Smart Library, 2016 as a reading year with the aim of providing advanced electronic platforms that contribute to the enrichment of Arabic content through the Internet through a huge collection of books in Arabic, whether composed or translated and in all Cognitive domains. The library is one of the largest digital libraries incubating Arabic content, which keep pace with the requirements of the age and new generations to disseminate and transmit the Arab knowledge and culture to the world, and contribute effectively in maintaining its position among other cultures and civilizations and build bridges of communication with different cultures wherever they are, through the dissemination of knowledge and heritage from the most accurate sources, where the library is a platform for the most important Arab publishing houses, and includes the first search engine for Arabic digital content, which facilitates the process of access to information, which saves time and effort in a way that complies with international standards in the organization of content in the digital environment. Dubai Digital Library is one of the foundation's ambitious projects, which will contribute to a qualitative leap in the field of knowledge dissemination, offering digital library solutions as a one-stop-shop for the huge databases of intellectual property rights holders of academic institutions, universities and schools, and providing publishers with a unified center for the

development of books. Electronic distribution and marketing globally through a single channel. The library is characterized by an attractive and easy-to-view style through its research tools and various options, to reach readers and visitors to the information and books they want quickly and get the largest amount of knowledge that opens up new horizons. The library also provides access to various types of publications including books, abstracts, audio books, magazines, reports and other publications, and enables end users to benefit from easy access to a variety of Arabic and international books on a single platform, anytime, anywhere and through tools every day, mobile phones and tablets, as well as an interactive platform for social media sharing. In the current phase, the Dubai Digital Library includes 50,000 titles covering all aspects of documented knowledge including Arabic and foreign books and periodicals, dictionaries, biographies and biographies, as well as images and maps, books issued by the Dubai International Writing Program, and the Foundation's publications and Qandil for printing and publishing, such as: Book releases in minutes, magazines, flashes and flashes. The library seeks to provide a huge number of Arabic content as a first stage, including plans for the next phase, the provision of international books through partnerships with the largest Arab and international publishing houses, and the library is constantly seeking to develop library services to provide easier and Smarter solutions for end users.

Conclusion

- 1- The current research found several definitions of Smart libraries. The researcher defines Smart libraries as a library governed by intelligent systems, software and devices that are controlled by people with technical, information and office knowledge as well as a building adapted to the internal and external environment of society.
- 2- There are types of Smart libraries (Smart libraries have a physical entity and represent their building and holdings and services Smart libraries represent systems and software intelligent integrated and ready, and libraries represent Smart applications, libraries representing platforms or Smart websites available via the Internet.
- 3- There are several characteristics of Smart libraries, including quick and intelligent search in the texts of the entire library.
- 4- Smart manifestations in the technology of Smart library buildings: controlling the interior and exterior lighting of the library, controlling the temperature level inside and outside the library. Super distribution systems and automatic control of the movement of elevators and stairs, and control in determining the right place for the book on the open shelves.



- 5- Some of the skills that should be enjoyed by the Smart librarian: language skills, technical skills, technical skills, intellectual or mental skills, management skills, possessing a deep knowledge of the sources of information and electronic systems and electronic training of beneficiaries ... etc.
- 6- Types of Smart devices that can be used in libraries: portable tablets (laptops and laptops), mobile tablets (Smart phones and Smart cards), tablets (Smart boards) and other types such as: interactive Smart TV, display screens, Smart watches, Intelligent lighting, temperature controllers, cleaning devices.
- 7- Types of Smart information sources that can be found in libraries: Smart books (interactive books simulate the mind, books in the form of stereoscopic images can be adjusted to the size of texts, books in the form of stereoscopic images can be translated simultaneously for various languages, encyclopedic books in the form of multimedia constantly update itself), Smart digital newspapers where events change, interactive films and pictures, various sources that simulate people with special needs, etc.
- 8- The qualities enjoyed by the beneficiary of the Smart library: knowledge of computers and complete accessories, knowledge of Internet applications and search strategy through the Web, knowledge of digital repositories, knowledge of systems and programs adopted by the library, knowledge of languages, especially English ... etc.
- 9- There were no Smart libraries that represent their Smart buildings, collections and services.

Research Recommendations

- 1- Our library begins the shift from traditional libraries to electronic libraries and then to Smart libraries with all its constituent elements including building, equipment and systems, and the provision of electronic resources and interactive services with the beneficiaries.
- 2- Introducing the subject of Smart libraries within the vocabulary of library and scientific research which teach students of primary and higher studies in Iraqi universities.

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