

Applications of Artificial Intelligence Techniques in Information Services in Libraries and Information Centers: Academic Libraries as a Model

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Abstract:

Artificial intelligence is a qualitative leap in the field of technological developments in the modern era, and its development helped to use technologies in many fields. Libraries took the leads using the advantage of technical developments and their applications in all aspects of their technical and information services. In technical aspects, libraries have been keen to constantly develop their catalogs, taking advantage of what the library management systems provide in terms of developing and accelerating their technical operations and linking them to other systems, such as publishers' systems to facilitate the acquisition process, international catalog systems to speed up cataloging processes and various databases to facilitate search and retrieval.

The study aimed to highlight the extent to which academic libraries benefit from artificial intelligence technologies, and to monitor the most important artificial intelligence technologies used by academic libraries. The study sample are the libraries of Sultan Qaboos University in the Sultanate of Oman, Leeds Beckett University Library in the United Kingdom, and the University of Kuala Lumpur Library in Malaysia. It also, monitored impact of this used technologies on the quality of services provided by these libraries.

The study used the descriptive analytical approach by examining the sample libraries' sites to identify the technologies and programs they use

and by analyzing the intellectual output related to the use of academic libraries for technologies and its impact on the development of its services and the satisfaction of its users.

One of the most important results of the study was the presence of extensive use by sample academic libraries of modern technologies and programs that depend on artificial intelligence, whether in technical services such as acquisition and indexing, or in various information services such as circulation, references, and other services

Keywords:

Artificial intelligence; Academic Libraries; Information Services; Artificial Intelligence Technologies.

Virtual Reference Service (VRS) technology in Arab libraries and information institutions

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Abstract:

Technology development and Artificial Intelligence techniques have gradually changed the way reference services are delivered in libraries and information centers. This study aims to provide an overview of Virtual Reference Services and how they can be applied in libraries and information centers in general. Reviewing published literature on the topics of digital and virtual libraries confirms that using both terms refers to “the library that provides access to a set of information resources that can be accessed remotely”. However, only a few studies have addressed virtual libraries and how Artificial Intelligence can be used in its services directly. While reference services provided by staff to users are either manual or digital, Virtual Reference Service is based on Artificial Intelligence to interact with users by providing an interactive interface between them and the automated virtual assistant either through an easy-to-use chat interface, either through a smartphone or library website through the computer 7/24 without any human intervention. The three main forms of Virtual Reference Service utilizing Voice over Internet Protocol (VoIP), Instant Messaging (IM) and Chatbots) were identified. A survey approach was adopted and the questionnaire was directed to practitioners, specialists, academics, and students specializing in Information Management, Records Management, and Knowledge Management in the Arab world, and distributed through social media sites (Facebook, Twitter, LinkedIn, and WhatsApp). The survey results revealed the usage patterns of Virtual Reference Services in 11 Arab countries. The main recommendations could be summarized by the necessity of involving all stakeholders (library management, and reference service staff) in the implementation process of Virtual Reference Service by raising awareness of the importance of the service and the need to invest in it.

Key words:

Library services; Digital Reference services (DRS); Virtual Reference Services (VRS)

Applications of artificial intelligence techniques in academic libraries

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Abstract:

Artificial intelligence (AI) technologies created a foundation for more innovative ideas, which provided creative technologies that led to the completion of tasks and services in easier and less expensive ways. Libraries are undoubtedly the places most in need of these creative technologies, so smart libraries have become dependent on intelligence.

Human creativity is the extent to which inventions and innovative artificial intelligence technologies are exploited. This is in addition to sites, groups, and services as part of a coherent and complementary relationship.

Emerging technologies are the basis for creating smart libraries, which include different types such as cloud computing, the Internet of things, Augmented Reality (AR), electronic resource management, wearable device technology, mobile internet, Smart bookmarking apps, Drones' mobile internet, Libraries' robots, etc. The adoption of other technologies will play an important role in reshaping the era of library transition. Technology (Gul & Bano, 2019).

And since one of the most significant of these free smart technologies is Augmented Reality (AR) technology, which in the future will be one of the most useful technologies in libraries, especially academic ones.

Keywords: Augmented Reality (AR) ; Augmented Reality (AR) apps; Academic Libraries; Artificial intelligence (AI)

Investing in big data and its impact on the resources and services of the Al-Azhar International Center for Electronic Fatwa

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Abstract:

The study aims to explore areas of investment in big data and its reflection on the sources and services of the Al-Azhar International Center for Electronic Fatwa, in light of the statement of the extent of influence and reflection related to information sources and its various channels, and to measure the return on investment in big data and its connection to the development of information services, and to indicate the features of the organizational and administrative structure, and the professional and informatics influences related to the areas of big data investment, while the study reached several results, the most prominent of which were: Evidence of the effectiveness and effect of the updated reflection from the areas of big data investment in the sources of the Al-Azhar International Center for Electronic Fatwa, at multiple rates imposed by the nature of the data issued by the center, as it came with average indicators between (20% - to - 52%, and this indicates the extent of the ability and influence created in the environment of information sources issued by the center in light of the investment of this data as an added value to its informational sources, The study also showed the strength of reflection on services and their development, with indicators ranging from (-22% to -58%) and between (-26% to -46%). These statistical data show the extent of the benefit resulting from the development of information services in a sustainable manner. While the study showed the need for inevitable changes related to the regulatory and administrative environment related to data management and investment operations, and among the most prominent recommendations presented by the study: the need to work on enacting legal legislation related to intellectual property rights and the privacy of

data related to individuals in light of the fair use of information, and to benefit from it in several ways Informatics and knowledge trends, and the development of professional and training aspects related to the fields of data management and investment through specialized programs to qualify the current cadres present in the center and the use of specialists in the field of data science and information technologies. The study methodology was also based on the case study approach as it is the best and most appropriate approach for this type of studies.

Keywords :Big Data Investment; Electronic Fatwa Services; Religious Information Centers; Al-Azhar International Center for Electronic Fatwa; Electronic Fatwa Sources

The interaction between the restricted navigation style in e-training environments and its impact on the development of effective teaching skills and learning engagement of the student-teacher at the faculty of Education, New Valley University

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Abstract:

The study aimed to investigate the effectiveness of restricted navigation style and cognitive methods in the electronic training environment (ETE) in developing effective teaching skills and engagement in learning for student teachers at the College of Education (CE). The study used a descriptive approach in the study, analysis, and design stage, and a semi-experimental approach when measuring the impact of the two independent variables of the study on the two dependent variables. The sample of the study was selected from students of the third year, Biology Division, CE, New Valley University, and the number of students in the sample was 120 students. The students were distributed into two experimental groups after applying the cognitive methods scale (tolerance of ambiguity - intolerance of ambiguity). The study determined the cognitive styles of student teachers at CE, New Valley, as well as indicators of student engagement in learning in the ETE. The effect of the restricted browsing style was studied in the ETE in developing effective teaching skills and engagement in learning for student teachers at CE, and the effect of the learner's cognitive style on developing effective teaching skills and engaging in learning was also determined. The study concluded that ETEs should be employed for learners in different educational stages, and effective teaching skills should be developed among student teachers in different colleges. The study's findings can contribute to the development of effective teaching methods and engagement in learning for student teachers in academic institutions. The study's results can also

help in the development of cognitive methods and the use of restricted browsing styles in the ETE

Keywords: Restricted navigation style; Effective skills education; E-training environments

Control Pattern (learner / application / learner with guidance) in Mobile Applications and its Impact on Developing Usage for Children with Autism Spectrum Disorder

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Abstract:

The current research aims to measure the usability of mobile learning applications based on patterns of educational control among a sample of children with autism, and the research sample was determined from 15 autistic children., The research results revealed that there were statistically significant differences at the level of $\leq (0.05)$ between the averages scores of the students of the experimental groups in the usability scale It is due to the effect of the difference in control styles (the learner, application, and the learner with guidance) for the experimental group that was exposed to the application based on the learner's control style with guidance.

Keywords: Patterns of educational control, Mobile application, Usability, autism

The role of the learning management system in supporting self-learning from the point of view of students of Arab East colleges

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Abstract:

The study aimed to determine the degree of application of the learning management system in the courses in the colleges of the Arab East from the point of view of the students. There are (210) male and female students, The study found that the results of the dimension "Degree of application of the learning management system in courses in the colleges of the Arab East from the point of view of students" the general arithmetic mean of the dimension (3.69) with a standard deviation (0.87), came with a (significant) degree of agreement, and came in the first place employing management system tools Learning to serve self-learning, followed by training on dealing with search engines contribute to increasing the effectiveness of self-learning. I also found that the results of the dimension "The reality of self-learning among students in Arab East colleges from the students' point of view" consists of (16) phrases, and the dimension expressions ranged from the arithmetic mean is between (3.98 - 4.30). The general arithmetic mean for the dimension was (4.04) with a standard deviation (0.83), which came with a (significant) degree of agreement. The first place was to send the required work from students related to the course through the system, followed by the degree of applying the learning management system in the courses in the colleges of the Arab East from the point of view of students.

Keywords:

Applications; E-learning management; Self-learning; Arab East colleges