Chapter 1
SWOT Analysis of Internet of Things in the Library and Information Science Environment

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ABSTRACT

Internet of things (IoT) is emerging as a prominent phenomenon in every domain including library and information science. Thus, this study aims to define the internet of things (IoT) concept and further conducts the SWOT analysis of internet of things (IoT) in connection to the library and information science domain in order to know the different insights of the internet of things (IoT). This study may be useful for knowing the different aspects of the internet of things (IoT) phenomena.

INTRODUCTION

In this technology-driven era, Internet has become a superpower and made everything online as well as enable to the users to send and access information or resources anywhere and anytime in real-time mode with the help of human, computer and internet technologies. But, nowadays, Internet of Things (IoT) has come up as the big thing and latest addition in internet sphere and considering as a most prominent technology owing to reasons of connecting and communicating to the large numbers of devices and is presenting deeper impact not only in different disciplines including library and information science but also daily life of the people. Internet of Things (IoT) is also considered as a new version of the Internet and provide facilities to connect the so many things or objects and enabled them to communicate each other automatically without a human in real time mode through a single device or server or interface. Therefore, the library and information science professionals are attracting towards the Internet of Things (IoT) phenomena and getting familiar as well as thinking seriously towards how Internet of Things (IoT) technology can be adopted, implemented and utilized in the library and information science domain

and can be supported by library and information science professionals. Thus, for proper understanding and making maximum usages of Internet of Things (IoT) technology in library and information science domain, the library and information science professionals must know about the internal and external issues as well as other insights of the Internet of Things (IoT) concept in the real situation. To measure the various potentials and other insights of the Internet of Things (IoT) technology, SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis can be considered to be an effective and appropriate instrument. (Humphrey, 2005) added that the framework of SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis was developed between the 1960s and 1970s at Stanford Research Institute in the USA, to analyze the business data of fortune 500 companies. A SWOT analysis may be defined as a framework that can be used to identify the insights from the different angles for the particular product, concept, project, place, person etc. Hence, SWOT analysis may be very helpful in making strategic planning, decision making, and to identify other insights in order to understand and implement a product, concept, project etc. successfully for various purposes. Thus, an effort through this study has made for conducting a SWOT analysis of Internet of Things (IoT) for understanding, participating, adopting, implementing, utilizing and supporting Internet of Things (IoT) technology in the library and information science domain.

LITERATURE REVIEW

The different study carried out on the diverse issues connected of the Internet of Things (IoT) and library and information science domain in which Fernandez (2015) defined the historical background of Internet of Things (IoT) and described the various potentials of Internet of Things (IoT) concept. This study further expressed the diverse roles of libraries in the Internet of Things (IoT) domain. Patel and Patel (2018) highlighted an overview of the Internet of Things (IoT) concept, This study also described the characteristics, technologies, architecture, application and future challenges of the Internet of Things (IoT). Ziegeldorf et al. (2014) highlighted the evolution steps of Internet of Things (IoT) concept and pointed out the threats of privacy issues in the Internet of Things (IoT) setting. Ibarra-Esquer et al. (2017) mapped the changes were taking place in the evolution of the Internet of Things (IoT) phenomena by using two steps approaches and six international databases. Atzori et al. (2017) presented different stages of evolution of the Internet of Things (IoT) and stated that IoT has different potentials and play vital roles to present societal problems and solutions. This study further presented the definition of the Internet of Things (IoT) in future perspectives. Haller (2010) elaborated the terms related to the Internet of Things (IoT) and described the relationship among these terms in detailed. Hoy (2015) critically argued the Internet of Things (IoT) phenomena and also highlighted the various challenges related to using the Internet of Things (IoT) in libraries setting by providing some examples of the libraries which are using the Internet of Things (IoT) technology in their service and resources. By conducting the literature review, Liang (2018) pointed out the different applications of the Internet of Things that can be used in libraries services. This study further argued the research challenges of the Internet of Things (IoT) in future perspective. Mishra et. al. (2016) conducted a bibliographic analysis of the literature published on the Internet of Things (IoT) in different databases by using three search terms. Xie et al. (2019) proposed a theoretical framework Internet of Things (IoT) based intelligent evacuation protocol in the libraries through gathering data from eight libraries of Vietnam and Chine. This intelligent evacuation protocol consists of five elements like the information base, the protocol base, the IoT sensors, the

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