Chapter 3
Information Needs of Bioinformatics Researchers

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ABSTRACT

Information plays a vital role in bioinformatics to achieve the existing bioinformatics information technologies and to identify the needs of bioinformatics researchers. The most revolutionary development for bioinformatics resources is access to the internet because internet is pervasive in all bioinformatics work. Users required various sources of information for conducting bioinformatics research. The success of the information service is more likely to be achieved by adjusting the services to meet the specific needs of an individual.

INTRODUCTION

Library and information science focus on information seeking and the information user, while those from the field of communications focus on the communicator and the communication process (Robson & Robinson, 2013). Needs may refer to lack of self-sufficiency and also represents gap in the present knowledge of the users. Apart from the expressed or articulated needs, there are unexpressed needs which the user is aware of but does not like to express consciously or unconsciously (Devadason & Lingam, 1996). Information is used, in the context of user-studies

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research. There is not much effort in research and writing of user studies that has circumstances in information science apart from information retrieval. The probable interrelationships among personal needs and other factors aim is to suggest that when we talk about users' information needs we should have in mind some conception of information (facts, data, opinion, advice) as one means towards the end of satisfying such fundamental needs. Information needs should not be confused with information seeking behavior. What users believe they need is represented in the subjective understanding of needs. This subjective understanding is reflected in their information seeking behavior. Even if this behavior may be studied objectively it is still not useful as criteria for what is needed. What is needed is something that is able to solve the problem behind the users' behavior (Wilson, 1981). Information plays a vital role in bioinformatics to achieve the existing bioinformatics information technologies. Information is recognized as a national resource, which is of vital significance in all sectors of human endeavor - planning, decision making, research and development, education, socio-economic and cultural development, and also in improving the quality of life of every members of the society. Along with the material and energy, information is considered a potential resource, a product and there by a need, which must be put to use effectively. It is true that the information scientists had for a long time neglected one of the most important components of any information system, namely the 'user'. They were more concerned with the information and their bibliographical organization and control. How exactly the user behaved when he was looking for some information, what type of information was used in which situation, how the information was used when obtained, all these were not very clearly known to the information scientists. Proper systematic planning and development of information resources and services of the user studies are very essential. In recent years, there have been several studies pertaining to bioinformatics researchers and their information needs in bioinformatics resources. However more need in bioinformatics resources has come to pass and the author discussed some topics in this chapter to get the unambiguous inspiration.

DEFINITION OF BIOINFORMATICS

Paulien Hogeweg coined the term bioinformatics in 1970 for the study of informatics processes in biotic systems. 'Bio' means Molecular Biology and 'Informatics' means Computer Science. The study of the application of molecular biology, computer science, artificial intelligence, statistics and mathematics, organizes, understand and discover interesting information associated with the large-scale molecular biology databases and to guide assays for biological experiments is known as Bioinformatics (Gilbert, 2007). Bioinformatics is the field of science in which biology, computer