

Impact of Information on Research and Development Activities of Nuclear Scientists in Ghana

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The study sought to investigate the impact of information use by Ghanaian nuclear scientists in their research and development activities. The rationale for assessing the impact of nuclear information arises from the need to provide management, policy makers and other stakeholders with empirical evidence of the role of information in the work of nuclear scientists. Such evidence would provide justification for continued and adequate funding of library and information services in this era of dwindling resources. The study would also enable information professionals to better meet the information needs of nuclear scientists.

A national survey of nuclear scientists was conducted using a semi-structured questionnaire, resulting in a response rate of 92 percent. The analytical framework proposed by the International Development Research Centre served as an appropriate guide for the study. Descriptive statistics was used to examine the personal characteristics of the nuclear scientists. Personal characteristics that were dealt with in this study included age, sex, organisational affiliation, experience, qualification, specialisation and sector of activity. The study also examined the extent of use of library and information services. Variables such as frequency of library use, reasons for non use of library facilities, preferred document type, awareness of existing library/information services and problems encountered in accessing information were analysed. For a situation specific analysis, the study also employed the critical incident technique to show a relationship between information use and productivity and achievement indicators of the nuclear scientists. Productivity was measured quantitatively in terms of work or research output such as the number of publications and formal, oral presentations. Achievement was also measured in terms of promotions earned, awards, committees served and high level projects.

The study results confirm the importance of information to nuclear research and development activities. The short term benefits of information use to nuclear scientists are timeliness in the execution of work, effective implementation of work, avoidance of unnecessary duplication of research, and savings in time and resources. In the long term, information use leads to discernable increase in volume and quality of user work output as well as achievements by way of their contribution to the work of their organizations. Though nuclear scientists value information, as the results of this study have demonstrated, it is significant to note that, the frequency with which they use library and other local information services is not very satisfactory. This is due to inadequate coverage of relevant subjects by most libraries, lack of awareness of some library

services by respondents and lack of access to up-to-date literature, particularly scientific journals, which they regard as essential to their work.

To improve information delivery to nuclear scientists, the study recommends the need to strengthen electronic information infrastructure and networks among nuclear scientists for effective resource sharing. In view of the importance of the International Nuclear Information System (INIS) Database to nuclear scientists, there is the need to conduct further research into the reasons for low use or non use of the INIS Database. There is also the need to compile a list of nuclear scientists in Ghana and elsewhere to serve as a source of reference for future research involving nuclear scientists.