Seven dimensions of information literacy can be identified:

- **Tool literacy**, or the ability to understand and use the practical and conceptual tools of current information technology, including software, hardware and multimedia, that are relevant to education and the areas of work and professional life that the individual expects to inhabit. This can be taken to include the basics of computer and network applications as well as fundamental concepts of algorithms, data structures, and network topologies and protocols.

- **Resource literacy**, or the ability to understand the form, format, location and access methods of information resources, especially daily expanding networked information resources. This is practically identical with librarians' conceptions of information literacy, and includes concepts of the classification and organization of such resources.

- **Social-structural literacy**, or knowing that and how information is socially situated and produced. This means knowing about how information fits into the life of groups; about the institutions and social networks -- such as the universities, libraries, researcher communities, corporations, government agencies, community groups -- that create and organize information and knowledge; and the social processes through which it is generated -- such as the trajectory of publication of scholarly articles (peer review, etc.), the relationship between a Listserv and a shared interest group, or the audience served by a specialized library or Web site.

- **Research literacy**, or the ability to understand and use the IT-based tools relevant to the work of today's researcher and scholar. For those in graduate education, this would include discipline-related computer software for quantitative analysis, qualitative analysis and simulation, as well as an understanding of the conceptual and analytical limitations of such software.

- **Publishing literacy**, or the ability to format and publish research and ideas electronically, in textual and multimedia forms (including via World Wide Web, electronic mail and distribution lists, and CD-ROMs), to introduce them into the electronic public realm and the electronic community of scholars. Writing is always shaped by its tools and its audience. Computer tools and network audiences represent genuine changes in writing itself.

- **Emerging technology literacy**, or the ability to ongoingly adapt to, understand, evaluate and make use of the continually emerging innovations in information technology so as not to be a prisoner of prior tools and resources, and to make intelligent decisions about the adoption of new ones. Clearly this includes understanding of the human, organizational and social context of technologies as well as criteria for their evaluation.

- **Critical literacy**, or the ability to evaluate critically the intellectual, human and social strengths and weaknesses, potentials and limits, benefits and costs of information technologies. This would need to include a historical perspective (e.g. the connection between algorithmic thinking, formalization in mathematics, and the development of Western science and rationality and their limits); a philosophical perspective (current debates in the philosophy of technology, the critique of instrumental reason, the possibility and nature of artificial
intelligence); a sociopolitical perspective (e.g. the impact of information technology on work, public policy issues in the development of a global information infrastructure); and a cultural perspective (e.g. current discussions of the virtual body and of the definition of human being as an information-processing machine).