

# The Paradigm Shift from Information Society to Knowledge Society and its Implications on Teaching

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## ABSTRACT

For developing countries to join race of development, they need to develop their 'digital infrastructure' and move on to the 'information superhighway'. This can allow the traditional societies in developing countries to become knowledge societies. The Society had already undergone a paradigm shift from information to knowledge society. In the knowledge society, competence is the most important factor in competition on the global market. That means learning and learning methods now attract great attention in all branches of the industry, in addition to the learning institutions. The knowledge society has brought new expectations, ideas and demands to both teachers and students in a school system. This article is a conceptual review on impact of knowledge society on the teacher education wherein there are new initiatives taken to understand the understanding of the students and educating the educators so as to fulfill the exact need of the students. Thus, there exists a need for knowledge based skills rather than mere skills.

## 1. Introduction

Experts had stated that, we stand on the threshold of a new era of 'knowledge' (Bindé & Matsuura, 2005). Moreover, 21st century has brought forth novel changes such as the advent of information and communication technology (ICT). Korotayev & Tsirel (2010) suggested that since 1990's, the world is living the 5th of Kondratiev waves in the form of information technology era. Information revolution has reformed societies and economies around the globe. Terms such as information society and knowledge society are surfed during the last decade (Bindé & Matsuura, 2005). Powell & Snellman (2004) defines a knowledge economy as an economy where production and services are based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advancement, as well as rapid obsolescence. Therefore, for any knowledge society there is a need for persistent technical and scientific advancement. In the sense, it could majorly be the focus on the advanced intelligence on the cognitive and metacognitive areas of education. Classic ideology about knowledge is that it has no inputs (Arrow, 1962). However, in modern times knowledge is considered as an intangible product of thought and research. Particularly, the change has to happen on teaching the teachers, so as to enhance the student's learning as per their need for the hour. It is posited that the information society is not sustainable because information alone is meaningless. Rather, we need to focus on the knowledge-based skills required for the students in this modern era.

## 2. The paradigm shift from information to knowledge society

The terms 'information society' and 'knowledge society' are frequently used interchangeably to denote a society wherein knowledge has become the most important production factor, there exists a culture of knowledge production supported by a higher level of education especially the teacher education and the focus is not only on the use of modern

Information and Communication Technology, but also on content, meaning and knowledge and knowledge-based skills.

Currently, however, there has been a trend towards the coinage of the term 'knowledge society'. This reflects an intuitive feeling that the concept of 'information' is perhaps too thin to carry the weight of the far-reaching societal changes that are expected hopefully. 'Knowledge' implies a resource that is richer, more structured, more organized, more complex and more qualitative than 'information'. Knowledge is not merely the result of collection and processing but also requires the exercise of judgment. If we extend this distinction to the information and knowledge societies, we can see a paradigm shift in emphasis of two societies (Table 1).

We therefore argue that the migration to the term 'knowledge society' reflects an understanding that the 'knowledge society' is a qualitatively richer concept. In our view the shift to a 'knowledge society' implies a more thorough societal transformation than the advent of an 'information society'.

**Table 1: The Paradigm Shift in the emphasis from information to the knowledge society**

Information Society	Knowledge Society
Information & communication technology	Knowledge technology
Collection	Production
Dissemination	Analysis, Evaluation
Packages	Content
Measurement	Judgement
Facts	Texts
Outputs	Outcomes
Quantity	Quality
Reliability	Validity
Accuracy	Truth, Trust

### 3. The implications of knowledge society for teaching

The Current education system in a knowledge society, gives priority for improving the overall quality of education, especially by focusing on student-centric education. So as to achieve the same, there exists a continuous revised curriculum and revised textbooks across the school system. The knowledge society has brought new expectations, ideas and demands to both teachers and students in a school system.

The knowledge society emphasizes the following educational outcomes for students of the twenty-first century will have expanded needs for knowledge-based skills. It reflects priorities implicit in assumptions of the knowledge society, especially as it applies to the changing idea of most jobs. It is proposed to guide the design of curriculum, learning activities, and assessment activities, particularly when students have access to ICT. Each skill category relates to a set of tasks and should be analyzed with respect to the type of knowledge predominating in these tasks. Each skill category may be appropriate to multiple types or levels of knowledge such as facts, principles, procedures, meta-cognition, and subjective states. Each type of knowledge-based skills (Figure 1) is discussed briefly below:

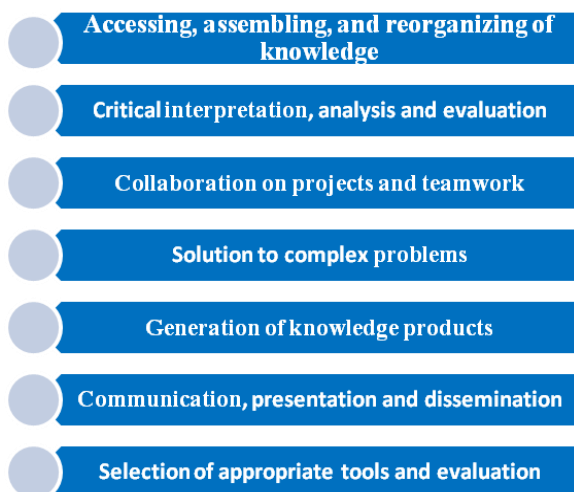


Figure 2: Knowledge-based skills in a Knowledge society

- 1) **Accessing, assembling, and reorganizing of knowledge:** It is generally identified that in the era of databases and the Internet, the ability to access effectively and quickly and assembling information of different types is critical. Undoubtedly, the concept of information literacy, which was invented about 35 years ago (cf. Spitzer et al., 1998), reinforces upon this process. The skills required to search and organize information from the websites are called as e-literacy. While the open Web being a great resource, there are numerous other sources of data and knowledge that are needed for many. Remarkable advances are being made in Internet-based systems that integrate browsing capabilities with additional tools that are pedagogically oriented (Soloway, 2000).
- 2) **Critical interpretation, analysis and evaluation:** Integration includes evaluation of the quality and link of knowledge to arrive on appropriate conclusions. Critical evaluation is also called critical thinking or high-

performance thinking. Many types of tools, both general and specialized, can be used for these tasks as suitable.

- 3) **Collaboration on projects and teamwork:** Sharing knowledge is an necessary aspect of successful teamwork, as it is the ability to consult with experts and others seated at different levels of the hierarchy. Present options include e-mail, conferencing and instant messaging. Effective communication in most global organizations demands the skills associated with selecting tools of communication tools as suitable for various types of knowledge work. Inter-cultural communication, both involving and without ICT, needs additional skills, which are in high demand.
- 4) **Solution to complex problems:** Problem solving has been always a major challenge, but with arising global technologies the problems are highly complex and the solutions are being more critical for creating competitive products. Thus, the stakes are higher and the significance of planning strategies and higher-level thinking skills are more critical. Not only the complex problems are central to school and the work- place, but they are also relevant to day-to-day life.
- 5) **Generation of knowledge products:** Knowledge product lies between single ideas and tiny documents and large, completed projects including hundreds of documents and complex models. The skilled use of software tools is critical to effective completion of such tasks. Based on the goal of the task or subtasks, relevant software tools include word processors, spreadsheets, databases, concept mapping and number of other application software programs. Innovation and creativity has to be considered both as a product and an outcome because of the significance of it to the success in the twenty-first century.
- 6) **Communication, presentation and dissemination:** Knowledge workers are expected to present their knowledge either to report facts or to persuade an audience to accept particular ideas. The use of audio-visual and computing media for such a type of presentations has been as called multimedia literacy.
- 7) **Selection of appropriate tools and evaluation:** This kind of knowledge-based skill encompasses not only awareness of these secondary effects but also the ability to react on existing legal and ethical boundaries. These tasks coincide with technological literacy, which is also called socio-technical literacy. It is also defined as balancing tool and application potentials with practical constraints, specifically social and ethical considerations. Rapidly evolving IT produces new unethical opportunities for cheating, plagiarism, access to private, personal information and access to adult materials. The new global economy needs to prepare youth in dealing with ICT both technically and responsibly with ethics.

#### 4. Conclusion

The concepts of the information and knowledge society are central to that understanding. In particular, it is necessary to know much more about knowledge, how best to define it, how to utilize students' prior knowledge in the learning process, how to manage knowledge in organizational environments, how to let it guide the construction of assessments, and so on. The point is not only that the student is being socialized by the teacher, but also that effective learning involves learning attitudes and values associated with any knowledge acquired. In other words, without the tacit dimension of knowledge, people do not learn when and how to apply the explicit part. Looking beyond information to knowledge of various types gives us a much wide

picture of learning. It also helps to clarify the ways in which learning and practice are being interrelated. First and foremost, the link between learning and practice is a social one. And if we embed learning in a social context, then subsequent practice is much more assured. Learning is not just about students. It is also an essential dimension of teaching and schooling. Finally, schools must learn to adapt, not just to change, but to new knowledge that helps them run more effectively. School reform has a much higher chance of success when its leaders nurture the learning processes of the school community. Reform is not just a matter of vision, but it is a matter of vision, resources, community participation, and taking full advantage of social mechanisms for making learning optimally effective.

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