

THE NEED FOR KNOWLEDGE WILL REMAIN!

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The impetus to this note has been Chris Anderson's article *The end of theory: the data deluge makes the scientific method obsolete* (Wired Magazine, 2008, www.wired.com/2008/06/pb-theory/). The purpose of the note is to recall two aspects, which are well known to the majority of university professors, but are not always embodied sufficiently in the practice of teaching.

1. The first point is the importance of fundamental disciplines.

Students often ask their professor of mathematics: "What do we need this for?" The principle answer should be "for being able to think". With today's clip-consciousness, students often can not even understand what this or that simple question is about. Of course, specific examples of applications of mathematical models should be also demonstrated (for instance, solving Cauchy problem to determine deflections of the cantilever beam, using probability theory to estimate the reliability of various systems, and so on).

2. Another fundamental aspect is that the knowledge should not be lost in the information, swept by it, deluged with "big data".

The triad "Data, Information, Knowledge" is now widely discussed, at philosophical, theoretical, and practical levels. At popular level the following definitions are, in particular, given for these notions: "Data – Facts, a description of the World; Information – Captured Data and Knowledge; Knowledge – our personal map/model of the World", or "Information is processed data whereas knowledge is information that is modeled to be useful", etc.

Being informed about sizes of bricks or classes of concrete the future civil engineer should understand where these sizes and classes came from. When studying today's programme means and new information technologies the students should have an idea of the basics on which these tools are built.

With fantastic, rapid development of computer technologies, computer buttons will be transformed or disappear. Program robots and artificial neural networks, other, yet unpredictable inventions can lead to new civilization paradigms (and will lead). Today's professions can also disappear or radically change in nearest future. Isaac Asimov has written impressive dramatic story about the world where few "chosen" have access to the Knowledge (*Profession*, in *Nine Tomorrows*).

The information does age, knowledge accumulates. Knowledge will remain, until learning and the search for meanings remain human need and destiny.