BOK Knowledge Areas

Introduction

This list of topics is my blending of the lists that the committee has before it. My goal was to provide a comparable level of granularity in the different Knowledge Areas. The material under Technology Resources and Technology Building is, however, an exception to this general rule. For many of those who are preparing to work as computing professionals, these two Knowledge Areas will be the central core of what is studied. I happily leave to others the task of filling in greater detail in these Knowledge Areas.

Mastery

The Bloom taxonomy is much referenced. And there is an open question about how much knowledge is required at the lowest Bloom level. The first three levels can be described (from wikipedia - 2010.04.30):

1. Knowledge
   Exhibit memory of previously-learned materials by recalling facts, terms, basic concepts and answers

2. Comprehension
   Demonstrative understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas

3. Application
   Using new knowledge. Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way

Mastery of a BOK could be defined to be Knowledge of all of the topics in all of the Knowledge Areas presented below, plus Comprehension of at least one topic in each Knowledge Area, plus Application of at least one Knowledge Area.

Knowledge Areas

A. The Computing Milieux

- History
- Social Impact
- Economic Impact
- Employment
- Professionals

Comment: It's an open question if "The Computing Profession" can be said to exist. Better to call the Knowledge Area "The Computing Milieux".

B. Professional Responsibility

- Code of Ethics
- Trustworthy Intentions
- Trustworthy Competence
- Public Interest

Comment: Trustworthiness is key. The steps the professional must take in order to justify the trust of clients, employers, or the public should be front-and-centre in this knowledge area.

C. Law for IT Professionals

- Common Law
- Intellectual Property
- Government Regulation
- International Business
- Electronic Commerce

Comment: Work has already been done within CIPS on how material from a standard undergraduate business law course could be adopted for our purposes. This is a list of topics adopted from that work.

D. Technology Resources

- Hardware & Software Fundamentals
- Data and Information Management
- Communications Infrastructure

Comment: I see this as mostly background knowledge about the resources - hardware, software & communications - that are available to the computing professional.

E. Technology Building

- Programming & Scripting
- Data Architecture & Design
- Human-Computer Interaction
- System Development Practices
- System Acquisition Practices

Comment: For many/most of those intending to enter the field, this knowledge area will be central in preparing them for their initial professional assignments.

F. Service Provision

- Business System Life Cycles

- Service Management Practices
- Service Secutity Practices

Comment: In many ways, this knowledge area is similar in scope to what can be found in ITIL version 3. The focus is on delivery, security, and management.

G. Outcomes Management

- Value Analysis
- Risk Analysis
- Organizational Change
- Project Management

  Comment: The ITGI Val IT and Risk IT could be used as the basis for the first two points (or however they are repackaged in COBIT v5).

H. IT Modelling

- Modelling Methods
- Business Modelling
- Business Reengineering
- Modelling Tools

Comment: It could be argued that "modelling" is central to effective deployment of business-focused systems. The system provides a "model" of the business, with goodness of fit critical.

I. Foundation Skills

- Native Language Fluency
- Finite Mathematics
- Probability & Statistics

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