



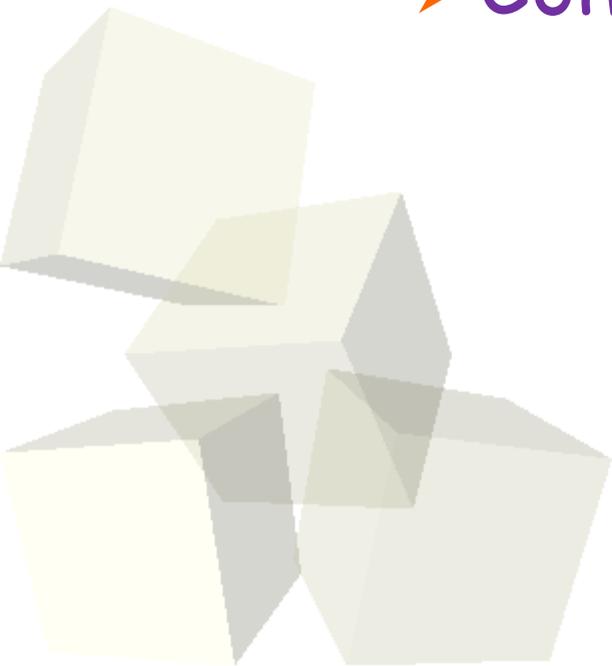
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**Informatics at the Czech Universities  
for Bc Students in Business Programs**



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- Motivation
- Methodology
- Results
- Conclusion



The motivation for the article (research study) preparation:

- ✓ The response for the review's remarks to the articles about informatics teaching in the past (ICTE conference).
- ✓ Analyze of the current situation regarding the study of informatics at faculties of economics and management in the Bachelor programs at the Czech public universities.
- ✓ Comparing the results with the goals of the computer and information literacy and ICT trends for that type of university students.
- ✓ Gaining arguments against attempts to cancel informatics education at the Faculty of Management and Economics (FaME) of Tomas Bata University (TBU) in Zlín.

The case study is based on the analysis of bachelor study programs at the WWW-pages of the faculties which provide study courses on economics, management and entrepreneurship that include the relevant education in informatics (Table 1).

Information about education is quite simple available, but the decision what is a part of problem analysis is complicated (mandatory and compulsory courses, generalization of themes, the scope and content of teaching the subject, etc..).

## Table 1

	University	Faculty
1	Czech Uni of Life Sciences Prague	Faculty of Economics and Manag.
2	Masaryk University in Brno	Faculty of Economics and Admin.
3	Mendel University in Brno	Faculty of Business and Economics
4	Uni of South Bohemia in ČB	Faculty of Economics
5	Silesian University in Opava	School of Business Admin in Karvina
6	Technical University of Liberec	Faculty of Economics
7	J. E. Purkyně University in Ústí nL	Faculty of Social and Econ. Studies
8	University of Defence	Faculty of Economics and Manag.
9	Tomas Bata University in Zlín	Faculty of Manag. and Economics
10	University of Pardubice	Faculty of Economics and Admin.
11	Technical University of Ostrava	Faculty of Economics
12	Brno University of Technology	Faculty of Business and Manag.
13	University of West Bohemia	Faculty of Economics

The first part of analysis is oriented to the computer and information literacy (Table 2).

The second part analyzes the approach to informatics teaching with comparing the ICT trends in business (Table 3).

Tables were changed due to sources of information and authors approach. In the article are tables version 2, in the presentation version 3.

## Expectations of computer science education in relation to Computer and Information Literacy (hypotheses):

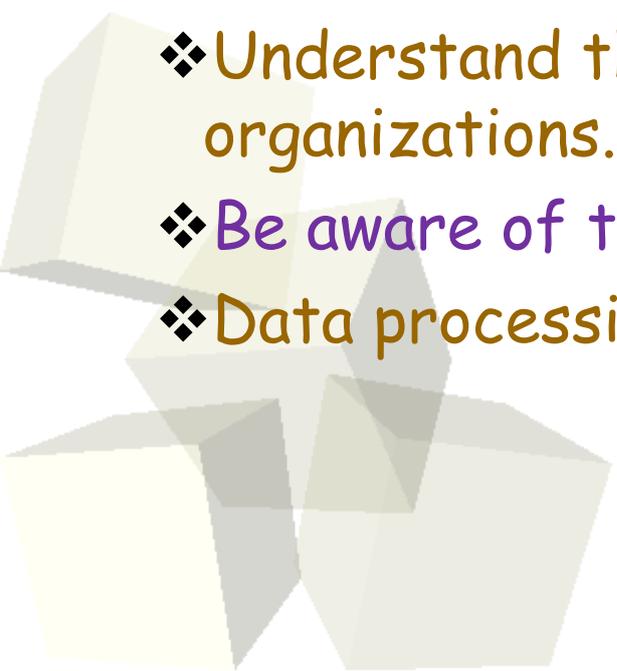
- ❖ Matching the necessary theoretical knowledge and practical skills.
  - ❖ Professional work with Office automation.
    - ❖ Seamless ability to communicate and retrieve information.
    - ❖ Understand the importance of ICT for enterprises and organizations.
    - ❖ Be aware of the security measures ICT.
    - ❖ Data processing, databases, and fundamentals of IS.
- 

Table 2

	Topic / Faculty	1	2	3	4	5	6	7	8	9	10	11	12	13	Σ
1	Algorithmisation, Programming	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	6
2	Data & Information Processing	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	12										
3	Database Systems and Tools	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	12									
4	Computer Graphics, Multimedia	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						6
5	Computer Networks, Services	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	10						
6	Ergonomics of Computer Use		<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>					2
7	Hardware	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	11						
8	Informatics, Information Society	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	12										
9	Information Systems (Basic)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	12										
10	Internet Applications, Services	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	11								
11	IT Security; Data Protection	<input checked="" type="checkbox"/>	13												
12	Office-text editor	<input checked="" type="checkbox"/>	13												
13	Office-spreadsheet	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	11									
14	Office-presentation		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	9					
15	Operation Systems			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		8						
16	Software (Basic)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	10
17	Web design	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				7
	Topics in Total	14	6	15	16	14	15	14	14	15	11	12	14	15	

Given the expectations of the informatics education can confirm the hypothesis, because the most frequent topics include:

- Data and information processing, database systems and tools.
- Informatics, information society, and information systems.
- IT security and Data protection.
- Office automation: text processing and spreadsheet.

As regards the scope of teaching fundamentals of informatics between faculties:

- ✓ Almost comparable level at 12-faculties, fewer subjects reported at Masaryk University (library).
- ✓ It can be concluded that faculty devote much attention to the teaching of computer science. Teaching is mostly distributed over the entire study period. In the first year are included Foundations of Computer Science.

Expectations of computer science education in relation to ICT trends to support business (hypotheses):

- Business Intelligence.
- ICT Outsourcing, Cloud Computing.
- Mobile Computing, including BYOD-Bring Your Own Device.
- Big Data, In Memory Computing.
- Social Media in Enterprises and Organizations.

Table 3

	Topic / Faculty	1	2	3	4	5	6	7	8	9	10	11	12	13	Σ
1	Business Intelligence					☑				☑				☑	3
2	Data and Functions Analysis	☑							☑	☑		☑	☑		5
3	Economic Informatics				☑							☑			2
4	e-Business, e-Commerce	☑				☑				☑	☑	☑			5
5	e-Government	☑				☑		☑		☑	☑	☑	☑		7
6	Information Management	☑	☑			☑			☑	☑	☑		☑	☑	8
7	IS Development	☑			☑	☑		☑			☑		☑	☑	7
8	IS in Government Organisations	☑						☑	☑	☑	☑		☑	☑	7
9	IS in Enterprises, ERP	☑		☑	☑	☑	☑	☑		☑	☑	☑		☑	10
10	Mobile Computing	☑													1
11	Object-Programming	☑			☑									☑	3
12	Outsourcing IT, Cloud Comp.	☑				☑				☑					3
13	Knowledge Management		☑												1
14	Process Management					☑				☑	☑		☑		4
15	Project Management	☑			☑				☑	☑	☑	☑	☑	☑	8
16	Social Networks/Media	☑						☑					☑		3
	<b>Topics in Total</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>8</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>10</b>	<b>8</b>	<b>6</b>	<b>8</b>	<b>7</b>	

Given the expectations of informatics education in the expanding topics hypothesis can not be confirmed.

The most frequent topics include:

Information management.

IS in Enterprises.

Project management.

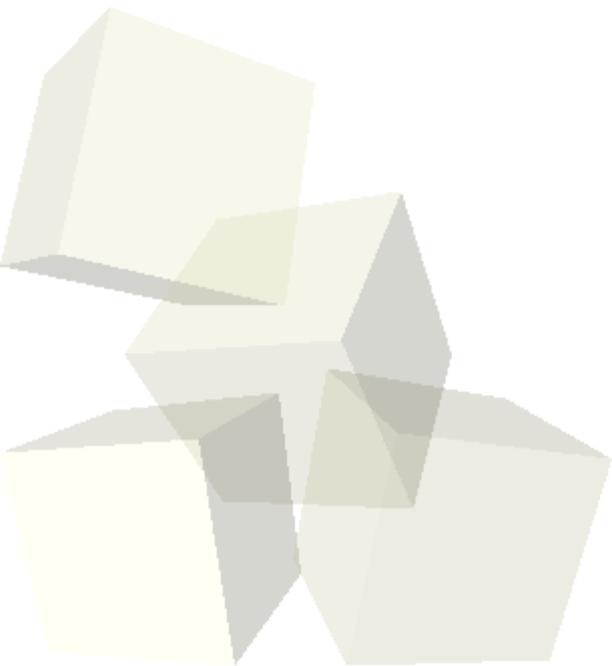
Topics in line with trends in ICT promotion of business are to a greater extent in the teaching included.

Confirm the delay of teaching regarding practice, which is also due to the process of accreditation of universities.



When considering the continuing research area offers:

- BC teaching of computer science at a private universities.
- Teaching informatics at the MGR-degree.
- Comparison with other countries.





**Thank you for your attention!**

