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COMPUTER LITERACY COURSE FOR TEACHER FOR THE 21st CENTURY

A Summary

The life and activities of every man in the transitional period from the second to the third millenium has been characterized by huge changes that resulted from scientific and technological revolution in which dominates a highly developed IT – Communicational Technology.
The IT educational is based on IT-Communicational Technologies and it is the basic feature of the IT society and a precondition for technological education of all those persons who are included in the educational and training process.

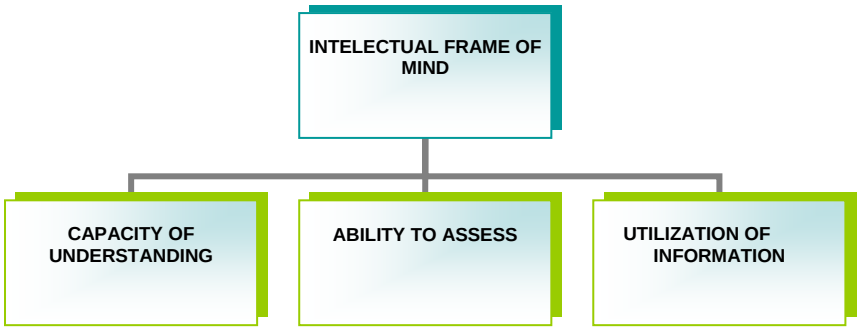
The key words: computer literacy, IT literacy, IT-Communicational Technology, the basic IT knowledge.

THE NOTION OF COMPUTER LITERACYAND IT-LITERACY

The 21st century has been renamed as «a century of knowledge». «Today, the number of information sources has been extremely increasing. If we compare the information sources of an institution we may find approximate values on number of documents received and filed on media in the following proportions:
N*104 books, N*102 periodicals, N*101 CD_ROMs, N*102 dischettes, N*109 Info on the Web (in which number 1,2,3 ...)» /1/
The traditional literacy under present conditions of living cannot be deemed sufficient, while the competitiveness of Croatia shall depend exclusively on this kind of literacy, meant for the 21st century, as «the tools of the digital era have increased the capacity of our muscles and have widened the capabilities of our brain» /2/

The notion «computer literacy» appeared in the early '70-ties; it was used for the first time by Paul Zarevski in 1974.

The person who gained computer literacy is the person who has learned how to leran, how to find desired information and determined knowledge on a topic and how to process and utilize such information.
Graphic Chart No.1 Intelectual freame of mind



If a person were to accomplish herself in computer literacy, he should primarily gain the required knowledge and determined skills to be able to operate within a given IT technology area.
The main precondition of progress may be conceived through the three undisputable categories:
COMPUTER LITERACY - the literacy for everybody
IT LITERACY – the literacy required for educational which is the precondition of either individual and/or group approach to the world of the WWW: and, of no less importance, the literacy for remote learning (distance learning).
IT LITERACY – the literacy per a permanent trainign of teachers (training for trainers). /4/

The IT or computer literacy is
The literacy which implies a capacity to operate a PC.
It is obtained by : /5/

defined levels of ability to adoperate IT Systems,
networks, and
application programmes.

WHAT DO THE IT-LITERACY AND COMPUTER LITERACY DEAL IN ?

The IT-literacy deals in ***contents*** , while the IT-literacy refers to ***technology, infrastructure and technological «know-how».***
(The IT-literacy – the key for all life learning. /6/
If an individual of the present time were to obtain the IT-literacy he must first gain his computer literacy. Why? Because of the enormous amount of information accessible in the electronic media (a number of databases accessible in an electronic medium).
However, the said computer skills do not precondition the IT-literacy, as such an individual may be an expert for PCs, and still, he would need an assistance and advice when assessing the quality and validity of such information.

WHAT IS THE CURRENT PHASE OF DEVELOPMENT IN OUR COUNTRY?

In respect of trends indicated hitherto, the europe may be considered backward when compared to the rest of the world.

Research work, educational levels and formal training are considered as the most important non-material investments everywhere in the world, especially in the european Union member states. Due to the great improtance of education for a national development of a country, it has become evident that all state institutions (the Croatian ones as well) have become active in the development of various strategies of IT-development.
On Croatian State level and considering the social requirements to become a member of the European Union and the general inclination towards a speedier entering into the society of knowledge caused more intensive activities relating to execution of a number of proposals of development which contain the scheme of technological development of Croatia. These are:

A strategic development programme of the Republic of Croatia «Croatia in the 21st century»
e-Croatia - a Proposal of Strategic Informatization of Croatia
The Elements of the Strategic Development of the IT-society of Croatia as an annex to the Strategic Development Programme of the Republic of Croatia «Croatia in the 21st century»,
The Croatian Innovational Technology Development Programme.

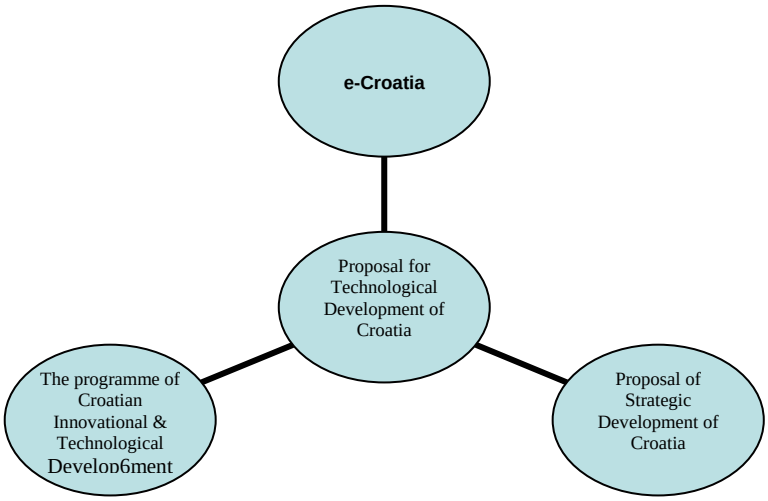
In the e-Croatia – A Proposal of Strategic Informatization of Croatia, by planned training the followings goals shall be achieved **:**

- national development,
- successful integration in the european society,
- preservation of the national identity through cultural heritage,
- a permanent personal development of every individual apartaining to Croatian society.

In the Stragey of Development, the Literacy of the 21st century we see that the treatise tackles wide aspects and contains IT-literacy. The said literacy consists of :

- training for the capacity of reading and understanding,
- training to gain skills of clear communication,
- training to become capable of resolving problems,
- ability and readiness for teamwork,
- trained to use the new IT technologies
- capability for permanent learning. /7/

The attainment of a competitive position of a country lies in the investments in «digital infrastructure.» /8/
Graphic Chart No.2 Technological Development of the Republic of Croatia



A chronological survey of Croatian schools in respect of their PC and communicational equipment development

During the year 2000 the data on provision of schools with IT and communication equipment were gathered and processed
In 2001, 2002 the Primary and Secondary schools were linked to the Internet

- In 2002 the total of 3,030 PCs were acquired for the students, 317 PCs for teachers, 317 printers, 300 LCD projectors, 300 lap-tops, while 394 computer labs were linked into internal networks
- In 2002 the four Regional IT Teacher Training Centres were provided with hardware and software in cities of Zagreb, Šibenik, Varaždin and Slavonski Brod.
- In 2002 the pilot project relating to IT Teacher Training was held in Zagreb and Varaždin.
- In 2003 the contract on collaboration with the Croatian Telecom was signed in order to implement the Project «Net in Schools – Internetization of Croatian Schools».
- In 2003 the total of 2,508 PCs were purchased for the benefit of students, 303 PCs for teachers, 100 PCs for student campuses, 100 PCs for school libraries, 40 multimedia sets-lap-tops and LCD projectors, 417 printers and additional two Regional IT Training Centres were furnished with the equipment in Ports of Rijeka and Split.
- Training of full-time employees to adoperate IT & Communicational technologies covered 5,000 persons. /9/

There is the total of 46,923 teachers employed in primary and secondary schools in Croatia today. From this total number, there are 2,120 teachers who lecture IT subjects, while 181 teachers are formally qualified as «Informaticians». « It should be borne in mind that IT lessons are held by teachers of Mathematics, Physics and Technical Culture and even other

teachers as required and within other curricula so that we cannot assess with precision what is the actual number of teachers who possess IT knowledge, or, who lecture on IT.
Also, it has not been precisely defined what is the field of expertise (after having graduated at the Faculty) of an IT teacher-lecturer of Informatics.» /10/

A Statistic Survey

Total number of PCs in secondary and primary schools	1999	2003
	12,323	24,000

Total number of students per 1 PC in 2003	Primary Schools	Secondary Schools
	28.5	16.91

Primary and Secondary School PC Labs linked in Network	1999	2003
	161	1,072

According to /11/

THE BASIC IT AND COMPUTER LITERACY KNOWLEDGE AND SKILLS

In the course of a tuition process, a teacher should assess by himself the modes and frequency of utilization of the IT technology. However, «if we consider our educational reality we should better indicate the two paradoxes in connection with the educational technology (media) in tuition and learning :
Most of the media applied in training has not been devised for such purposes; their application comes subsequently and gets incorporated into training processes while the total effect of such indiscriminating application (potentialities and limitations of the same) on training process and learning has not been wholly foreseen.
The preparation of teachers to qualify as trainers has been mostly directed towards «professional expertise» - how are they to act eventually, while the issues of «applied methodology» - that explain how to work are deemed of minor and marginal importance, so in this context there appears the question of selecting structural design and applying of technology in the training process.» /12/
Owing to that, it will be necessary to provide both IT and computer literacy for all those perons who are involved in training and education based on the catalogue of expertise to be mastered by each and every trainee.
The basic knowledge in the field of IT skills, or to define, at what point it could be said for a given person that he/she may be considered a person with computer literacy and IT literacy?

«With the purpose to provide a systematic approach in training of full-time employees to adoperate ICT, in 2002 the Croatian Government approved the Project «The Proposal of Training Teachers to Apply IT and Communicational Technologies.» /13/

The training began by the end of 2003 within the six Regional Centres in : Zagreb, Varaždin, Slavonski Brod, Šibenik, Rijeka and Split, covering around 5,000 employees in educational institutes.

According to the excerpt from the Project «The Proposal of Training Teachers to Apply IT and Communicational Technologies», the Basic Framework of training contents for the Basic Course would include the total of 80 lessons, while the Advanced Course would include 94 lessons. /14/

The Basic Course of IT knowledge consists of the following curricula:

Curriculum	Lesson
Basics of Informatics	6
Operational Systems	12
Word Processing	18
Log & Chart Calculations	14
PC Presentations	8
Internet (e-mail, Web)	14
ICT in Training & Education	4
TOTAL	**80**

The Advanced Course of computer literacy consists of :

Curriculum	Lesson
MS Office (Advanced)	36
Computer Labs Network	18
Integrated ICT into tuition	18
Internet (Advanced)	18
TOTAL	94

The Specialistic Degree of IT knowledge /15/ consists of :

Curriculum	Lesson
Programming	36
School IT System	18
Multimedia in tuition	18
Specific Software for Group Curricula	18
Programmes for Compilation of Curricula Units	18
Desk Editing – design of a school bulletin	18

Library & Info Centre	18
Networks and Communications	18
TOTAL	**162**

«The Project has foreseen that full-time employees (45,000 – 50,000 persons) adopt IT knowledge and receive a corresponding certificate by the end of 2006, while the scheduled completion of their training would depend on disponibility of funds to be invested in this form of knowledge and skills that are unavoidable today. In most European countries, similar projects have either been completed or are near completion.» /16/
The Open University of Poreč, Croatia has been holding IT Courses addressed to all those who wish to learn the basic and more complex IT knowledge and skills relating to computer literacy and IT literacy. In order to provide a trainee with IT literacy, the following skills need to be absorbed, utilized and upgraded : /17/

ADOPT THE BASIC NOTIONS DERIVING FROM:

Field of the Informatics, IT-Communicational Technology
Operational System-Microsoft Windows XP Surroundings,
Programmes for Text Processing (WordPad, MS WORD).
Programmes for Log & Chart Calculations (Log Calculations) (MS Excel),
The Basics of Internet
The Basics of Execution of Multimedia Presentations (MS PowerPoint).

BASIC NOTIONS

Basic Definitions of Computers,
What Is the Purpose of Computers,
What Are the Advantages of Computers,
Basic Structure of a Computer,
Hardware and Software
Basic Structures,
Memory.

MICROSOFT WINDOWS XP

Starting Up the Windows
Usage of Keyboard and Mouse
A Survey of Applications (Explorer, Control Panel, Folders and Recycle Bin) and operating a number of applications at the same time,
Exchange fo Data between applications
Use of Tools to provide PC Maintenance
Operating PCs Network.

TEXT PROCESSING (WORDPAD, MSWORD)

An appearance of a Window
Inserting Text into a Document
Tool Bar
Opening and Closing of a New Document
Saving a Document
Mode of Cacellation
The Use of functions Undo and Redo
Text Compilation
Copying and Transfer of Text
Levelling of Paragraphs
Printing
Tracing and Substitution of Texts
Forming Chart Lists
Headers and Footers
Numbering of pages
Page Formatting
Creation of Tables
Inserting pictures, symbols, charts, Word Art

THE TABLE CALCULATOR (MS EXCEL)

A notion of a notebook, lists, cells
The basic Type of Data
Entering Data into a Chart and Correcting Errors
Copying and Transfer of Data
Entering Formulas and Functions
Copying of Formulas (the Absolute and Relative Address)
Rounding with the Function ROUND
Arrangement of the Chart Design
Creation of Graphic Displays of Data Contained in a Chart
Adjustment of Printers and printing Charts with Data

I N T E R N E T
The Basics of Operating Internet
World Wide Web (WWW)
Modes of Searching on Internet
Operating electronica mail (e-mail)

MULTIMEDIA PRESENTATIONS (MS POWER POINT)
Slide Forms
Presentation Forms
Graphic forms
Slide Dynamics
Dynamics of Objects on a Slide

Installation of Speech and Sound Background
Installation of Links

The forecasts of technological future, according to Moore's Law state that computers might reach the processing capacity of a human brain by 2050, and memorize everything that an individual has read, heard or seen.
The people will no longer act as passive viewers, but active communicators, directors and consumers and creators of intellectual property in the virtual world without limits. /18/ they will reside in cities and villages, but at the same time they will become inhabitants of numerous «virtual cities and villages» in **the virtual world** defined by geographic, demographic and intellectual interests.

CONCLUSION

To attain IT-literacy and computer literacy would mean to have a capacity to monitor changes and contribute to the development of the IT of the Republic of Croatia. Every individual, and especially those who deal in education and training should invest into their education on a lifetime basis, as, otherwise they might, instead of playing an active role, become only passive bystanders that act as «brakes» in guiding and directing the young (children, students) in their life-cycle curriculum.

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