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Information Society and Education System in Romania

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Abstract

The analysis in this article is based on a system of indicators to measure progress and proposed by Romanian specialists. The system is divided into 5 groups associated areas considered essential for the development of information society and the four stages of development. Unlike o ther indicators of SI systems, it not only allows comparisons between countries and within each country for one or all groups of indicators, but also can determine the level of development of each indicator. In the present paper we focused on the group of indicators on education - education for SI and SI - and we made comparisons between the education system in Romania and other systems of the EU countries and between levels within the core system higher levels of education and between schools in urban and in rural areas, etc. Stage of the SI in rural schools and pre-university education is at Level I (early stage) or maximum level evolutionary stage II (stage of growth) while in the higher education institutions urban areas have to do, if indicators of development and stage IV (stage of maturity). Romania's education system needs major investments in new technologies to prepare young people to join the knowledge society we are heading.

Keywords:

SI system of indicators, information society, information and communication technology, digital inequality, e-inclusion

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1. Introduction

Information Society (IS), information technology (IT) or information and communication technology (ICT) are concepts that have been generated by scientific and technological progress and, naturally, associated technical field. They have, however, demonstrated a strong social dimension primarily by the applicability of these technologies in areas such as health (eHealth), education (eLearning), culture (eCultura, eLibrary), economics (e-Business), etc. Area more extensive areas that were conquered by new technologies and develop differentiated them - in geographical terms, the range covered, the results achieved so - has led to a new type of inequality between countries and between members of society: unequal access and use of new technologies. This means that some members of society can not receive services, social opportunities, economic, educational, cultural circulated through new technologies. Given the importance of new technologies in life and human activity concerns the development of new products, ICT models were added to those aimed at reducing inequalities in access and use of new technologies (digital inequality) and the formulation and implementation of policies e-inclusion.

Any type of measure, regardless of the field to be applied requires an objective assessment of the situation/condition in which the field on which is to act. At the level of international organizations (UNESCO, OECD, EU) have been established a number of indicators aimed at developing the information society in the Member States: the number of computers compared to the size of population, number of telephones, Internet connections, the frequency with which people use new technology, etc. In parallel with these systems of indicators, many countries have developed their own evaluation system SI. Romania is no exception.

2. Literature review

In Romania concerns the SI, the development of new technologies occurred with greater intensity immediately after the change of political regime (early 90s) because this area needs an environment, specifically a democratic society where allowed freedom of speech, free access to information. In the two decades of democracy and market economy Romania managed to recover much of the differences in technological development and information but is far from being

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considered a country with a high information technology accessible to all citizens. Conversely, national and international statistics but rather highlights sharp inequalities between different population groups in terms of access and use of new technologies. If at EU level, in 2011 24% of the population aged 16-24 had never used the Internet, in Romania, the percentage rises to 54%. [1] Inequality of access to new technologies is associated the lack of digital skills: only 7% of Romanian appreciates that such a high level of skills, 36% believe it is at a medium level and 57% of Romanian respondents are characterized by their low level.[2]

The pace of development new technologies is very alert and therefore states can frequently change position in the hierarchy of information. To determine more precisely the place that it occupies in this new hierarchy Romania and periodically to measure progress of technology and the use of her Romanian specialists have developed a system of indicators for measuring the state of information society in view of guidelines of the Center for International Development (CID) and the World Economic Forum (WEF) at Harvard University.[3]

The system proposed by Professor Guran includes 20 indicators organized into 5 groups associated areas considered essential for the development and four stages of development. The proposed indicator 5 groups [3]:

- *Group on information infrastructure and network access* (information infrastructure, Internet availability of internet services to achieve locally (ISP), the cost of Internet access, quality and speed (bandwidth) of communication networks, hardware and software availability, support and technical services);
- *Group on Education for SI and the SI* (school access to ICT education through the development of ICT human resources in ICT and their preparation (as users or make products and services based on ICT);
- *Group of people and organizations in SI* (users and organizations that use Internet content (content) that corresponds to the needs and interests relevant persons/organizations, information and communication technologies in everyday life, information and communication technologies in the workplace);
- *Group on the economy and governance in SI* (employment opportunities in ICT, electronic commerce between businesses and consumers

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(B2C) electronic commerce between companies (B2B) Electronic Government (e-Government), production of goods and services in ICT and ICT);

- *Group Policy, regulation and integration into SI* (Communications Regulatory, legislative and economic regulations).

Regarding the stages of development they cover the range from *early stage* (stage I) followed by two intermediate stages - *growth stage* (stage II) and *consolidation stage* (stage III) - the *stage of maturity* (stage IV).[3]

The indicators that we call is complex and allows those interested in the field and evaluate its stage of development both nationally and compared between different countries, either for a single or group of indicators for all groups of indicators proposed, for all areas considered essential or just for yourself. It is a fact that the existence of equipment, technologies, systems, etc. to the society, institutions, house holds do not automatically equate to use their recovery with presence among holders of skills, skills to use. The teacher Guran include indicators that measure both the equipment of the institutions - in this case educational institutions - as well as indicators that measure the skills to use ICT equipment.

Much of the statistical data presented in various reports, studies focused on quantifying the ICT domain. The indicators proposed by Professor Guran focus on both dimensions, both the quantitative and qualitative.*For the present study we focus on just one group of indicators - education group aimed at SI and the SI.*

Table 1: Groups of indicators for education in SI and SI and staging [3]

INDICATORS FOR EDUCATION IN SI AND SI	THE EARLY STAGE	GROWRH STAGE	STAGE OF CONSOLIDATION	STAGE OF MATURITY
Schools Access to ICTs	There are no computers in schools	Computers in universities (about 5	Computers in all types of schools: 10-15/units, 4 students/	Computers in most schools and classes;

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		workstations per unit); Limited access without network; Simple operation (writing documents, e-mail);	computer; Dial-up Internet connection with limited access; Independent Computer Library CD-ROM;	Network with internal web server; Classrooms and laboratories connected in LAN and WAN, including radio; The existence of a national network for education, with more than 128 Kbps Internet connectivity;
Develop Education through ICT	Do not use computers in education (teachers, students)	Using restrictive low computer; Existing computers are autonomous; Uses simple applications;	Computers in schools to complete all the traditional methods; Use only to illustrate case studies and simple applications; Using web technology;	ICT is integrated into the curriculum, with works teams; Teachers use ICT in teaching;

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Human Resources ICT	Training opportunities absent	Limited training opportunities	Opportunities in variety of public and private centers; Access to online training limited; Some companies and organizations offer training for employees.	There are schools for all levels, with specialization in ICT; Many training opportunities; Online resources and training to developing knowledge.

The reason we focus only on the group of indicators related to education is supported by the fact that the development and adoption (or/and use) advanced technology-specific and depends heavily on the level of education of the population. The education level of the population is higher, the chances of developing and adapting this technology in all areas of life are higher.

One of the principles underlying the functioning and organization of the education system is to ensure equal opportunities in education for all members of society and a quality education. This principle and equality of access and use of ICT by all students in the education system. Moreover, inclusion of ICT in education is to reduce geographical distances between individuals and institutions - including education - to facilitate access to education for people with disabilities, reduce training costs, thus supporting resource poor communities provides more flexibility in organizing training of the population, etc. all of which are strongly associated with the increase equal opportunities in education for all.

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3. Methodology
3.1. Objective and hypotheses

In this article we propose to analyze each of the four groups of indicators on education ICT in the education system in Romania.

The premise is that we leave, ensuring equal access and use of ICT in the education system is able to contribute to the development and evolution of Romanian society to a knowledge society for all. Each group of indicators relating to ICT education and related development stages will be analyzed based on qualitative and quantitative data from the research mentioned above to get a more complete picture of the situation of ICT in Romanian education system.

3.2. Data Analiysis

To analyze this group of indicators we will use both quantitative and qualitative data from research conducted at national and European level by national and international institutions specialized in gathering statistics.

Research data will be processed and analyzed in the present material considering the objectives we have set.

In most EU Member States there are mechanisms to monitor the development of ICT in education policies. The responsibility of this monitoring responsibility, depending on the country, different institutions - the Ministry of Education, the statistical offices or institutions specially created for this activity. In Romania statistics on ICT in education can be found both at the National Institute of Statistics (INS) and the annual reports of the Ministry of Education, Youth and Sports (MECTS). The data provided by these institutions are objective data and their analysis results allow generalization of the findings to the entire population or the parts there of. Data from these sources reflect the objective situation of ICT in Romania.

To analyze the three groups of indicators for stages I resorted to a series of studies conducted in recent years in Romania and that included, among the issues analyzed and those related to access to and use of ICT by the population. Our interest will focus with priority on those who research oriented school population.

Thus, for this article we analyze databases of research *Quality of education in secondary education,* performed by Metro Media Transilvania in

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2007 and included students and teachers in secondary education in urban areas. Considering the objectives we have set will process the data which reflect the level of housing of computers, but pre-university students and the school they attend, how students perceive their level of knowledge of English, the aim for students and teachers using ICT equipment, frequency of using ICT in the educational activity.

School population to increase access to ICT, Ministry of Education, Research, Youth and Sport of Romania initiated and runs a number of support programs - *Euro 200* being the best known. Perceptions of the population - especially adults, be they parents or teachers - this program is an important criterion in analyzing the measures of fighting against the inequalities of opportunity in education undertaken by the authorities. For this purpose we used the results of a research report - conducted and published in 2012 by the Policy Center for Roma and Minorities, a non-governmental organization in Romania. The aim of the research conducted by the team of this organization was to evaluate the impact of different educational programs support the disadvantaged school population, focusing on Roma students.

ICT is common not only in schools but in any other institution, company, organization, be it public or private. It is natural in these circumstances that employers pay attention to ICT skills to potential employers. Research whose data we process in this article, made by TNSCSOP in 2008 - "Romanian Employers (public and private) and the Labor Market" has consisted in the application of questionnaires to 1212 employers in the public and private sector.All data from this research will be processed using SPSS17.

Analysis of the perception of the implications of development and is very important. Thus, one of the main sources of digital inequality is the fact that some members of society do not realize the importance of new technologies in everyday life. Times, which is not perceived as important is it harder to assimilate, be rejected by the population.

Objective data and subjective which we will call in this article covers a extended period of time - past decade - thus providing the opportunity to observe the manner and pace of the ICT in the education system in Romania.

4. Results and discusions
4.1. Schools Access to ICT

Access to ICT is that we refer to institutions, organizations or individuals that we consider is generally approached from two perspectives. On the one hand it is about access to equipment (computers, phones, internet, etc.) and on the other hand, the issue of skills, skills in using this type of equipment. Although the indicators that will appeal relates only to the first perspective approach in the present study we examine both.

In the last decade, the education system in Romania has made significant efforts to equip as many educational institutions with ICT equipment, particularly computers and Internet connections. If part of the financial resources come from the national endowment, others come from extra-budgetary sources (eg EU Structural Funds). According to annual reports from Romania MECTS resources obtained through budget projects covered numerous components of ICT: from the purchase of equipment, digital literacy training both students and the teachers to improve national assessment system, from pre-school education at the undergraduate and postgraduate [4].

Table 2 Number of PCs by level of education and area of residence

Level of education	Area of residence	2001	2011
Primary education (including special education)	Urban	9690	42447
	Rural	6125	84857
High school	Urban	21936	97028
	Rural	1408	10674
Vocational	Urban	557	37
	Rural	65	0
Post-secondary education	Urban	900	2363

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	Rural	0	167
University	Urban	19865	102334

Source: Statistical Databases - TEMPO - time series online [12]

Data published by the INS points out that efforts in this area have led authorities to favorable results: in the last decade the number of PCs increased significantly at all levels of education both in rural and in urban areas. (Table 2) differences between the two areas and between levels of education in terms of equipment is due to the characteristics of the institutional network (number of postsecondary educational institutions is lower in rural areas compared to urban areas) and policies ICT development in our educational system level in recent years (greater concentration of investment in ICT in schools in rural areas compared to urban areas). The data provided by INS they notice the level of pre-university education is disadvantaged in terms of ICT equipment compared to the university. In terms located on residence, where in the early 2000s was the disfavored rural areas, in 2011 the situation is in urban environment (Table 2). However, as we mention at the outset, only the existence of equipment is not sufficient to assess the situation and the educational system.

Table 3 Distribution of PCs (%)

| Indicators	2011	
	Total	From the higher education
Number of PCs per 100 students	10,7	18,9
Number of Internet connections per 100 students	8,1	17,7

Source: National Institute of Statistics, 2011[13]

Although the overall level of ICT equipment in schools in Romania has improved, an analysis of the number of students/number of PCs reveals another situation: the need for PCs in schools in our system is much higher than what Why is there now. Considering the

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indicators proposed by Professor Guran in our educational system, the number of students per computer is two times higher than allowed and this means that we are dealing with more than one growth stage (stage II).

Not in terms of Internet connections can not be said to have reached another stage of evolution than Level II (Table 3). Therefore and access pupils and students acquire skills, skills to use ICT and to actually receive information and opportunities for intellectual, social and professional that can offer such equipment is damaged .

The INS data do not allow assessment of digital literacy of students or the quality of ICT equip schools Romania. Results obtained from research conducted in recent years in the education system of representative samples of the population of the school and the teachers can complete image on the stage of development of ICT.
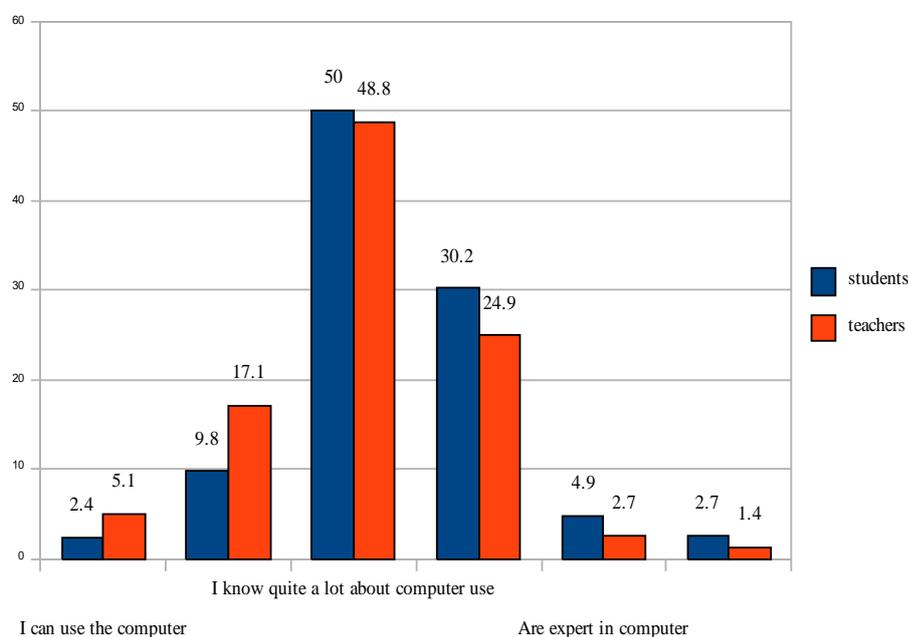
Graph 1 *The perception of students and teachers on skills Computer*
Source: Quality of education in secondary education, Metro Media Transilvania,
2007 (database students and database teachers) [13]

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Research conducted in the urban school education shows that both students and teachers have an average level of digital literacy. (Grafic1) In biased indicators set by the system to which we appeal, it means evolving stage II (stage growth). Such skills might improve if students have access to a computer and an Internet connection both at school and at home.

New technologies, accelerating the process of development, became more accessible to the population in terms of acquisition costs but in Romania, there are many households that do not have a PC, phone or Internet connection.

Table 4 Share of households with access to home computer and Internet access of all households (%)

2012	Computer	Internet
Total	52	49,3
Urban	66,4	64,6
Rural	31,7	27,7

Source: Statistical Databases - TEMPO - time series online[12]

In 2012 just over half of households in Romania had a home computer and less than half have access to the Internet and the technological distance between the two areas is very high (Table 4). Differences in the level of ICT endowment of households, especially those that are school-age children have an important impact on skills, their digital skills.

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Table 5 Relationship between computer literacy and housing facilities (%)

	The apartment is equipped with PC, laptop	Housing is equipped with PC, laptop
I can not use the computer or know very little(1)*	5,0	43,7
I know good and well use computer(2)	53,0	44,6
They are experts in the use of computer (3)	42,0	11,7

*Source: Quality of education in secondary education, Metro Media Transilvania, 2007 (student database) * Recoding database: do not know how to use computers, I know very little about computer use (1); know quite a lot about the use computer know a lot about computer use (2), are expert in the use of computer (3) [13]*

In Romania studies on the impact of socio-economic and family of digital literacy of students are small in number but those who have addressed this issue have concluded that students have access at home and at school to a computer, especially a computer connected to the Internet have a higher level of digital literacy. This is revealed by the survey data conducted in the urban school education: students living in households with computer or laptop is characterized by a high level of digital literacy. (Table 5) but not all children benefit from this facility. Factors that lead to differences in available housing facilities are numerous but the most important are: education level of the parents, their occupation, income level, residence etc.

In Romania there is a direct relationship between the individual's level of education, occupation and income level in the sense that a higher level of education is associated with a job better and safer and higher income. We thus expect that people who have a higher level of education to have ICT equipment in the home so that they have the requisite income and purchasing them because they are necessary and frequently use them in everyday life.

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Table 6 Share of households with access to a computer and Internet connection at home, the level of education of the household head in the total households in each level of education in 2012 (%)

Level of education	Computer	Internet
Total	52	49,3
Primary (including no schooling)	17,1	14,1
Gymnasium	27,4	24,5
Professional complementary or foremen	52	48,1
High school	73,4	71,1
Specialized post-secondary or technical	75,3	73,9
University	91,2	90,2

Source: Statistical Databases - TEMPO - time series online[12]

INS data reveal that as the education level of the population is higher the greater the chance that households are equipped with ICT equipment. If less than a quarter of households where the household head's education level is very low is now a computer and an Internet connection, for those with higher percentage approaches 100% (Table 6).

The material and financial capital referred to by Bourdieu [5] when explaining social reproduction theory assumes other dimensions in the knowledge society: ICT is currently the parents belonging to the socio-economic, cultural favored target their resources to order to maintain their privileged positions by children in socio-professional hierarchy.

To reduce the digital distance between different categories of people every state has established a number of policy measures inlcuziune email. In Romania, one of the measures that can be classified among those related to e-inclusion policies, is the taking up and pursuit *Euro 200*. This software program provides allocation on the basis of socio-economic an amount in lei (equivalent £ 200 EUR) disadvantaged students to purchase a computer. A study aimed at assessing the impact of educational programs that support highlights *Euro 200* is one of the

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programs appreciated both by students and by parents and teachers.Only in the 2011-2012 school year in 3110 to *Euro 200* program schools was conducted in 915 schools in urban and rural schools in 2195.[6]

If we look at the development stage and only at our educational system we now conclude that compared to the early '90s and even the early 2000s I went from early stage (stage I) to the growth (stage II). The level of education we talk about growth stage at university and one of consolidation (stage III) at the university.

For a more accurate analysis is required, however, a comparison between the situation of ICT in the education system in Romania and other EU education systems. The most recent publication on the use of ICT in schools in the EU member states confirm the low level of this type of equipment in Romania both at institutional level and at the personal (home).
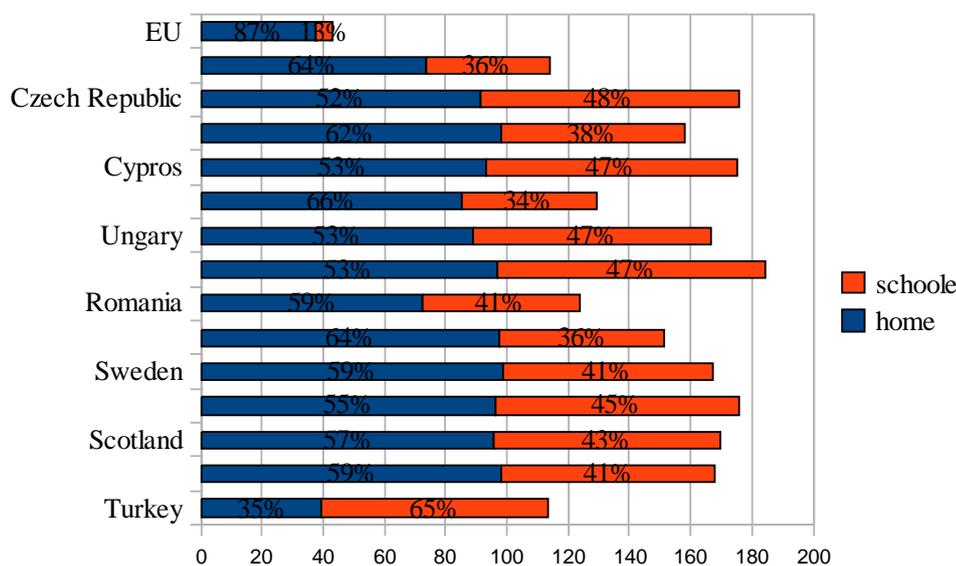

Graph 2 *Eighth graders who use computers at home and at school*
Source: Key Data on Learning and Innovation through ICT at School in Europe 2011[8]

The chart above shows that Romania is among the countries where the number of students per computer, both at home and at school, is one of the lowest. (Graph 2) Even if, as outlined in this report, most EU students use the Internet and your home more leisure activities

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and less homework for school, that they have access to technology and information is a positive factor to enhance the skills of working with new technologies. These skills will help them later in adult life to look for a job, to integrate more easily in terms of socio-professional. In other words, inequalities of access and use of ICT changes in inequality of opportunity later to a better standard of living for themselves and their families.
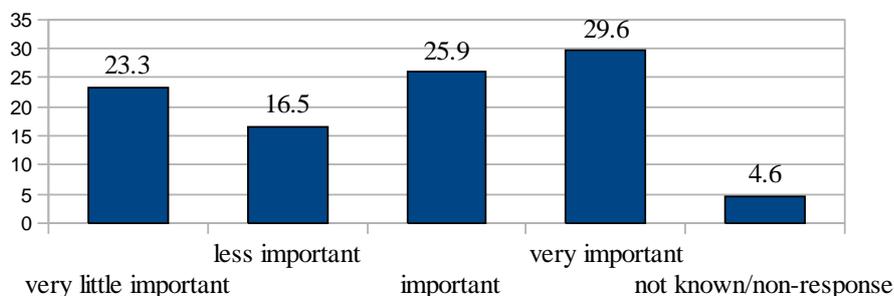
Graph 3 *Importance minimal knowledge of computer use (eg, Word, Internet Explorer) to view Romanian Employers (%)*
Source: Database of employer Romanian research (public and private) and the labor market, TNSCSOP, 2007[14]

Currently very few institutions, whether in the public or private sector, can afford to neglect the importance of ICT in development. We note that for Romanian employers access to and use of ICT components are among the skills that workers must possess when applying for a job. (Graph 3) digital skills among the eight essential skills required by the economy and knowledge society to which heading. The role of the school is more important for the formation of such powers as the level of development of society is lower, as is the case of Romania: the population of these societies can not afford to invest in the purchase of additional or ICT, either in training skills to use ICT and based on what provides education system.

Access to and use of ICT calls and language skills especially proficiency in English. The national curriculum is established teaching two foreign languages from the compulsory education level, and according to statistics, most schools in Romania headed to option the English language [11] - in 98.1% of schools in Romania to teach English

the knowledge of English among the population is one of the criteria
used by experts when assessing the level of e-inclusion of a country.[7]
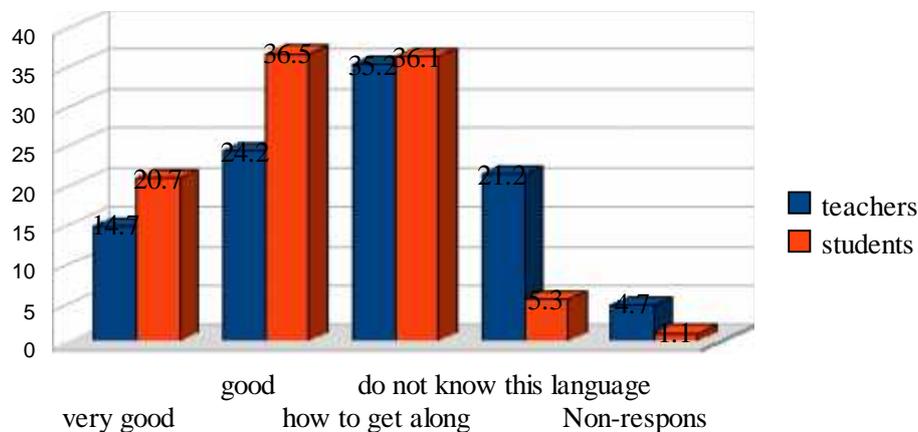

Chart 4 *The perception of students and teachers in secondary education (urban) on
the level of knowledge of English (%)*
*Source: Quality of education in secondary education, Metro Media Transilvania
(database of students and teachers database) 2007[13]*

We note that a high percentage of students and teachers are
familiar with the English language which would favor the development
of their digital skills. (Chart 4) However the knowledge of the English
language as a medium in the case of computer usage skills. An average
level does not ensure a high level of educational performance which is
why it takes continuing education courses, as well specialized personnel
to teach in schools. However, both teachers of English language and
those specializing in ICT, one of the problems are difficult to solve
systems of education.

4.2. Develop Education through ICT
In many field studies and official documents emphasizes the idea
that "ICT can increase students' motivation to learn by giving them more
control over the learning process". [9] Theoretically, ICT can be used in
all disciplines and all levels of education. Moreover, not only through
new technologies for teaching and learning is improving, but the
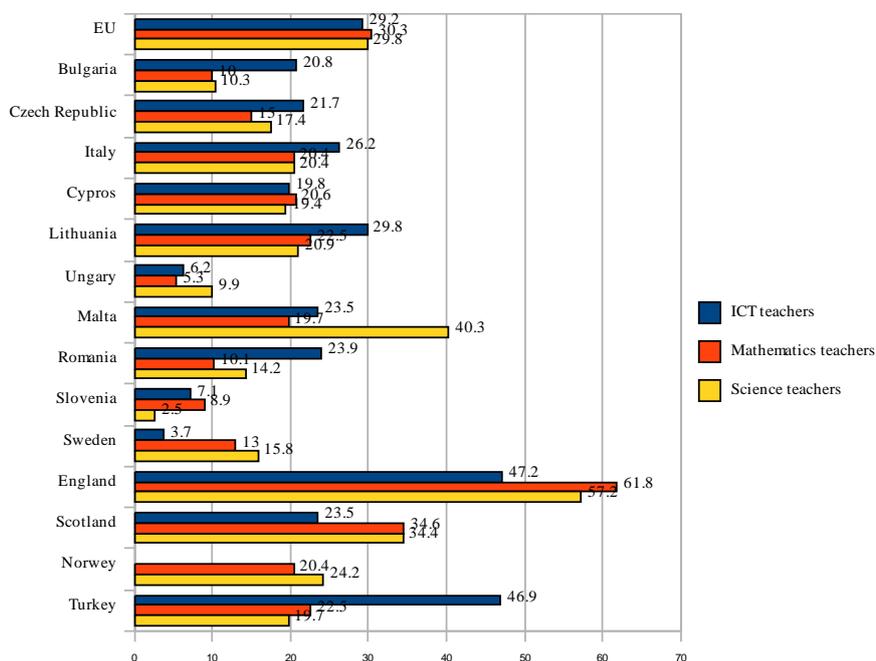evaluation is more objective (students can assess themselves to).

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The low evolutionary stage two of the indicators of the group on education for SI and SI, the third can only have a value close to them. Develop Education through ICT - the third indicator - refers mainly to the inclusion of ICT in teaching, learning and assessment. Basically, in a limited number of schools - not only in Romania - this happens. At the level of our education - education level - it was found that many of the teachers believe that ICT should be used for computer classes and, at best, for the physics and chemistry.[9] Other subjects and extracurricular activities are favored by the limitation or exclusion of the use of ICT in teaching, learning, assessment. The educational institutions of Romania can not talk about a non-use of ICT in education but the stage of development of this indicator is more than Level II - restricted use, low use of ICT in the classroom.

4.3. Human resources in ICT

ICT human resource indicator system Guran teacher focuses mainly on issues of training, the opportunities for those interested in the field of ICT have and can use them. With regard to staff in the education system, one that provides employment training on the job is the completion of a post-secondary educational institutions: college, university. The training courses attended by teachers only to improve, in order to broaden the knowledge to keep their professional position but failed to get a job in the education system. The projects undertaken in the MECTS especially those with extra-budgetary funding, to pursue and strengthen digital literacy among teachers by organizing specialized courses. Unfortunately this project did not include the whole education system so that differences between schools and between teachers in terms of digital literacy level is still preserved. In the medium and long term access and participation in ICT training courses will be enhanced because more and more areas of life, socio-economic, cultural, administrative, etc. will be dependent on new technologies. Development and application of ICT in as many areas of social, economic, cultural depends on the level of skilled personnel in the field.

Currently all European countries face a serious shortage of staff estimating that about 700 000 jobs in this field will remain vacant until 2015.[10] Skills shortages in one area leads to competition between firms public institutions to attract them. Education system, not just the Romanian, is less attractive for graduates and professionals in ICT due to

the low pay, difficult working conditions and the great responsibility that must uphold a teacher regardless of discipline that teaches.

Chart data (Percentage by country):

Country	ICT teachers	Mathematics teachers	Science teachers
EU	29.2	30.3	29.8
Bulgaria	20.8	10.3	10
Czech Republic	21.7	15	17.4
Italy	26.2	20.4	20.4
Cypros	19.8	20.6	19.4
Lithuania	29.8	22.5	20.9
Ungary	6.2	5.3	9.9
Malta	23.5	19.7	40.3
Romania	23.9	16.1	14.2
Slovenia	7.1	2.5	8.9
Sweden	3.7	13	15.8
England	47.2	57.2	61.8
Scotland	23.5	34.6	34.4
Norwey	24.2	20.4	
Turkey	46.9	19.7	22.5

Graph 5 *Percentage of students who attend a school that has difficulty filling vacancies with qualified personnel in ICT*
*Source: Key Data on Learning and Innovation through ICT at School in Europe 2011.[8]*

Assessment of the EU Member States revealed that approximately one third of students attend schools where principals argue that difficulties in recruiting specialist teachers in ICT. [18]

As the data indicate, Romania is among the countries most severely affected by the lack of qualified staff to work in ICT in education. (Graph 5) From this point of view HR ICT indicator in the assessment system and is at the second level of evolution: there are opportunities for specialized staff training, but found it very difficult in education, especially at university. Although in Romania there are opportunities for training, participation in such courses is low for at least

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two reasons. On the one hand it is too high costs for income Romanians especially for those working in education. On the other hand offer courses in this area is most often thought of as a way for the acquisition of basic skills and less or not at all as a source of improvement. In both cases teachers are not part of the target group of these courses.

Preparing teachers in Romania depends mostly by themselves, the desire, the will and interest to be well informed. One source of information is the Internet. Regarding Internet use education teachers in urban high values.
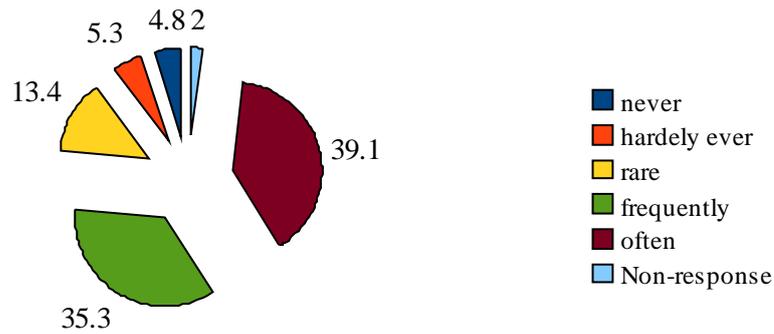
Graph 6 *The frequency with which teachers in preuniversitar (urban) use the Internet (%)Source: Quality of education in secondary education, Metro Media Transilvania (database of teachers) in 2007[13]*

The survey data confirms that the Internet has become part of life for most teachers in education in Romania (in the urban area in this case).

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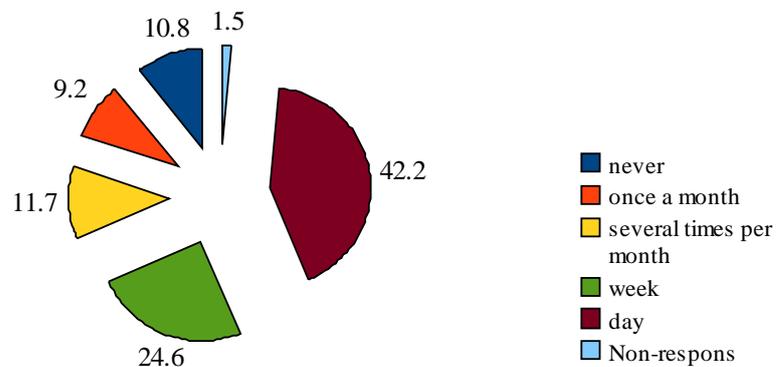
Graph 7 *Frequency of teachers in urban education documented for the discipline they teach using the InternetSource: Quality of education in secondary education, Metro Media Transilvania (database of teachers) in 2007[13]*

The chart above shows a positive aspect in the relationship between ICT and teaching staff: most of them use a computer and the internet to get current information about the discipline they teach.

And the education system in Romania and other EU systems there is a contradictory situation: although teachers recognize the importance of ICT in education, calling themselves to document additional ICT teachers about half of the students in Europe do not encourage using new technologies to classroom activities. [8] At best teaching staff believes that ICT is recommended for teaching subjects like mathematics and computing.

5. Conlusion and recomandations

Analysis undertaken in the education system in Romania - with priority at university - based system and evaluation indicators (school access to ICT human resource development in ICT and Education through ICT) has helped us to determine the position of the system our education in relation to their own objectives and relative to other educational systems in the EU. The conclusion we reached is that all three indicators have limited stages of development. The education system in Romania is not alone in seeking solutions to face the challenges of the information society as at present but is among those characterized by both enhanced digital inequalities among pupils, students and the teaching staff.

Increased investment in ICT and awareness campaigns among teachers, students and their parents on the importance of new technologies in the teaching and training are two solutions adopted should be able to improve Romania's position in the hierarchy of information.

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