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*Ileana ROTARU*

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# FROM BLACKBOARD TO INTERNET: POSSIBLE CHANGES OF THE ROMANIAN CLASSROOM

Ileana ROTARU<sup>1</sup>

## Abstract

Romanian educational area is still characterized by a period of changes and it is still confronted by one hand with the lack of the teachers' skills in basic ICT and Internet use competence and on the other hand, with the lack of material and technical resources in schools. Even if there have been done some improvements, the explosive development of the „internet society” makes it difficult to keep step with. The research points out the necessity of developing new competences such as media competence based on the social pressure of the *digital natives* generation. The paper tackles a paradigmatic change that takes place in the inner of the school organization which becomes not only a knowledge producer but an institution that must “learn how to learn”. Nevertheless, the aim of our research is to exhaustively determine the way that the Internet is perceived and represented by the teachers (of primary school) within the educational process as means of teaching, learning, evaluation and communication. The research is realized in a comparative local manner and does not express the matrix of a national level sample.

*Keywords:* internet use, educational process, digital society, teachers' competencies

## Introduction

The place that Internet occupies in the educational process is one of the most importances in the context of the continuing social change and modern thinking. The way that the Internet is perceived and integrated by the professor in the learning process, it takes a great responsibility for the teacher to find and to use information according to the contemporary educational needs (Gibson & Blackwell, 2011). This sociological study is based on the necessity to understand and

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<sup>1</sup> University of Resita, Resita, ROMANIA. E-mail: ileana\_rotaru08@yahoo.com

to observe the manner that teachers use Internet within the learning process during their classes, the impact that the Internet has on the ordinary pupil, a pupil that is emerged into technology and virtuality (Boyd, 2014). The teachers' professionalism is reflected on their regular activity with the students during classes, but also on their own interest in acquiring professional training programs. These programs represent a useful base of novelty for each teacher in order to widen their epistemological universe. They have also a benefic effect on students, too, as a method of quality and improvement of the didactic process (Alderman & Green, 2011). This is one of the reasons why it matters the way that Internet is used in the learning process. Another one is represented by the didactic means of teaching correlated with the classroom specificity and the school's curricula. The recent CMC's studies (Computer-Mediated Communication) focus on the educational space as they stress the alternative to traditional teaching (Gradinaru, 2011). This research puts an emphasis on the fact that new media and Internet represent the reality in the context of a changing educational environment where the traditional teacher is not the center of the universe (Cucos, 2006; Mičge, 1995), where the informed and up-to-date student is active and the teacher has become a mediator or an alternative source of information (Hobbs, 2004).

## **Problem statement**

This small-scale case study examined how the Internet is used by teachers within the educational process. The globalization phenomena and the contemporary virtual society stress out new necessities in achieving changes in communicational competences of the didactic personnel. We all are in the McLuhan's "global village" and the informational society has become a daily fact (Nadolu, 2007). These phenomena and social processes have determined changes on the teachers' competences and their representation of the educational process. Our paper presents a local specificity of the Romanian educational area in the matter of digitalization of the schools' environment. Romanian educational area is characterized by a period of changes and it is confronted by one hand with the lack of the teachers' skills in basic NTIC (New Technologies of Information and Communication) and on the other hand with the lack of material and technical resources in schools. Previous researches (Rotaru, 2014) demonstrated that there is a large discrepancy between rural and urban areas as it is between young/ beginner teachers and those with a long teaching career. The aim of our research is to determine what the impact of Internet on teachers is in the educational process. We consider as work hypotheses that teachers, who have skills of using NTIC, use Internet, too and the educational process is more efficient. The teachers' professional skill could be highly appreciated by the students as their classes could have grown more attractive. It is our opinion that there is a strong correlation between the teachers' degree of professional training and the use of Internet as didactic mean within the learning process. The basis of the present research consisted of the fact that forming and training the media competence by using NTIC skills and Internet would contribute to the improvement of the teacher's pedagogical performance within the educational process and to an increased

level of connection between school/ teachers and students. In this order, our main research objectives are: to determine the measure of Internet use in the educational process, to identify the obstacles in using Internet and to identify possible differences of Internet use between rural and urban areas (teachers' skills, resources, training programs).

## Methodology

The main research instrument of quantitative analyze was the social investigation based on the questionnaire. It contains several items in order to describe the research lines. A pre-questionnaire was administrated in order to elucidate the main items. The pre-questionnaire was administrated to a number of 10 subjects divided equally from rural and urban schools. The final research instrument, the questionnaire contains open and closed items and it was applied to 30 teachers from the rural and the urban area (N=30). We choose to use several free answer questions based on the fact that teachers are highly educated persons and they are able and willing to express their opinion very clear and openly. The subjects were teachers of primary school level. The classrooms were part of high schools units (K12). We choose one school from a rural area in a county with a high economical level (Timis county) and one school from a municipality that is the economical and administrative capital of another county, but with a poor economical level (Caras-Severin county). The research idea came out based on an intensive work in continuing professional training of teachers of the undergraduate level in Caras-Severin county and in the West region of Romania. This process has been taken place as an Education Ministry policy due to the general process of Reform in education since 2003. In this research paper we have tried to determine the degree of Internet' use (Vd) in two ways that we considered inter-related: personally, by teachers in their spare-time and professionally in schools and within the lessons' activity and the causes of not using the Internet. On this level, we took into account the next main directions: resistance to change, capabilities/skills, lack of resources (technical and informational).

Therefore, our main hypothesis is that there is a strong connection between the level of professional training and the use of Internet as didactic means within the educational process. In other words, the development of NTIC competency determines an increase level in using Internet within lessons and a light resistance of the teachers to changes. Next step, we tried to determine: the frequency of using Internet and the level of professional training programs (measured by period and credit number) acquired by teachers.

We also considered as a work hypothesis that during our research we would find significant differences between the schools and the teachers from rural and the urban area. This fact is due to a common sociological process that generally characterized the Romanian educational space, as a deep cleavage between rural and urban area. Regarding our research and based on our experience, we considered that this discrepancy will still remain.

## *Research findings and interpretation*

We considered a sample consisting of 30 teachers from the next areas: Gataia – Timis county (Theoretical High-school of Gataia - LTG) and Resita – Caras-Severin county (National College “Traian Lalescu” – CNTL). As a general feature, they participated in any type of continuing professional training for a period of time of more than 5 years and their average age was 37 years old. Most of the sample teachers had more than 10 years experience. Starting from our main hypothesis, we imagined the next variables:

- V1 : the degree of openness to new and the opposite: the resistance to changes;
- V2 : frequent usage of the computer;
- V3 : the general self perception of Internet use;
- V4 : the learning sources;
- V5 : main obstacles in using Internet within lessons;
- V6 : pupils' perception of the educative process when using Internet;
- V7 : teachers opinion on their own didactic activity when Internet and new media can be used successfully

### *V1: Professional training*

This variable was described by several items and one of the most significant answers regarded “the interest towards new technologies, in general”, “the perception in the future of the teacher replaced by computer” and “the resistance to changes”. Even they were coming from the urban areas, we met a high number of responses that were not so interested in new technologies (22% of the answers). Also both subjects from urban and rural areas declared their preoccupations and up-dating to new technologies (computers, mobile, tablets etc.). We didn't encountered any “no” answer at this question. The item if “resistance to changes” was described by the next affirmations: (a) Using Internet is only a fashion; (b) The pressure of the contemporary society impose to use Internet; (c) Children's interest (active participation) within lessons; (d) Is too late for me to learn to use as I'm too old; (e) Pupils learn better in the old fashion way: using blackboard and textbooks; (f) Children spent too much time in front of the computer; (g) I enjoy the time when pupils come with new information from the Internet.

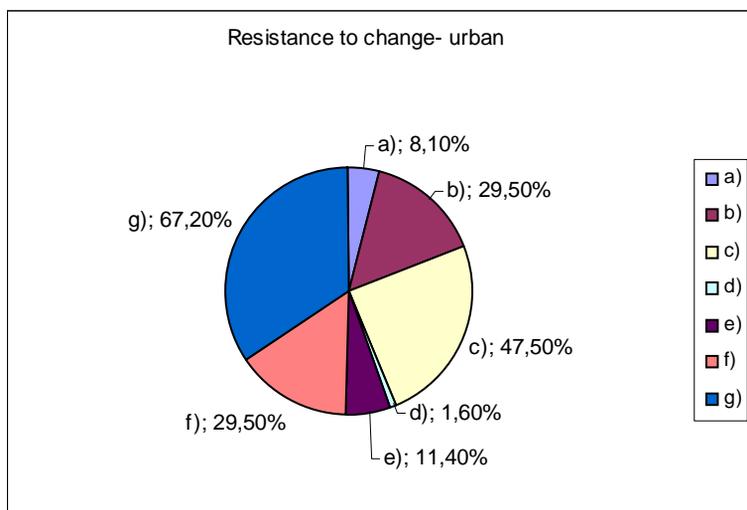


Figure 1. Resistance to change - urban (Caras-Severin)

And for the rural area it is obvious the same answers for points “g” and “c” as the most frequent, but also a change for point “e” : *Pupils learn better in the old fashion way: using blackboard and textbooks* as a consequence of the lack of technologies in schools and a more active resistance to changes. In comparison, teachers from the urban area considered as imposed the courses of ICT that the Ministry of Education offers them freely by attending different professional trainings once of 5 years (Figure 2).

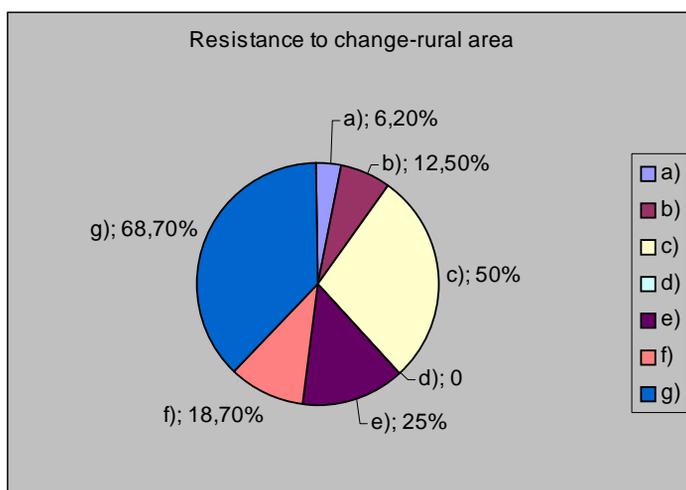


Figure 2. Resistance to change - rural (Timis)

The analyse of the professional training courses was realized on the next independent variables: the program type (short or long) and its credit number (from 24 credits to 90 credits in 5 years). As result, 93.33% primary school teachers of CNTL graduated programs of professional training while the rest followed none. In this perspective, all the teachers of the LTG followed professional training programs. In comparison, the teachers of LTG have been trained in programs of 3 month period long when some of the colleagues of CNTL have chosen longer training programs from 6 month to one year (over 20%). Most of the teachers form both sample areas prefer shorter professional training programs from several reasons: time availability (week-ends agenda), the bare need for professional credits, to fulfill a bureaucratic and administrative task, the fear of not losing their job (annual evaluation system). From this point of view, one can argue the necessity of identifying the best professional programs to be offered in order to fulfill the professional needs, but also the personal and social ones.

### *V2 : Frequent usage of the computer*

70% of the teachers from the urban areas declared that they used computer in their daily activities and 10,3% from the rural area declared the same. The latest number is equal with the ones that don't use computer at all. This fact can be explained as a result of the age of the teachers from the rural area and the lack of time and possibilities of learning. The same explanations are given also for the frequency of using computer: daily in the urban area and from time to time (more frequent) in the rural one. The lack of financial support and new technology is more accentuated in the rural area when subjects answered to the means of using computer. 43% of the subjects from the rural area answered that using the computer from the ICT laboratory in comparison with 77, 7% from the urban area using their personal ones.

### *V3 : The general self perception of the Internet use*

Teachers were asked, first of all, to indicate on a scale of five points (1 representing the best and 5 insufficient) the mark how they considered their computer's skills are. Most of the answers were situated at the middle of the scale (around three) both for the rural and the urban areas. Also, the next item describing this variable referred to teachers' perception of the using the Internet in their professional activity due to the fact that also a negative representation can be explained as the results of not using it or as a resistance to change. Over 85% subjects of the both area appreciated using Internet as a positive fact.

Another item describing this variable referred to the most accessed functions of the Internet use. In this matter, both in the rural and in the urban area the most frequent internet function chosen was the search for professional information, seconded by looking for new information from different fields. Only a few young teachers (between 20-35 years old) affirmed that they use internet for

playing and leisure, too. The interpretation of the general answers is marked by the average age of the sample and of their competences of using the internet.

#### *V4 : learning sources*

One of the main sources of learning ICT and achieving the competences of using Internet and new media technologies was a result of the different training courses. This hierarchy maintains for both rural and urban areas (68,8% urban and 56, 2% rural). At the same level and having the same percentage were situated the sources of: teaching themselves and thought by friends (informal learning). The computer remains the most used didactic tool, and the teachers are aware of the necessity of achieving the basics of ICT skills. When the question about how they achieved their computer skills, 70% of them answered that the main source of learning was the ICT learning programs. The rest of them were taught by friends (including family) and a few were self-learners.

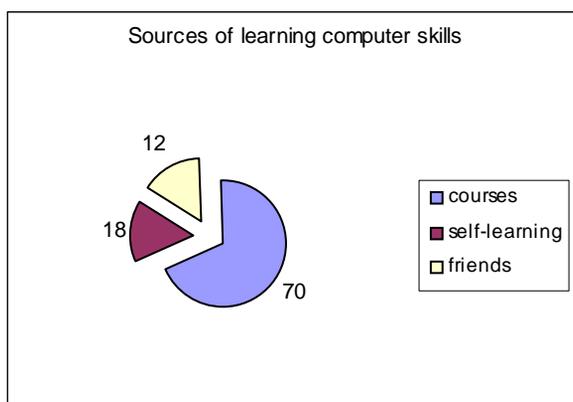


Figure 3. *Sources of learning computer skills*

#### *V5 : Main obstacles in using Internet within lessons*

One of the most relevant responses regarding this aspect was that variable "age" wasn't seen as an obstacle in using Internet even the average age of the subjects sample was over 37 years old.

Next items were conceived as questions with free answers in order to comprise the multitude difficulties and obstacles met by teachers within lessons and educative process. Therefore we imagined a simple enumeration of difficulties in a free answer type of question. The most common responses indicated in order of frequency were: (1) lack of computers in schools and in the laboratories or an insufficient number of computers; (2) lack of free Internet connection or poor internet connection (usually, private ones); (3) the high degree of moral and physical usage of the existent computers; (4) difficulties in having access into the informatics' laboratory for all the classes; (5) lack of educational software for

most of the disciplines (digital textbooks, for example); (6) little degree of competences in using a computer or on digital information (see the textbooks and new educational soft); (7) others (lack of material resources – paper, toner etc.; thefts).

Nevertheless, both in rural and in the urban area a percentage of over 80% of the teachers express their wish and their will of using the Internet in classes.

### *V6 : Pupils' perception of the educative process when using Internet*

The Internet represents a very important source of information both for teachers and students of all the educational levels. The teachers' perceptions about how the pupils consider the lessons using methods based on Internet use and the means of teaching and learning refers to the next positive points: (1) Increase the degree of pupils' interest during lessons; (2) A high level of pupils' attention and receptivity; (3) Learning fast by using time in a more efficient way; (4) Learning from examples and experiments that in other way were almost impossible to make; (5) Pupils become more cooperative and independents.

The next negative aspects were indicated by teachers as most frequent: pupils see the lessons as too leisure and they lose the competences of hand-writing.

### *V7 : Teachers opinion on their own didactic activity when Internet can be used successfully*

We found out that despite the teachers and the school's residence (rural or urban), most of the answers indicated that all subjects can be thought by using Internet. An interesting finding is that most of the teachers agreed that their didactic activity had been improved when they used Internet (80% rural area and 100% urban school). This result underlines the Internet impact on school's activity and on the school's actors (teachers and students). The positive feed-back of the Internet use gives a strong idea about the necessity of finding the right ways of coping and of mediation between teacher-student relationships when using Internet in the didactic activity.

Although the curricula indicated as Internet can be used frequently especially to subjects as: informatics, technologies and foreign languages, other subjects can be opened to the Internet use in a soft use relationship: literature, history, grammar etc. This aspect may be explained by implementing the educational software for those subjects, a program that was created at the request of Ministry of Education and an IT company.

## Conclusions

The Romanian Reform in education should underline the general aspects of the social and economical life. Cleavage between rural and urban area of education may become more visible that it is in present due to the lack of materials and financial means. Our general and work hypothesis was confirmed: teachers who have a strong NTIC competency are more willing and use Internet within lessons when having the necessary resources and technical support. From the methodological perspective, the research is local and cannot express the reality of the national level. The research methodology combined a quantitative method (questionnaire) with qualitative items used for social interview (semi-structured questions). The issue discussed, instead, focuses on a social and educational reality that can be met in the Romanian schools, despite regions and other geographical borders.

A special attention should be given to the continuing professional training of teachers in ICT and Internet. This idea should become one of the main development axes of the educational reform for a digital society in Romania. The steps forward must immediately include the use of social media and new media as core elements within the school's curricula. These aspects regard the quality of the educative process. Having these data and the profile of teachers and schools of two counties as a start point, we can imagine a more extensive research at the national level, and also an intensive one, regarding how the Internet can be effectively used and integrated within learning and teaching process.

The simple presence of Internet in the contemporary educational process reveals the statement that education is based on communication, technology and socialization. It underlines the necessity of stressing the importance of adjusting to the digital society, digital literacy and media education. It confirms the findings of several researches applied on international level (Livingstone et al, 2010; Pediatrics, 2013). One of common statement of these studies is the emphasis they put on the role of the school in the virtual world of children. The importance of the Internet active use within the classroom has an impact on the students' learning results, on their activity in non-formal and creative educational activities (Parola & Ranieri, 2010). It also has an important impact on teacher as source of information, documentation, didactic tool etc.

From another perspective, the Internet access can be a sensitive issue when discussing the technological resources and financial ones as differences between schools of rural and urban areas. We underline the necessity of access not only to a computer, but to Internet and to educational soft. Another significant issue is represented by the age and the teacher's interest on Internet use. In previous studies (Rotaru, 2014) we showed that there is a direct relation between the teachers' age and the personal interest in acquiring new skills and competencies. The teachers' participation in different programs of professional training stands for a point of development of the entire educational system and process. The change from a traditional education to a modern one is conditioned by the modernization of the teacher himself/ herself as a person and as a source of

formation. The different area of teachers' professional training makes of the teacher an important chain in the development of the educational process. This area involves more than ever the practice and training of the media competence. The educational process is becoming more digitalized as a part of the contemporary society. It is the teacher's duty to transform a social pressure into a learning, creative and independent environment where students as children can feel secure, critical and original.

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