The Media and Computer Literacy Project in Europe: The Case of Slovenia

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SUMMARY

The aim of this article is to present and critically assess the Media and Computer Literacy Project in Slovenia. The article is divided into four parts. Comparative analysis of the teaching of media and computer in the 1990s in Europe is presented in the first part. The media literacy project in Slovenia is assessed in the second part, while the third part assesses the computer literacy project in Slovenia and discusses information literacy, which refers to the ability to access, analyze, critically review and create diverse forms of information and communication (press, TV and radio, computer) and to develop skills and practices needed in the process of participatory democracy. The fourth part contains an analysis of the reasons why the computer literacy prevailed within the Media and Computer Literacy Project. Computer literacy received more support from the authorities because it broadly agreed with some general political and economic principles valued by Slovenian society. The author suggest that education policy-makers everywhere should carefully review their media and/or computer literacy policies and give clear support to information literacy.

Key words: information literacy, media education, education system, Slovenia, Europe

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Introduction

During the transition of the political and economic system in the 1990s, the educational system in the countries of Central and Eastern Europe changed as well. The main goal of the transformation of the educational system (1990-1998) was to educate pupils for living and working in the age of information (*The Path to the Information Society in the Central and Eastern European Countries,* 1996; Svetlik, 1997). New possibilities for different projects arose: one of them was the Media and computer literacy project.

It was Slovenia that began officially with the integration of media and computer literacy into its school curriculum as the first country in Central and Eastern Europe in 1993. The Media and computer literacy project in Slovenia is composed of two main parts: the Media literacy project and the Computer literacy project. This article will present and critically assess the Media and computer literacy project in Slovenia using historical analysis, document analysis, in-depth interviews with educators, media and computer scholars. The aim of this article is to propose some creative suggestions based on the results of the analysis of the project.

The article is based on the argument that inside the Slovenian Media and computer literacy project, the Computer literacy project received more support from the educational authorities because it falls in line with some general political and economic principles valued by Slovenian society. The concept of media literacy was focused on providing the classrooms with technological equipment and giving teachers and pupils technical skills which are only a small part of the citizen's competence needed for the access, critical analysis, evaluation and production of different forms of information and communication and participation in a democratic system. In addition to that, I presume that the authors of the computer literacy project were driven primarily by vocational policy.

The article is divided into four parts. In the first part, comparative analysis of the teaching of Media and Computer in the 1990s in Europe is presented. In the second part, the Media literacy project is presented and assessed. In the third part, the Computer literacy project assessed and information literacy is focused on conceptualizing and defining its aims and key components. In the fourth part, the reasons why the Computer literacy project prevailed within the Media and computer project are analyzed. The general political, economic and educational principles in Slovenia are presented. In the last part of the article, it is proposed that education policy-makers should develop an information literacy curriculum and form a coalition between media, computer and education scientists.

Media Education in European Countries

The international project "EuroMedia" (Hart and Süss, 2002) offers the first international perspective on the teaching of Media and Computer, i.e. Media Education, in the 1990s in Europe. Reading twelve national reports of the international project (Belgium, Britain, Finland, Germany, Greece, Hungary, Ireland, Norway, Russia, Slovenia, Spain and Switzerland), big differences as well as some common elements can be observed.

Media Education in Europe: Common Elements

Media Education is an interdisciplinary subject and sets an importance on comprehension and interpretation. It can be interpreted in various ways. People who are interested in technology reduce their goals to Network and Computer Literacy, in other words Media Didactic. People who are primarily interested in aestethics stress the awareness of media's language; be it visually, verbally or auditively. Ethnologists, sociologists and psychologists point out, that media are means of transferring values instead of information: The information which can be taken out is always a consequence of interpretation and varies therefore depending on the recipient. Furthermore, it is influenced by illustration; which again suggests that other institutions like the agents, agencies as well as technological, economical and financial conditions of media production have to be considered. In order to make young people to competent users and possibly to active media producers, the above mentioned aspects have to be known.

With the approach to question the media system as being "the fourth power" in society and to use it as being self-productive, one is likely to be criticised. It is far away from the approaches of the traditional teacher-training, it needs a very profound knowledge and occurs in practise very seldom. Most of the teaching staff is better prepared to do the analysis of media's language mainly if media is considered to be but books and newspapers. Since this happens very often the result is another constant in Media Education: its bias on material equipment and cognitive approaches.

A Shakespeare edition from the year 1900 is still applicable at school. A computer, made in 1980 with its expensive software, isn't usable anymore. Expensive hardware and software have to be replaced regularly and maintained in a large effort. For students who always want to work with the best and newest computers they seem to be old and unusable. For the school communities however it is impossible to follow the rhythm of the chaotic innovations and the fast changes in the IT field. But the cognitive bias is much more serious. Who can assert oneself to have the knowledge to operate all current

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hardware? Who has even an approximate survey about all current products which form the young people's media environment?

In all the countries, even in those who enjoy the best IT equipment and where the aims in Media Education are very ambitious, the gap between school culture and media environment widens, the majority of teachers feel that they are not trained well-enough and the technological equipment is insufficient. The problem, how the school should integrate media youth-conformably to its students and in the same time still follow traditional goals, remains unsolved. Practically everywhere the kind of exams, which should control if the official goals could be reached, don't offer any incentives for Media Education (see for the USA: Christ, 1997). Because of narrow time resources Media Education is in danger to appear as a waste of time.

A further common element is also given by the fact that teachers do a very good job concerning this subject, and this despite of all the hindrances. The same holds true for the specialists and specialised institutions, which, on the one hand, offer the teaching staff further education in Media Education as well as technological support, and on the other hand claim publicly the integration of Media Education in the curricula. Even though at universities Media Education is only in the beginning to become a part of the teacher-training as well as of communication and media science, it is still insufficient and very often only mandatory in the training-courses, things are changing to the better. In general, having a cautious and patient optimism is allowed; an optimism that in every country, Media Education will be part of the curricula, that the training of students in Media Education might improve, that one might be successful in preventing the partially threatening reduction of Media Education to the narrow goal of Computer Literacy (compare Potter, 1998) and that Media Education might be practised as "a real Pedagogy" more and more in every school.

Media Education in Europe: The Differences

Whereas in some countries mostly women teach on their own for a salary between 20 to 30 $, in others well paid pedagogue work in a team; On the one hand, 14-16 years old teenagers show much interests in Media Education, on the other hand, they are totally demotivated, they feel as victims of the system and give teachers the same feelings; federal school systems allow the teachers freedoms, while other countries prefer having a strictly centralised educational system, which offers almost no space for own initiatives. In the wide range between integrative schools and systems, which practice a less permeable di-

versification of education, almost every variation can be found. Mainly, there is a difference to the importance of Media Education.

In *Greece*, Media Education doesn't exist for the supervisory school authorities and for teachers it isn't barely practicable because of not given either any freedoms nor equipment and supportive organisations. In *Russia*, financial conditions have to be pointed out as handicaps primarily besides weak embodiment of Media Education in national curricula. National institutions, offering supports and consultations, have excellent specialists, however only a few members and precarious conditions. In *Spain*, Media Education has been introduced as part of the curriculum recently. Because of unavailable resources and a crisis in the school level 14 – 16, Media Education couldn't be launched yet. In *Switzerland* there aren't any national binding curricula. The cantonal curricula prefer a vaguely defined Media Education without any goals that are to be achieved. This means that any kind of Media Education is possible. During the last years the interests in Media Education have declined because of the technological oriented introduction of ICT.

A grimly federalism is also practised in *Belgium* whose language communities follow separate ways. In Flemish communities, the significance of Media Education in the curricula seems to decrease. However, there are several active organisations, which offer the teachers further education as well as material support. Particularly in *Germany*, Media Education is subject of many controversies and publications, but still there has not been many progresses in practice. The federal politic of the "Bundesländer" develops different possible solutions. Even thought Media Education is part of the curricula or has already been integrated, it's still mainly a subject for pioneers. In *Ireland*, the endeavours of the „Irish Film-Institute", Irish Radio and Teacher Community of Media Education have contributed that Media Education has been released in optional courses, English lessons and finally in art lessons and civic education. It doesn't exist as a subject on its own.

In *Finland, Norway, Hungary, Slovenia* and *Great Britain* Media Education is an important part in the curricula. In *Hungary*, the communist regime recognised the media's importance for people's consciousness. It therefore assured that Media Education conformable to the values of the communist government (system) was part of the national curricula. After the process of democratisation, this tradition was carried on under modified indications. However, the teaching staff is worried about the future of Media Education because of ideological disputes of the changing governments and the lack of financial resources. In *Slovenia*, Media Education develops an amazing vividness through intense conflicts and discussions (more about Media Education in Slovenia in the next pages).

In *Finland* and *Norway*, Media Education is an indispensable subject in the curricula, mainly as a part of mother-tongue education. In these countries, the key role of Media Education for the present and future society is emphasized. Furthermore it lies within the school's responsibility to prepare the future generation to handle these instruments competently. *Great Britain* has followed this way for years and the beginning was the integration of Media Education in mother-tongue education. Since 1995, Media Education can be taught as a subject on itself and it even can be chosen as a key subject in colleges, but this solution isn't very common. Contents and procedures of the final exams are based on formal criteria similar to the classical languages (see Christ, 1997).

The rise of the Media and Computer literacy project in Slovenia

In the 1990's, there was 'a boom' in the media and computer literacy field in Slovenia. During the transformation of the education system in Slovenia (1990-1998), two different projects of Media and Computer literacy were constructed: 1. *The Media literacy project*: a) Media Education as an optional course on the primary school level (1997) and b) Media across the primary and secondary school curricula (1993, 1997), 2. *The Computer literacy project* (1994) a) Computer Education across the primary and secondary school curricula, b) Computer Education as a course on the primary and secondary school levels.

The Media literacy project was developed by the Media Education Curriculum Research Group composed of three communications scholars. They wrote and theoretically framed the curriculum with no cooperation from education scholars. The Computer literacy project was developed by a group of computer scientists and practitioners chosen by the Ministry of Education and Sport who had no educational theoretical framework.

There was no cooperation with the communications scholars and the two groups responsible for the projects worked independently. In the next two sections, the development, content, aims and shortcomings of both projects will be presented.

The Media literacy project

The authors of the *Curriculum for Media Education* (1997: 13) claim that "the main goal of Media Education in Slovenia is to educate an autonomous, competent, socially responsible and active citizen, who knows how to select quality information and responsibly communicate in the media and other societal forms of communication". The media literacy has three main compo-

nents (*Curriculum for Media Education,* 1997): 1. Creating awareness of the micro processes of media communication: analysis, evaluation and communication skills; 2. Creating awareness of the macro processes of media communication: an analysis of political, economic, social and cultural contexts of the media environment and building an appreciation of the importance of monitoring the world; 3. Participating in the media and other forms of communication in society.

Media Education involves didactic methods, which stimulate the following educational aims (*Curriculum for Media Education,* 1997: 11): a) cognitive aims (to help the students understand the differences: fiction vs. reality, ads vs. journalistic content, real vs. make believe, to know the basic characteristics of the media, to understand the media production process, journalistic work, basic media genres, to be familiar with the characteristics of media audiences, to understand the effect of the media on audiences, to know the relationship between the media and the historical, social, cultural, economic and political environment, to know the basic media trends), b) affective aims (to encourage the students to communicate in a group, to present their own opinions, to solve conflicts in a peaceful and tolerant way, to develop a critical reflection of media communication and production, to develop their individual personalities and enable them to understand and analyze their own activity as readers and writers), c) action aims (to motivate the students to seek out quality of information, to identify for themselves the issues of concern, to process their own opinions and distribute them to the media, to participate in social communication).

The Media literacy project tried to realize its aims through two different Media Education models: Media Education as a an optional course in primary schools and Media Education as a topic within the integrated primary and secondary school curricula.

Media Education as a topic within an integrated curriculum

The Media literacy project started out with experimental integration of Media Education in certain kindergartens. The main aim at this level was to help pre-school children (5-6 years) develop an understanding of the difference between fiction and non-fiction, ads and news, real and make-believe.

Furthermore, on the primary school level, Media Education is an obligatory component of all Slovenian language courses from K-9 and it is a part of the Civic education and ethics course in Grades 7 and 8. The impact of mass communication on citizens and society is the main content of the Civic education and ethics course (*Curriculum for Civic education and ethics course,*

1997). The Slovenian language course (*National curriculum for the Slovenian language for primary schools,* 1997) should provide information about the characteristics of media texts (genres, media language and media aesthetics).

Media Education has been integrated into the secondary school curriculum as a compulsory part of specific, independent and obligatory courses, such as the Slovenian language, Sociology, Psychology and the History of Art. The media construction of reality is central to Sociology (grammar school, fourth year). Students should also learn about the media institutions, political, economic, social and cultural contexts of the media environment, media persuasion and propaganda techniques (*Curriculum for Sociology,* 1993). According to the *National curriculum for the Slovenian language for secondary schools* (1993: 10-12), the aims of Media Education within the Slovenian language curriculum (all levels of secondary schools, all years) are: to examine different media text and style forms, to develop the skills of analyzing the grammar of media language and to understand the basic characteristics of the essential journalistic genres. Students taking psychology (grammar school, third year) should learn about the effects of the media on audiences, especially about media violence and stereotypes (*Curriculum for Psychology,* 1993). In the History of Art (grammar school, first and second year) students should be taught how to evaluate the different media products and how to produce them (*Curriculum for the History of Art,* 1993).

Media Education as an optional course

The optional course Media Education is a part of the nine-grade elementary school system, designed for 7th, 8th and 9th grade. Media Education is composed of three one-year courses: the Press, Radio, and Television and the Internet. This adds up to 35 hours per year or one hour per week (*Curriculum for Media Education,* 1997; Erjavec and Volčič, 1997; Košir, 2000).

The first year course is designed so that it stresses the topics related to the press. Pupils learn the basic principles of the mass media, the differences between the different media messages and how to differentiate the marketing and propaganda models from the journalistic model. After the first year course, pupils should understand that the media create and construct the world and do not reflect it and that messages have social, political, aesthetic and economic purposes. At the end of the year, pupils produce their own newspaper (*Curriculum for Media Education,* 1997: 18-19).

The second year course is focused on the radio. Pupils create their own radio show and discover that individuals construct meaning from messages. Pupils learn about the effect of the mass media, especially about topics such as

media violence, idols, and stereotypes (*Curriculum for Media Education,* 1997: 19-21). The third year course deals with television and its characteristics. In cooperation with local TV station, pupils create their own TV show. The last part of the course is dedicated to the Internet. At the end the year, pupils analyze the media content and write a letter to various editors in which they present their initiatives for the change of the media content (*Curriculum for Media Education,* 1997: 22-23).

The specialist Media Education training course (90 hours) at the Faculty of Social Sciences is offered to the students who are may teach the Media Education course in elementary schools. The university course covers both the concepts and knowledge about media studies and the pedagogical skills required to teach them effectively. Media Education course teachers are organized in the Association of Media Education teachers, which provides a back-up for individual initiatives. There are also a number of other resources available for teachers and the Faculty of Social Sciences offers information, textbooks and supporting audio-visual material, annual workshops and summer schools.

A review of the Media Education project

The in-depth interviews with the 20 randomly chosen primary (Civic education and ethics course, Slovenian language) and secondary school teachers (Slovenian language, Sociology) shows that Media Education is very seldom the subject of a lessons (up to 5 percent of the time). Thus for example, in most cases media integration in the Slovenian language course involves using the media only as a tool for presenting language exercises. The majority of teachers said that there is little time for teaching about the media because the curriculum covers so many things. The realization of Media Education objectives depends on the personal commitment of teachers (Erjavec, 2002). The interviewees said that they experienced difficulties in finding solution to financial and organizational issues (Erjavec and Volčič, 2002). Most of the interviewed teachers felt 'alone, without support from school authorities and educational policy' and did not have any training in Media Education. The majority of them are self-taught. (Erjavec and Volčič, 2002).

The main problem in teaching Media Education across curriculum lies in the lack of a long-term strategy and support for teachers from the educational authorities – there is no serious continuos educational policy. The Ministry of Education and Sport did not earmark any special financial support for media equipment, teacher training, material support etc. A lack of pre-service teacher instruction for all those teachers who are interested is one of the main problems of Media Education in Slovenia. Because of the lack of institutional sup-

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port, Media Education is mostly dependent on the work, initiative, and knowledge of individual teachers themselves. This reduces the possibility of integrating Media Education across the curriculum into the Slovenian schools.

The advantages of establishing Media Education as a subject specialty are considerable (Masterman, 1997). The goals of Media Education are easier to achieve within a specialist Media Education course, which has its own identity, its own rooms and equipment, its own resources. However, if the Media Education is adopted as an optional course, it is highly dependent upon the existence of pupils who chose this course. Research showed that in 1999, approximately 12 percent of Slovenian pupils in 7th grade chose Media Education course as an option (*Education for media and education with media 1999*, 1999). What does this mean? As the analysis of the integration of Media Education across curriculum (Erjavec, 2000; Erjavec and Volčič, 2002) shows that the majority of primary school students get hardly any information about the media in other courses, we could generally conclude that only 12 percent of Slovenian primary school students are informed about using the media critically and autonomously. The problem is that the course is optional. According to *Education for media and education with media 1999* (1999) Slovenian pupils, parents and teachers consider the optional courses in a pragmatic, instrumental way. It is not the theoretical understanding that matters, but the practical skills taught.

If we sum up, the main problem of developing the Media literacy project is the lack of support from the educational authorities and a lack of emphasis on Media Education in pre-service teacher training in general. Pre-service training should be offered to both specialized teachers, who teach Media Education courses, and teachers who are integrating Media Education into other courses: for all teachers a basic competency, related at the secondary and tertiary levels to their specialist disciplines and the primary level to their general pedagogical skills is necessary. For those teachers who are interested, training at greater depth should be provided thus enabling them to teach specialized courses (Butts, 1992). The ultimate objective of the in-service training should not be to transmit specialist information but to fire teachers with enthusiasm for Media Education in order to assist the cross-curricular principle on the road to success (Boeckmann, 1992).

The Computer literacy project

The Computer literacy project ('Računalniško opismenjevanje') represents one of the key recent development projects in education in the Republic of Slovenia. The goal of the project is to raise the level of informatisation of the

Slovenian education system with special emphasis on primary and secondary schools (Gerlič, 1998). In February 1994, the Slovenian government passed a law assuring the financing of the necessary developmental programs in Slovenian education named the School Money *(Šolski tolar)*. One of five projects chosen was the five year (1994-1999) Computer literacy project. The project is run with state financial support. The state contributed more than SIT 5 billion (approximately US $ 25 million) for the Computer literacy program. The computer equipment in the majority of institutions was purchased with the financial support of the state as well. Local authority funding and corporate sponsorship also help with the financing of schools (Gerlič, 1999). The Computer literacy project was finished last year, five years after its start (1994-1999).

The goals of the Computer literacy project were (Gerlič, 1998: 457): training teachers and pupils in the use of modern information and communications technologies, introducing standardization of computer-aided information transfer between schools and other institutions, unification of computer software to support teaching and administrative work, ensuring suitable provision of modern computer and information equipment, and providing opportunities for research and development work on introducing new information technologies into the classroom.

The goals of the Computer literacy project were implemented using two different education models: Computer Education as a course in primary and secondary schools and Computer Education as a topic within the integrated primary and secondary school curricula.

Computer Education as a topic within the integrated curriculum

Equipping classrooms with computers was the main goal of the Computer literacy project. As far as pre-school education is concerned, 59 (out of 278) nursery schools in Slovenia have computer equipment. In 1998 there was a total of 7 609 computers in primary schools; that means an average of 19 computers per school and one computer for every 28 pupils. Most of the computers in primary schools are personal computers (96.4%) (Gerlič, 1999). In 1998 there were 4 567 computers in secondary schools, with an average of 35.9 per school and one computer for every 9.5 pupils. Most of the computers in secondary schools in Slovenia are personal computers (98.1%) (Gerlič, 1999).

In 1994-1999, primary schools witnessed a certain degree of increase in the number of schools with teachers who obtained their knowledge through additional training in the use of computers (Gerlič, 1999), In Slovenian primary schools computers are most often used in individual parts of lessons (most fre-

quently to obtain new materials), but an integrated approach remains very rare (Gerlič, 1999).

As far as secondary schools are concerned, a review (Gerlič, 1999) of the use of computers in 2- and 3-year vocational programs and in 4-year technical or other vocational programs shows that computers are most frequently used in practical classes and less in other courses (most often in natural science courses, and to a negligible extent in social science courses). A study of the use of computers in individual courses of the grammar school program shows that grammar schools are lagging behind other secondary school programs (Gerlič 1999).

Primary and secondary school teachers are trained in the use of computers in two- or three-day seminars. The Computer literacy project has provided education programs for 5 639 teachers and other primary school staff (*Education for media and education with media 1999,* 1999). In 1998 approximately one half of the teachers per school finished some kind of computer seminar or training (Gerlič, 1999).

Computer Education as a course

The optional three-year technical course in Computer Education is a part of the nine-grade elementary school system, designed for grades 7, 8 and 9. This adds up to 35 hours per year or one hour per week. The aim of Computer Education is to teach the pupils (*Curriculum for Computer Education,* 1997): a) the basic principles of computer science (the structure of the computer, differentiating the functions of the individual elements and the principles of operation), b) data processing by computer (autonomous use of the computer and producing simple texts using a word processor) and c) computer programming (solving linear problems with a computer algorithm).

With regard to the course in Computer Education, research showed that in 1999 approximately 54 percent of Slovenian pupils in 7th grade chose Computer Education as an optional course (*Education for media and education with media,* 1999).

In secondary schools (the first year of general secondary schools, 4- year technical and 3-year vocational schools), lessons in computer science are provided as an obligatory independent subject (70 hours) as specified by the curriculum: some of the lessons are theoretical (18 hours) and some are practical (52 hours). The curriculum (*Curriculum for Computer Education for Secondary School,* 1997) has eight main aims: 1. to familiarize the students with the basic concepts of information science (information, data, continuous in discrete data storage), 2. to instruct the students about information technology

(differentiating between software and hardware, explaining how the computer works, explaining the functions of the individual units of the computer, using the computer autonomously), 3. presenting a computer program, 4. are capable of presenting information in writing (producing a text (using a computer) fairly quickly and with no major mistakes), 5. are capable of presenting information graphically, 6. are familiar with the concept of computer (can send and receive e-mail messages, can find information of the Internet), 7. are capable of processing data (can make tables and charts), 8. computer programming (defining the algorithm, understanding the role of the program and the program language).

The author of the Computer literacy project analysis of, Gerlič, (1999: 431) concluded that in secondary schools two-thirds of the staff teaching Computer Education are suitably trained, while one-third (43) of secondary schools employ inadequately trained teachers. The Faculty of Mathematics and Physics offers Computer Education training to the students who are going to teach Computer Education in secondary schools.

A review of the Computer literacy project

An analysis of the Computer literacy project shows that the project focused mainly on equipping classrooms and developing the technical skills of teachers and pupils.

As a result of the five-year Computer literacy project, teachers are no longer struggling to get on training courses. With structured interviews of 20 randomly chosen primary (Civic education and ethics course) and secondary school teachers (Slovenian language, Sociology) we identified fear and pressure as the main sources of motivation for teachers attending the seminar on Computer literacy (Erjavec and Volčič, 2002): the fear of a computerized future; the fear of not being able to follow the knowledge of their students; the pressure from other teachers and administrators who want to be up-to-date; the pressure from parents, who think their children need computer skills to compete in school and at work. At two- or three-day seminars, teachers were trained in 'the basic use of a personal computer' (Erjavec and Volčič, 2002).

In the 20 schools visited (10 primary and 10 secondary schools), one teacher of Slovenian language was using the computer as a tool to support the study of literature. There is, as yet, no evidence of any attempt to integrate computer technologies into the primary (Civic education and ethics course and the Slovenian language course) and secondary (the Slovenian language, Sociology) school curricula (Erjavec and Volčič, 2002). Computer technology is used as a way of presenting information. Furthermore, the Computer literacy

project focused on providing and using the computer in school, that is teaching *by using* the computer and rather teaching *about* the computer. When the computer is used simply as an alternative means of giving lessons, this is education *with*, not *about*, the computer.

The main problem of the Computer literacy concept is that it is poorly defined and delineated. The key goal of Computer Education is mainly equipping classrooms with technology: well-equipped classrooms and operational use of computers (Gerlič, 1999), with no further planning on how to understand, analyze and use the computer. The authors of the Computer literacy project are concerned about promoting the use of the computer and ignoring its social impact (Marentič Požarnik, 1997). Computer Education as it is practiced in Slovenia is not controversial and it covers only the practical/technical dimension, but not the civil and social dimension. There seems to be no consideration of the computer as an instrument of social changes. The main goal of the Computer Education lessons is enable the students to become 'literate' in the sense of possessing technical fluency.

The Computer literacy project has no apparent theoretical framework for a critical assessment of the role of the information and communication technologies in Slovenian and global society. Without asking a broader, contextual WHY?, the Computer literacy project in Slovenia does not address the question how to understand a wider picture of information and communication, how to understand computer technology. The questions regarding the balance between the role of technology, the economy, and the social and cultural structures are omitted. After all, information and communication technologies are a social institution, working in a society, with its own distinctive set of norms and practices but with the scope of its activities subject to the definition by society. Information and communication technologies are dependent on society, on political and economic forces, and the question which arises is: Are information and communication technologies completely independent of the rest of society? The Computer literacy project does not recognize that historical reflection is important for understanding the existing reality, and further, does not view the relationship between technology and society as reciprocal.

Because information and communication technologies have become intertwined with people's professional, civic, and personal lives, students should be educated broadly (Potter and Christ, 1998). In addition to the ability to use and apply technologies (practical/technical dimension), a computer-literate person should also have an understanding of the issues associated with the applications and use of the computer (civic) and an appreciation of the significance of computers (social). "Students need to be prepared for the public discourse that our society requires and for taking responsibilities for the processes of democ-

racy at all levels" (Kuhlthau, 1997: 442). Technical skills do not enable students to engage in higher-order thinking activities such as understanding complex ideas, solving real-world problems, and analyzing critically (Neil, 1995).

To sum up the need for literacy in the age of information, one can choose a common denominator: information literacy, which - in contrast to the different 'literacies' (media, computer, technical) - is an inclusive term (Doyle, 1992). According to Doyle (1992: 6), an information-literate person is one who recognizes that accurate and complete information is the basis for intelligent decision making; recognizes the need for information; formulates questions based on information needs, identifies potential sources of information; develops successful search strategies; accesses sources of information including computer-based and other technologies, such as the television, radio, newspaper; evaluates information; organizes information for practical application; integrates new information into the existing body of knowledge and uses information in critical thinking and problem solving.

The aim of information literacy is to teach information and communication technology users, particularly young students, how to access, analyze, critically review and create diverse forms of information and communication (press, TV and radio programs, computer) and further, develop skills and practices needed in the process of participatory democracy. Therefore, information literacy has several components (Lee, 2000: 147-149). The first component is an understanding of the nature and function of the media and computers and critical awareness of their impact on individuals and society. The second component is the development of the ability of critical thinking. The students discover the social, political, cultural, commercial and ideological implications of the information received. The third component of information literacy is the skill of efficient searching and critical selection of information: to inform students to become familiar with and skilled in all the information searching devices and to apply the model of logical thinking (reflective thinking, creative thinking and critical thinking) to assist information selection. The fourth component of information literacy is knowing how to employ media-computer production using the above mentioned technologies. The fifth component is social participation: to encourage students to monitor the media and technology and motivate them to seek out quality of information, to identify for themselves the issues of concern, processing their own opinion and distributing them to the media and others, and participate in the communication in society.

Discussion: Why has the Computer literacy project prevailed within the Media and computer project?

Computer literacy has been widely adopted as a goal for Slovenian schools. It is a new goal, which came to the forefront in the 1990s. It has arisen because it falls in line with some general political and economic principles valued by Slovenian society. During the transition period in all Central-Eastern European countries there has been a steady rise in individualistic and consumerist values and identities, and, with it, a gradual erosion of collective and community identities and beliefs. Indeed, the question of the citizens' freedoms, democratic institutions, media autonomy, and the control of society over the state are no more relevant for the public agenda (Splichal, 1995). Economic neo-liberalism became the dominant form of political meta-narrative on the eve of the 21st century in Slovenia, and other Central-Eastern European countries. The political arguments that prevailed in the debates actually reproduced what had been already said and seen in Western Europe and other developed countries. The manifestation of neo-liberalism is characterized by a primary concern to create the structural conditions which best facilitate free enterprise and market liberalization (Svetličič, 1996). The main current political aim in Slovenia is to develop, so that the country will be compatible with the European Union and other developed countries (*Slovenia, Strategy of International Economic Relations,* 1996).

During the transition period, the role of the national education system has changed and the government cannot managed education as it used to, when the original function of the education system was to cultivate social integration and cohesion. At the end of the transition in Slovenia and other Central-Eastern European countries, education is seen as a means of individual and collective economic advancement (Svetličič, 1996; Kos, 1998, Rihtarič, 1998). This vocational policy stresses the occupational destinations and the needs of the learners. Educational authorities assert that computers will dominate the workplace of the future, and that students must therefore have some knowledge of how computers function, in order to be comfortable and competent in such a workplace (Svetlik, 1997; Kos, 1998). Computer literacy becomes one more tool in increasing the economic productivity in order to retool the Slovenian economic production. "Today, the use of informational technology is necessary in all school processes. Without it, we are not going to be able to compete in the marketplace," claimed the research group of the Computer literacy project (Muha et al., 1999: 444). In Slovenia as in other countries (Goodson and Mangan, 1996; Gray, 1999), the need for computer literacy has become widely accepted as a kind of value-neutral, technological necessity of modern life.

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The main reason for the existing situation lies in the absence of a broad public debate about the concept of the Computer literacy project in Slovenia. Furthermore, the Slovenian government, scholars and the lay public agreed that it is, after all, computer literacy that can help Slovenia become part of the Western World. Even today, the atmosphere and trust in the Computer literacy project remains: a consensus prevails that computer literacy, as it is developed, is a technological necessity for economic competitiveness in the global market. If we sum up, the Computer literacy project is favored by the curriculum because it reflects the new political goals (to join the European Union) and economic goals (competitiveness in the global market) in Slovenia.

Conclusion

In general, Slovenia belongs to the developed European countries on the field of Media and Computer literacy projects. But, the Computer literacy project received more support from the Ministry of Education and Sport and the government, because it falls in line with some general political and economic principles valued by Slovenian society. It is widely considered to be the "magic road" that will lead to the country towards the technologically developed Western World. However, a close analysis shows that the concept of the Computer literacy project needs further elaboration. While focusing exclusively on equipping the classrooms and providing the teachers and pupils with technical skills, it neglects the elements of information literacy. The concept was accepted uncritically, with the goal to help the pupils become skilled workers.

One of the main reasons why the Computer literacy project focuses only on technical skills and why Media Education is not more integrated in other courses is the low financial and institutional support from the educational authorities for the Media literacy project, especially for media equipment and teaching materials. In addition to that, there is a lack of pre-service Media Education training for all the future primary and secondary school teachers interested in the subject. The realization of Media Education objectives depends on the personal commitment of teachers.

Even though the Computer literacy project is finished, the Slovenian educational system should continue developing computer literacy on the basis of the knowledge that is necessary for an information-literate person. What I am suggesting is that teachers and policy-makers should become more critical of the purpose of computer literacy, and begin to insist on a more serious role in defining and directing the appropriate use of information and communication technologies in their classrooms.

The challenge for media educators in Slovenia is to steer the debate about the literacy in society in the direction which includes all forms of communication in the literacy equation and which leaves room for flexibility in policy-making so that teachers can learn to accommodate to the rapidly changing forms of communication. One way to approach this is to stress the goals of the information literacy programs as central to the Slovenian education system and to form coalitions between media, computer and education scientists/educators. Information literacy should develop informed and active citizens, which have the ability to analyze, critically evaluate and produce communications (micro-processes), and further, it should give students a sense of their own socio-historical location and the place of information and communication technologies (audio, visual, audiovisual, computer, electronic, and telecommunication media and technology) and enable them to develop skills and practices which are needed in the process of participatory democracy (macro-processes). An information-competent citizen must know how to use the basic information on public affairs (e.g. laws, government, economy, and specialized work interest), and have the ability to participate in the democratic system.

I believe that education policy-makers everywhere should carefully review their media and/or computer literacy policy and give clear support to the information literacy project by mandating the teaching of information literacy within the curriculum, providing technologies, and developing the necessary teacher training. Information literacy should be added to the existing media and/or Computer Education programs. Media and computer scientists/educators should work together to develop an information literacy curriculum at all school levels and curriculum models (for example, information education as an independent course and across the curriculum), include information literacy in pre-and in-service teacher training programs and providing teaching materials.

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Karmen Erjavec

Projekt medijskog i informatičkog opismenjavanja u Europi: Primjer Slovenije

SAŽETAK

Cilj rada je prikazati kritički pristup projektu medijskog i računalnog opismenjavanja u Sloveniji. Članak je podijeljen u četiri dijela. U prvom dijelu prikazana je komparativna analiza nastave o medijima i računalima devedesetih u Europi. Projekt medijske pismenosti (media literacy) u Sloveniji procjenjuje se drugom dijelu. U trećem dijelu, o projektu računalnog opismenjavanja u Sloveniji raspravlja se usporedo s osnovama informacijske pismenosti koja uključuje sposobnost pristupa, analize, kritičke procjene i proizvodnje različitih medijskih oblika za novine, televiziju ili radio, računalo i ostale medije, jednako kao i razvijanje vještina i prakse potrebne za aktivno sudjelovanje građana u procesu demokracije. Četvrti dio analizira razloge zbog kojih project računalnog opismenjavanja prevladava nad projektom medijskog opismenjavanja. Između projekta medijskog i računalnog opismenjavanja, projekt računalnog opismenjavanja ima veću podršku autoriteta, zato što je u skladu s općim političkim i ekonomskim načelima vrijednosti u slovenskom društvu. Ovaj članak upućuje na to da bi stručnjaci i kreatori školovanja za medije, trebali pažljivo preispitati politiku medijskog opismenjavanja te dati jasnu podršku cjelovitoj informacijskoj pismenosti.

Ključne riječi: informacijska pismenost, obrazovanje za medije, obrazovni sustavi, Slovenija, Europa