WAYS OF USING NEW TECHNOLOGIES IN EDUCATION

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Summary: *In recent years Internet has become a way of learning and teaching from distance. Education through Internet is a form of training based on Web (on-line) that has a software profile accessible via Internet anywhere and anytime. The paper presents web-based training as a form of distance education, IT support, educational software applications and E-books. Furthermore, the paper looks at various resources, educational portals and weblogs used in education.*

Key words: *Internet, education, distance-learning, IT, portals, weblogs.*

NAČINI KORIŠĆENJA NOVIH TEHNOLOGIJA U OBRAZOVANJU

Rezime: *U poslednjih nekoliko godina Internet je postao jedan od načina učenja i nastave na daljinu. Obrazovanje putem interneta je vid obuke zasnovan na Web-u (on-line), softver dostupan putem Interneta bilo gde i bilo kada. Rad prikazuje obuku zasnovanu na Web-u, kao oblik učenja na daljinu, IT podrsku, obrazovne softverske aplikacije i elektronske knjige. Takođe, u radu su razmotreni i razni obrazovni resursi, obrazovni portali i Internet blogovi koji se koriste u obrazovanju.*

Ključne reči: *Internet, obrazovanje, učenje na daljinu, IT, portali, blogovi.*

1. EDUCATION

Through Internet is a type of learning and teaching from distance which is gaining ground every day due to the multimedia nature of the World-Wide Web space, in a superior Internet access both quantitatively (number of persons) but particular quality (such as transfer speed). Education through Internet is a form of training based on Web (on-line) that has a software profile accessible via Internet anywhere and anytime. Web browsers that support 3D virtual reality, animation, interactions, conversations and lectures, audio and video streams in real time provide training. Technological progress has made the study activities more and more interactive and more natural, without requiring sophisticated

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equipment. The main advantages of high lightening web-based training as a form of distance education are:

❑   Reduce storage costs, shipping and staff;
❑   flexibility for students as in choice of the possible sequences that remain in print or electronic form;
❑   Rapid access to information exactly when and where necessary;
❑   incorporate a variety of learning environments: text, graphics, static images and animation, sound, short films, in just one word *multimedia*;
❑   wide possibilities of information through hyperlinks;
❑   removal of isolation by using specific Internet communication facilities;
❑   control access to resources by logging in users;
❑   opportunities for group training (asynchronous and synchronous) as well as individual training.

However, the Internet as a resource and support for web-based training is still not exploited to its full technological potential. The main causes could be:

underdeveloped skills for the creators of the Internet-based courses. There are two critical skills that such a person should possess: technical skills (how can new technologies be better used for building Web-based courses) and pedagogical skills (how they can be created, submitted and evaluated better the web-based courses using teaching methods and techniques available to a Web instructor);

the chances and opportunities for creators of Internet-based courses to share experiences are small. Each developer and / or distance education institution involved is trying to build its own platform for online courses. In this way, the gained experience is not properly disseminated for widen the necessary horizons of developing a higher-distance-learning education.

• lack of production centres, where multidisciplinary teams to develop educational content in digital format. A real example is the Ecoles-Medias Service from the Department of Public Instruction in Geneva where "schools provide the resources and expertise to use and educational integration of the media, images and information and communication technology."

Online training presents live content, refreshed when necessary and modified at will in a structure that allows self – rhythmicity and self – guidance on any subject, being a type of training in media fully capable of evaluation, adaptation and remediation, all independent of platform. As the infrastructure development is necessary for this type of education, and I mean informational society, students will assume greater responsibility for defining and organizing what is to study.

Although web solutions are an option that justifies their efforts, in the context of the educational process should begin by achieving the teaching goals, from the intellectual satisfaction of students, the technology is used as a way and not as a purpose.

Firstly we must follow to ensure the quality of education, we must satisfy the educational principles, we must remove the rigidities associated with traditional educational systems, and we must harmonize innovation in education with technology.

Distance education has diversified in full compliance with the technological development

of human communication, the media in general. Thus, nowadays, mediation between students and instructors is carried out in the vast majority of situations through new information and communication technologies - especially the Internet.

In the document *Better e-learning* for Europe's European Commission e-learning is defined as multimedia and Internet technologies to improve the quality of learning by facilitating access to resources and services through collaboration and exchange of information. The term, borrowed from the Anglo-Saxon literature, was extended from the primary meaning, etymologically, electronic learning, now covering the intersection area of educational activities with new information and communication technologies. The significance of e-learning overcomes and interferes with a multitude of terms that capture the variety of educational experiences that can benefit of technological support: assisted instruction, digital / mobile / online learning /education, training, through the media, etc. E-learning is a generic term which designates the educational distance situations in which significant information and communications technologies are being used.

Applicable both in academia and in the know-how management and also in the training business, e-learning solutions are adaptable to various requirements.

The role of e-learning expands and becomes more and more important while technology progresses without eliminating traditional training methods. E-learning's goal is not to eliminate traditional learning, but to complete it. Perhaps in a few years there will not exist anymore o clear border between e-learning and traditional methods, the study evolving naturally to the increase of progress and improvement of the learning process.

Distance education offers the greatest flexibility, but requires self-discipline, reading and writing skills, self-taught, curious and motivated learners. Children / students who are attending distance classes form their skills to study independently and autonomously, which is an important advantage for the next stages of their professional training. The limited space of institutions and the various difficulties attending courses in a traditional system of education, in junction with the training they need throughout their entire lives, led to the consideration of distance education as aviable alternative, especially in university as an alternative way of learning the adults.

In higher education the bond between teachers and students has direct consequences in shaping young people's personality that is way this system is less used.

Moreover, most students do not have the wanted characteristics of the distance education form; they are still in the process of training.

For lab experiments and social life we do need direct contact with the teachers because we need mix solutions, both classic and e-learning.

Although it offers enough advantages, the development program of distance education usually finds disadvantages such as:
- ❑   Negative attitudes
- ❑   Technological constraints, especially lack of connection to the Internet;
- ❑   Low degree of flexibility from the institutions;
- ❑   Restrictive local or national policy.

Whatever the chosen form of distance education is, the students may face tension generated by the feeling of isolation and felling control lack.

The learner may fee disconnected because of the bad structure support and slow feedback.

The lack of social interaction may lead it reduced motivation.

The student may also feel the absence of a solid structure – absence of stabile schedule.

Eventually, if nobody helps the student to escape his fears and feel comfortable throughout the program, the student will become reluctant and he will abandon the course.

However, by integrating certain educational distance programs, skills like studying independently and autonomously will be built, and these skills will give teens an important advantage for their next professional step.

Increasing the capacity of processing and storage, reducing significantly the size of the equipment as well the emergence of interaction with the user will increase the using of computers in almost all the fields of activity. The new information and communications technologies are suitable for numerous types of training uses, for the direct or indirect benefit of the children/students.

The contribution of the new technologies in teaching is materialized through:
❑ resources for the teaching-studying activities;
❑ application support for teaching;
❑ training systems based on the web.

The most frequently used IT resources for the teaching-studying activities are the *educational software products*, applications that contain a teaching strategy are that are directly addressed to those who study, helping them assimilate information or to acquire abilities through demonstrations, examples, explanations, and simulations. Another type of resource for teaching is the *e-book* for which a significant progress is announced, taking into consideration the cost of production that are reduced in comparison to the printed books, but most of all the reduction of paper consumption and in consequence the protection of the environment. Alongside the educational software products and the e-books, in the instructive-educative process, an important informational contribution is provided by the *educative multimedia applications* like the encyclopaedias, the multimedia dictionaries or the diverse types of atlases.

As a support in teaching, computers are used by teachers:
❑ to prepare and to make teaching materials;
❑ to evaluate and to analyze the children/students' progress;
❑ to make the informative and formative presentations;
❑ to plan the length, the timetable and the calendar of activities.

The children/students, in their approach to acquire concepts and/or skills, can use the new technologies in diverse ways and purposes, from informing on the Internet, to writing homework using the word processors.

Other useful tools for students include the electronic dictionaries, support systems like CAD (*Computer Aided Design*), music editors or simulators.

If the first achievements in the computer assisted instruction field were built on the basis of the pedagogical principles of programmed training, the current educational systems encourage the active construction of knowledge, assure significant learning contexts, promote reflection, free the child/student from many routine activities and stimulate an

intellectual activity similar to that filed during the work process. The interconnecting of computers has, as its major consequences in the educational field, the possibility of communication and the joint use of resources, which, through sharpening the need of continuing education, has led to the development of training systems based on the web, referred to by the phrase e-learning platforms. The evolution of these platforms is the consequence of the continuous growth of the capacities and flexibilities of the new information technologies that can be applied in educative situations, doubled by a continuous decrease in equipment cost. The unprecedented dynamics from the domain of information and communications technology has, as its effect, the inclusion in modern teaching of more and more techniques and means of learning in full concordance with the psycho-socio-pedagogical profile of the learner from the contemporary society. The optimum way of presenting the content, the encouragement of an active step, and the collaborative learning offer a plus in quality, raising the flexibility of the educational systems in conformity with every step of the learning cycle.

The use of new technologies in education requires a set of knowledge, aptitudes and attitudes from the teachers to allow the use and capitalization of technologies in teaching. In other words, it requires the formation of a certain informational culture, understood not only as knowledge and specialized skills, but also as a new orientation and reference to reality. The conversion of technologies in training and education strategies has already enforced itself as reality which characterizes the educational systems, having a great impact on the growth of the educational activities' efficiency through:

❑   the operative use of logical, selective and analytical thinking;
❑   the development of visual perception;
❑   the structuring of the content;
❑   the growth of confidences in one's own forces.

Teachers are required to have the capacity to identify both the pedagogical situations and the adequate informational situations, with the beneficial effect for education and forming.

2. IT SUPPORT

The continuous improvement of information and communication technologies, the degree of use growth and the continuous adaptation to the requirements enforced by the development of the society turn these technologies an optimum environment for transmitting information, a necessary condition yet not sufficient to assure success in the educational process. The effectiveness of the training also depends on the selected way for communicating the content, and the choice has to be influenced by the content and not by the technology, each environment presenting both advantages and disadvantages.

The **text** is a basic element in training, but its excessive use must be avoided for transmitting information because it can become a mean too slow and monotonous, soliciting too much the attention and concentration of the learner. Furthermore, every time, the following aspects need to be taken into account:

Concrete experimentation:
❑   understanding;
❑   imitating.
Abstract conceptualization:

- analyzing;
- summarization.

Observation and reflection:

- observation;
- consideration.

Testing in new situations:

- practice;
- attempt.

The ability of the learners to read is facilitated by:

- the use of known words, of clear sentences without useless details;
- dividing the content into small paragraphs, easy to assimilate and with a high degree of attractiveness;
- using a conversational tone that brings the content to the learner's personal level of understanding.

The way its written is another important factor when a text is edited, and that is why the following are to be taken into account:

- the selection of certain types of letters that are easier to read;
- keeping the same type of letter for the entire text not to create confusion and not to slow the reading process;
- using paragraph titles to outline the ideas;
- using free spaces around the paragraphs to avoid the feeling of agglomeration.

The use of further explanations for a better understanding of what it is desired to be transmitted. Because these explanations are not necessary for all the learners, they can be shown just on request, ussually through a click of the mouse.

The *lists* represent a way of organizing the content through which the similar information is grouped, forming an enumeration. To each element from the list, a new paragraph is associated. This way, free spaces are created that increase the text tracking degree, the structured information from a list being easy to assimilate by the reader. In the computer assisted training, two types of lists are being used:

Numbered lists:

- each element of the list is numbered;
- different styles of numbering may be use, based on Arabic or Roman numbers, but also letters;
- the format shows an information hierarchy.

Bulleted lists:

- to highlight, every element of the list is preceded by the same symbol, called a bullet;
- they have a pleasant visual aspect;
- they are usually easy to track;
- they require a short reading time.

Drawings have been used since the begging of human existence to convey certain messages, representative for this are the cave like drawings. Now we use clip arts, digital photos, diagrams and even 3D images to illustrate data and trends, for describing concepts, for e-mails or just for decoration. The replacement of different information with a graphic

eloquent representation can better structure the information and has a greater impact for the user.

People use graphs because is easy to retain something that expresses quite much in a small space. Visual memory is considered to be superior to lexical memory, by the psychologists. In the latter case, each animation must be paused and resumed at any time.

In order to retain better, animations can be correlated with a voice or textual comment. The remove the monotony through the visual impact that is caused some animation effects ca be added as content elements or elements such as height, position, colour, etc.

Live cameras can be used for educational purpose both for observing different aspects of the real world but also for removing isolation feelings. Students can have these feelings if he uses distance education.

There many uses of the audio format in training. People tend to understand better if they listen and they can also benefit of intonation and diction.

The sound is the most efficient way to attract attention, although is the oldest and most subtle of all communication elements. Music can be used to create a proper atmosphere for presentations in this way you can increase feelings or to illustrate or to emphasize particular points of view.

If you use videos during you lesson or training you will motivate your students, they will have the chance to receive information which could be presented only as a text. Videos allow us to see real scenes, demonstrations, procedures, generally reflects ideas that can sometimes be abstract.

Audio-video combination, however, has its own limitations. Some details may be overlooked because of the speed with which are played. For students it is more comfortable to watch or to listen a video, but in this manner they don't make much effort in understanding the context, compared with a text.

If you want to avoid moments when the listeners do not pay any attention you should consider the following aspects:
- ❑ The recording has to be short
- ❑ The students must control running (forward, rewind, pause)
- ❑ Play pause from time to time to allow reflection on the shown sequences
- ❑ Ask questions during pause for students to focus on certain details of the presentation.

Presentations represent the digital alternative of the slides used as a traditional way of organizing information and another way of presenting it.

The computer facilitates the use of these teaching techniques and the most popular software that allows HTML format, or a single slide as a picture file, or using audio in presentations is Microsoft PowerPoint.

In the presentation we can use both transition effects and animation affects associated with different components presented in the slides (see pictures below)

An advanced branch of the Microsoft PowerPoint pack is *Macromedia Flash*. Although it is more difficult to use, the Action Scripts offers several working tools.

Hyperlinks represent an important component of the computer and you cannot find it in the traditional ways of training because they appeared after the Web technologies. It helps the student to participate actively to its own training and it also leads him to a deeper understanding of the information.

They can be used for additional explanations, for connecting the context with examples, providing in this way auxiliary information for a better understanding of the material. The hyperlink information can be accessed in a nonlinear form.

Email, forums, chats attenuates the feeling of isolation of the learners involved in distance education. This feeling develops when people don't interact normally.

Discussions, problem solving, interaction with the others around us, are just some of the activities that give the students the opportunity to focus on learning.

Web-based training reduces the physical isolation of the student through asynchronous or synchronous communication.

Forums is an asynchronous communication tool that allows learners and teachers as well to exchange information about the course modules or about the proposed topics and opinions. For an effective and efficient management of web-based trainings we must storage, monitor the real opinions of the learners.

At the same time, through this way of communication, the teacher can support and coordinate the student's activities. Chat lines allow a high degree of individualization of the relationship between learners and teachers. Using this type of communication tool, the interlocutors can communicate in real time using the keyboard.

Web technology now offers a chat system that incorporates both audio and video communication, in addition to written communication. If we could test the students, we should take into account the support of their presentation, but it must be remembered some particularities, such as – the level of cognitive development, intellectual ability, aspects of the learning style, motivational and attitudinal factors.

A human being is capable of seven different ways of processing the information (Gardner, 1999):

1. Relying on words.

   People who like to play with words, to talk, read and write, people who can easily remember names, places, dates, numbers, etc, after reading a text.

2. Asking questions.

   People who like to shape their ideas by asking questions, exploring and experimenting can learn better when they can classify, order or work with abstractions and relations between them.

3. Looking at pictures.

   People who like to draw, to watch pictures, slides, movies, being able to imagine, to bring chance, to do puzzles, read charts or maps, assimilates information better by seeing, by using the mind's eye in handling the images and colours.

4. Listening.

   These people excel at remembering sons, for seeing the rhythm of life and have a good

notion of time. For these persons it is very important the intonation and the diction of the speaker.

5. Watching movies.

    People who have good visual and auditory memory at the same time.

6. Talking with others.

    People who collaborate to perform tasks have the ability to understand and make themselves understood.

7. Through individual study.

    Persistent people who learn by themselves without asking questions or discussing with the others.

The figure above illustrates the correlation between seven learning styles and different modes of information processing and presentation available in the training and choice of optimal environments for the transmission of information.

Another important aspect is the conclusion of experts that active learning modes are implemented through a combination of talking and to do amplify the power of accumulation. They are characterized by a higher retention rate than passive learning modes: view, read and listen. It is also possible to transmit the same information to use multiple presentation techniques, leaving the choice up to the student of his style optimal learning environment.

3. EDUCATIONAL SOFTWARE APPLICATIONS

An educational software application or educational software product is a program designed in relation to a series of pedagogical coordinates (behavioural goals, specific content, characteristics of the target population) or technical coordinates (assuring the individualized interaction, the sequential feedback and the formative evaluation). The use of educational software products in the learning system is a necessity dictated by the current society's needs, a society dominated by the power of intelligence that shuts the door of traditionalism and opens the windows of knowledge. In this context, it is important that school teach young people how to learn, promoting work autonomy, thinking flexibility, cooperation and dialogue capacity, anticipation of change, adaptability, self-instruction stimulation, keeping an equilibrium between individualism and socialization.

The educational software products can be classified by the specified pedagogical function that they fulfil in a training process[2]

1. *Drill-and-Practice products* can be used as a supplement of the class activity, facilitating the assimilation of certain data, procedures, techniques or forming specific skills, offering the advantage of working at one's own rhythm and immediately validating the given answer.

2. *The interactive software products for teaching/learning* of new information create a dialogue between the learner and the respective program (environment), the interaction

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[2] *E., Noveanu, O., Istrate, D., Oprea, R., Jugureanu (coordonator),* Metodologia SIVECO de realizare a conţinutului educaţional multimedia interactiv*, Editura Litera Internaţional, 2009.*

being controlled by the computer (dialogue tutorial) or by the learner (inquiry dialogue). The generic term of tutor designates the product in which the learner's "path" is fully controlled by the computer, leading him to assimilate new capacities of forming new skills after a strategy set by the product's designer. If a tutor forces the learner to undergo a certain path in his learning, an inquiry software product uses a different strategy: the learner isn't given the information already structured (the path), but an environment where he can extract all the information (both declarative and procedural) needed to resolve the task or for a different purpose, based on a set of rules. This way, the path depends largely on the learner (both by his level of knowledge and by the characteristics of his learning style). This way, an individualization of the progress is determined by the level of training of each learner through an adaptive interaction which assures that the operational goals are met.

In the past years, they are designing and experimenting different learning environments with an extremely complex interaction, based on using artificial intelligence; the approach is known under the name of "computer assisted intelligent training".

3. The simulation software programs *allow the controlled representation of a real* phenomenon or system, through a model with analogue behaviour, offering the possibility to modify some parameters and observe the system's behaviour.

4. 4). *The software products for testing knowledge* represent maybe the most varied range, because their specificity depends on a lot of factors – the time of testing, the purpose of testing, the interaction typology (immediate feedback or not) – these applications sometimes appear independent, other times being an integral part of a complex training environment.

5. *Educational games* implicate the user in a problem solving process, through intelligently applying a set of rules. In the figure below we are presenting an educational game-puzzle for Geography-primary education and educational games for preschool education.

The educational game is an educational method that "galvanizes teaching through lucid motivations that are subordinated to the purpose of the teaching-learning-evaluation activity into a pronounced formative perspective"[3]. The lucid resources of the game can be pedagogically valued in preschool and primary education, both in traditional training, and in educational software products. Through games, the learner's capacity to operate is engaged; his spirit of competition and the possibilities of heuristic exploration of reality are amplified. Harmonizing the educational and technical innovations, the development of an educational software product must firstly pursue the assurance of the educational product's quality, the satisfaction of teaching principles and the elimination of the stiffness afferent to classical education systems, the technology being used as a means and not as a purpose.

4. THE E-BOOKS

The accelerated rhythm of development in the information and communications technology industry has led to redefining the book from the perspective of dissociation between content and its material support. The same content can be published both on paper, and in electronic format. The e-book is the digital variant of a printed book that can be read on the computer, laptop, on portable lecture devices and even on the screen of the mobile, thus becoming a modern way of gathering information. On a medium and long term, the major gain resulted from using e-books is the protection of the environment by decreasing the consumption of wood for the paper necessary for traditional books. The immediate advantages of using the

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[3] *Cristea*, Dicţionar de pedagogie*, Editura Litera internaţional, Chişineu-Bucureşti, 2002*

electronic format are multiple.

Thus, the producers:

- ❑ can multiply without additional costs any book, the stock being inexhaustible;
- ❑ need minimal investments, the e-books have production costs way lower that the traditional books, and the costs of transportation and storage and meaningless;
- ❑ can make changes after the release date, without withdrawing the draft;
- ❑ have instruments to protect their content at their disposal and secure the access to the content.

Ant the potential readers:

- ❑ benefit freely or at low costs through immediate download of a large range of books ready for shipping;
- ❑ have at their disposal current technical books, and the time spent from the end of writing to the release being very short, it eliminates the classical books' disadvantage to refer to an outdated technology;
- ❑ have access to volumes that have an extremely little number of copies of those that are unique;
- ❑ can use various tools (annotations, bookmarks, highlighters, searches etc.), to facilitate the assimilation of information presented in electronic format.

A series of requests related to the content, distribution, and visualization intervene, however. Regarding the content, the essential problem is the format. Placing e-books and portable lecture devices on the market has determined various software producers to get involved in this domain. Thus, there are numerous applications that allow the creation of e-books in diverse proprietary, web, and executable formats. These applications are differentiated by price, through tools of protection and security made available to the e-books producer and through the information browser facilities. Among the e-book formats, the most used are PDF, LIT, and HTML.

The **PDF** format (**P**ortable **D**ocument **F**ormat) is independent from the platform, being available both on the PC and Macintosh, and on *Palm PDAs*. *Adobe Acrobat* and *Acrobat Reader* are two distinct applications that allow the PDF documents to open and be visualized. Adobe Acrobat allows however to create documents, adding bookmarks, written or spoken commentaries, changing the security settings and modifying PDF documents. Acrobat Reader is a free application that only allows the PDF document to be opened, visualized and printed. An e-book in PDF format is a PDF file whose content is protected through *Adobe DRM* (*Digital Right Management*), a technology that pursues the content protection through setting the use rights: opening, copying, printing etc. and through user management. E-books that are in the PDF format can be protected both through a secure access, and by setting a period of time when the content can be visualized, an option that allows one to borrow e-books in the same manner as with classical ones.

Trying to cancel the visual printing advantage, Microsoft has developed a printing technology called ClearType implemented in LIT format, proprietary format which requires for viewing Microsoft Reader, an application that can be downloaded free from the Microsoft website. This format is available for computers with Windows operating systems and Pocket PCs. The development of electronic books in LIT format is done using Word 2002 (or newer) provided that an additional tool is installed free - RMR (*Read in Microsoft Reader*). The main advantages of Microsoft Reader are the tools for configuring and

reading notes, bookmarks of different colours, underlining, changing the type and size of letters etc.. Moreover, it is possible that the text is read by the computer, depending on the installed voice interpretation engine, using one of the voices that the reader has at his disposal. So, s/he now has the opportunity to turn from a reader into a listener. This technology, called TTS (*Text To Speech*) is in full process of development and it will certainly have spectacular effects in education, books, regardless of format, being an essential teaching resource.

HTML is a format mainly used to read live on the Internet or as a basis for compilers that transform books into executables that can subsequently be downloaded to your own computer for reading. This format benefits from the contribution Web hyperlinks and other components, but is rather away from the traditional book. It is seen a great future for electronic books in educational and academic areas where they will be essential for the dissemination of several categories of information, efficiently and inexpensively. Several initiatives aimed at facilitating access to information through electronic books. It can be highlighted, in this respect, the draft of U.S. University MIT that has decided to make freely available on the Internet, all its courses.

Access to the online consultation of information resources can be made remote from the comfort of your own home or at information centres in libraries, beyond the geographical barriers or time zone differences. In this context, the role of librarians, information science specialists, is changed. They draw *web bibliographies* on various topics, in order to help readers access trusted sites, whose authority has been verified by a librarian. *Web bibliographies* (guidance, lists of online resources grouped by themes) are publicly available both printed and electronically, via a *hyperlink* from the library's *web page*. Without paper limitations, the books of the future will integrate safely also the audiovisual content, because many authors experiment on different *web* techniques: *hyperlinks*, interactivity and even collaborative development.

5. RESOURCES AND EDUCATIONAL PORTALS

One already established method, by which institutions provide centralized access to information and facilitate the development of a community, is the *portal* as a form of integration into a single construction of several web applications. The advantages of this integration are:

- ❑ content aggregation - the ability to combine multiple pieces of content in a single consistent interface;
- ❑ personalized visualization ways - each user will have access to certain information presented in a specific form of the user's profile;
- ❑ personalized content – by this feature, personalization is taken to a higher level and gives users the opportunity to determine the manner of viewing the information in order to satisfy personal needs.
- ❑ The portal is "a website that offers a wide range of services and resources, and serves as a point of entry and of general information on the web" - http://www.arond.ro/
- ❑ ro/resources/glossary.html
- ❑ unified security model - users have a single account through which they will have access to the portal. This provides a single authentication and a role-based security;

❑ collaborative features - which permit the development of communities with common interests through communication, sharing applications / files and conducting conferences;

❑ location - refers to customizing the portal (interface and content) for the region it is used in, including language, currency exchange, date format;

❑ independence from the platform - a portal should not only be compatible with most browsers, but with different platforms and devices (such as mobile devices);

❑ modular development - is a feature of portals that develops them from a kernel, later on being added other modules if needed.

Public relations management is becoming increasingly important for educational institutions that begin to regard Web sites as being strategic both in educational community development and in improving efficiency and productivity of the institution. An educational portal requires a good collaboration of academic and administrative staff to provide informational content.

Portals can be a launching point for effective use of ICT in education. On European level there are major initiatives in this respect. An important achievement is the *European Schoolnet* portal where education ministries of 24 countries are trying to determine original reflection directions on good practice and policies of using ICT in education, to piece together the communities of teachers and students from across the continent. (European Commission, 2003)

On national level, there are many steps taken to facilitate access to a wide range of information, tools and educational resources. Illustrative, for high school education, are the *Portal SEI* and *the Portal of Modern Teacher.*

Problems that arise are related to impartiality and independence, manipulation and control, ethics and confidentiality, i.e. the objectivity, timeliness and relevance of information presented. Many times more confidence is given to smaller portals, just because the team that manage it is familiar (Massachusetts Institute of Technology - http://web.mit.edu; http: //www.eun.org; http: / /portal.edu.ro/; http://didactic.ro/)

6. USING WEBLOGS IN EDUCATION

A weblog (or blog, for short) is a "website updated with entries (notices, notes) that are automatically indexed and dated. It is like a journal. Usually, the weblog has a certain theme, and entries are reviews with links to other weblogs / online resources" (Holotescu, 2005). In other words a weblog is a means of interpersonal communication and can take various forms, from an online journal at a deposit of information in a specific area. Therefore, the weblog is a web page with the following characteristics:

❑   structure of hyperlinks. The site content consists mainly of entries with comments and hyperlinks to other online resources. There is no default length for published articles, some messages may contain a single link to the content found anywhere on the Web, while others, most of them, include additional information and / or personal comments about the subjects discussed. The presence of hyperlinks distinguishes weblogs from online scrapbook journals where the author records events that are not necessarily relevant to the general public, except a small circle of friends;

❑ frequent updates displayed in reverse chronological order. Weblogs are in constant dynamic, new posted messages always appear at the top of the homepage.

Consequently users return there regularly, waiting for new messages. This feature marks the most important distinction between weblogs and personal pages that are rarely revisited;

❑ free public access to content. The site can be accessed without restrictions related to payment or membership in a community;

❑ archiving. Each message is associated with a permanent link so it can be easily accessed even if it disappeared from the front page as a result of the dynamics of the blog.

An optional component is an internal search engine, visitors being able to quickly find, on the basis of certain information appearing in messages from the weblog. The general structure of a blog containing a title, a list of current messages, a list of useful links, known as the blogroll list, statistics, etc.. Increasingly, weblogs are used in education, for communication with students. Any teacher can open a weblog by which to publish materials/resources for activities/courses, news, to stay in touch with his students, to present different aspects of the course discussion, to facilitate the formation of a learning community. By means of a weblog lecturers can be more easily invited, the institution can publish projects, facilitating forming a learning community. By means of a weblog can be more easily invited lecturers, the institution can publish projects, facilitating the formation of partnerships.

A section of the weblog can be a list of educational sites/weblogs, which might be of interest to students. From the perspective of students, personal weblogs, or digital portfolios can become a group workspaces, allowing them to keep in touch after a course as well, being a true knowledge management system, useful in professional development. As a learning tool, weblogs can be ideal for use in models of constructivist learning by encouraging independent and profound learning strategies. A weblog's interactive components are indicated for communication and collaboration, an open dialogue with others that allows the student to be in touch with colleagues and teachers, prompting him to study a topic from several perspectives. The more so that each element is displayed and archived in chronological order, thus creating a chronological record of the personal construction of knowledge and dialogue with other people who are available for a more thorough research; it also encourages reflection.

To create and manage a blog advanced computer knowledge isn't required. There are many opportunities to post blogs easily and for free; this explains the large and growing number of blogs available on the Internet. An example would be http://www.blogger.com site, through which, after registration and choosing a name, you select a template and set up the blog. Connecting to the Internet greatly increases the possibilities of cooperation between people located geographically apart. Working in groups increases the degree of involvement; sharing ideas and responding to the other side, thinking is reinforced and in-depth analysis is promoted. The main attributes of teamwork are:

❑ Positive interdependence – the success / failure of a member affects the whole group;

❑ Individual responsibility - each group member is responsible for all the activities of the team

❑ Confidence in your teammates - the group members learn to trust, to lead, make decisions, to communicate and resolve conflicts that arise;

❑ Sharing knowledge to improve individual performance.

Supported pedagogical approaches for determining the most appropriate and effective ways to conduct training process emphasized the need http://www.webprof.ro http://www.desprewebprof.blogspot.com/, to incorporate in the instructional environment a social and group component. Thus, in designing an educational system, one must take into account the context in which it will be used and the opinions of the social group that will use it. Learning should be seen not only as a process of information transfer from the teacher to the student, but as a knowledge-building process while interacting with other participants of the group to a specific educational activity.

Another important aspect to be considered is the motivation of learners; for this purpose a variety of techniques such as boosting confidence, competitive spirit and curiosity are used. Cooperation involves sharing responsibilities for a given activity among participants. Cooperative Learning is not just placing learners in a particular group and assigning a task to the group. Cooperation in educational systems is based on communication (exchanging information), collaboration (working group) and coordination, each of which is supported by infrastructure software group[4].

The effect of collaborative learning depends largely on the context of its development and it is achieved through the development of social skills needed to achieve professional success in the future such as:

- ❑ the interpretation of certain tasks and to decompose its components
- ❑ the ability to make decisions and comply with them to achieve performance;
- ❑ maintaining a mutual understanding about goals,
- ❑ develop a spirit of mutual aid.

By targeting the benefits of collaborative learning, the educational systems plan on building and strengthening learning communities by:

- ❑ establishing clear objectives and continuous evaluation of the performance of learners the assessment of the content generated by the participants
- ❑ encourage communication between members by creating a climate of trust and safety;
- ❑ access to multiple information resources;
- ❑ integration of course content and communication in an intuitive environment.

A collaborative system creates an environment where people can work better together, can share information without the constraints of time and space, characterized by three fundamental aspects: joint activities, sharing the environment and the interaction. Regardless of the quality of courses, great help in achieving the targets is offered by the extent to which students are involved and actively participate in their own making. The process of involving learners is collaboration, group work proved to be an effective way to improve learning outcomes. Therefore, an important task for the teacher is to contribute to the development of interactive learning communities that facilitate collaboration. Not only will the students enhance their knowledge through collaboration, but they can be taught to respect others' ideas, to accept other ways of learning.

Groupware software or infrastructure group is a set of tools that enable individuals to work

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[4] C., Niculescu, Study on the technology, methodology and standardization in the field of education assisted by the computer, The Technology and Education Bulletin, no.1, http://www.bsufonline.org/lite/uv/index.htm (accessed on 12th Jan. 2010).

together through communication, collaboration and coordination at any given time and different places[5]. This infrastructure includes:

- ❑ virtual approximation of individuals to achieve goals;
- ❑ organizational redesign by quantifying individual tasks and collective tasks definition;
- ❑ a total change in managerial strategy6.

This type of work in group has advantages and disadvantages, the advantages are many opportunities for learning, speech, talent, ideas. The disadvantages underscore the existence of various barriers to effective collaboration between the students: poor communication, work styles, work schedules are incompatible or poorly equipped average. For these reasons, we are calling into doubt the effectiveness of educational activities.

Between education and the media system there are long indissoluble links which have been strengthened continuously in recent years, particularly with the development of computer networks. Interactions between the two areas is a concern for teachers, not only for them, because the impact of mass communication on the development of human personality can not be ignored. With the diversification of educational needs in the modern world, the media represents a true learning resource in the form of program offers, informative and educational media in perspective recoverable or non-formal to formal education. The mass media is also an informal resource with informal, spontaneous, influences carried by unintended messages whose content was not designed explicitly for educational purposes.

7. REFERENCES

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[6] http://www.bsufonline.org/lite/ uv/index.htm

[7] http://humanum.arts.cuhk.edu.hk/Lexis/Latin/

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[5] D., Fotache, Groupware. Methods, techniques and technologies for work groups, Polirom Publishing House, Iasi, 2002.
[6] Ibidem.