



# The Professors' Perspective on the Use of New Information Technology in Romanian University Education

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## Abstract

*The EU Council resolutions regarding the strengthening of policies and educational systems in Europe underline the absolute necessity of facilitating access to education and of improving continuously the quality of the educational process. Given that Romania is also experiencing increased usage of new technologies, these can be significantly helpful in accomplishing this task set by the Council. During the last few years, new technologies play an increasingly important part in Romanian university education, with multiple roles to play: as educational tools, as information libraries or as assessments of academic performance.*

*The study we propose aims to identify and analyse the perceptions of professors involved in using new technologies in education. The objectives for our research involve (1) identifying the methods through which professors answer the inherent challenges, such as creating an authentic educational environment, as well as accessible and valid studying opportunities; (2) identifying the needs of professors with regard to adaptation and high performance in this context; (3) understanding and describing the impact of the use of new information technologies on the students' results. The study was undertaken in Brasov county, Romania, over a sample of 50 participants, split into two groups: the first group made up of 25 professors from state universities, the second made up of 25 professors from private institutions. Research methods included questionnaires and focus groups.*

## 1. Introduction

In a modern, dynamic world, where information changes so often, each of us, regardless of age, finds himself needing to learn continuously. It is difficult to budget time for learning alongside the obligations of job and family, particularly when the field of study has scarce written resources. New informational technology then becomes an option. Time savings, speed of contact, optionalities related to the short- and long-term requirements, all of these are valid answers to the question "Why new informational technologies (NITs)?" NITs are the future of education and commit the system to modernity, topicality and efficiency. Although distance learning is increasingly popular, the emphasis must be on the style and strategies that have the greatest impact upon the quality of learning. Facilitating the use of NITs requires new approaches to the practice and management of the process of education. In order for a programme to be efficient, a new conceptual framework towards that technology is required. Many education establishments use up important resources – not just time and money – to introduce NITs and provide them to students. But it is equally important that the educators learn to manage the critical new dimensions brought about by this new framework, including: acceleration, permanent updates, role changes, metaphor, cognition and cooperation.

Learning can involve different technologies, used by themselves or in conjunction. A number of decisions must therefore be taken regarding the methods that are best and most suitable to the established goal. The emphasis is therefore not on "providing", as in the traditional educational model, but on "facilitating".

Most problems encountered by teachers relate to the design and management of educational programmes through NITs. Frequently asked questions include: "How are we to strike the correct balance between tuition and experimental practice, between teaching and collaboration, between tasks set by the facilitator and those identified by the student?"

The new technology requires us to rethink this dynamic of the process of learning, because we are dealing with unfamiliar approaches. It also gives us the opportunity to change the way in which we manage teaching and learning in general.

The critical part of the question is "How do we engage students virtually?" or, to be more exact, "How do we engage students more in education through this technology?". Facilitating learning through NIT does not mean transcribing our old lesson plans through new media. More likely it is a possibility to extend the reach of our available teaching methods in order to create a new dynamic for education which is aligned with best practice among adults.



The first challenge for a teacher using NIT is to understand how to put into value the power of the new media technology in order to benefit from their ability to support flexibility and parallel processing in real time; it is also important to form new designs and not to simply use the new media to convey the same old messages.

In the old method of projecting teaching, the evolution was linear, from the definition of the objectives of each lesson to the “delivery of the lecture”. The first educators engaged in a comprehensive assessment of learning needs often used as basis assessments made by others regarding the goals and competences of learning. Large courses were built up on the basis of this assessment and the course was delivered according to a plan.

Associated with this linear approach was a set of matching linear teaching strategies, which involved centralisation towards a single direction and uniform delivery. When students appeared bored and unengaged in this programme, the solution was to find ways to utilize the new technologies to make teaching and learning more appealing.

New learning technologies are very well adapted to approach learning management dynamically. Good teachers have always been open to changing lesson plans on the basis of student input. New media makes this transition easier. For instance, it is much easier to provide supplementary reading materials that match the students’ interest instead of relying on a textbook planned and structured weeks or months prior to the actual start of the course. Online media offers a space in which conversations can continue among students regarding the way to proceed in a course, about new perspectives or new research directions.

### **1.1. Methods for managing new informational technology**

One of the first things the teacher must determine in using NITs is the type of atmosphere that he wants to create; only thereafter can he clearly define the learning experience he wants to effect. In NIT learning language and metaphor are very important, as primary instruments necessary to create ambiance, to help participants evoke the right images and to create a frame of mind that is conducive to learning, even if this learning takes place in different spaces at different times. In long-distance learning also, many media borrow the language of traditional educational institutions, offering clues to students of what they can expect; words like classroom, reading room, library. This can be a good strategy to help students navigate through unknown environments.

However, there is a danger inherent in using a language that references traditional learning, rather than the environment of long-distance learning, as old models can be accidentally transposed into the new environment.

One method of starting a virtual course is to identify the types of interactions and experiences that the teacher considers necessary for learning and the feelings he is trying to bring out. The teacher may wish that the students can carry out intimate conversations of self-statement as one hears in cafes after hours, or he may wish to engage teams of students in different working themes as in a conference or workshop. Transporting the students to a virtual classroom space can use either of these dynamics.

The advantages of a student that has access to NIT are the following: the possibility to study individually and independently; access to e-learning platforms and virtual libraries; flexibility in carrying out time-consuming activities at weekends, thereby reducing time and money cost; access to a large spectrum of educational technologies, including materials in multiple formats, multimedia, online courses, web pages, computer-managed learning, interactive learning and assessment, real time support from counselors and teachers; access to a virtual secretariat; participation in web conferences. NIT education is a more interesting and flexible way to learn, and this makes it more attractive.

The current trend is to move away from a teacher-centered education to one focussed on the student, emphasizing individual, long-distance learning. A large degree of importance is bestowed on supporting study by providing learning opportunities through specific media.

American author Diana G. Oblinger [1] has identified four main reasons why universities may embrace long-distance learning to a greater extent in future, with particular reference to the United States context:

-*Extended access*: long-distance learning can contribute to meeting the increasing demand for education and training from the population in general and industries in particular, by offering great flexibility, which can be worked around the time constraints that come with personal responsibilities and commitments;



-*Mitigating constraints regarding infrastructure*: as they are mostly done off-site, the system reduces the need for institutional infrastructure such as buildings, furnishings, machinery etc.;

-*Obtaining funds from emerging markets*: it pre-supposes an increased level of acceptance from the population of the value of permanent learning throughout life, beyond normal school age, and financial institutions can benefit from this through support from long-distance learning. Such institutions can regard such types of education, for instance for managers, as a more profitable investment than existing traditional means of education;

-*Catalyst for institutional transformation*: the modern competitive market requires rapid change and innovation, and long-distance learning programmes can act as a catalyst for this.

Other researchers have identified another financial benefit for US institutions, claiming that long-distance learning creates new graduates, potentially willing to donate money to the school, in a number not available to traditional institutions [2].

Following an analysis of long-distance learning in 11 regions (Canada, US, Caribbean, Latin America, Europe, Africa, India, Korea, Australia, New Zealand and Pacific Islands), the Department for International Development from London published some general observations regarding virtual education and virtual institutions:

The most common applications of new technology are found in administering, preparing and distributing supporting material, and where possible, in tutoring such as student to student or teacher to student;

Nobody appears to dispute the fact that the development of information technologies will have a profound impact upon access to learning, institutional functions and upon the process of teaching and learning;

The development of virtual institutions is still at experimental stage in the majority of countries. The full potential of technologies is rarely used, primarily as a result of the lack of emphasis on training and improving the competencies of teaching staff;

The emergence of virtual institutions is directly linked with the development of and access to information and communication technology infrastructure; the majority of social and economic challenges are related to this access and make up the critical issue in long distance learning, as lack of access limits the ability to acquire knowledge and competencies. In spite of this direct correlation, it appears that strategic plans to improve infrastructure almost never take into account benefits to education.

Permanent education is an integrating process, through which all educational influences converge in a coherent way upon the individual, through various methods and means, throughout his life. Permanent education must be taken as a principle for organising education. It has a defining role in managing contemporary education.

Permanent education is required because of the dated nature of knowledge, professional competence, professional techniques, professional positions and functions. Simply put, new positions and situations require not only known items, but also new aptitudes.

These new aptitudes are not particularly problematic for an all-rounder or for a good specialist. Professional obsolescence is always linked with special problems, and the more narrow the specialty the more vulnerable it is to professional obsolescence. E-learning becomes independent of time and space, and available to students regardless of age. The freedom to learn when and where one wishes is simply a new way to look at education through a new means to transmit and acquire knowledge. This convergence between learning and the internet is the fastest, lowest-cost means of learning, and provides access to it to everyone.

Throughout youth, the process of education gradually modifies the proportion between socially programmed learning and self-imposed learning towards the latter. Necessity-based learning dominates later youth and involves cognition, affection and motivation as participating parts of the human personality.

For adults, the issue is not accumulating or completing knowledge, but primarily reorganisation and restructuring. Permanent learning prolongs participation in the active age, through the addition of knowledge, adaptation to change and new contexts, and through a narrowing of the knowledge gap. Active, engaged learning, in permanent education, is addressed to the sensory, psychological, intellectual, moral, cultural, affective and aesthetic levels of the personality [3].



## 2. Purpose of Study

Our study was aimed at identifying and analysing the perceptions of professors from the Romanian university system regarding the use of new technologies in the education process. Objectives: 1. Identifying the ways in which Romanian professors respond to challenges they face in this context, namely the creation of an authentic environment for learning and of accessible and valid study opportunities. 2. Identifying the needs of professors regarding adaptation and performance in this context. 3. Describing the impact of utilising new information technologies on the students' results.

### 2.1. Methods

The study was performed in Brasov County, Romania, on a sample of 50 participants, split into two groups: one group of 25 professors from the state university system, and a second group of 25 professors from the private university system. All teach humanities (Psychology, Education Science, Philosophy). The research methods used to reach the objectives were questionnaires and focus groups.

### 2.2. Findings and Results

Following the processing of questionnaires, the following is apparent: to the item „*What are the methods through which you offer students an authentic study environment using NITs?*”, 80% of respondents stated that they try to create a context that is as close to reality and as topical as possible through learning platforms specific to universities (for ease of communication with students, to answer questions and to post supplementary materials required or for assessment). This consists of online access to ample databases, belonging to reputed institutions or specialist websites, thereby stimulating student interest and responding to their learning needs. Most respondents said they encourage students to use search engines and media in the presentations they make during seminars and workshops.

To the questions “What personal needs do you identify in adapting and performing with the aid of NITs? What needs do your students have?” some respondents (12%) admitted that they lack the computer and English language skills, but the majority (88%) argued the need primarily for a course to train them to use the multiple functionalities of e-learning and smart tablets, access to databases online and from home computers.

Professors also claim that students face similar challenges, a small percentage of them still requiring (particularly in the freshman year) basic computer training.

To the question “What NITs do you use?”, 86% identified the use of laptops, projections, educational software, online testing, psychological questionnaires or databases purchased by the faculty, depending on the specialty. In the case of psychology, this enables students to understand how to construct psychological profiles, thereby greatly facilitating the learning process.

To the question “What NIT assessment methods do you use?”, respondents answered that they frequently use multiple-choice testing both in progress and final examinations. They also use overhead projectors for presentations in PPT format, but also for statistical processing of data obtained through fieldwork, in SPSS format.

The final question regarded the impact seen by professors of NITs on the results of students relative to the traditional system of education. Only 4% thought NITs did not influence student results, 10% regard results as comparable, while 86% saw much better results through the ample and varied use of NITs.

### 2.3. Conclusions and Recommendations

To conclude, NIT utilisation has a positive impact on the results shown by students. However, professors are realistic in stating that their communication and utilisation abilities need permanent updating and improvement, particularly with regard to language training and a detailed understanding of learning platforms. Much greater emphasis is therefore needed on training teachers.

The analysis of results by group shows little significant variance between state and private universities. The only major difference has been the relatively better endowment of private universities with computers and overhead projectors. No significant statistical variance was noted between the gender of participants. The suggestions provided during focus groups reflect a genuine concern on behalf of educators for optimising the educational framework, both through greater variety and through greater use of NITs.



While the image of NITs is still fragmented in Romania, without a nationwide consistent strategy, and while virtual institution building is still at a very early stage, we believe a constructive approach can open up new possibilities to use NITs. One of the key directions is the continuous and flexible support offered to any person in his or her development throughout life.

### References

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