

THE TEACHING OF AUDITING: FROM SCHOOL ATTENDANCE TO VIRTUAL SCHOOL

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Abstract: The concept of education has evolved in time and is now seen not only as a natural phenomenon, but specially as a social phenomenon essential to the development of the society. School shouldn't be an organization closed in itself apart from the surrounding environment, on the contrary it should be an open organization and it should take part in the constant changes. In the specific situation of the Higher Education Institutions they can not remain indifferent to the economical, social and specially technological change happening everywhere and that are urging a different behaviour from the teachers who need now new skills to face the competitive environment of the present. Therefore we believe that the scientific and technical training must be complemented with another training capable of stimulating other skills concerning attitude and emotion.

Along with the development of management skills the teachers should also invest on new learning proceedings related to the New Information and Communication Technologies (NICT), namely the web pages, portals and enterprise simulation.

Hence we have tried to identify the new environments reflecting about the actual and virtual teachings and sharing our experience concerning the teaching of auditory using the Internet. Thus we have created a web page for the discipline of auditing, a positive experience, if we consider the results which show a clear preference from the students who find it relevant, convenient and a precious aid to improve the process of teaching/learning.

1 INTRODUCTION

The universal access to a high education is one of the main accelerators of the economical development and one of the features of the present society.

Moreover the political and social freedom, which took place in the recent past rapidly, extended to the economical world allowing the globalisation of the different markets. Hence the teaching process as we understand it is a static process and, in most cases is closed in itself with few bi-directional communication flows and a weak content integration.

The present school must understand the differences between today's situation and that of the past or if you prefer the environment of today and that of the past.

<u>Past</u>	<u>Nowadays</u>
Slow science	Knowledge explosion
Bipolar world	Multipolar world
Defined political system	Ambiguous democracy
Dominant cultures	Multi/Inter culture
Industrial Economy	Services Economy
Job security	Unemployment threat
Close culture	Distance culture

The democratization in the high education is seen today in the access and specially as a social and national demand and as a way to renew qualifications in a continuous teaching perspective allowing an effective participation in the information and knowledge society in a solid way. The speeches at the UNESCO World Conference on High Education (1998) consider flexibility an attitude and a vital disposition to survive or succeed in the job market.

The adaptation to different environments is a demand or a requisite we should take into account more and more, so that it has become convenient to establish equivalence systems of degree or disciplines acknowledgement of disciplines among national and international Schools as well as a continuous learning throughout our lives, capable of including experiences and know-how and of producing new knowledge, in short, that is capable of learning to learn.

This way taking advantage of the New Information and Communication Technologies (NICT) we can not be indifferent to its development and wide range of application, namely in education through the web pages and portals.

The ODL – Open and Distant Learning has had a remarkable development since the seventies in the last century.

This article aims to report the experience acquired from building a web page taking advantage of the Internet in the discipline of auditing in the Accounting and Finance Graduation.

The teachers initiative comes from a non-conformist spirit of the teaching process and seeking to take advantage of the NICT potentiality in general and concerning the discipline of auditing.

2 THE ENVIRONMENTS

The “new” society and economy in which we live is called The Information and Communication Society and is featured by the market supremacy and consequently by an increasing skill level and value creation.

For such, the NICT have had a large contribution through the massive and generalised use of its most prominent tools, namely the Internet, the Intranet, the cell phone and the electronic mail (e-mail).

These tools have allowed a proximity between producer and consumer or seller and buyer with no parallel in our trade history and a new organizational structure which generates value, in short, a new process of “competitive intelligence” capable of offering services with a better quality and efficiency.

Besides, the Internet stands to the information society just as electricity stood for the industrial age (Castells, 2001).

Thus the NICT have provided a new push to the trade services and finance market making them more and more global and have redesigned the job market (perhaps it would be more appropriate to designate it as knowledge market) in what new kinds, shapes and conceptual demands are concerned, interrelated and interdisciplinary also at a global scale.

Well, this globalisation wave, due to the market influences imposes an unprecedented challenge to the educational systems when it questions the traditional teaching process by creating a paradigm of teaching-learning.

The construction of a Knowledge Society “exige un profundo cambio en la configuración y comportamiento de los agentes políticos, económicos y sociales – que han de estar dispuestos a involucrarse en un proceso de aprendizaje complejo y continuo, característico de la sociedad que aprende, que permite la traslación del concepto de empresa de conocimiento” (Castillo and Abad, 2003).

The NICT are more and more intensely used by students who mostly stimulate the teachers to adopt at the same time that they facilitate communication through image, direction and intensity to reach different kinds of public.

This way we are before the change of the teaching paradigm into that of learning:

- The system based on teaching is replaced by the learning;
- The teaching is no longer centred on the teacher, now it is centred on the student, that is, we move away from the teacher as the transmitting agent of the contents and place the student in the centre of the process (Serra, 2004);
- Concerning the attitudes the students are no longer passive content receivers while the teachers concentrate mostly on resource management;
- The teacher is no longer the true holder of knowledge at the same time that the student no longer memorizes for he seeks to check, discuss and find situations and solutions;
- The activities organized in order to value the process of content transmission are being replaced by the selection and organization of contents and learning resources;
- Transmitting knowledge is now less expository and static and is becoming interactive or in the form of dialogue (two directions or multidirectional) and dynamic (by using new methods and supports);
- The process of knowledge transmission has to do with a life long training where the teacher has the role of knowledge facilitator or entertainer;
- Contrary to a stable and predictable environment where the student was dependent or passive, today we have a troublesome and complex environment so that what we value essentially is autonomy,

critical spirit and decision-taking, namely by studying cases.

A Graduation is more and more a long term contract with knowledge while its term is becoming shorter and shorter due to the new demands and skills the global markets impose.

Marcelo (2002) shares this opinion and supports the idea that nowadays knowledge has an expiry date, which forces us more than ever to establish formal and informal guarantees so that the citizens have to regularly keep up to date.

One of the political decisions with a stronger impact on education in the last three years in the European Union and consequently in Portugal was the Bologna Act. Here a new educational spirit or paradigm centred on learning has been proclaimed “more than a social status opening potentialities of interdisciplinary training with an easier diversification and articulation of the basic trainings with the specialized trainings” (Cruz, 2004).

However and also according to Cruz this new paradigm needs time as it involves a cultural adaptation and does not happen just out of an administrative reform.

Therefore we couldn't disagree more with the thought of a General from Chile “we come to university to study, not to think” (Sepúlveda, 2004).

Knowledge production takes place in schools of different levels and areas and also in other organizations such as enterprises, associations, and so on. This integration allows the building of a new knowledge that has to be apprehended by people and organizations in the sense that the learning happens to everyone for a lifetime.

3 THE TEACHING PROCESS: FROM SCHOOL ATTENDANCE TO VIRTUAL REALITY

The digital revolution has broken time and space limitations and has generated a notion of a global market independently of its nature and has made it possible to take into account every client or group of people or even interests individually (Molenaar, 1998).

This revolution sets the Knowledge Age and allows the emergency of new concepts at economical, social, political and educational levels.

Concerning the latter we are watching “an anarchistic growth of the trans-national education “ as a result of the “liberalization movement of educational services essentially from the USA” (Costa, Teixeira and Rei, 2004).

Thus it is essential to create a culture of virtual education for the teachers, the students, the institutions and the nation itself, in that it promotes the knowledge outside school benches and responds to the fears of those who really need it.

Those needs may be just short trainings on specific subjects or disciplines and not necessarily complete courses just as they are taught nowadays even if they take place in semi-attendance situations. It is therefore important to start as time is of the essence and a non-organizational and country position is losing competitiveness every day.

As believers of the potentialities the NICT bring to the teaching process and particularly to the high education, we have chosen a hybrid process, that is attended lessons supported by a web page within the School website (Business Administration College).

The reasons that have made us choose the semi-attendance model were the following:

- To be able to respond to each student's pace, complemented by tutorship;
- To provide a preview over the academic or informative contents which become essentially a permanent aid of access to key concepts, the nuclear structure and examples, more than a mere consultation item;
- To promote skills and abilities development in a process of self-learning essential to initiative and decision-taking.

This was a personal decision and aimed to be a first experience to be adopted later on with a strong support, specially by the night students of Accounting and Finance (taking into account the fact that their timetables often prevent them from attending lessons), or with a promotion of the courses in a virtual model concerning auditing and accounting.

These goals imply joining two educational models (school attendance and virtual lessons) seeking to fit and adapt to the students traditional studying rhythm, without missing teacher support and at the same time to introduce and provide support material beforehand as well as privileged contacts with the teachers.

Hence we have created a new space of communication between teacher and student that has largely gone beyond the classrooms and promoted learning as well as a whole new kind of relationships.

Fortunately we have long ago abandoned the straight technological view (automatic task handling, of which invoicing, salary processing or accounting are examples, as well as graph building), and adopted an integrating perspective as a factor to be considered at the organizations strategic positioning.

That strategic power allows the organizations new ways of managing and organizing (Barbosa and Gonçalves, 2004), reflecting a performance improvement in the creation of value amidst its business core.

By using the Internet as a resource the students have access from anywhere within the net, in a comfortable and in time way to the support materials of the theory lessons and to the exercises as well as the teachers and other schoolmates through the electronic mail.

With this new model, in spite of its early state, we promote:

- Within time access to the lessons' contents;
- More comfort for each student's needs (specially working students to accede the lessons' contents);
- A more intense communication with the teacher through the electronic mail in order to ask questions anytime;
- An open space to announce lectures or open lessons as well as other science events;
- The self esteem or positive reinforcement by following and recognizing the student's work;
- A within time view of the lesson and, consequently, a better preparation and critical spirit.

However we may have to face some obstacles, namely:

- Change resistance, concerning not only a new learning attitude but also the working tools;
- Different degrees of use by students of the same class;
- Insufficient informatics knowledge;
- Absence of informatics instruments.

4 THE CASE OF THE DISCIPLINE OF AUDITING

4.1 Introduction to the Discipline

The present paper is based on the discipline of Auditing, which is taught in the third year of the two phased Accounting and Finance Graduation in the Business Administration College of the Setúbal Polytechnic Institute, in Portugal.

The discipline's goals are the understanding, interpretation and work development of Auditing to the Financial Exemplifications through means of adequate procedure and working methods. We aim to structure the role and responsibility of auditing as

well as of its professionals in the organization and in the society, so that the principles, methods and procedure of accounting and finance check up and analysis are presented.

Just like all the other disciplines of this course, auditing is divided in theory and practice, where the latter is taught in three different classes (each gathers a third of the theory class) in order to allow a closer involvement and participation from the students when analysing practical situations.

In the last three years we have tried to captivate the students for the role of auditor and to the importance of auditing and motivating them for a more active and critical role in the process of teaching/learning.

In a first phase in the theory lessons we have used the expository method to teach the main concepts concerning the discipline's contents, but have also given special attention to the interactive method between teacher and students, developing the essential role of the student to succeed in the discipline. In order to reach the aims proposed by the discipline we have created a Documentation Portfolio, which gathers the Standard Revising/Auditing by the Accountant Revisers Order (AORO) used during an auditing as well as other documents equally relevant.

Concerning the practical lessons we have gathered in an Exercises Portfolio a set of practical situations as far as auditing procedures are concerned, which are relate to Balance Accounting and Result demonstration, as well as practical exercises and theoretical questions from previous years examinations, being thus a priceless studying instrument both for the practical lessons and to help students learn the discipline's contents.

We have also asked the students to work in groups in order to develop some topics suggested by the teachers aiming to promote the students reflection on the problematic, and calling attention to the professionals increased responsibility.

Nevertheless the development and the use of the New Information and Communication Technologies (NICT) by some students and the job market demands became another working instrument and a complement of the learning process to which the teachers of Auditing would not be indifferent.

Thus we have decided to build a web page for the discipline of Auditing with the School site (<http://www.esce.ips.pt/auditoria>), which will allow a larger interactivity between teachers and students and contribute to a better learning.

We have privileged the students active and critical participation through links with suggestions and comments to the teachers mails, believing that it is a crucial factor both for school success and for the improvement of the process of teaching/learning.

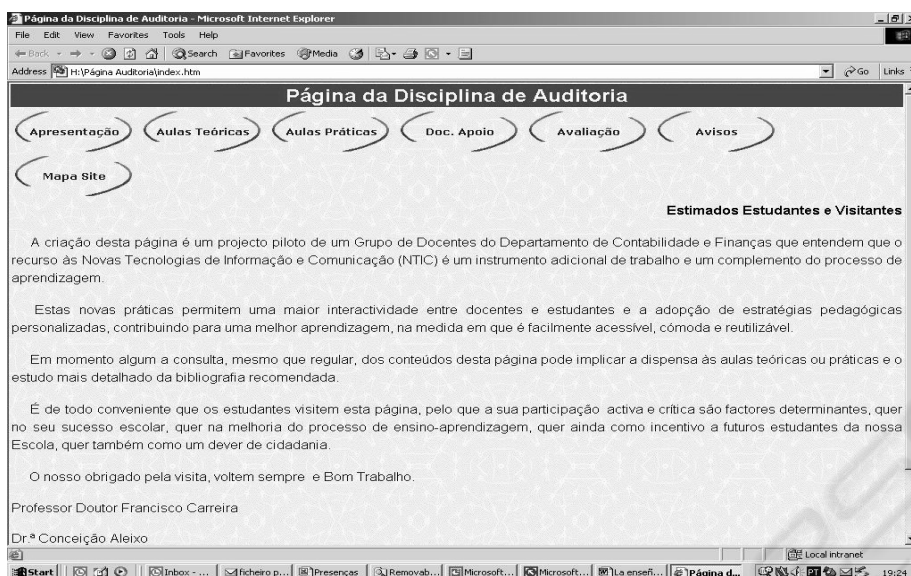


Figure 1: Web Page of the Discipline of Auditing*

We have designed a web page, which would allow an easy access to the different contents enabled this way. So the web page is divided in seven key points (Figure 1):

- Introduction – students have access to the programme, the summaries, the discipline timetable and teachers tutorship times, the extra contact supports (phone, e-mails) and links directed to national and international organisms, namely: Stock Market Board (CMVM), Accounting Standards Board (CNC) Certified Accountants Society (CAS), Portuguese Institute of Internal Auditors (CTOC), Official Accountants Order (OROC), American Institute of Certified Public Accountants (AICPA), Financial Accounting Standards Board (FASB), International Accounting Standards Board (IASB), International Federation of Accountants (IFAC) and Information Systems Auditing and Control Association (ISACA);
- Theoretical Lessons – Power Point slides concerning the following week's theoretical lessons are provided, divided in chapters, in order to allow a stronger classroom involvement;
- Workshops – the lessons planning is provided as well as the access to the exercise book and practical cases;
- Support material – gathers a set of theoretical and practical information essential to a good development of the discipline, some extras (forms needed to

the auditing work) and tests and examinations from previous years;

- Evaluation – highlights the evaluation system and its calendar, as well as the students marks;
- Announcements – information concerning the dates of events and others;
- Site map.

***Note:**

Apresentação – Presentation
 Aulas Teóricas – Theory Classes
 Aulas Práticas – Training Classes
 Doc. Apoio – Documents of Support
 Avaliação – Valuation
 Avisos – Notices
 Mapa Site – Map of the Site

Dear Students and Visitors

The Development of this page is a first project by a group of teachers from the Business Administrations Department who understand that the New Information and Communication Technologies (NICT) are an additional working tool and a complement of learning process.

This new practice allow a higher interactivity among teachers and students as well as the adaptation of personalised pedagogical strategies, adding to a better learning in that it is of easy access, comfortable and can used endless times.

At no time can the page consultation, even if regular, replace the theoretical lessons or the workshops as well as a closer study of the advised bibliography.

It is absolutely convenient that the students visit this page in that their active and critical participation are crucial factors, both for their success and for the improvement of the process of teaching/learning. It is also an incentive for future students of our College and a citizen duty.

Thank you very much for your visit. Come back soon and good work!

Professor Doutor Francisco Carreira
Dr.^a Conceição Aleixo

4.2 Study Characteristics

The population target is made up of the student enrolled in the discipline of Auditing in the year 2003/2004, which sums a total of 80 students, knowing that anyone in the world could have access to this page.

The study has a double feature: one is quantitative (based on the web page visits, both the in terms of access and the information available) and a qualitative one (based on a questionnaire to the target population in which we aimed to assess the relevance and opportunity of this new working tool in the process of teaching/learning).

We have used counters both in the main page and in the pages to accede to the different content information in order to count the visitors to the web page, and to be able to know at any time the number of visits to each of the different menus. The counting was carried out from March to September (semester in which the discipline is taught, although the lessons only take place from March to June) in two distinct ways:

- a) Constant counting – In the end of each month;
- b) Variable Counting – Immediately after the publication of the discipline's evaluation.

The questionnaire carried out in the end of the semester to the target population involved 80 students and is divided in two distinct parts:

- Characterization of the enquired students in order to obtain some information, namely age, sex, residential area and e-mail;
- Specific aspects made up of eleven closed questions scored from 1 to 4 corresponding 1 to "of very little importance" and 4 to "very important" and an open question. This part aimed to know the students' opinion concerning the importance and use of the web page of the discipline of auditing in the

Business Administration College in trying to improve the teaching/learning process.

We got 70 answers to the questionnaire, which represents a handout tax of 88%.

4.3 Results

4.3.1 Visits to the web page

Concerning the constant count and according to Figure 2, we have found that the main page registered an average access between ten and thirteen daily visits, with a higher access in April and May, which translates the students interest for the page of the discipline.

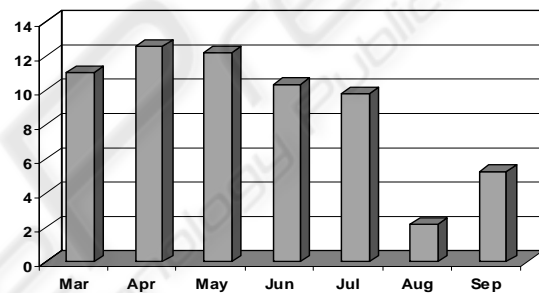


Figure 2: Visiting daily average to the Page of Auditing

From the page analysis according to the offered menus – that is the available contents (Figure 3) – we can see that the Theoretical Lessons, Support Documentation and Presentation are the contents the students look up the most every month, surely due to the fact that these contents are available throughout the lessons.

We highlight the month of June specially due to a probable preparation of the students for the evaluation test. Concerning the menu of Evaluation we have seen that the visits percentage in May, July and September were quite significant, as the evaluation results were published then.

As far as the menu workshops are concerned, there is an inferior number of visits, once that the Exercise Book is available in its whole right at the beginning of the semester. We highlight as well the menu of Announcements which reached in April a percentage of visits higher than 15%, which is related to the students interest in taking part in events concerning the discipline, as shown in Figure 3.

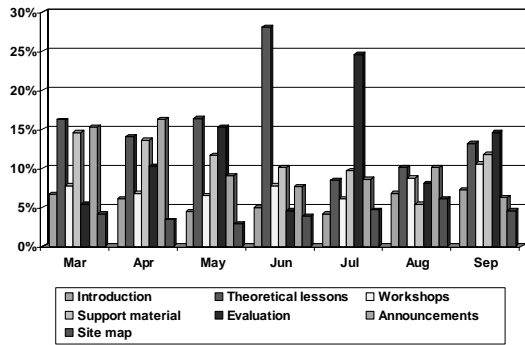


Figure 3: Visits to the Web Page of Auditing per Menu

In what the variable count is concerned and which was carried out right after the publication of the evaluations we can see an increase in the visits to the menu Evaluation, specially right after their publication, as shown in Figure 4.

This menu was quite visited when the evaluations were published, although with a minor impact at the time of the appeal evaluation (September) and when the percentage of visits decreased significantly, surely due to the reduced number of students who did this examination

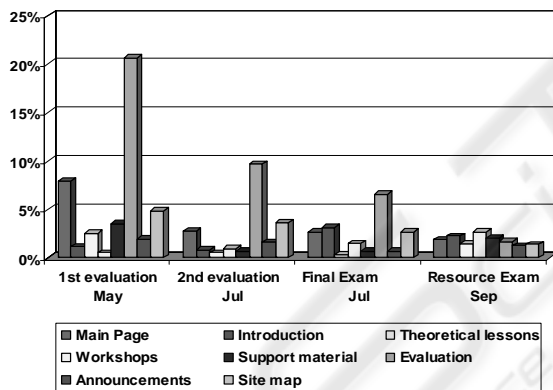


Figure 4: Visits to the Web Page of Auditing per Menu and after publication of examinations

4.3.2 Questionnaire

a) Characterization

Concerning the students enquired we found out that 84% is less than 25 years old, only 6% is older than 31 and 10% of the students are between 26 and 30 years old, as shown in Figure 5. About 68% of the enquired students are from the male sex.

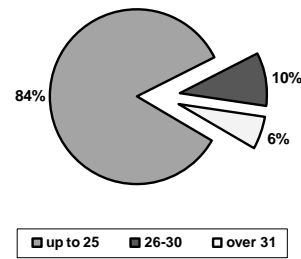


Figure 5: Student's age

b) Specific aspects

Of the 12 questions in the enquiry, we will only talk about those important to assess the students acknowledgement relating to the web page created.

One of the questions asked has to do with the adaptation of the Information and Communication Technologies (ICT) by the students of auditing or of other students.

From analysing Figure 6 we can see that 75% of the students acknowledge that the teachers of auditing consider adapting the ICT very important as an essential instrument in the process of teaching/learning, against 25% of the teachers of the remaining disciplines of Accounting and Finance and 15% of the other disciplines of the course.

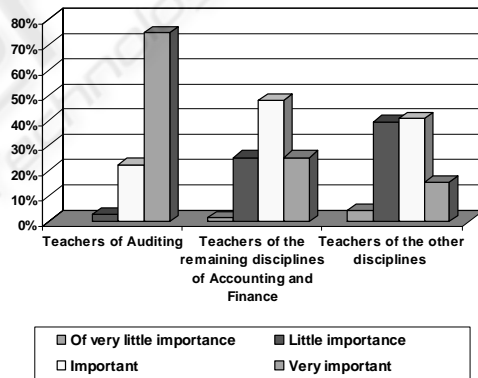


Figure 6: Teaching ICT adaptation

When questioned about the implications of the use of the web pages in the process of teaching/learning the answers are uniform about the reduced impact relating to the uninterest for the attendance lessons, in the loss of contact with the teachers, in the students passivity and in the disorganization of the teaching/learning process.

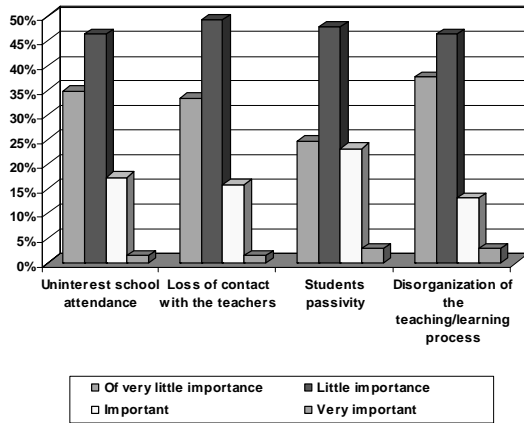


Figure 7: Implications of the use of the web pages in the process of teaching/learning

In what the limitations in the use of the internet web pages are concerned, from the answers given we can see the absence of difficulties, both about the management of technology performed by the school and teachers and students insufficient training, as shown in Figure 8.

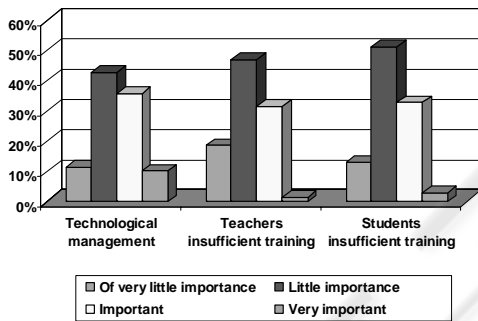


Figure 8: Limitations in the use of the web pages in disciplines

As you can see in Figure 9, most students have considered that the web page of the discipline of auditing contributes to increase their academic performance, their interest for the discipline and for the ICT, where 40% of the students have considered it important and about 30% have considered it very important

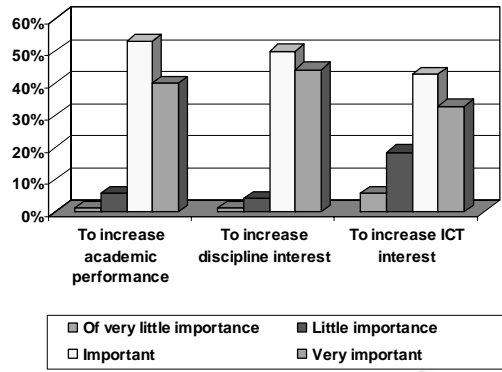


Figure 9: Web page contribution to the discipline of Auditing

At last, when questioned about the presentation, functioning and contents of the web page of the discipline of auditing, about 75% of the students have considered it very important.

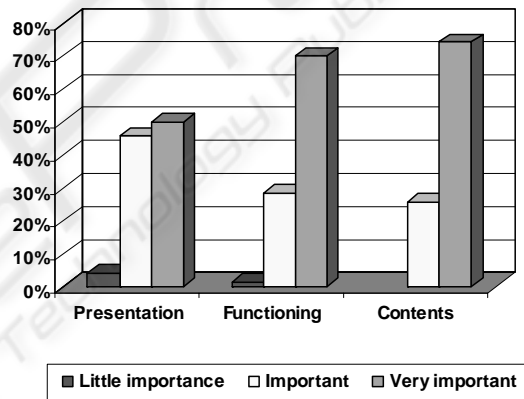


Figure 10: Opinion about the web page of Auditing

5 FINAL OBSERVATIONS

The pedagogical experience carried out in the discipline of Auditing is an important challenge in a society that has to evolve concerning the process of teaching/learning. Adopting new pedagogical methods comes naturally, when trying to change the paradigm resorting to the New Information and Communication Technologies.

The goal we aimed to reach by creating the web page for the discipline of Auditing has allowed to a certain extent a consideration about teaching both in terms of school attendance and a virtual school and we have concluded that the students have adopted this teaching methodology, showing a stronger interest in the discipline, and at the same time allowing them to develop their critical spirit. From the analysis to the visits to the web page and the

questionnaire carried out to the students in the year 2003/2004, we have registered a good adaptation to this new method that has interconnected the school attendance with the virtual school and has doubtfully allowed an improvement in the students academic performance and interest for the discipline.

We believe we have moved forward towards a better knowledge of the process of teaching/learning in the Knowledge Age, by focusing not on the teacher but on the student and responding to his motivations, interests and stimulating his critical capacity.

However and because we are only at an early phase in this kind of work, there are limitations, namely the impossibility of comparing this methodology with different school years. Therefore it is our aim to develop this work for some more years in order to analyse at a long term the value that comes from using the virtual school and the real implications in the improvement of the process of teaching/learning.

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