Information Technology in Ensuring the Quality of Education at Private Colleges in Russia

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This article analyzes issues in legal informatization amid the formation in Russia of a single information-legal space that ensures the legal awareness of all establishments within society and every citizen taken singly. The author notes that the legal informatization of society opens up whole new vistas for enhancing the organization of juridical activity. Data from a sociological study conducted by the author indicates that new information technology, based on the use of personal computers and telecommunications means are entering modern juridical practice rather late. The author notes that resolving these issues is possible through the information orientation of the system of higher juridical education and a multi-tiered and multi-component system of preparation of specialists based on a model for information culture. The article brings to light the "Information Technology in Juridical Activity" discipline within this model, thanks to which there are adopted and developed new forms of learning and ensured tendencies to the formation of open education, advanced learning, the use of new technical means and technology, and enhancing educational methodologies.

Key words: Higher education, Computer learning, Computerization, Private educational organizations.

The IT industry is a leading sector of the economy, which in large measure defines the innovation nature of the development of other sectors and areas of activity. In economically developed countries, 99% of annual GDP growth is provided for by the implementation of innovation and new technology. Within these areas, over 90% of the employed must have a higher education.

It has been proved mathematically that an increase in the percentage of people with a higher education results in an increase in the work output of the region's entire workforce, as well as the size of salaries across all categories of employees (Engines of Economic Growth: The Economic Impact of Boston's Eight Research Universities on the Boston Metropolitan Area., 2003).

If prior to the shift to the market economy, incomes, as a consequence of one's getting a higher education, grew 2-4%, by 2000-2005 growth was 8-10% (Fleisher, 2005, pp: 351-370).

Increasingly more people are going back to school at the age of 30-40 with a view to finishing an education received earlier or altering the course of one's career. In Europe, there emerged the first institutions of higher learning for senior citizens.

The system of professional and corporate education is seeing a wide use of multimedia technology; the methodological basis of their effective use was the model for applying them proposed by B.B. Andersen in 1999 (Andersen, 1999).

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Building a rule-of-law state in Russia involves, above all, the formation of a single information-legal and economic space that ensures the economic and legal awareness of all establishments within society and every citizen taken singly.

Analysis of the issue

If in 2002 the Russian Federation had an Internet audience of 8 million people for the entire nation of 150 million, which, note, included people who used the Internet once a year, today the IT audience is nearly 70 million people, people who use the Internet at least once a month, and in reality once a week. Today, the Russian Federation is seeing major activity in respect of the operation of online stores and electronic banking, an area where big money is circulating. IT systems are also implemented in processes related to society and politics.

According to the definition adopted by UNESCO, IT is a complex of interrelated scientific, technological, and engineering disciplines that study methods for the effective organization of the work of people engaged in processing and storing information, working with computer equipment, methods for organizing the work of and interacting with people and production equipment, their practical application, as well as social, economic, and cultural issues associated with all this. IT itself requires complex training, sizable initial expenditure, and high-tech equipment. Its introduction should begin with the creation of mathematical support and formation of information flows within systems of preparation of specialists. Today, Russia ranks 38th among 75 countries on human capital, 62nd on software and hardware, 66th on the information-communications structure, and 71st on the use of IT in education (Zadorozhnyuk, 2006, pp: 111).

A.A. Andreyev provides unpromising data on that the majority of college instructors, especially those belonging to the older generation, have hard time using the 2.0 (Web 2.0) services: blogs, wikis, Delicious, YouTube, Flicker, and Twitter (Andreyev, 2010, pp: 44).

With a view to investigating into the above issues, every year we (during the time of student internships at territorial police departments, courts, district attorney offices, defense attorney offices, enterprises, institutions, and organizations) conduct sociological studies. For that, we have worked out a special questionnaire containing 62 questions.

Here are the results of the 2012 study. There were 91 respondents. Among them, there were 4 (4.3%) legal advisers, 4 (4.2%) investigators of the Procurator's office, 17 (18.5%) investigators of territorial police departments, 1 (1.1%) assistant prosecutor, 9 (9.8%) investigating officers, 5 (5.1%) notaries, 6 (6.6%) attorneys, 13 (14.2%) judges, 3 (3.3%) bailiffs, 3 (3.3%) arbitration tribunal specialists, 4 (4.4%) justice department specialists, and 22 (25.7%) specialists of other categories.

Among them, 34.1% do not have professional training in using information technology in juridical activity.

Those who do have professional training gave the following answers to the question "If yes, where did you get it?":

at school	4.3%
at an institution of secondary vocational learning	8.7%
at college	49.5%
took a training course	15.6%
self-education	22%

Almost half of the respondents consider their preparation not sufficient in terms of using information technology. Thus, regarding the question "Is your knowledge enough to be able to effectively use information technology in juridical activity?", the answers were as follows:

Yes	53.8%
No	46.2%

The answers to the question also substantiate the superficial, fragmentary nature of one's acquaintance with information technology. One in five respondents does not use legal reference systems in one's activity.

KonsultantPlyus	75.6%
Garant	75.6%
Kodeks	38.5%
YuSIS	4.4%
Referent	7.7%
Zakonodatelstvo Rossii	22.0%
1 S Kodeks, 1 S Garant, 1 S Etalon	14.3%
Yuridicheskiy Mir Internet	7.7%
Etalon	1.1%

The use of both the internal network and the Internet is characteristic of employees of commercial firms and justice agencies. Notaries,

bailiffs, and employees of territorial police departments do not use networks.

Intranet (internal network)	34.1%
Internet (global network)	31.9%

The majority of employees of law enforcement agencies lack knowledge of the various types and capabilities of Internet services and do not have access to networks.

Many of them do not use access to reference systems online.

KonsultantPlyus	27.5%
Garant	24.2%
Kodeks	14.3%
YuSIS	1.1%
Referent	5.5%
Zakonodatelstvo Rossii	3.3%
1 S Kodeks, 1 S Garant, 1 S Etalon	2.2%
Yuridicheckiy Mir Internet	5.5%
Etalon	1.1%

The results of the study indicate that effective use of information technology in juridical activity is impeded by a whole spectrum of reasons. The answers to the questions "What problems give you hard time at work?" were as follows:

the absence of a PC	5.5%
a lack of knowledge of the workings and operation principles of the PC	4.4%
a lack of practical skills in communicating with the PC	2.2%
a lack of knowledge of common applied systems	8.8%
the absence of access to the network's resources	38.5%
a lack of knowledge of methods for navigating and ways of searching for information on the Internet	9.9%
a lack of knowledge of the various types and capabilities of Internet services	13.2%
a lack of knowledge of the Russian Internet and ways of placing information	9.9%
a lack of knowledge of the characteristics of referring to, searching for, and obtaining information from legal reference systems	4.4%

The most difficulties working with information technology are experienced by investigators of the Procurator's office. This is due to the lack of access to the Internet and their elementary incompetence in using the computer.

Having said that, the absolute majority of investigators of the Procurator's office surveyed have a computer in their workplace.

The most serious issue to the majority of the respondents is the absence of access to the network.

The lack of skills in using reference systems is characteristic of those respondents who do not have a PC in the workplace. The main problem is the absence of access to the network's resources. Hence one's corresponding incompetence. We can suppose that access to those resources is constrained by the budget of corresponding institutions.

Information technology that is based on the use of personal computers and telecommunications means is entering modern juridical practice rather late. In part, this is associated with that lawyers, on account of the specificity of their occupation, are characterized by having a conservative approach towards novelties, including technical ones. Law as an instrument presupposes the invariability of fundamental principles and stability of ways of regulating relations between its subjects.

We believe we should take a look at a number of factors substantially impacting on the quality of professional preparation of law specialists in studying the "Information Technology in Juridical Activity" course.

Firstly, viewing informatics as an aggregate of three component parts – Hardware (the technical component – the PC's software and hardware organization), Software (the programming component – the PC's software), and Brainware (the intellectual component, thanks to which informatics is a scientific discipline that can fully sustain itself in its development) – we should note that the subject's third fundamental component is not provided in the learning process completely enough or is not provided altogether.

Secondly, in secondary general education institutions there is growth in the number of various specialization courses. An analysis of their programs indicates that this process is moving along in an unregulated fashion, without any research- methodology substantiation.

Thirdly, the content of college programs related to information technology virtually does not consider such important issues related to

selecting learning content as inter-subject links, the role of information technology in youth's polytechnic learning, professional orientation, and professional self-determination.

Fourthly, within the existing educational system, priority is with didactic linear technology for transferring ready knowledge, which amid rapid growth in information flows impedes the realization of the principle of transfer of all accumulated knowledge in the process of learning.

Therefore, preparation of highly professional human resources capable of developing new IT and effectively using IT in practice is becoming a strategically crucial objective.

The last decade is characterized by the active implementation of the new technology course in colleges across the Russian Federation. Over this period, they more than once corrected the educational standard on informatics, and lately on information technology, which defines requirements for the course's place in the college's educational plan, its content, students' preparation level, technology, and means of checking and assessing students' meeting the requirements of the Federal State Educational Standard.

Resolving the above issues will be possible on the basis of information orientation of the system of higher juridical education. Graduates of economic-juridical colleges must not only have an idea of the capabilities of information society but be able to effectively and professionally use them. It is the processes of enhancing the educational activity of economic-juridical colleges that can substantially impact on the existing situation through the implementation and development of new forms of learning and the practice of advanced learning. The primary goal is to acquaint students with the fundamentals of modern information technology, trends in their development, principles of constructing information models, conducting the analysis of results obtained, and applying modern information technology in professional activity. "Information Technology in Juridical Activity" should, in our view, hold a special place among disciplines studied at college, since we should build the whole educational process on its groundwork and it is this discipline that is a toolbox for one's future juridical activity.

Tangible is the contribution of private colleges to preparation on the specialties of informatics and computer equipment – 5-6% in terms of the number of learners (Education in the Russian Federation: 2006: A Statistics Yearbook, 2006, pp: 114-115).

A sphere of activity where the capabilities of private colleges are, no doubt, wider is educational innovations. At private higher schools, it is easier to test new methods of learning (the acclaimed case-study method emerged at Harvard); new programs, new subjects and focus areas of preparation.

It is for a reason that the former Deputy Minister of Education of Malta notes in his monograph "Education in Malta" that the private sector "can provide educational services to its client faster, more straightforwardly, and more economically, than the state sector, since private schools service their clients directly compared with the bureaucratic state system and are free from those obligations which are often faced by states and governments. Since private schools mainly operate on their own and are not encumbered by state bureaucracy, they are capable of perceiving the needs of the market more acutely and deliver the "goods" faster and, sometimes more effectively as well, than the cumbersome and clumsy state system" (Mangion, 1992, p. 299).

B. Weisbrod points out that the non-commercial sector emerges in response to the inability of state establishments to satisfy cumulative demand for public goods, and, above all, within the sectors of the social sphere (Weisbrod, 1998).

It would be more expedient in Russia to back the private sector of higher education.

At present, a particular structure of professional preparation of law students has formed at the Altai Institute of Economics and Law, one of the first private institutions of higher learning in Altai. It is characterized by a shift to a multi-tiered and multi-component system of preparation of students in the area of jurisprudence based on a model for information culture, which is formed in studying the entire complex of disciplines: the general humanities and social-economic, information-legal and general professional juridical cycles.

A crucial role in this model is played by

the "Information Technology in Juridical Activity" course, thanks to which there are implemented and developed new forms of learning – for instance, distance learning – and augmented tendencies towards the formation of open education. This, in turn, poses in front of us the issue of expanding the practice of advanced learning, using new technical means and technology, and enhancing educational methodologies.

Adopting in the process of preparing lawyers computer equipment and information (including automated) learning systems is aimed at inculcating on students and specialists who have graduated from college information culture skills.

To realize the above requirements at the AIEL

a)　There have been created conditions for teaching students information technology and applying it in one's practical activity (the availability of computers, programming products, specialists, rooms, and equipment and the availability of the local network and access to the Internet);

b)　There is taking place the adoption of computer technology in the learning process across all disciplines (using the computer, the student becomes a researcher in the process of learning);

c)　Students have been granted access to electronic resources of the "KnoRus" publishing house;

d)　There has been created a multimedia library for all students, which amasses various instructive, exerciser, control, and other programs (using these programs, the student can independently study new topics, fill in the gaps in new knowledge, carry out research, and conduct experiments for one's term or graduate qualification papers).

The institute now has a lab for new information technology and a computer center, which help to comprehensively resolve issues related to organizing the management and enhancement of preparation of law specialists. The institute enables its instructors to receive relevant technical and methodological support relating to network and computer technology. The center has made it possible to substantially expand the geography of educational programs and increase the number of specialists capable of using the

center's programming products in a competent manner and ensuring their maximum efficiency.

In the view of N.A. Shevelev, the integrated mastering of IT by colleges includes the following components: material, program, information, institutional, and technological; it also presupposes the across-the-board application of information technology in the college's practice (Shevelev, 2010, pp: 95).

The use of information technology is not limited to the above at our college. Computers and new information technology are used for ensuring the flow of the learning process and an active exchange of knowledge and data in scientific and research work. The institute has held seven "Education and Science in the Third Millennium" international research and theory conferences. You can check out the conference materials at www.aeli.altai.ru.

Based on the above technology, there has been put together the provision of instruction to graduates of the Altai Institute of Economics and Law at the National Tomsk State University of Research (NTSUR; over 1998-2012, 315 AIEL graduates received their diplomas from this university). Students at the institute have access to informatics rooms brilliantly equipped with multimedia PCs (CD-ROMs, soundcards, acoustic systems, microphones). All the computers running on Windows XP are joined up into local networks and hooked up to the Internet. Students can make use of electronic textbooks and the latest programming tools – the electronic Excel table, the Access database management system, modeling tools, and reference search systems, such as KonsultantPlyus, Garant, Kodeks, etc. There are several PCs in the reading hall at the institute's library, which provides students with constant access to the NTSUR distance learning server as well as to all other servers across Russia, the CIS, and other countries.

Providing instruction to 5th-6th-year students is based on one's level of knowledge in the area of information technology, which was attained when taking the "Information Technology in Juridical Activity" course.

As A.N. Khuziakhmetov and R.R. Nasibulov justly assert, if we use the latest distance learning technology in the system of university learning, competently combining it with college
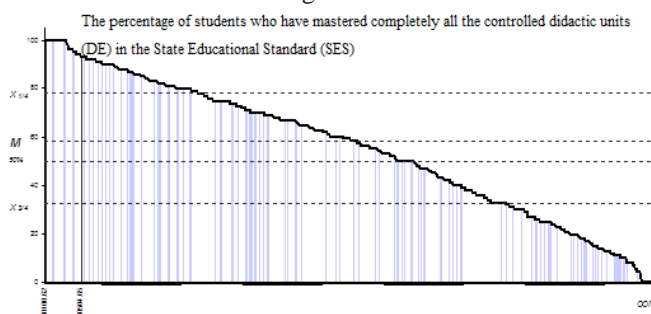
education traditions, we shall see a substantial increase in students' motivation towards studying, and knowledge they get can become personally and professionally significant (Khuziakhmetov, 2012, pp: 102).

With a view to providing support to colleges during self-examination, on assignment from the Federal Service in the Sphere of Education and Science, the National Accreditation Agency in the Sphere of Education has conducted starting in May, 2006, the "Internet Exam in the Sphere of Professional Education" experiment.

The Altai Institute of Economics and Law has taken an active part in the experiment. The average percentage of correctly executed assignments ranged from 73 to 100%.

Demonstrable are the results of the Internet-testing of students at the Altai Institute of Economics and Law in Informatics (Figure 1)

The percentage of students who have mastered completely all the controlled didactic units (DE) in the State Educational Standard (SES)

Fig. 1. A diagram for ranking the indicators of mastering a discipline for colleges' Primary Educational Program (PEP) (UGS ("enlarged groups of specialties") 030000 – Humanities) Discipline: Informatics

The diagram illustrates the results of mastering a discipline against the State Educational Standard requirements for 832 PEPs from 365 colleges which participated in the Internet exam. The results of the exam participants in the "Institute" status are marked in grey. The indicators of mastering the SES for the PEP of the Altai Institute of Economics and Law are marked in dark and are in the general background.

Inferences

Such an approach towards education ensures the conditions for developing in students skills in setting objectives, modeling, optimizing, making decisions amid uncertainty and the ability to get knowledge on one's own, which is especially significant in preparing law specialists – under standard methods of learning, upon graduation, virtually every specialist has to be taught additionally for no less than 6 months.

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