

INNOVATIVE CHANGES IN EDUCATION: MULTI-LEVEL SYSTEM AT SFU AS PART OF THE BOLOGNA PROCESS IN RUSSIA

Author 1: Prof. Olga Georgievna Smolyaninova
Director of Institute of Education, Psychology and Sociology
Siberian Federal University
Russia, Krasnoyarsk, pr. Svobodny 79
tel./fax +7 (3912) 445911
smolog@lan.krasu.ru

Author 2: Alexander Mikhailovich Danichev
Head of Organizational and Technological Department,
Institute of Fundamental Studies,
Siberian Federal University, Russia
Russia, Krasnoyarsk, pr. Svobodny 79
tel.: 7 (3912) 430932, fax: 7(3912) 498932
asukstu@mail.ru

Knowledge Economy and Competency Approach in Higher Education

The main **challenge of modern system of education** today is development of the post-industrial forms of economic relations which are characterized by **continuous changes** in technology and knowledge. Modern society is characterized by the knowledge-based economy. Economy, based on knowledge brings new requirements to the labor market all over the world (key or basic competencies). Modern graduates have to possess both professional competencies and the basic competencies important for the knowledge-based economy. Among the second are such competencies as communicative and administrative, teamwork, reflexion, and ability to work in multicultural groups and work independently.

One of the first-priority tendencies in training highly qualified specialists is transition to competency approach in education. These competencies are necessary taking into consideration quick dissemination of the scientific and practical knowledge, shortening of the term within which the knowledge preserves its urgency. This is the result of continuous production of the new knowledge and the growing influence of science and technology which considerably change conditions of work and life. The consequences of these changes are difficult to foresee. Reliable sociological research shows that possession of the key competencies leads to a higher quality of life in all the spheres [1].

Siberian Federal University as National Russian Project in the Sphere of Education

The system of higher education in Russia is undergoing the process of reform. The Russian Government has started several National Projects. National EDUCATIONAL Project is among them. In accord with this Project in year 2006-2007 the two big federal universities were opened. They include scientific and educational centers. One federal university (FU) was opened in the Southern District, and one – in Siberia and Far East (the Siberian Federal University). For Siberia and Far East our city of Krasnoyarsk was chosen. Why was Krasnoyarsk chosen among other cities? Krasnoyarsk is the geographical center of Russia and the biggest Siberian city. Its population is about 1 million people.

It is the historical, industrial and cultural center of our big region (2339,7 square km which is 13,6% of all the country, and about 3 million people). It is also a quickly developing region.

- Within the nearest 10 —15 years the volume of investments into the economy of Krasnoyarsk region will be 41 billion dollars.
- Exploitation of oilfields in Evenkia, construction of pulp and paper mill and metallurgical works in Boguchani, investments in Lesosibirsk pulp and paper mill and Turukhansk hydroelectric power station makes Krasnoyarsk region even more attractive.
- Realization of such big industrial projects needs many highly qualified specialists and managers of different levels.
- FU attracts young specialists from other regions. The total amount of students of Krasnoyarsk Federal University is over 50 thousand people, minimum 30% of which are students from other neighboring regions.

Creation of the Siberian Federal University is closely connected *with the systematic changes in Russian higher education and professional training of highly qualified specialists for the development of the region in future.*

The Siberian Federal University in Krasnoyarsk was opened on the bases of the four existing universities according to the plan of the National Educational Project. These are the Krasnoyarsk State University, Krasnoyarsk Polytechnic University, Krasnoyarsk Architectural University and Krasnoyarsk Academy of Gold and Non-Ferrous Metals. Strategic positioning of the SFU can be described as follows: “...professional training of highly qualified specialists, creating innovative technology and making contribution to the social and economic growth of the potential in the regions which are situated in the unfavorable geographical conditions and rich in mineral resources”[2]. We all understand that creating a university offering a new level of high quality education and scientific research will not happen by means of mechanical uniting of several universities into one. Fundamentally new models of education are needed for that purpose and changes in technology of the academic process administration.

We see the following problems

- **Less than 20 %** of university graduates (average for Russia) can find a job *in their professional sphere.*
- The system of higher education does not take into consideration the needs of labor market and its regional specific character.

What is Needed

- Partnership of the state and business in the sphere of higher education.
- New standards and quality assurance.
- Changes in the academic process.

Institute of Education, Psychology and Sociology, SFU in the Cluster of Human Resources Development

Institute of Education, Psychology and Sociology (IEPS) was created within the SFU. The Institute is oriented toward the cluster “human resources development”. The fact that people continue their education after graduation from higher educational institutions, that they continue their study being professionals is the new reality, it is now the norm. In highly developed countries within the nearest decade employees will have to change systematically their place and even profile within their professional carrier.

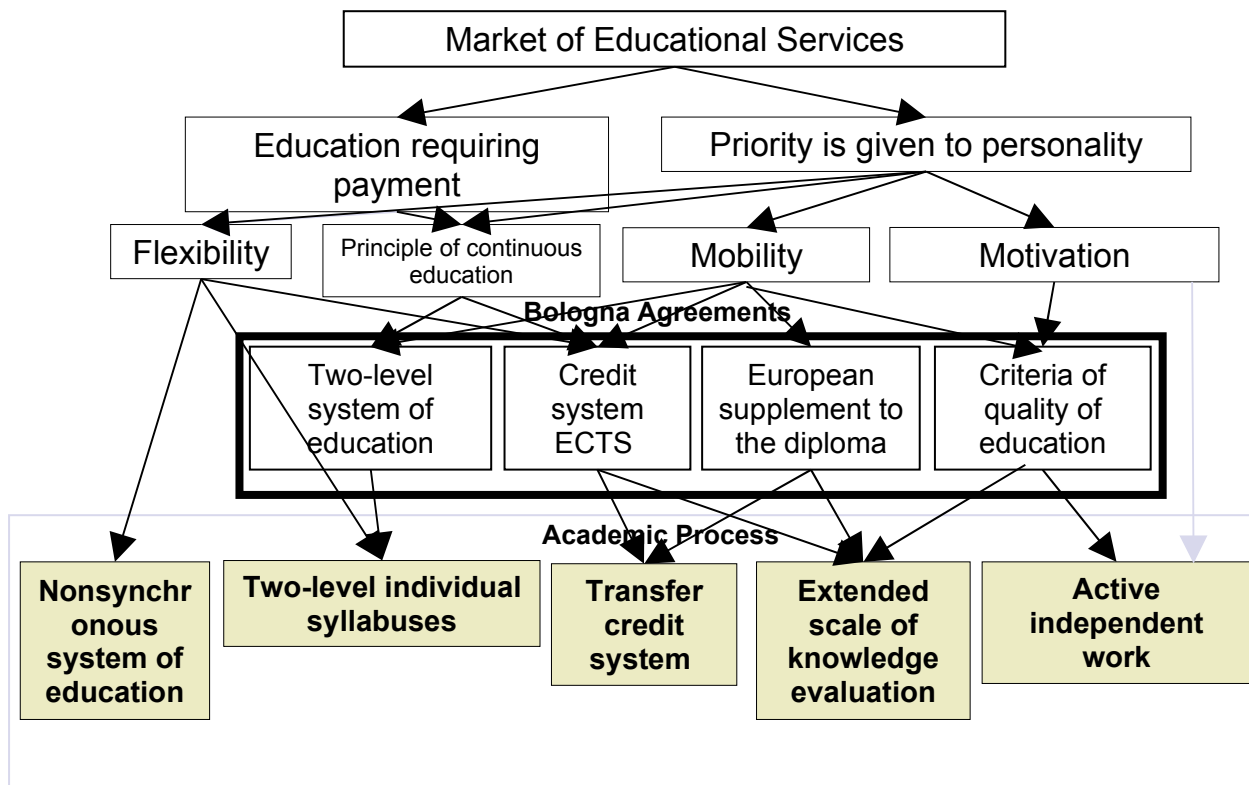
Positioning of the IEPS is connected with the growing competitiveness of the SFU in the sphere of human resources management (intellectual, social, moral, emotional resources, etc.). Psychological and educational sector is important for the Institute as scientific and educational university subdivision. This sector is based on the principles of Developmental Psychology and projecting approach. In contrast to the economics where a person is regarded as a **resource**, we at the IEPS work with the resources of **the person**. Taking into consideration the trends of development in education in future we focus our scientific and methodological research work on the development and implementation of the effective models of education FOR ADULTS. To make the focus on education for adults there are several reasons, among them:

1. The fact that there is the decrease in the young people able to work makes clear the necessity to include adults in the new types of activities.
2. There is the urgent need in continuous education and obtaining new professional education among the adults. According to the statistics 2/3 of the adult population plans to continue education.
3. Traditional education is not able to solve the problems of adult students to continue education and obtain new professional education. A new sphere of knowledge has appeared, it studies adult education.
4. New scientific and methodological tools should be worked out, new forms of organizing professional education for adults.
5. The companies cannot rely only upon the new university graduates or those who come to the labor market for the first time as the only source of new skills and knowledge. They need employees who want and are able to upgrade and perfect their skills continuously.

Thus the institutes involved in work with adult students develop educational strategy for adult education to satisfy the needs of labor market. Except for this, adult students need professional coaching in application and development of individual resources and basic competencies for career purposes.

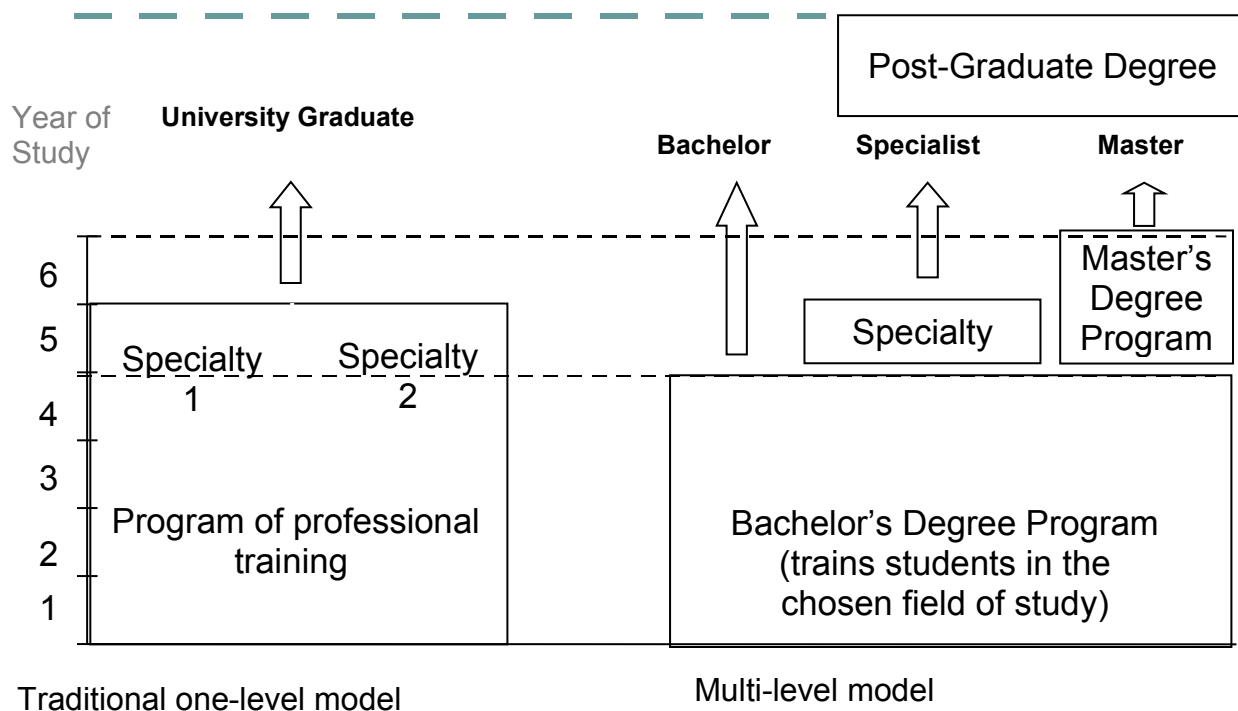
Changes Introduced into Professional Training for Students of Humanitarian Specialties on the Bases of Implementing the Multi-Level System (Bachelor/Master degrees)

We would like to tell about the experience of introducing innovative changes into educational practice in humanitarian field of education in our University. These changes are closely connected with the Bologna Process and transfer of the Russian traditional system into the three-level system of education with Bachelor, Master and Doctor Degrees. Why do we head for the Bologna System? Because we need specialists of a new level which corresponds to the labor market and world standards of education for university graduates. Because we need more mobile and more flexible system of higher education, aimed at realization of the personality's interests together with the demand of the labor market. Pic. 1 shows the scheme by Gladkikh B.A., Tomsk State University, Russia.



Pic. 1. The Scheme of the Bologna System Educational Structure

One level does not correspond any more to the interests either of the student or the employer. There should be several levels of education and free transition from one Bachelor degree to different Master degree programs (Pic. 2).



Pic. 2. Traditional and Bologna Models of Education

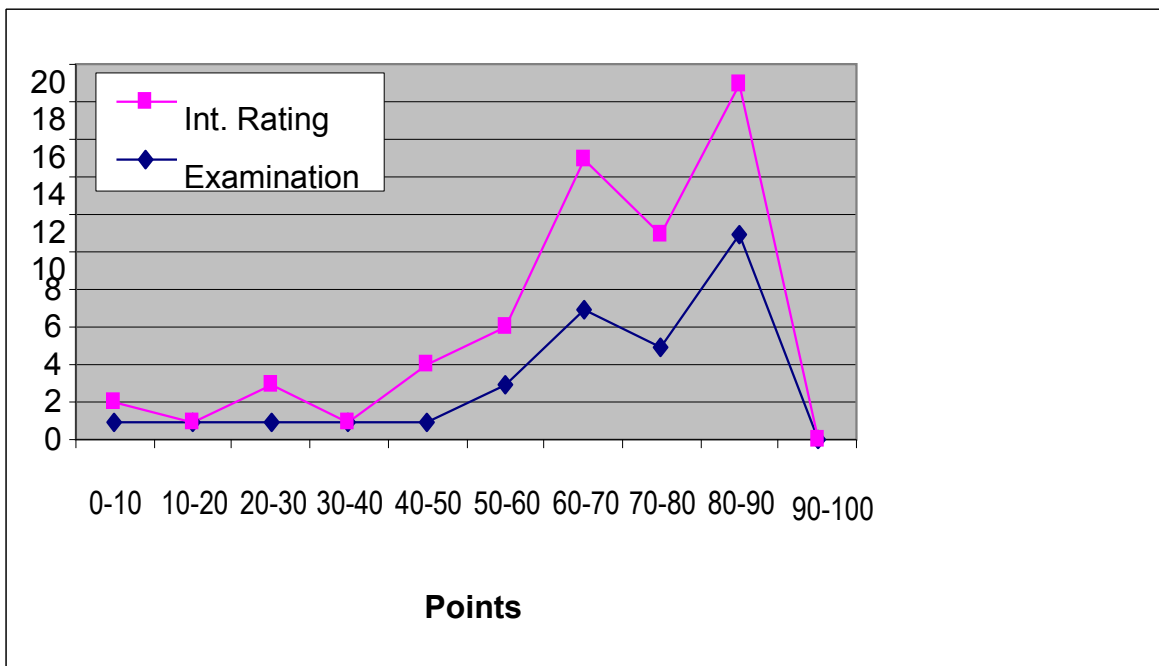
What is done (for implementing the multi-level system of education):

- ✓ The two-level system of education (in Psychology and Education) was started;
- ✓ Elements of the non-synchronous system of education were introduced;
- ✓ Credit system is being introduced;
- ✓ We extended students' progress evaluation scale;
- ✓ Independent students' work became more active thanks to:
 1. module-based schedule
 2. rating system
 3. electronic information recourses.

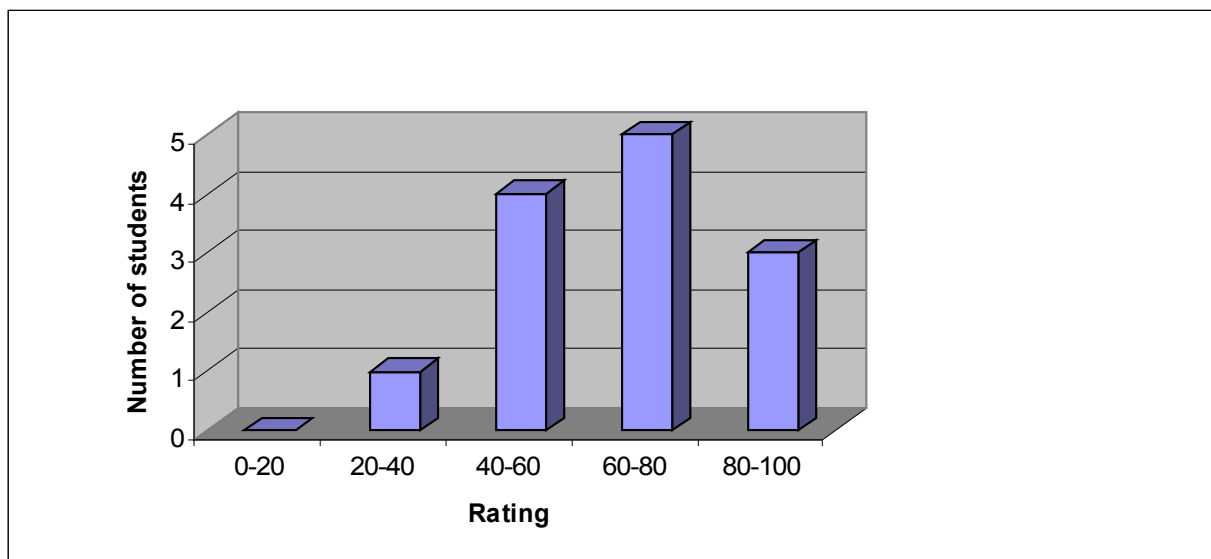
Experience of Module- Rating System Application for Bachelor and Master Programs in Education and Psychology in the Real Educational Practice

We opened Bachelor and Master programs in Psychology and Education (4 years of study). We started to work out credit-rating and module system for Bachelor program in Education. At the end of the first term we obtained the information on the students' rating studying according to Bachelor and Master degree programs in Education, rating in different disciplines and total rating. The data we received (intermediate and total rating) are the valuable material for student academic achievements analysis, for the system of assessment, and for teachers within their work at developing and delivering courses in different disciplines (Pic. 3).

Pic. 3. Course Intermediate and Total Rating



Totalling the results we composed the diagram based on the students' rating. As it is clear from the diagram there is the predominance of high and good results (Pic.3). We are inclined to think that this is thanks to the conservative tendencies in the assessment from the teachers' side and the influence of the social aspect – the dependence of the student scholarship on the mark. After the second module the rating came closer to the normal distribution (Pic. 4).



Pic. 4. Final Students' Rating at the End of the Term

A new form of relations between the participants of the educational process was registered. A student and the university sign an Agreement. It gives the possibility of introducing differentiated fee for educational services and increases the responsibility of both sides - the University and the students – for the results of education. We also changed the organizational form of the academic process, making the credit-rating principle the bases for it. Module-based scheme of organization of the academic process makes it more flexible and convenient for students and teachers and transparent to the department administrators and foreign partners. Pic.5 contains model of module-based Master academic program in Higher Education. It includes the student input in credits.

Master Academic Program in Higher Education (Model)

1 Module (1 September- 30 October)

This Module includes the following methodological disciplines:

1. Modern problems of Science. Number of credits: 6.
2. Information Technology in Science and Education. Number of credits: 6.
3. Scientific and Research Students' Work. Number of credits: 4.

2 Module (1 November-21 December)

This Module includes the following methodological and technological disciplines:

1. Methodology of Psychological and Pedagogical Research Work. Number of credits: 4.
2. Information Technology in Education Management Work. Number of credits: 3.
3. Bases of Pedagogical Epistemology. Number of credits: 2.
4. Work at Master Thesis. Number of credits: 5.

3 Module (8 January- 18 March)

This Module includes professional training disciplines, practical work, and training in ICT. Module 2 is divided into 2 part-modules.

Part-Module 1 (8 January – 17 February)

1. Bases of Pedagogical Profession for High School Teachers. Number of credits: 2.
2. Design and Web-technologies for Educational Purposes. Number of credits: 2.

3. Scientific and Research Practical Work, 6 weeks. Number of credits: 2.

Part-Module 2 (18 February- 18 March)

5. 4. Developing Syllabuses and Materials. Number of credits: 3.
6. Multi-Media Technologies in Higher Education. Number of credits: 5.

4 Module (19 March-18 June)

This Module includes disciplines, having practical character and problematic-methodological character.

1. Modern Problems of Pedagogical Science. Number of credits: 2.
2. Portfolio Method in Education. Number of credits: 5.
3. Work at Master Thesis. Number of credits: 5.
4. Scientific and Research Students' Work. Conference devoted to Scientific and Research Students' Work, presenting a scientific work. Number of credits: 4

Subtotal number of credits: 30

Total number of credits for the first year: 60.

Pic.5. Model of Master Academic Program in Higher Education

The Problems of Construction of the Module Based Scheme of Education

Nowadays there are different approaches toward definition and understanding of the academic modules. Glossary on the Bologna Process [3] points out that at present “*there is no document explaining how to interpret this term in European system of higher education. There are many interpretations of the concept of module-based education, beginning from the definition of a separate unit (lecture, seminar, etc.) as a module and up to the complex module systems, containing interdisciplinary elements*”.

Working out the master academic program we used successive block of disciplines as a module, which composed a knot uniting the educational content and the technology of mastering it. The Master academic program was segmented into modules:

- 1 Module: methodological disciplines
- 2 Module: methodological + technological disciplines
- 3 Module: professional training disciplines, practical work, training in ICT
- 4 Module: problem and methodological disciplines, disciplines of practical and applied character
- 5 Module: operational (for formation and development of methods of professional activity of a high school teacher)
- 6-7 Modules: mixed (scientific and research work, practical work, formation and development of methods of professional activity)
- 8 Module: scientific and practical

In general the Master academic program consists of 8 modules, the duration of the course of study is 2 years. Mastering the modules includes the choice in “Theory of Education” bloc of disciplines and the block of special disciplines (educational innovations, educational and administration technologies, IT in education). The content of these modules includes not only writing essays, accomplishing expertise of educational resources and making reports to actualize and generalize one’s educational experience but lays the ground for scientific and methodological research, projecting work and mastering modern technologies of administration in higher education. Modules are composed out of disciplines from the federal list, having the given system of didactical units, and authors’ courses. The total amount of the credits a student has to obtain during the 2 years of study (8 modules) for a Master degree is 120

credits. During one year of study a student has to gain no less than 60 academic credits (30 credits per two modules). It is possible to draw an individual academic program choosing the disciplines among the list and having an individual trajectory of training, though mastering a certain subject within a certain period of the academic program is obligatory.

Students' assessment is carried out by means of 100 points scale. Within the course a student may gain maximum rating of 100 points. The course finishes with the test. It means that a student is given a mark "passed" or "not passed" after the examination.

In Table 1 you could see the example in the course in Information Technology in Science and Education. This discipline includes practical work and independent study. The number of credits is 7. The course ends with an examination. Duration of the Module: 5 September – 31 October. Examination Structure: intermediate rate is the result of regular work (max. 50 points), final test – examination (max. 50 points).

Table 1. Academic Course in Information Technology in Science and Education.

	Content of Lectures	Hours/ Dates	Method of teaching, type of communication	Hours/ Dates	Type of activity, form of control	MAX Points
1	IT in Education	4/13.09.07	Problem lecture		Independent study of materials, analyses	
2	Didactic Models of Education Based on ICT	4/14.09.07	Workshop Discussion, presenting the existing models of education based on ICT	4/4.10.07	Writing an essay and presenting models of education based on ICT (placed in the Internet, on CD/DVD)	10
3	Methodology and Technologies of Distant Education	4/05.10.07	Multimedia presentation. Presenting experience of the Russian high school institutions in distant education	4/10.10.07	Preparing a report on distant education in higher education (on the example of a Russian or foreign higher educational institution)	10
4	Satellite Technologies in Education	4/06.10.07	Multimedia presentation Presenting regional experience in satellite technologies		Independent study, study of prospectives of ST at Russian higher educational institutions	
5	Methodology and Technology of Creating Educational Multimedia Software	4/11.10.07	Workshop: practical work devoted to different approaches towards expertise	4/13.10.07	Expertise of Russian educational interactive Multimedia software	10
6	Network Interactive Educational Resources	4/12.10.07	Presentation of one of the educational resources for Higher Education	4/17.10.07	Report and presentation of Russian/forging educational resources	5

					for Higher Education	
7	Psychological and Physiological Aspects of ICT Application	4/18.10.07	Multimedia presentation. Presenting medical and psychological research data on ICT influence		Independent study, study of methodological and scientific sources. Control: test.	5
8	Information Technology in Science	4/13.10.07	Discussing students' reports. Students' presentations of the research work carried out on the bases of Internet sources	4/24.10.07	Essay devoted to one of scientific fields of study and ICT application	5
9	Competency Approach on the Bases of ICT	4/25.10.07	Multimedia presentation. Group discussion of key competencies.		Studying materials devoted to competency approach, independent study. Control: test.	5
	Final Test (Examination)	4/27.10.07				50
	Total					100

Electronic Support of Module-Rating System at SFU

The most important role in the module-credit system plays electronic support of the academic process. In Siberian Federal University automated computer system "Rating" was developed to support the innovative credit-rating system (Table 2).

Table 2. Structure of the Electronic Register

Processes	Sub-Systems
Planning of the academic process (for the total period, for the term)	"Academic Process Planning"
Planning for separate disciplines	"Academic Programs for different disciplines"
Distributing resources for the needs of the academic process	"Rooms", "Schedule", etc.
Entrance examination	"University entrants"
Record of the student circulation	"Contingent"
Monitoring the students' rating	"Rating"
Scholarship calculation and university fees	"Scholarship", "Flagman"
Planning for University Publishing House and record of publications	"RIO"

In the database was included and is constantly updated the following:

- state educational standards;
- academic programs in credits for all the period of study;

- academic programs for every discipline, specifying how many credits are included in what modules, and specifying the types and work;
- target auditory of the courses (the contingent), about 50 thousand students.

When preparation for the starting academic year takes place the following is done:

- individual academic programs for students are composed;
- the working load for the chairs is calculated, traditionally in academic hours and in the new units – in credits (the amount of students is taken into consideration, all types of work including independent study);
- based on the calculated working load for each chair salary schedule is completed;
- electronic grade reports on intermediate/final rating on the bases of continuously updated information (specifying the student input for each module and types of academic activities);

Students have access to the data from the subsystems “Academic Process Planning” and “Academic Programs for different disciplines” (part of the data are printed as hand-I materials). The students use these materials to compose individual academic programs and to better understand the criteria of assessment (Pic. 5). The automated system “Rating” allows promptly adding the points and carrying out continuous monitoring of the students’ progress.

The screenshot displays the 'Учебные программы дисциплин - Lotus Notes' application. The interface includes a menu bar (File, Edit, View, Create, Actions, Help), a toolbar, and a workspace with several open documents. The main content area shows a tree view of academic programs, with the following table of course details:

Индекс	Модуль	Лабораторные работы	Задачи	Семинары	Экзамены	Итого
Заявлено						
1	Физические основы механики	13	4	5	15	37
2	Колебания и волны	9	2	5	10	26
3	Молекулярная физика и термодинамика	13	4	5	15	37
Итого		35	10	15	40	100

Below this table, there is a section for 'Обязательный минимум для допуска к экзамену/зачету' with the following table:

Индекс	Заявлено
100	100

The interface also includes a search bar, a list of documents, and a status bar at the bottom showing the Windows taskbar with the time 16:05.

Pic. 5. Access to the Academic Programs for Students

Picture 6 shows electronic register for intermediary rating. It also depicts the integration character of the information system: to form grade reports the data of the following subsystem are used:

- “Academic Process Planning” – for completing the list of disciplines offered by the chairs;
- “Academic Programs for different disciplines” – to show the scheme of assessment within the discipline (modules, types of academic activities, student input)
- “Contingent” – to form the list of students.

№	ФИО	ИНЖ.	зачет	ИНО.	зачет	ИНФ.	экза...
1	БЕЗРУКИХ ДЕНИС АНДРЕЕВИЧ	73.33	100.0	69.88	100.0	87.58	90.0
2	БОРОВИК МАРИЯ ВЛАДИМИРОВНА	0.0	0.0	0.0	0.0	0.0	0.0
3	ДАНИЛОВ МИХАИЛ МИХАЙЛОВИЧ	42.67	100.0	40.0	100.0	41.08	0.0
4	ДЕНИСОВ ВЛАДИМИР ИГОРЕВИЧ	58.67	100.0	29.75	0.0	81.67	0.0
5	ДОКАЛОВ МАКСИМ ВАЛЕРЬЕВИЧ	56.0	100.0	41.62	100.0	41.0	42.0
6	ЕМЕЛЬЯНОВ АНДРЕЙ АНДРЕЕВИЧ	54.67	0.0	69.88	100.0	66.42	62.0
7	КАЛИНИНА АЛЕКСАНДРА ЭДУАРДОВНА	65.33	100.0	63.0	100.0	78.92	40.0
8	КОВТУН ЕВГЕНИЙ ВИКТОРОВИЧ	89.33	100.0	96.62	100.0	91.0	91.0
9	КОЖЕВНИКОВ АЛЕКСАНДР ВИКТОРОВИЧ	0.0	0.0	0.0	0.0	0.0	0.0
10	КОЗЛОВ ВЛАДИМИР ВЛАДИМИРОВИЧ	78.67	100.0	79.88	100.0	84.75	50.0
11	КОСТОКОВ АЛЕКСАНДР ФЕДОРОВИЧ	68.0	100.0	73.25	100.0	82.92	50.0
12	МАМОНОВА ЕВГЕНИЯ АНДРЕЕВНА	78.67	100.0	69.88	100.0	86.42	62.0
13	МОНИЧ ЕКАТЕРИНА ПЕТРОВНА	100.0	100.0	96.62	100.0	98.5	99.0
14	НОВИКОВ АЛЕКСАНДР КОНСТАНТИНОВИЧ	72.0	100.0	64.88	100.0	83.42	50.0
15	ОРЛОВА ЕКАТЕРИНА СЕРГЕЕВНА	74.67	100.0	48.31	100.0	64.67	0.0
16	ПОНОМАРЕНКО СЕРГЕЙ ВИКТОРОВИЧ	77.33	100.0	86.5	100.0	94.5	60.0
17	РАХМАНОВ ЭМИН АДИЛ ОГЛЫ	53.33	100.0	49.94	100.0	86.25	0.0
18	РОГАЛЕВ ИГОРЬ ИГОРЕВИЧ	61.33	100.0	66.56	100.0	83.67	40.0
19	СОБОЛЕВСКИЙ АНДРЕЙ ВИТАЛЬЕВИЧ	40.0	100.0	40.0	100.0	40.0	0.0
20	СОРОКИНА МАРИЯ ПЕТРОВНА	100.0	100.0	96.62	100.0	97.0	97.0
21	СУХИХ ВИТАЛИЙ АЛЕКСАНДРОВИЧ	68.0	100.0	64.88	100.0	88.0	45.0
22	ТОЛСТИХИН НИКИТА СЕРГЕЕВИЧ	0.0	0.0	0.0	0.0	0.0	0.0
23	ТОРГУНАКОВА АНАСТАСИЯ ВИКТОРОВНА	0.0	0.0	0.0	0.0	0.0	0.0
24	УСОВИЧЕВ ДЕНИС ВЛАДИМИРОВИЧ	74.67	100.0	69.10	100.0	88.42	40.0

Pic. 6. Electronic Register of the Group. Individual Rating

Automated system of academic process administration is based on the principles allowing to integrate information of the linked documents and monitor all the interrelated processes and elements of the academic process, carry out management and administration and make up decisions taking into consideration the data analyses and redistribute the resources. The automated system also makes it easier for the teacher to monitor the academic process. The teacher having access to the university network fills in the electronic register. The students registered for the course also have access to the electronic register (Pic. 6).

In general the informational environment of the Siberian Federal University is based on different technological platforms (except for the mentioned above subsystems the University has library systems, GIS, systems for management the scientific activity and university utilities, etc. Administrators, teachers and students do not use all the modern innovative information technologies at present moment. Further development of corporate information technologies at the Siberian Federal University is planned on the bases of some high-performance integration platform, for example Intersystems Ensemble.

Electronic system of management the processes allows to make easier monitoring of the academic process (for the teacher). The teacher working within the university network fills in the electronic register. All the students, registered for this course have access to this register. Table 3 presents electronic register (Master program in IT in Science and Education). It contains the list of all types and topics of work and the maximum points a student may obtain for each.

Table 3. Electronic Register. Master Program in IT in Science and Education

Students' Name	13.09.06		14.09.06		4.10.06		5.10.06		6.10.06		10.10.06		11.10.06		12.10.06		13.10.06		17.10.06		18.10.06		19.10.06		Current Student's progress evaluation		27.10.06		Total																
	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark	Points	Mark															
S1	+	+	H	H			H	H	H			H						H																											
S2	+	+	H	+			+	+	+			H18						H			+15	13	13	13							13	3													
S3	+	+	619	6			+19	+	+			5	5	10				5	4	9		+12	39	40	40	15	12	15	42	82	5														
S4	+	+	7	H			+10	+	+			5	4	9				4		4		+4,5	24,5	24,5	24	9	9	10	28	52	4														
S5	+	+	H15	H			H14	H	H					+								+4	13	16	16	10	6	6	22	38	3														
S6	+	+	9	H			+18	+	+			H12	4	6								H		+4,5	27,5	28,5	28	13	15	15	43	71	5												
S7	+	+	7	H			+18	H	+			H12	5	7				5	4	9		+4,5	35,5	35,5	35	15	8	15	38	73	5														
S8	+	+	H10	H			H12	+	+			5	2	7				4	3	7		+4,5	20,5	20,5	20	19	8	4	34	54	4														
S9	+	+	10	+			H14	+	+			5	4	9				4	5	9		+4	36	37	37		10		10	47	4														
S10	+	+	H10	H			H16	H	H			H1-	3	3								H		+4,5	13,5	13,5	13	15	8	11	34	47	3												
S11	+	+	6	H			+17	+					3	3				3	3	6		+3	25	26	26	8	10	12	30	56	4														
S12	+	+	7	+			+15	+	+			5	3	8				2	4	6		+4	30	34	34	12	10	10	32	66	4														
S13	+	+	8	+			H18	+	+			H	7	7				5	5	10		+4,5	37,5	41,5	41	18	9	12	49	90	5														
S14	+	+	7	+			+14	H	H			H	4	4				4		4		H		19	19	19	9	9	7	25	44	3													
Information Technology in Education		Didactic Models of Teaching on the Bases of ICT		Essey+presentation devoted to Didactic Models of Teaching on the Bases of ICT(max10 points)		Methodology and Technology of Extended Education (Additional Qualification)		Satellite Technologies of Teaching (lecture)		A report on Application of Extended Education in Higher Education (max 10 points)		Methods and Technology of Creating a Multi-Media Complex		Network Educational Resources (lecture)		Presentation		Expertise of MMC		Total Amount of Points(max 10 points)		"Network Educational Resources"		Presentation		Report		Total Amount of Points(max 10 points)		Psychological and Physiological Aspects of ICT Application (lecture) (max 5 points)		Information Technologies in Science (lecture)		max 50 points		Presentation (max 20)		Report (max 15 points)		Test (max 15 points)		Total: max 50 points		Max 100 points	

Thus credit-module system of the academic process organization supported by the “Rating” system introduces innovations into the educational practice at SFU, implements elements of the Bologna system and makes the educational process transparent for all its members.

Problems and Prospects of Implementation of the Bologna System into the University Academic Process

To reach the anticipated benefit from the credit-module system we are to overcome the existing problems. Among the anticipated benefits there are:

- Increasing efficiency of education thanks to systematic control by means of rating current students’ progress;
- More differentiated students’ progress evaluation;
- Possibility of introducing differentiated fee for educational services;
- Support of academic mobility;
- Possibility of issuing diplomas of international standard.

We are ready to face the following problems:

- No coincidence between the existing state educational standards and absence of mechanisms, checking correspondence of the academic programs to the standards;
- Reform of the existing system of academic process administration;
- No coincidence between the existing norms and practical approach in filling in the educational documentation;
- The number of tests and examinations within one term is limited;
- The necessity to get accustomed to the new system, both for teachers and students.

We are interested in international partner higher educational institutions for cooperative work in the following areas:

- Training for teachers, cooperative lectures and workshops, held by teachers of the two universities.
- Cooperative seminars – discussions, presenting the two scientific schools by teachers of the two universities, workshops. Exchange programs devoted to studying quality assurance mechanisms and expertise.
- Student exchange for studying 1 or 2 modules, carrying out empirical research work (in sociology, quality assurance, administration).
- Workshops for students in different fields of study.
- Participation of students and teachers of partner higher educational institutions in launching Master degree program during educational games, holding training workshops, professional orientation (1st week of September).
- Intensive workshops for students (from both universities), cooperative pedagogical research work in comparative study of educational systems;
- Holding on-line conferences, forums for students and teachers, for presenting projects and cooperative discussions.

Perhaps someone will find our educational process boring and overloaded with formal documentation. This is not true. Every year we start a Master degree program with the game named “Professional Self-Identification”. This game is held outside the university and is headed by the team of teachers; it lasts 5 days, each of them includes intensive training, discussions and game activities. We possess and actively use the unique technology of holding organizational games which allow us to set and reach

educational objectives and goals of a large scale. These goals and objectives are connected with the self-determination, mastering the basic competencies, group work, problem of leadership, productive communication and critical thinking. We hold interdisciplinary workshops, consultations and discuss synopses of the students' future Master thesis. The 1st Module of the Master academic program starts after the organizational game which guides students toward the scientific work.

Beginning from this year we started to implement the **Reflexive Electronic Portfolio method** into the Game to extend the traditional method of assessment and storing of the qualitative data and this is the contribution to the method of individual progress assessment.

Students include into the electronic Portfolios their reflexive reports of the game activity, essays describing professional goals and competencies, personal principles, self-study of the educational style, and prospective career ambitions. Among the artifacts of the portfolio there are resumes, certificates, descriptions of individual progress and achievements which may help in finding a job and making a self-presentation to the prospective employers.

Thus our educational reform is not limited by the credit-rating system only. As it was stated in the work by the Rector of Higher School of Economics, State University Kuzminov Y.I. [4] "Credit frame is only the system which provides measurability and comparability of the results of education in the context of different types of qualifications, programs and educational environments, standard (accepted) tool to compare the programs. Credits by themselves have only one measurement – the working load, but in the Diploma appendix credits are added to the other information about the higher educational institution, the degree obtained by the graduate, its level, content, quality of the works completed by the graduate (in marks), etc.". We support this point of view and believe that in the temporary situation when the system of Russian education is undergoing the process of innovative changes it is necessary to develop qualitative methods of assessment and university brand.

Conclusions

The considerable part of our efforts we spend on extending the traditional system of student progress assessment. Beginning from the previous year elements of electronic portfolio were introduced into the academic programs for Master and Bachelor degrees in Education and Psychology. In this context the electronic portfolio is the reflexive, prolonged method of students' progress evaluation. Our University joined the experiment on reforming the system of higher education, oriented on the competency approach and knowledge society.

For realization of the new models it is necessary to fundamentally reform the existing system of education in Russia and its administration to integrate into the Bologna process.

The Siberian Federal University constructs a new system of professional training and retraining of high school teachers based on a multi-level foundation (Bachelor, Master and Doctor degrees) heading for international standards of quality in education and ECTS, taking into consideration specific needs of the region (deficit of the highly qualified top managers for mining industry, for example).

We are open for international partnership and launching joint Master programs in Psychology and Education together with the European universities and for joint educational and scientific projects.

References:

1. Organization for Economic Cooperation and Development, World Bank, 2002
2. Program for Development of Federal State Educational Institution of Higher Professional Education “Siberian Federal University” for 2008, Krasnoyarsk, RIO, 106 pp..
3. Glossary on the Bologna Process, <http://bologna.owwz.de>
4. Y.I. Kuzminov, L.L. Lubimov, M.V. Larionova, European Experience in Formation of the General Understanding of the Content of Qualifications and Degrees. Competency Approach, <http://www.rc.edu.ru>