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The university reform process has proceeded in a concrete way to the detailed preparation of the new legislation. The plans of the Ministry of Education and the Government on the new university system have received a clear direction during year 2007. The pressure for intensifying the co-operation between the Kajaani Polytechnic and the University of Oulu increased further. The principals of the units set a steering group for the task, and professor Jorma Rantanen was invited to act as the administrator for the task. The work has been in progress all through the rest of the year. The results of the intermediate report showed green light for the consortium-like solution. Professor Jorma Rantanen will be able to finish his task in the first part of year 2008.

The scientific work of the University of Oulu was evaluated by ten international evaluation groups from the top of different academic fields. All the evaluated units of the University Consortium received a fairly favourable evaluation. The research activities of the Measurements and Sensor Laboratory obtained the high mark of four. This mark further confirms the status of the Measurements and Sensor Laboratory as an international top unit. The intensive co-operation between the university consortia has confirmed their activities in the exploitation of the regional research and different regional programmes.

The financing of the University Consortium has been in order the whole year. The problem still is the high percentage of the external financing. For the Laboratory of Biotechnology and the Measurements and Sensor Laboratory, it exceeds heavily the limit of 90 per cent. With the decreasing volume of the regional funds of the European Union by year 2013, the current organisation will easily generate difficulties in financing. Making the personnel’s positions permanent should be done quickly. The delay in paying out the subsidies already created difficulties, but these were overcome. The funding required for the support of the Kainuu Innovation system should be obtained fast. Particularly, the Kainuu Joint Authority administration should act in order to make sure of the financing and of maintaining the high-quality university services in the region of Kainuu and in the Iisalmi District.

At the Department of Teacher Education, the profiling continues towards physical education and special pedagogy. The Laboratory of Biotechnology started new projects on both, food stuff industry and mining industry. Intensive co-operation with the University of Kuopio for obtaining a Master’s Degree programme continued. At the beginning of the new know-how centre programme, the Measurements and Sensor Laboratory participates heavily in the know-how cluster of wood industry. The international co-operation of both laboratories has increased. Also, the Department of Teacher Education has strengthened its contacts in Russia. The Post-Graduate education programmes were confirmed and the units participate actively in the education.

New openings have also been made towards the social service tasks, and the Kajaani Unit of Information Processing Science and the Unit of Sports Technology have made new contacts with the business world. The role of the Snowpolis has improved the preparedness for action of the units working in Sotkamo.

The Continuing Education of the Kajaani University Consortium started a Senior Academy training programme in Art and Culture, offering university level completing education for people who are over 50 years of age, in the field of art and culture. The education is carried out as contact and distance teaching; also the virtual network teaching has an important role.

Juhani Suortti
GENERAL ON THE OPERATIONS OF THE UNIVERSITY

The special fields of the Kajaani University Consortium of almost a thousand students and 270 staff, administered by the University of Oulu, are Education and research of Education, Biotechnology, Sport Technology, Measurement Technology, Information Processing Sciences, and Humanistic-Social Sciences.

The new strategy of top research at the Kajaani University Consortium is the Master and Doctor Schools close to the business world operating directly with the businesses. The professorships in Special Education, Physical Education and Sports Technology confirm the quality of research and teaching and will promote the re-generation skills and internationalisation of the top research.

In the Continuing Education, the complementing training for teaching and education were stressed, as well as equality questions, development of working life and work communities, open university teaching and co-operation with consortium universities, Kajaani Polytechnic and Kainuu Summer School.

The Kajaani Department of Teacher Education maintained its position as a popular place of study. Almost a thousand persons applied for a study place. The teaching of subject Special Education was intensified by re-organising the teaching and research positions of the Department. The operation of entrepreneurship education will be intensified. New development projects were started in the Information Processing Sciences in co-operation with the businesses of the region.

The Lönnrot Institute acted as the coordinator in Finland for a Deserve project. This project was mentioned as an example of a good project in the Regional Politics bulletin of the European Union. The Institute made the final evaluation of the project activities carried out in Oulu in 2000–2006 by the City, the University and the Polytechnic. The results of the Ilisalmi District Research and Innovation Manager operations were executed in the Project Innostuva ja Oppiva Itä-Suomi (Stimulated and Learning Eastern Finland) which developed business based university co-operation and innovation services.

The quantitative targets set for the Measurements and Sensor Laboratory were reached for the most part. As per the previous years, the activities were concentrated on the development and application in laboratory of optical spectroscopy, microwaves and SPR.

The Laboratory of Biotechnology intensified the research connected to food stuffs and milk as well as to mining industry. The Laboratory of Biotechnology was awarded the University Reward for laudable execution of social service tasks in the University of Oulu. Seven foreign scientists worked in the bio-sensor project.

The Department of Sports Technology established its operations at the Snowpolis when receiving its first professorship. The newest actor in the field is the Center for Wireless Communications (CWC).
EVENTS

Jan 4, 2007 Seminar ‘The Role of Remote Areas in the Field of Bio-energy – firewood or high-tech’ Eero Sipilä Auditorium, Lönrot Institute

Jan 31, Lecture and visit by Deputy Speaker of the Parliament, Sirkka-Liisa Anttila, Martti Hela Auditorium, Department of Teacher Education

Feb 6, Seminar of the Palma Project; discussion on the occupation and innovation services of Kainuu, Lönrot Institute

Feb 9, Signing of the co-operation contract of the City of Kajaani, the Municipality of Sotkamo and the University of Oulu

Feb 21, The 80th anniversary concert of the arrival of Martti Hela to Kajaani, Martti Hela Auditorium, Department of Teacher Education

Feb 27, Visit by Director, Mr Martti Pallari, Federation of Finnish Enterprises and planning of co-operation in entrepreneurship education, Department of Teacher Education

Feb 28, Certificate of Honour of the Regional Library to the students of Early Childhood Education for laudable promotion of Finnish culture, Dept. of Teacher Education

Apr 11, Visit by Arktiset aromit ry and Degree Commission of the Ministry of Education, Laboratory of Biotechnology

Apr 15 till 18, Excursion of the Bottom Rules Project for the Norwegian and Swedish colleagues, Lönrot Institute

Apr 18, Seminar ‘Possibilities of Regional Cultural Activities’, Cultural Industry Education, Department of Teacher Education

Apr 18, Diploma Conferment Ceremony

Apr 24, Culture Entrepreneurship Seminar, Senior Academy

Apr 27, Honorary title of Academician to the Director of the University Consortium, Professor Juhani Suortti (Russian Academy of Pedagogical and Social Sciences)

Apr 28, Newspaper Kajaanin kampus 10 years

May 11, Festivities of Floora Day, University Consortium, Akava-Kainuu and the Polytechnic

May 22, First meeting of the new Board of Directors of the University Consortium, Snowpolis

June 4, Visit by Paula Lehtomäki, Minister of the Environment, to the University laboratories, Measurements and Sensor Laboratory

June 11, Visit by MIKES (Measurement Technology Centre) to the Laboratory of Biotechnology

June 13, Visit by the Agriculture and Forestry Committee of the Parliament to the Laboratory of Biotechnology

June 25, Visit by Merja Kyllönen, MP to the University laboratories

July 5, Visit by the Committee for Education and Culture of the Parliament to the Kajaani University Consortium

Aug 6, Visit by Mauri Pekkarinen, Minister of Trade and Industry, to the University Consortium

Aug 14 till 22, ‘Learn to Know Matsu-take’ evenings, Vaala, Kajaani, Sotkamo and Kuhmo

Aug 22, Vesa Linnamo, Professor of Sports Biology, Department of Sport Technology (University of Jyväskylä), Snowpolis
Aug 22, Permanent Secretary, Risto Volanen and Aila Paloniemi, MP, visited and were introduced to the University Consortium.

Aug 24, Professor Jorma Rantanen was nominated the administrator on the university structure in Kajaani.

Aug 25, Meeting of the Board of Directors of the University of Jyväskylä in Snowpolis.

Aug 25 till 26, Start of the term of the university students of Kajaani in Rehjansaari island for the 10th time.

Aug 27, CWC in Kainuu – good quality research and versatile cooperation – introductory event, Snowpolis.

Sep 4, Opening of the University Consortium study year.

Sep 14, The first signing of the Osaava Pohjois-Suomi programme contract (Competent Northern Finland).

Sep 24 till 26, Chinese visitors from Hangzhou (Zhejiang University of Finance and Economics).

Sep 27, Services of Villages and Service Centres in Sweden, Skotland and Finland – Deserve Project, Lönrot Institute.

Oct 9 till 10, Two campuses – University event, campuses of the University Consortium and the Polytechnic.

Oct 11 till 13, Anniversary Seminar of the Vaasa Language Immersion in Vaasa, Department of Teacher Education.

Dec 12, Diploma conferment ceremony.

Dec 14, Complementing Education as Seen by the Teachers of Kainuu – Public defence of a doctoral dissertation, Eija Heikkinen, Martti Helä, Auditorium, Department of Teacher Education.

Nov 9 till 10, Opekatti Fair 2007 – Teaching Branch Fair, Sotkamo, Continuing Education and Oulu County Administrative Board.

Nov 9, Food Stuff Day, Kaukametsä, Kajaani, Laboratory of Biotechnology.

Nov 10, Opekatti Fair 2007 – Teaching Branch Fair, Sotkamo, Continuing Education and Oulu County Administrative Board.

Nov 30, Chief Director of Ministry of Education, Sakari Karjalainen visited the University Consortium.

Dec 12, Biosensors and Applications Seminar, Laboratory of Biotechnology.

Dec 14, Visit by Svetlana Bondyreva, Headmistress (Moscow Psychological-Social Institute).
The new subjects of study at the Laboratory of Biotechnology were the effect of berry juice fractions on the growth of bacteria, electro-chemical biosensors, and the suitability of nano-composite materials for biosensors. The research teams of the Measurements and Sensor Laboratory continued their operations at six fields of applications: paper and pulp, mechanical wood, wireless instrumentation, environmental technology, and sports technology; in addition to these, a photonics team, mainly concentrating in the processing of images, worked in this unit. The environmental and sports measurements are still at their early stages, but very vigorously gaining strength. The research of the wireless instrumentation landed into a state of insecurity, since the operations of the VTT (The Technical Research Centre of Finland) in Kajaani were reduced. In the autumn, the sports technology team moved to Snowpolis in Vuokatti, to their application field.

The Measurements and Sensor Laboratory housed 20 research projects in total: ESF/ERDF basic funding type project, know-how centre project, six Measurepolis projects, and 12 projects of TEKES (Technological Development Centre). It has been possible to use the subsidies from the City of Kajaani as the self-financing part in the joint financing projects as well as basic funding, without which, MILA (Measurements and Sensor Laboratory) would not be able to cope. The Municipality of Sotkamo has funded the research operations of sports technology. The research subjects of Department of Information Processing Science are software business and organisation processes. The software business research concentrates on creating new business from a regional point of view and on productising, sales and marketing of software. Taking the usability of the products into consideration is seen as a part of high quality product development. The usability laboratory of the Kajaani Department, built in the CreaTol Project, concentrates on the research and analysis of the usability planning processes of information technological applications and of product versions. The process laboratory, CreaProc, concentrates on the research and analysis of the organisatoric processes.

The combining of the separate internationally important research projects of the Kajaani Department of Teacher Education into a Kajaani Research Consortium of Experience, Learning and Cultural Development started well. The Department has participated in the execution of the multi-discipline doctoral education of the Consortium. This research has been funded by the Academy of Finland and TEKES (The Technical Research Centre of Finland), among others.

The areas stressed in the operations of the Lönrot Institute were regional development, countryside, bio-energy, Russia and areas close to the frontier. The Institute carried out local, national and international research, evaluation and development projects. The research on the working life skills and training needs of the immigrants in Kainuu was completed.

**Master's and Graduate Engineer's Degree in Kajaani**

Those departments which offer degree studies at the Kajaani University Consortium form a part of the faculties in their fields: the training programme of sports technology is a part of the Faculty of Sport and Health Sciences of the University of Jyväskylä, the Department of Teacher Education a part of the Faculty of Education of the University of Oulu, and the Department of Information Processing Science in Kajaani a part of the Faculty of Science in Oulu.

At the Kajaani University Consortium, you can take the degree of Master of Education or Master of Philosophy in the basic education: the qualification of a primary school teacher, early childhood education (nursery school teacher), subject teacher in physical education, Swedish for immersion course and subject teacher, and subject teacher in mathematics. Also, as conversion training, Master’s Degree in art education (Virt@) and cultural industry are available.

In the Information Processing Science, you can take the Degree of Master of Philosophy in software production or software business. In addition to these, the University Consortium also offers the Degree of Graduate Engineer in Electrical Engineering (DIKO) at the Measurements and Sensor Laboratory, and conversion training under the guidance of the University of Jyväskylä in Sport Technology in Vuokatti.

In the conversion training of Degree education for Graduate Engineer at the Department of Electronics at the Measurements and Sensor Laboratory, there began a short pause in the middle of the year. The previous project was completed, but a new MIDI Project has been planned in good atmosphere with the Department of Electronics. The conversion training was participated by 13 students; two of them completed the degree of Graduate Engineer. The teaching job of the professor and assistant of the Department of Electronics situated at the Laboratory continued without pauses in the tutoring of the thesis students, mainly in the team of photonics.

The first special needs nursery school teachers graduated in Kajaani in co-operation with the Department of Special Education of the University of Jyväskylä, and the new class teachers specialising as special education teachers were selected for further education. Continuing Education co-ordinated the complementing training in the field of teaching regionally.

**The Master's Degree in Cultural Industry Was Finished – Most of Those Who started the studies also Graduated**

The Master’s Degree programme in Cultural Industry began in the Department of Teacher Education in Kajaani on Jan 10, 2005 and finished on Dec 21, 2007. The project obtained its target. The training was divided into two main directions: 1. Cultural Pedagogical orientation (University of Oulu) and 2. Cultural Industry orientation (University of Lapland). Most of the 21 students graduated by the end of year 2007. All the students had good basic training in the field and many years of working experience in the fields of art, culture and teaching. Many of them have worked in their fields in their own enterprises.

As per the project plan, the participants participated in the development of art and culture in Kainuu and Eastern Finland, in the development of production organisations and co-operation systems, creating co-operation projects, promotion of art and culture co-operation between regions, and development of international cultural co-operation.
Open University
In Kainuu and the District of Isalmi, the Open University executes the operations of open university of the University of Oulu and the university studies of the Department of Teacher Education in Kajaani. Subjects of Education and Humanistics are still the most popular, but studies from other faculties were also offered, for instance, new ones, such as handicraft/textile art and interior decoration of the Department of Architecture. The route studies of Nursing Science were started. The students of the Open University came mainly from the region of Kainuu. All together, there were 581 students in the Open University. The rationalising of the operations at the Oulu University and developing of co-operation with the University Consortium partnership universities continued in year 2007.

Senior Academy
The education and development operations of the Senior Academy of Art and Culture began on Jan 1, 2007. Based on the co-operation contract between the University Consortium Department of Continuing Education and the Municipality of Ristijärvi, the university courses and lectures included in the Senior Academy of Art and Culture (2006–2007). In addition to this, a project, funded by ESF, Senior Academy of Art and Culture Promoting Employment and Wellbeing was carried out.

Doctoral Studies at the Kajaani Campus
The need for scientific post graduate training has been recognised in Kajaani as early as in the 1990’s. This has been carried out at the Department of Teacher Education for several years. Regional post graduate education was started in the development strategy of the Kajaani University units at the beginning of 2002.

The operation continues as regional multi-discipline doctor "hatchery", organised by the Department of Continuing Education, with the purpose of activating and recruiting those who are in the working life, but are interested in scientific further studies in the area of Kainuu and the District of Isalmi, and organising different kinds of coaching and support services for further study with the aim of a doctor’s degree. For those interested in doctoral studies, coaching, training and guidance services are organised, and for the students who have progressed further in their studies, supporting and complementing courses.

For the students at the final stages of their doctoral dissertation, mentoring is organised to help them complete the dissertation. There are normally about a hundred of those interested in the doctoral studies, and about 20–30 who do their studies more actively.
The professorships in Special Education and Physical Education confirm the quality of research and teaching and will promote the regeneration skills and internationalisation of top research at the University Consortium and in the Faculty.

The Kajaani Department of Teacher Education maintained its position as a popular place of study. Almost a thousand persons applied for a study place in the Department. The subject teaching in the Special Education was confirmed by re-organising the teaching and research positions in the Department. The operations of entrepreneur education became more solid. In the information processing sciences, the Department of Teacher Education has intensified its cooperation with the Department of Information Processing Sciences in Kajaani.

International activities were extended to the United States, China and Japan. Cooperation with the Russian Academy of Pedagogical and Social Sciences became stronger.

The operations of the Kajaani Training School rest on the research and development of the University. As a network-building learning and training school centre, the school co-operates with the field schools in developing the working life skills.
Laboratory of Biotechnology

The activity of the Laboratory of Biotechnology was concentrated on the following sectors: research on food stuffs and milk biotechnology including the research of wild berries and other biopulps of the northern nature, bioanalytics and connected development of biomeasurement methods and biosensors, technology transfer, boosting of innovation and business operations, and application of bioanalytics and biotechnology for the needs of mining industry. Co-operation with the University of Kuopio continued intensively in the fields of training and project partnerships. The planning of the Master’s education in food stuff biotechnology (Bologna, lasts 2 years) has been executed and the education should start in autumn 2008, when 20 students will be admitted.

The distribution of food stuff know-how has continued under the project Elosa kainuualaiseen elintarvikealan yrittäjyyteen 2007 (Life for the Food Stuff Business of Kainuu 2007) in which 20 companies are co-operating. Also, training with “Learn to Know Matsutake” has been organised as evenings in different parts of Kainuu (more than 300 participants). In co-operation with other actors, Locally Produced Food Fair and “March to the Market” food stuff day in Kajaani.

The Laboratory of Biotechnology participates in the national know-how centre of measurement technology, in the Measurpolis programme as an actor as well as in the steering group; the laboratory runs an international project on human-physiological bio-measurements. The domestic partners in the project are the Measurements and Sensor Laboratory and Technical Research Centre of Finland in Tampere. In the project “Optimising the Effectivity of the Photosynthesisreaction in Relation to the Quality and Quantity of Light” optimised the photosynthesis of cucumber by adjusting the quantity and quality of light and other factors. It was possible to modify the growth to a more favourable direction. In another TEKES (Technology Development Centre) project the research know-how on mining industry was strengthened. The project exploited the flow-cytometer as an analysis technique connected to mining industry by developing a quick determining method for bacteria. The Flavour Design project aims at strengthening and modifying the taste of berries through an enzymatic treatment; the project is done in co-operation with the Technical Research Centre of Finland, the University of Turku, and the MTT Agrifood Research Finland. The favourable effect of milk protein, BLG, in the absorption of calcium was studied.

The Laboratory carried out several business-based paid studies connected to product development of food stuff industry. Attempts have been made to fit the projects and the operations of the Laboratory into the Snowpolis concept and to support it. The Department has participated actively in the regional research and development projects.

New methods of analysis have been established in the Laboratory in order to improve the research and service capabilities in the plant and berry side (eg. Flavonoids and antocyanins). The capillary electroforesis appliance is tested for protein samples, plant samples, berry samples and mining samples as well as for ion analytics.
In year 2007, the operations of the Measurements and Sensor Laboratory (MILA) was heavily characterised by the change of the programme periods. The new six-year structural fund period of the EU started. However, the funding decisions were not obtained during the whole year; the first decisions seemed to drag late into year 2008.

A docent and professor team is being put together; this team gathers the docents working outside the Laboratory, both in the basic technology of optics and in the main application field, the wood industry. Also, a good basis was created for the obtaining of docents in environmental measurements and in metrology. Active publishing is expected of the docents as well as of the growing group of our own doctors to prove the scientific quality of the MILA.

A new know-how centre programme was started; MILA participates in the wood industry know-how cluster as a part of the Kajaani know-how centre and in the environment technology cluster through the know-how centre of Oulu. Also, a new Measurepolis programme started, and in that, MILA had six projects. MILA continued its established operations in the Opto-electronics and Measurements research group of Infotech Oulu. The members of the Eastern Arc (Idänkaari) partnership from the Universities of Oulu, Joensuu and Kuopio as well as VTT (Technical Research Centre of Finland) invested specially in preparing joint research projects. Co-operation with the Laboratory of Biotechnology has been almost daily, particularly in the research of the SPR technology.

The regional and other social efficacy of MILA is channelled through businesses. In each project, several businesses have participated – together with MILA – to produce and exploit the know-how in the measurement technology.
Continuing Education

In the Continuing Education, the completing education in teaching, education, and equality questions of working life and training were emphasised, as well as open university teaching. The forms of training are professional specialising studies, qualification studies, degree studies, completing and chartered training, as well as Studia Generalia lecture series, thematic seminars, and public lectures.

The Continuing Education co-ordinates the completing education in the field of teaching regionally. As a result of this co-ordination, Opekatti Fair, a fair in the field of teaching was organised in co-operation with the Culture Department of the Oulu County Administrative Board and the municipalities of Kainuu.

The project of Moninainen Woima 2006–2008 (ESF) was started on the basis of the recommended actions of the WomenIT. Consulting and regional training sessions on Equal and ESF projects continued in year 2007, financed by the Ministry of Labour. On the order of the Ministry of Social Affairs and Health the project ‘Equality Planning as a Practise’ (2007–2008) was begun in the Target 3 area.

The development of the working life and work communities continued in several projects, such as in the Hyvien työyhteisöjen Kainuu (Kainuu of Good Working Communities) by the Joint Authority of Kainuu, a Workplace Development Programme project.

The operations of the Kainuu Regional University was developed together with the Kajaani Polytechnic and the Kainuu Summer University.

Altogether 72 completing training courses were organised in 2007, of which 39 were long and 33 short. 297 training days took place. 1939 participants came to the training courses, and 2066 hours of teaching were given. Similar to the earlier years, the long training courses as well as co-operation with other training institutions were stressed in the operations of the Continuing Education.

Department of Information Processing Science, Kajaani Unit

The Department of Information Processing Science, Kajaani Unit offers a comfortable and modern study atmosphere in a small unit with the advantages of teaching from a large parent department. By means of modern teaching technologies, it is ensured that the skills of the whole faculty of TOL are distributed to the students. The students choose the orientation of either software production or software business in their studies.

By the end of year 2007, 10 students have graduated as Master of Philosophy. The Kajaani Unit co-operates with the local businesses in studies as well as in projects. In the CreaTol Project, completed on Sep 31, 2007, a learning environment and usability laboratory based on project learning and entrepreneur-like way of action was built.

The project studies the creation of new business ventures, marketing and productisation. At the end of the year, also the CreaUse Project was completed; during this project, five training periods were organised for the ICT companies of the Kainuu region. The project exploited the CreaTol facilities in testing a company product. Eight companies from the region participated in the project. In the first six months of the year, the CreaGame Project generated a pilot report on game engine technologies.

In the CreaProc Project, started in 2006, process research is done for different companies and organisations and process research methods and technologies are developed. Continuation projects for these will be prepared during year 2008. The CreaTol Research Programme was created of the research projects of the Department of Information Processing Science, Kajaani Unit (TOL).
In year 2007, the Lönnrot Institute executed several single project evaluations as well as larger programme and thematic evaluations, such as the final evaluations of City, University and Polytechnic project activities carried out in Oulu 2000–2006, and Target 2 of Southern Karelia. In the field of regional research, for instance, the working life skills and training needs of the immigrants in Kainuu were studied, research was done on the strengthening of trade skills in the municipalities of Paltamo and Vaala, the anticipating study on the development needs of education and research in Kainuu, and the research on services in remote rural areas (PALMA) was continued.

The regional Kylässä (In the Village) project was ended. The project produced village plans for the areas of 100 villages in Kainuu. The Deserve project ended in the autumn, in the international final seminar, with the theme of services and service centres of villages. The Kainuun Tulipasili project promoting wood energy continued. The Institute drafted a theme programme for bioenergy for the years 2008–2010 and a theme project on bioenergy co-ordinating the programme started.

In the field of cultural history, field work was done on the Viena Karelian village cemeteries and a publication on the subject was being written. Also, the Institute participated in the Vienan reitti (Viena Route) project (From Kainuu to Viena Karelia – pilot study on culture and nature tourism) in co-operation with the Joint Authority of Kainuu, the Museum of Kainuu, the Kainuu Environment Centre and the Russian parties. Among other things, for negotiations and field study, the project visited Kostomuksha, Voknavolok, and the Kamennaja Ozerka village in August 2007.

**Sport Technology Education**

The conversion training of Sport Technology of the University of Jyväskylä admitted students in three different admissions in years 2004–2005, 55 students all together. The students admitted have had a degree or an almost completed university or polytechnic degree in a field of technology and information technology considered suitable for the conversion training. The contents of the conversion training itself are based on the subjects of the Department of Sport Biology of University of Jyväskylä. The first master’s degree project ended in autumn 2007; by then almost ten students graduated. The target is to continue the training by a new, similar project. Also post graduate training has been on-going in Vuokatti for several years now, having started in 2005. The aim is that the first doctors would graduate in 2010. The subjects of the five dissertation projects on-going at the moment are skiing, ski-jumping, physical stress of a soldier, and factors affecting the balance control of aged persons. The post graduate programme brings important research in the field to the Snowpolis area in Vuokatti, and acts as a backbone for the high-quality international research activities in the development of sport technology in Vuokatti.

By these means, we believe that we can reach the targets set for the programme, which are attempting to 1) produce professionally skilled sport technology in the Region of Kainuu and in the County of Oulu, 2) develop business-based sport technological research in the Snowpolis environment, and 3) create steady international research activities in the area.

**Lönnrot Institute**

The Institute participated in the operations of the Northern LTSER-platform research network, in the steering group of the Oulu-Kajaani development zone, and acted as the chair for the operating line of Developing know-how in the zone.

The Institute participated in the Vienan reitti (Viena Route) project (From Kainuu to Viena Karelia – pilot study on culture and nature tourism) in co-operation with the Joint Authority of Kainuu, the Museum of Kainuu, the Kainuu Environment Centre and the Russian parties. Among other things, for negotiations and field study, the project visited Kostomuksha, Voknavolok, and the Kamennaja Ozerka village in August 2007.
Space planning and co-operation with the Polytechnic continued further at the Kajaani University Consortium Library. Thanks to the flexibility of the personnel and partial substitution arrangements, the Library could keep normal opening hours and the teaching of information gathering was organised in the normal way, although the Library has suffered almost for a year of a shortage of personnel.

113 hours of teaching in information gathering was offered to 575 students and 317 information retrievals were performed. The quantity of local loans was 17801. 131 inter-library loans were received (in addition to this, the common loan books), and 286 inter-library loans were given to other libraries. 747 books were purchased (440 of these were bought); in addition to this, 108 new volumes were listed at the MILA and TOL reference libraries. 115 annual volumes of printed magazines were subscribed, and 26 free annual volumes were received. 253 annual volumes were removed from the storage.

The space group appointed by the Rector started to plan the arrangement of library and archive rooms at the Kajaani University Consortium.

The teaching of information gathering and work possibilities of the customers are improved by ADP-class obtained to the reference library – class room in September.

Pilot period of common loan giving between the Kajaani University Consortium Library and the Kajaani Polytechnic Library continues.

In the District of Iisalmi, one intermediate stopping point of the operations of the joint Research and Innovation Manager of the Kajaani University Consortium universities was reached by the end of the year, when the project Innostuva ja Oppiva Itä-Suomi (Inspiring and Learning Eastern Finland) (INNO-STU), financing the operations, ended. The starting point of the INNO-STU project, funded by the County Board of Eastern Finland and the European Social Fund, was to develop the availability of innovation and university services in an area with no university of its own. The areas have a lot of innovation potential, but the activity in innovations is low; therefore, activation of the innovation operations is needed from the public side, too. Most of the small and mid-sized companies cannot use the innovation resources offered by the development companies, municipalities, and universities, or they do not have the resources to process their innovation templates further. In co-operation with the Ylä-Savon Kehitys Oy (Development company of the Iisalmi District), the Research and Innovation Manager has tried to activate the companies in the innovation operations by circulating in the companies and offering them the support of the university network and innovation services of the area in their innovation processes.

In the final seminar of the INNO-STU Project in Kuopio, on Dec 11, 2007, results of the years 2006 and 2007 were presented. The results tell us that the operation is developing to the right direction. Also, new service models were developed for the operation of the Research and Innovation Manager and the innovation services for the companies of the university network were improved. During the project, 162 innovation templates were found, 89 realisability studies were made, and 39 Development and Research projects were started, which resulted in 15 new innovations (2 for export). At the end of the project, the Research and Innovation Manager operations are continued normally and the new operating methods and productised services are put into use in intensifying the regional university and innovation services.
The programmes and instructions of the Human Resources Administration of the University of Oulu are adhered to at the Kajaani University Consortium. Development discussions were performed with the personnel by departments. The use of the state salary system became established. The office structure of the teaching and research personnel is considered on the basis of the decision taken by the University Board of Directors.

About 230 person years were worked at the University Consortium. 269 persons were employed for services or employments of different lengths. The filling of the post of professor in Physical Education was postponed to the current year. The filling of the post of professor in Special Education, position in Kajaani, progressed, but the decisions were left to year 2008. It was proposed that the Research Manager’s post at the Laboratory of Biotechnology be transformed into a professorship. A professor in the Sport Biology for the education of Sport Technology, given under the University of Jyväskylä, was nominated for the period of Sep 1, 2007 till June 30, 2012. In the operations of the University Consortium, there were 10 professorships all together.

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### RESOURCES

#### Personnel

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The quantity of the fixed-time employments (68%) at the University Consortium is still excessive and the payment is based on
the complementing funding (53 %). Due to the delay in the funding decisions of the EU Programmes, the employment periods of the personnel have been regrettably short. Changes caused by the starting of the productivity programme and the service centre are anticipated by training and supervision of work, also three person years are directed for the well being at work of the personnel. A recreational day has been spent in the form of hiking once a term, and different kinds of festivities and other events have been organised for the personnel as well as for the students. More subsidies for the work place exercise have been obtained from the University than before. The well-being at work and crises plan of the University Consortium was started.

63 % of the personnel have a master’s degree, and 14 % have a doctor’s degree.
The total financing of the Kajaani University Consortium reached 17 M€. The total financing increased by four per cent from the previous year. The part of the complementing funding was 51.8% and that of the budget funding 48.2% of the total financing. About 7.6 M€ of income based funding was included in the complementing funding, and about 1.1 M€ of separate funding obtained as allocations, taking transferred allocations into consideration. In the whole University of Oulu, the share of the complementing funding was 32.2% and that of the budget funding 67.8% of the total financing. The share of the University Consortium of the complementing funding of the University of Oulu was 14.3%. The share received by the University Consortium of the funding obtained by the University of Oulu from the funding of the administrative field from the Ministry of Education (budget and separate funding) has been as low as 5.2%.

The University of Oulu and the City of Kajaani closed a five-year contract (2007–2012) on the funding of the Measurements and Sensor Laboratory and Information Processing Sciences, and the University of Oulu and the Municipality of Sotkamo on the funding of the Laboratory of Biotechnology. The contracts bring stability to the operations.

The income structure rests heavily on operations with joint financing, since 88% of the income is formed by joint financing. The share of the paid services is 10% and the other profits are 2% of the income. The largest part of the complementing funding came from different institutes of the state, for instance TEKES (Finnish Funding Agency for Technology and Innovation), different ministries and Employment and Economic Development Centre as well as from the municipalities and federations of municipalities as EU funding and its municipal shares. It was encouraging that the Academy of Finland granted funding for the University Consortium.

### Use of the development allocations of the University Consortium in total in year 2007

<table>
<thead>
<tr>
<th>Available €</th>
<th>Used in 2007 €</th>
<th>Transferred to 2008 €</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alloc. 2005</td>
<td>89.475.35</td>
<td>89.475.35</td>
</tr>
<tr>
<td>Alloc. 2006</td>
<td>1.950.448.81</td>
<td>1.560.438.85</td>
</tr>
<tr>
<td>Alloc. 2007</td>
<td>500.000.00</td>
<td>278.179.46</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>784.520.16</strong></td>
<td><strong>523.698.66</strong></td>
</tr>
</tbody>
</table>
The Sport Technology education of the University of Jyväskylä acted on the basis of the separate decisions of the Ministry of Education on complementing funding of 0.4 M€. Accrued income was a bit below 1.8 M€ mainly from the EU funded projects, i.e. about 23 % of the total income. However, the amount of the accrued income has decreased by 0.9 M€ from the previous year. The EU funded projects have mainly ended during year 2007, but some of them have been extended to year 2008. The funding decisions of the new programme period were not obtained during year 2007. The expenditure of the University Consortium was about 15.7 M€.

When considered by forms of funding, 52 % of the costs are directed to the budget funding and allocations obtained through separate decisions, 29 % to the funding between accounting offices, 14 % to the joint funding, and about 5 % to the paid operations. In the cost structure, personnel costs are stressed; they form 67 % of the total costs, travel costs 4 %, purchased services 7 %, and rents 11 %. The expenditure of the University Consortium (UO) formed about 7.7 % of the total expenditure of the University of Oulu (VAT excluded). The quantity of the costs has remained around 15.5 % for four years already. Allocations have been saved and preparations made for decreasing of the EU funding and for delays in their payment. In the average, 9.2 % of the budget funding was transferred to the following year.

When considered by departments, complementing funding was used for financing the Measurements and Sensor Laboratory (dept. of Electrical Engineering) 95.2 %, Laboratory of Biotechnology 90.0 %, Lonnrot Institute 83.2 %, and Continuing Education 80.9 %. The following departments rest on budget funding: Teacher Training School 99.3 %, Library 96.7 %, common operations of the University Consortium 82.2 %, and Department of Teacher Education 86.9 %.

When calculated in euros, the Measurements and Sensor Laboratory (dept. of Electrical Engineering) is the largest department of the University Consortium with its 4.3 M€, the second is the Department of Teacher Education with its total funding of 3.9 M€ and the third the Teacher Training School with its 2.2 M€.
On the basis of the study on the facilities completed at the end of year 2006, a new workgroup appointed by the director started its work in order to organise the library and archive facilities. The basic renovation of the library is planned for years 2009–2010. The campus area facilities of the University are administered by Senaatti-kiinteistöt real estate office, the real estate management is taken care of by ISS, and the cleaning by SOL. The campus area offers 13 359 m² scattered in ten different buildings, which makes them impractical and lowers the utilisation rates. The target is to make the use of the facilities more intense. At the Kajaani Teknologiakeskus, the Measurements and Sensor Laboratory has rented facilities of 2 881 m². TOL Kajaani rents 1 606 m² from the City of Kajaani. At the Kajaanihall Sports Hall, the University Consortium has 1 038 m² of sports facilities available. The Laboratory of Biotechnology rents 637 m² of the old Valio facilities. The need of the Laboratory to have proper and up-to-date facilities has been presented to the University. In the Snowpolis facilities in Vuokatti, the Master's Degree education of the University of Jyväskylä and the Sports Technology group of the Measurements and Sensor Laboratory are housed.

The costs of the facilities in total are about 1.7 M€.
The Kajaani University Consortium renewed the earlier Erasmus contracts with the Hungarian Nyíregyházi Főiskola (Nyíregyháza University), with the Lithuanian Vilniaus pedagoginis universitetas (Vilna Pedagogical University) and with the Swedish University of Lund. The new Erasmus partners were the German Westsächsische hochschule Zwickau and Italian Università di Roma Tor Vergata.

The Erasmus exchange is based on the exchange of students and teachers as well as other personnel between the universities. Teacher visits last for about 1 to 2 weeks, and student exchange about 4 to 12 months.

Contracts connected to the exchange of students and personnel were closed with the Chinese University of Zhejiang (Zhejiang University of Finance and Economics) and the Russian Moscow Psychological-Social Institute.

In biosensor research, international co-operation is done with the British Cranfield University, the Italian Università Tor Vergata and Università degli Studi di Firenze as well as the Danish Technology Institutten and the Romanian University of Bucharest.

The international activities of the Department of Sport Technology occur through the University of Jyväskylä.

The rural research and development projects (Deserve, Palma) had international partners in Sweden, Iceland, Norway, and Scotland. The Palma project participated in three international networks (Q-Cities, Living Labs, Neibor).

In the fields of culture and history, the international partners were in England, Latvia, and Russia. In evaluation research, we participated in two international evaluation research projects, the advance evaluation of the EU member states’ countryside programmes 2007–2013, and European Evaluation Network for the development of countryside in years 2007–2013.

Teki ja kara Anu Alsta

AISTIKASTA ABIPÄIVÄÄ


Kemia:
+ löytyi helposti, keskeisellä paikalla keskustelussa
+ vertailen paras karkkivalikoima!
+ kemian liittyvä rekvisiti, kuten labaramat, varmasti vetoavat aiheesta kinnostuneisiin
- pöydän takana hiljaista porukka
- kukaan aibeista ei innostunut tekemään vedenpuhdistusasteissa värkäillään

Ympäristötekniikka:
+ löytyi helposti keskustelusta
+ alain palkkauks- ja sijoittamistaulukko esillä
+ pulmatehtavan kimpussa innokkaita aibeja
- karkkiva keveästi tavoitteessa prosessitekniikan pudekka (vytteinen stånd)
- esitteiden jakajat epäaktiivisia: jattelevat keskemään ja tutuilleen

Kajaanin opettajakoulutus:
+ varikkaita askeleita juisteita
+ vertailun äänekkään porukka, otti hyvin kontaktia yleisöön
+ jossa herkullisen vihreän laka, kynä, Kajaanin karttoja
+ omistut maaparustoivalinta: akustinen orkesteri & laulua (by Nekavat)
+ mahdollisuus harrastaa minigolfia
- syrjässä
The number of international scientific publications increased further in year 2007. The researchers and teaching staff of the Kajaani University Consortium produced more international publications than before. In year 2007, there were 209 publications in total, of which 75 were published abroad or in international scientific publications, and 17 were other international publications.

18 Finnish scientific publications were published and 99 other Finnish publications. The number of publications has increased from previous years, as in year 2004, the total number of publications was 110, in 2005 140 and in 2006, 170. From the starting year of the University Consortium, the number of international publications has increased by 50 publications and the Finnish ones by almost fifty.
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Professor Timo Mäkikallio, UO, Faculty of Medicine
Professor Risto Myllylä, UO, Faculty of Technology, Dept. Electronics and Information Processing
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Faculty of Science and Environment
Vice-rector Jukka Mäkelä, University of Lapland
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Joint Authority of Kainuu
Director of Education Risto Brunou, City of Kajaani
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- Jouko Käsmä
- Ari Heiskanen
- Juha Kalliokoski
- Vesa Linnamo
- Jouni Ponnikas
- Arja Poranen
- Vesa Virtanen

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- Professor, Director, chair person of the Board of Directors, KYK (Kajaani University Consortium)
- Development Manager (dept.), KYK
- Professor, Department Head, TOL (Dept. of Information Processing Science)
- Research Director, Department Head, MILA (Measurements and Sensor Laboratory)
- Professor, Department Head, LT (Sport Technology)
- Senior Researcher, Department Head, LI
- Planner, Department Head, AIKO (Continuing Education)
- Research Director, Department Head, BIO (Laboratory of Biotechnology)

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- Juha Vartiainen

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- Development Manager, information administration
- Development Manager (dept.), planning, development, co-ordination
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