# Bridging the Gap - Taking the Distance out of e-Learning

**Peter Karlsudd and Yael Tågerud**
**University of Kalmar, Sweden**
peter.karlsudd@hik.se

**Abstract:** In order to promote closer relations between two existing academic environments – on-campus and distance learning – a pedagogical intervention was made aiming to raise the level of competence and awareness among faculty regarding flexible learning and the use of ICT in higher education. The intervention was a process-oriented pedagogical effort based on collaborative learning and cross-institutional cooperation. Teacher teams worked to enhance flexible learning in either new or existing courses. The intervention resulted in more teachers getting involved in flexible learning. At the same time several problems surfaced indicating the need for further competence development efforts in order to further promote flexible learning environments.

**Keywords**: distance learning, flexible learning, higher education, ICT, information and communication technology, pedagogical development

## 1. Introduction

The University of Kalmar (HiK) provides on-campus education but it also has a long tradition of distance education. These two learning environments are often separate, engaging different educators. As responsible for the pedagogical competence development activities for faculty members at HiK, we have reflected on this distinction and noted the differences between the two teaching and learning environments. The teachers involved in distance education form a minority part of the teaching staff but they are very active in overarching discussions concerning pedagogical development, especially cooperation between new technology and pedagogy. Distance teachers are often described as real enthusiasts. This group established early a tradition of meeting spontaneously and building networks in a way that has been less common within the group that chiefly works on campus. There are probably a number of explanations for this distinction, for instance, that an interest in new technology and innovation is a unifying factor. Another possible explanation is that these teachers do not receive enough support from their departments in their role as distance educators seeking, therefore, support from each other instead.

On-campus pedagogical development has been characterized more by formal than informal structures and is less open to exchanging experiences between teachers and departments. In observing this distinction we have also been able to confirm that the differences between distance and on-campus education are becoming fewer and that a common ground is being found in what is generally known as *flexible learning/flexible education*. The status of distance learning within the University of Kalmar (HiK) has shifted in recent years and along with the awareness regarding flexible learning in general, the university's leadership has articulated a vision stating the importance of flexible learning as a strategic issue. In one of the university's general policy documents it is stated that HiK's educational programs are to be characterized by flexible learning. This statement provides a rhetorical base and a mandate for various efforts geared to strengthening the notion of flexible learning within the university. In June 2004 a flexible learning project was launched at the University of Kalmar (hence referred to as the FL-project). Within this project a university pedagogical course, *Flexible learning within higher education* (equivalent of 7.5 ECTS credits) was started. This course and other activities included in the FL-project should be regarded as a step in the strategic pedagogical development within the University of Kalmar.

## 2. Education in transformation

University education in both Europe and the USA has for a couple of decades been in focus for revision and transformation. Several western researchers have described this development as "mass education" (Hargreaves, 1994; Trowler, 1998). More and more students are supposed to be educated within higher education by means of fewer and fewer resources. Educating 50% of those who leave secondary school has been a long-standing goal of Swedish universities. At the same time the auditors of the Swedish Parliament have shown that the number of students who leave university without completed results has increased (Riksdagens revisorer, 2000/01:4). One way of supporting and improving the rate of completed study result may be found within the transformation of teaching and learning commonly referred to as flexible learning, i.e. developing courses with the help of flexible learning methods and the support of ICT (information and communication technology) in order to find solutions that facilitate and reinforce student learning.
Education is today a decisive contributor to Sweden's welfare and competitive strength (SOU, 1996:27). Many people are convinced that ICT will play an increasingly important role for education in the future, when


Reference this paper as:
Karlsudd, P. and Tågerud, Y. "Bridging the Gap - Taking the Distance out of e-Learning." *The Electronic Journal of e-Learning* Volume 6 Issue 1, pp. 43 - 52, available online at www.ejel.org

traditional teaching methods will be replaced by new ones. The information society necessitates new learning strategies, and developments in information technology will probably erase the border between teaching aids and other more common information sources such as the worldwide computer network (Marklund, 1994). The development leads to educators having, to a much greater extent, to reflect on and analyze their practice in order to enable them in the next stage to further develop their work in accordance with new demands and new conditions (Silén, 1996; Dolmans, 1996). In "new learning" the pedagogue will proceed from an intermediary to a more advisory function. The new task means facilitating for students to learn how to screen, arrange and critically relate to the enormous information flow that will be available with the new technology (Höglund & Karlsson, 1998; Jacobsen, 1997). An important factor for the quality of education is that the faculty work team shares a common attitude to learning; to educational goals and to the surrounding community. But it is also important that those teachers have a good knowledge of the possibilities inherent in ICT as a support for learning.

## 3. Development work in higher education

Sweden has a long tradition of higher education in a variety of forms, and this sector has undergone several reforms involving continuous development work (Bron & Wilhelmson, 2004). During the last decade the Council for the Renewal of Higher Education[1] has supported projects aiming at stimulating pedagogical development at Swedish universities. However, no clear definition and explanation of what is meant by pedagogical development has been provided by the Ministry of Education, Research and Culture or by the Swedish National Agency for Higher Education. Instead it has been the concern of each university to set its own targets and work modes in this field.

### 3.1 Pedagogical development work at the University of Kalmar

The University of Kalmar (HiK) had in 2006 over 400 active teachers organized in eight departments. Some of those departments started to offer part-time, distance, or web-based courses within the regular curriculum as early as the mid-1990s. These initiatives were the result of the interest and commitment of a handful of teachers since at the time this was not a strategic issue for the university. However, only a relatively small number of teachers gained experience of teaching distance courses and not many made the effort of trying to apply flexible learning to on-campus courses. This is why it was considered important that a strategic policy for flexible learning should include support for teaching staff development. Promoting flexible programs sometimes involves great changes for the teachers. What is needed is, for instance, a critical and reflective survey of existing routines and practices. Furthermore, there is a need for an overhaul of teacher attitudes and their basic pedagogical views as well as a reconsideration of their role identity and teaching methods (Jokela & Karlsudd, 2007). This entails initiatives included in what we have chosen to call competence development in the field of university pedagogic. Work with competence development of teachers at The University of Kalmar is inspired by the ideas of learning organizations (Dalin, 1997). Each head of department is responsible for the development of his or her entire department. This pedagogical intervention in the form of an innovative course about flexible learning in higher education has emerged to become one of the prioritized competence development activities for HiK's faculty in the period 2004-2005.

## 4. Flexible learning, a challenge to higher education

At the initial stage of the FL-project a discussion took place about the concept of *flexible learning*. The concept invites discussion and to some extent disagreement, but the project participants agreed that flexible learning means greater freedom for the student. Flexible learning can be characterized by several factors: greater flexibility as regards syllabus, modes of study, pace of study, examination forms, and variety of learning styles, as well as geographical independence and variation in mode of communication (student-teacher, student-student) (Hill 2006). The environment provided for flexible learning offers conditions for active learning, adapted to the practical life circumstances of the students. In addition to being described from the students' point of view, flexible learning may be correspondingly described from a teacher's perspective. The differences between the students' and teachers' perspectives are primarily a function of the specific circumstances of teachers, both in regard to their own learning (competence development) and with regard to what flexible learning entails as a prerequisite for educational activities. Flexible learning may comprise several dimensions demanding various competencies such as professional subject knowledge, pedagogical skills, educational psychology, web design, layout, computer skills, etc. Consequently, course design and course development involve the cooperation of more colleagues than used to be the case in

[1] The Council for the Renewal of Higher Education was merged with The Swedish Net University, creating the present Swedish Agency for Networks and Cooperation in Higher Education (NSHU).

 ©Academic Conferences Ltd

traditional on-campus learning environments. In the effort to clearly define what flexible distance education is, DISTUM, a former government authority in the distance educational field, made the following definition: "Flexible distance education gives students the chance of choosing place, time, pace and mode of work for their studies." (DISTUM, 2001 – *our translation*) Consequently, flexible distance education represents several different ways of organizing education (Table 1). It falls upon the teacher to be available during the study period for supervising studies, supporting work process and communication and it is his or her responsibility to provide the students with an administrative study structure.

**Table 1**: Definition of flexible distance education

| For the student flexible education is characterized by the possibility to: | In flexible education the education coordinator has to: |
|---|---|
| study and participate in teaching from home/another place than where the education is administered<br>begin studies and partake of teaching at different points of time<br>study at different tempos<br>choose between working individually or together with others | develop/adapt teaching material<br>develop/adapt supporting material<br>develop/adapt examination forms<br>make use of information and communication technology to bridge distances in time and space. |

Source: (Karlsudd, 2002 – based on DISTUM, 2001).

Many investigations discussing life-long learning emphasize the importance of the regular educational system's capability to adapt to more flexible education. Adaptation is deemed essential in order to compete with the rapidly growing private educational market (SOU, 2000:51). Furthermore, society – including student groups who want to combine studies with other activities and employers who need to provide further education programs for their employees – seems to make higher demands regarding the possibility of participating in higher education regardless of time and place. The Swedish government has also defined its demands on universities for providing educational programs for new types of students, e.g. students with social backgrounds that lack academic traditions. This may in turn pose a pedagogical challenge to the traditional academic environment (Regerings, prop., 2001/02:15). Another matter adding to the importance of flexible education is constituted by pedagogical insights into how different people react to, process and transform information into knowledge and what factors play an important role in this context (Becher & Trowler, 2001; Bauer *et.al.* 1999). Flexible educational programs must be placed in a larger context than that of distance programs alone. The question must be raised whether certain elements of flexible education can be integrated into traditional on-campus programs in order to ascertain/increase the quality of the course or in order to contribute to an optimal use of resources.

The distinction that has been made between distance education and more conventional education, often referred to as on-campus education, is on its way to being weakened. The fast development of computers and computer networks has created new conditions for planning and implementing higher education (Dahlin, 2000).

## 5. The idea and aim of the pedagogical intervention

The overall aim of the FL-project was to contribute to bridging the gap between distance education and on-campus education and at the same time promote flexible learning in both of these educational environments. Flexible learning is no self-evident concept in either of these cultures – distance courses are sometimes more rigid than flexible while on-campus courses may be flexible in many ways – and, therefore, the concept of flexible learning needed to be developed further. Work on pedagogical competence development focusing on flexible learning does not only entail the development and implementation of formal courses. It is a matter of a cultural change involving many people in the organization and therefore our realization that the character of planned pedagogical intervention had to be process-oriented. The following partial objectives were also been defined within the framework of the FL-project:

- taking stock of relevant pedagogical and methodological competencies represented in each of the university departments;
- taking stock of and documenting the need for further university pedagogical education as expressed by the department representatives in discussions on flexible learning;
- arranging creative encounters between different groups of teachers in order to move towards flexible learning;
- disseminating the knowledge and experience gained in the various departments;

- engaging colleagues as supervisors and lecturers in competence-raising activities aiming at stimulating pedagogical development work at the university.

The FL-project was to contribute to increasing awareness, curiosity, stimulation, motivation, understanding and skills related to flexible learning. It is a question of identifying, analyzing and facing advantages as well as disadvantages, success factors and stumbling-blocks.

## 6. Method

A central element in the FL-project was the competence development activities that constituted the pedagogical intervention described in this article. This intervention took the form of an academic course that is described below.

### 6.1 Action research

The FL-project applied an action research approach, which may be described as an interactive process of change between action, research, theory and practice, where the researcher takes an active part in the process (Starrin, 1993). Action research may be described as a spiral of steps where every step involves *planning*, *action*, *observation* and *reflection* (Figure 1). From the very start of the FL-project to its conclusion a continuous documentation of this process was made.

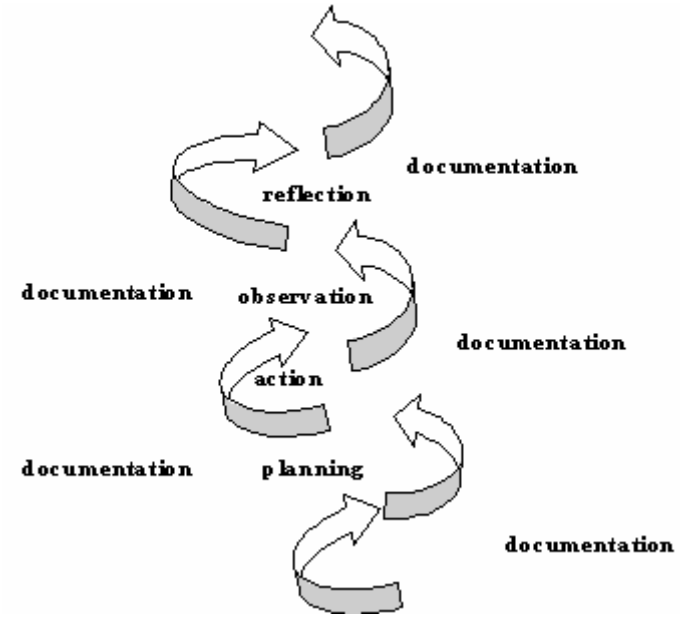


**Figure 1:** Action research, a continuous process. Source: (Karlsudd, 2003)

The action research approach has been far from unambiguously formulated, different researchers emphasizing different aspects. However, a central concept is the close link between theory and practice (Feldman & Minstrell, 2000; Archer, Holly & Kasten, 2001). Different terms have been used in an attempt to better define the approach. Argyris (1985) uses the term *action science* for the part of action research which is more theoretically oriented and *action research* for the practically oriented part. Regardless of the emphasis, the obvious common denominator of action research is *researching through action*. The FL-project required the participants to work with pedagogical development from a clear perspective of change, where need and target-group analyses were given elements. There is a clear difference between the roles of course participants and researcher in the action research process. Tiller (1995) developed this circumstance and describes the role of the former as *action learning*, whereas *action research* puts the emphasis on what the latter does. The researcher's task is to study and analyze how the action research method has changed, while the task of the course participants may be to describe and reflect on their development work. The model allows for passing on and testing the experiences of other departments. The strategy of learning from good examples is quite relevant in action research (Johansson Lindfors, 1993). In such research the participants are expected to be in control of the knowledge produced and applied (Rönnerman, 2003). It is common that teachers and researchers work together sharing a problematizing approach (Cohen & Manion, 1994), which makes it even more important for the participants to support one another and view activities critically by asking challenging questions.

 ©Academic Conferences Ltd

## 6.2 Data gathering, analysis and reliability

Throughout the course every group kept a process diary where progress and results were presented. Similarly, the resource persons involved in the work documented their views on progression and results. A large part of this process was published on the public homepage of the course. The observations, positive as well as negative, made by the resource persons were then discussed within the project group. After the conclusion of the course a questionnaire with open questions was directed both to participants and to resource persons. In addition, interviews were conducted with the department management and the IT pedagogues employed by the department. The questions were formulated on the basis of the aim of the course and were all of an open character.

One way of checking the reliability of a study is by using methodological triangulation. This type of validation may have an intra- or inter-method application. The intra-method application entails the use of several strategies belonging to a specific method, such as asking several questions in a qualitative interview, applying several points of view for elucidating the same phenomena. This was done in the group interviews conducted, which probably reinforced the intra-method validity. The inter-method application involves combining various methods for measuring the same phenomenon (Svensson 1996). The study comprised questionnaires, interviews and observations, which may be regarded as examples of the type of combination described as inter-method triangulation. The result of the procedure described above shows that in a comparison of the various data gathered the consensus of opinion was rather high. Some discrepancy between the course management's and the participants' assessment of the project result may be noticed. The participants have rated their own efforts somewhat more positively than the rating done by the course and department managements.

## 6.3 "Flexible Learning in Higher Education" – a pedagogical intervention in the form of an academic course

The pedagogical intervention carried out within the FL-project focused on flexible learning and it involved teams of teachers from all the university departments. These teams were formally admitted to an academic pedagogical course of 7.5 ECTS credits that implied that the teams carried out pedagogical development work. The principles of flexible learning were applied to this intervention. However, a number of compulsory ingredients were included such as the participants actively advising and assisting in a systematic manner the other teams from other departments that participated in the intervention. The process, documentation and analysis of needs preceding the development work carried out by the teacher teams formed the basis for the examination that was required for teachers to be qualified at the end of the intervention. The development work carried out by the teams of teachers received support from pedagogical supervisors and from a technical resource group. The intervention combined, in fact, three objectives. First, it aimed to raise the competence of the colleagues taking part in the development activities. Second, it aimed to try out and apply the support functions that had been established as part of the FL-project, e.g. a production team. The third objective – which was the most strategic one – was to help bridge the gap between distance learning and on-campus educational environments.

In an attempt to form a joint favorable learning environment that would create a community of practice (Wenger, 1999), the activities/studies included in the intervention took place primarily among the work teams admitted to the course. Those teams consisted of teachers who had experience of distance and/or flexible learning as well as teachers who were novices in this field. Through dialogue with the pedagogical supervisors and the resource personnel, each team created – or re-created – a course, focusing on the principles of flexible learning. A collaborative work method was applied in the intervention, where the participants' previous knowledge and experience formed an important resource. In addition, resource personnel with expertise and experience in the field of flexible and distance education was engaged, including people employed by the university or elsewhere. The work method aimed at what Elleström (1996) terms *development-directed learning*. Each team of teachers engaged in a different pedagogical development work that was divided into four steps, preceded by preparatory and planning phases that were led by the project coordinator for the entire FL-project together with a contact person at the given department. The preparatory phase included, for example, the anchoring of the project work in the team's department. The planning phase included a financial assessment of the costs of all the four steps of the development work. Upon the start of each team's work, a written agreement outlining the basic features of the development work, responsibilities, and work distribution was signed between the FL-project and the department.

### *6.3.1 Target image*

An essential element in the introductory stage of the intervention was that the department described in its own words what flexible learning involves for the student, the teacher and the administrative staff. This description evolved into the guiding star and target image of the pedagogical development work.

### *6.3.2 Implementation and evaluation*

One requirement was that the results of the team's development work, e.g. a new course, were to be produced, implemented and evaluated within the time frame of the FL-project. However, this did not mean that the new course had to be concluded within the time frames of the FL-project. During all the stages of the development work the teams received support in the form of project coordination, pedagogical supervision as well as technology, production and user support.

### *6.3.3 The four steps of each team's development work*

The first step, after the preparation and planning steps, was carried out at departmental level and it entailed choosing and outlining the pedagogical development activities to be carried out by each team of teachers participating in the intervention. Every department chose a course (hereafter referred to as target-course) where there was an identified need for innovation, change or improvement with focus on flexible learning. The second step consisted of the development and implementation of the target-course, including examination in accordance with the regulations of the department/university. Technical and to some extent administrative support was provided centrally from the FL-project. Revisions were continuously made at the implementation stage.

The third step comprised the evaluation of Steps 1 and 2. The evaluation of Step 1 was performed jointly by the FL-project coordinator and the department. The implementation of the target-course was evaluated in a traditional way. In addition, an evaluation was done in order to find out whether quality control could be improved. The contributions made by the central support functions were also evaluated. The fourth step of the pedagogical development work included dissemination of information. This was intended to take place internally within the department, mainly via internal communication between teacher teams as well as externally, via a web gate dedicated to flexible learning that was developed within the FL-project.

## 6.4 Experiences, results and insights from the pedagogical intervention and its results

Within the framework of the FL-project all university departments initiated pedagogical development projects. During the duration of the FL-project 14 teams of teachers initiated some type of pedagogical development work with focus on flexible learning. Three of these interrupted their work at an early stage due to time constraints. Examples of courses that were developed/enhanced within the intervention include management accounting, aquatic ecology, web conferences for the program of journalism, pedagogy, rhetoric, social science, music, hematology, media and communication studies, ship's officers Class VII and C++ programming.

Previous knowledge varied among the teams and during the process the teachers encountered both problems and opportunities. At the beginning of the intervention many participants were confronted with distrust from their colleagues, but this gradually changed into a positive attitude. One explanation may be that the insight into the teams' work has been good and that many teams have informed the others about their work in different ways, for instance through diaries. In several of the pedagogical development projects, comprehensive course material was produced, including texts, video films, simulations, pictures, sound recordings, etc. Those were then made available to all colleagues at the university.

Some projects encountered technical problems, but these were solved with the support of the production team, which has enabled the groups to concentrate on methodological and pedagogical issues. Given the fact that multi-professional expertise was available at no cost for the departments, many teams took the opportunity to produce media of various kinds for their courses. One of the projects that dealt with management and accounting issues had an underlying hypothesis that young people today are mostly used to visual ways of communication and therefore they need further assistance in developing their skills to engage in abstract thinking. One way of stimulating abstract thinking may be, according to the analysis made by the team, to present important processes with the help of animation. In the course that this teachers' team planned there were models produced which show concretely how various processes appear, the thought behind being that they should function as support for the continued development of the students' own abstractions.

 ©Academic Conferences Ltd

The team from the Department of Technology worked in a similar way. A “C++ Programming” course had for a long time been a bottleneck which many students had failed to pass. The identified problem was that students have difficulty in understanding the transition from problem to completed program code. Here, too, the team participating in the intervention used animation to increase the understanding of complicated operations. The same team of teachers produced a system of regular examinations. Here, the integration of pedagogical theories was particularly clear, since every examination level was linked to Blom’s taxonomy (Bloom, 1984).

Video technology was used by several teams. This was not primarily to convey traditional lectures or instruction. Instead, the output consisted of short films produced as documentaries, sketches and presentations. In the subject of rhetoric digitalized vignettes were produced to be used as a starting-point for discussions among students. For the same course in rhetoric, lectures and supervisions were prepared with the support of video conference tools. The team working on developing a course entitled “Hematology, the science of blood diseases”, a program was developed enabling students to continuously learn about the origins of blood diseases. The mainstay of the information is a database with microscopic pictures of various cases.

The teams that participated in the pedagogical intervention devoted a great deal of time to the production of tools for supporting learning. In their meetings and seminars, however, faculty concentrated on discussions and reflection about methodological and pedagogical issues. Seminars and lectures supplementing supervision were much appreciated and well attended. Lectures were given by visitors from elsewhere in Sweden or from overseas. On several occasions teachers could follow the lectures and take part in the ensuing discussions from their own offices through the Internet.

Carrying out a competence development activity which could make an immediate impact on teaching activities was of great importance. University teachers have designated time for competence development and thus, many of the participants in the intervention felt at the start that the chances of completing their assignments were good. Despite this, a few teams were forced to interrupt their work due to time constraints. The pedagogical intervention included also literature that was selected in consultation with a librarian and with the examiner who assessed the teachers’ performance. Such structure enabled each team to find suitable literature that covered relevant subject-didactic fields addressing the issues that were dealt with by each team.

Many of the teachers expressed concern that the effort required in order to make courses more flexible would be too time consuming. Course flexibility may, in many teachers’ opinions, also increase the workload. All the participants in the intervention agreed that a basic condition for this kind of pedagogical development work in the future would be that the production team which assisted the teachers’ teams throughout the intervention would become permanent after the termination of the FL-project.

Shortly after the FL-project was concluded a Section for Flexible Learning (SFL) was established and placed as part of the University Library under the direction of the Chief Librarian. Five people are now working at SFL together with a coordinator who is responsible for the distance programs offered to the learning centers spread out all over the county of Kalmar. No research activities are conducted by the employees of SFL and the research base in the field of flexible learning at the University of Kalmar can be considered weak. Nevertheless, faculty members employed by the various departments of the University are encouraged to apply for funding for research on pedagogical issues related to flexible learning. Allotting research resources to the field of flexible learning would probably increase its status further. Given the rhetoric claims about the strategic value of flexible learning environments in the context of both on-campus and distance courses it remains to be seen if resources in the form of money and teachers’ time will be allocated for additional pedagogical development work with focus on flexible learning, even after the termination of the FL-project.

Taking active measures towards educating and influencing colleagues at the managerial level is becoming increasingly important in pedagogical innovation (Havnes & Stensaker, 2006). Exerting influence at the policy level and simultaneously implementing educational projects for university teachers may be a fruitful combination for developing activities (op.cit.). In this respect the FL-project and the pedagogical intervention have not been very successful. Heads of departments claimed to be supportive of the activities initiated within the FL-project, including the pedagogical intervention. But the teams of teachers who participated in the activities expressed at times that leadership was not insightful with regard to the resources needed for the teams to perform well. Nevertheless, the concept of flexible learning has become more familiar among a larger number of teachers and university leaders and there seems to be more understanding for the need to

bridge the gap between on-campus and distance learning. There seems to be also increased consensus about possible benefits of bridging the gap between these two educational environments and, hopefully, future evidence based research will bring along further arguments to this end. Kirkpatrick (2001) draws an outline for effective academic development programs and those principles could be said to apply even for the management of efforts focusing on flexible learning.

In spite of the shortcomings of the FL-project and the pedagogical intervention with regard to the managerial level's attitudes and actions, the project has in many ways advanced the development of competence among members of faculty. As a concrete result of the project a semi-formal flexible learning network has been established within the university, the so called *flex-group*. This group includes teachers and IT-pedagogues from all the departments and it is coordinated by the newly established SFL. The coordinator of staff development who manages among other things Teaching & Learning activities is also part of the network and so are several of the pedagogical consultants that are a resource for competence development in the field of university pedagogy. This network functions as a reference group and it takes stock of and discusses the demands for further education and the measures that need to be taken in order to meet these demands. One of the initiatives of the Flex-group has been the creation and maintenance of a home page on the web where pedagogical innovations with focus on flexible learning are published and discussed.

The broad teacher representation in the Flex-group guarantees coverage of the pedagogical and methodological competencies available in the different departments. From the discussions within the Flex-group a new university pedagogical course has emerged, whose objective is that the course participants function as mentors for other colleagues, helping them to develop their competence within the area of flexible learning. Hopefully, this will further stimulate the interest of university teachers with regard to flexible learning. Pedagogical development is a multi-faceted area requiring constant focus and discussion (Ashwin & Trigwell, 2004). For this reason a series of lectures on flexible learning has been arranged, where university teachers have contributed, sharing their knowledge and experience. With the support of video conferences national as well as international cooperation in the field of flexible learning has been established with other academies. Upon the conclusion of the FL-project an exhibition and a demonstration expo were organized presenting the results of the work carried out by the teams of teachers who participated in the pedagogical intervention. This expo has now become an annual event at the university which is evidence of the long-term strategic effects of the FL-project and its activities.

In 2005 around 13 % of full-time equivalent students at the University of Kalmar were distance students. In 2005 when the project was most active the level of activity in the fields of distance and flexible learning rose appreciably (see table 2). During the project period the number of distance courses rose by 22% and the number of distance students rose by 12% in relation to the year before the project started. Even after the project was concluded, 2006, the number of distance courses rose by 20% and the number of newly developed courses increased by 40% compared with the project year. It is not possible to ascertain how much of this growth was directly generated by the project but it is clear that the project acted as a catalyst. The drop in full-time equivalent students from 2005 to 2006 can be at least partly explained by restrictions on student numbers and general cutbacks during the first half of the year.

**Table 2:** Statistics for distance learning at the University of Kalmar 2004 - 2005

| Activities | **2004** | **2005 (**Project year) | **2006** |
|---|---|---|---|
| Full-time equivalent students participating in distance learning | 704 | 802 | 708 |
| Distance courses | 52 | 67 | 84 |
| Distance programs | 6 | 6 | 10 |
| New courses developed during year | 19 | 32 | 21 |

About ten years ago there were relatively few teachers working with distance learning. This situation has now changed. There is now a clear demand for academic teacher training in flexible learning and there is clearly a higher status for this field both amongst teachers and management. Another point of interest is that flexible learning has for some reason been a rather male-dominated area at the University of Kalmar. Before the project there were very few women involved (20 %) in distance course development whereas now we see a marked increase (47 %). One explanation of this may be that in comparison with what was the case earlier the structure of the courses reflect the effort to reduce the focus on technology in favour of emphasising pedagogics and methodology. Another explanation may be that the flex course attracts more participants from the department of Health Sciences and Social Work, where the proportion of women teachers is higher than in other departments. However, it is still the case that all IT pedagogical consultants at the university are male and it is vital that efforts are made to recruit more women into this field in order to counter the impression that the combination of technology and education is an all-male preserve.

 ©Academic Conferences Ltd

The project was on the whole widely acclaimed and many participants saw considerable synergy benefits as a result. The time assigned by management to course development was added to time assigned to competence development and this meant that teachers had more time available to fully develop their course. Since the course lead to a tangible result for the department the participants felt they received greater support from their management. Working in teams made it easier to present and highlight the development work within the department. Further courses are now being developed drawing inspiration from their colleagues' previous efforts. Participants were also able to advise colleagues at other universities who were about to develop similar courses.

The five key pieces of advice from the course participants were:

- Allow participants to develop courses that are of high value to their departments.
- Make teamwork obligatory for course development projects.
- Give the different teams ample opportunity for discussion and comparison of methods.
- Combine the training with tasks that must be performed. This gives better financial conditions and better level of support from the management.
- Involve the management in course development.

To tie the result directly to the five partial objectives presented in the formulation of the overall aim of the project the following summary may be made:

- At the competence and knowledge stock-taking made in the departments a number of important competencies came to light. There are a number of teachers in every department, whose knowledge and experience may strengthen the further development of flexible learning at the university. These teachers' experience and competence had not been taken notice of before the implementation of the project
- During the course and in close contact with the departments concrete needs for further education were brought to light, some of which were subsequently met with the support of the competence identified in the project.
- The demand for courses on flexible learning has increased from some 15 interested individuals to comprising more than 50 applicants.
- A direct result of the course is that meetings are now being arranged continuously on intra- and inter-department levels with the focus on flexible learning issues. A learning project on Second Life has, thanks to these meetings, been firmly anchored around the departments.
- The course participants have made presentations of their projects at the university, both via a poster exhibition in the library and at minor seminars. Some participants have presented their projects at national didactics conferences.

One of the main ideas behind the FL-project and the pedagogical intervention reported in this article was to bridge the gap between on-line and distance learning environment. This objective is considered, on the whole, to have been successful. Methods for flexible learning have now become better known among teachers working within the on-campus tradition, and many of them now use, for instance, digital learning resources in on-campus education. However, the experiences gained from the FL-project led to discussions about problems that have been identified with regard to the relations between flexible learning and on-campus teaching indicating that there is still a great deal of work to be done before the two educational cultures may become one.

## Acknowledgements

The authors wish to thank all the participants in the FL-project for providing information and sharing their views and experiences as well as for their willingness to discuss challenges and opportunities of relevance for our work.

## References

Archer, J.M., Holly, M.L. & Kasten, W.C. (2001). *Action Research for Teachers*. Upper Saddle River. NJ: Merill/Prentice Hall.

Argyris, C., Putnam, R., McLain Smith, D. (1985). *Action Science.* San Francisco: Jossey Bass.

Ashwin, P. & Trigwell, K. (2004). Investigating staff and educational development. In Baume, D and Kahn, P.: *Enhancing Staff & Educational Development.* Routledge Falmer.
Bauer, M., Akling, B., Gerard Marton, S., Marton, F. (1999). *Transforming universities. Changing patterns of governance, structure and learning in Swedish Higher Education.* London: Jessica Kingsley Publishers.
Becher, T. & Trowler, P. R. (2001). *Academic Tribes and Territories.*
Bloom, B.S. (1984). *Taxonomy of education objectives: the classification of educational goals.* Handbook I, Cognitive dowmain. New York: Longman.
Bron, A. & Wilhelmson, L. (2005). *Lärprocesser i högre utbildning*. Stockholm: Liber AB.
Buckingham: SRHE and Open University Press.
Cohen, L. & Manion L. (1994). *Research Methods in Education*. 4th edn. London: Routledge.
Dahlin, B. (2000). *Om IKT baserad distansutbildning och "flexibelt lärande": En forskningsöversikt.* Karlstad University Studies 2000:20. Karlstad: Karlstads universitet.
Dalin, Å. (1997). *Den lärande organisationen: kompetensutveckling i arbetslivet.* Lund: Studentlitteratur.
DISTUM. (2001). *Distums definition av begreppet flexibel utbildning.* Retrieved October 13th, 2006. http://www.distum.se/pages.asp?
Dolmans, D. (1996). *How students learn in a problem-based curriculum*. Maastricht: Universitaire Pers Maastrricht.
Elleström, P.-E. (1996). Rutin och reflektion. Förutsättningar och hinder för lärande i dagligtarbete. In P.-E. Elleström, B. Gustavsson & S. Larsson (eds). *Livslångt lärande,* (pp. 142 -179). Lund: Studentlitteratur.
Feldman, A. & Minstrell, J. (2000). Action Research as a Research Methodology for the Study of the Teaching and Learning of Science. In A.E. Kelly & R.A. Lesh (eds) *Research Design in Mathematics and Science Education*, (pp. 78–96). London: Lawrence Erlbaum Associates.
Hargreaves, A. (1994). *Changing teachers, Changing times. Teacher´s Work and Cul-ture in Postmodern Age*. Trowbridge, Wiltshire: Redwood Book.
Havnes, A. & Stensaker, B. (2006). Educational Development Centres: From Educational to Organisational development? *Quality Assurance in Education*, 14, (1).
Hill, J. R. (2006). Flexible Learning Environments: Leveraging the Affordances of Flexible Delivery and Flexible Learning. *Innov High Educ,* 31, 187–197.
Höglund, A. & Karlsson, K.G. (1998). *IT i skolan – vision och verklighet*. Teledok rapport 126. Stockholm: Teledok.
Jacobsen 1997, D.Y. (1997). *Tutorial processes in a problem based learning context*. Dragvoll: Norwegian University of Science and Technology.
Johansson Lindfors, M-B. (1993). *Att utveckla kunskap: Om metodologiska och andravägval vid samhällsvetenskaplig kunskapsbildning.* Lund: Studentlitteratur.
Jokela, P., Karlsudd, P. (2007). Learning with security. Journal of Information Technology Education. Volume 6 (1) (p. 291-309).
Karlsudd, P. (2002). *Att lära på tunna linor och breda(a) band: E-Learning: Ambition, mission och vision. En granskning av e-utbildningsföretagens pedagogiska grundsyn.* Institutionen för pedagogik och metodik. Kalmar: Högskolan i Kalmar.
Karlsudd, P. (2003). *Tillsammans: Integreringens möjligheter och villkor.* Institutionen för pedagogik och metodik. Kalmar: Högskolan i Kalmar.
Kirkpatrick, D. (2001). Staff development for flexible learning. *The International Journal for Academic Development,* 6(2), pp. 168-176.
Marklund, K. (1994). *Ny informationsteknologi i undervisningen*. Rapport nr 10. Ds1994:21. Stockholm: Nordstedts tryckeri AB.
Regerings Proposition. (2001). *Den öppna högskolan.* 2001/02:15. Stockholm.
Riksdagens revisorer (2000). *Resursanvändningen inom högskolans grundutbildning.* 2000/01:4. Stockholm: Riksdagens revisorer.
Rönnerman, Karin (2003). Action Research: educational tools and the improvement of practice. *Educational Action Research* (11), 1, pp. 9-21.
Silén, C. (1996). *Ledsaga lärande – om handledarfunktionen i PBL*. Institutionen för pedagogik och psykologi. Linköping: Linköpings universitet.
SOU. (1996:27). *En strategi för kunskapslyft och livslångt lärande.* Stockholm: Norstedts Tryckeri AB.
SOU. (2000:51). *Individuellt kompetenssparande – en stimulans för det livslånga lärandet.* Stockholm: Norstedts Tryckeri AB.
Starrin, B. (1993). Tillämpad socialforskning. In Holmer, J. & Starrin, B. (Red), *Deltagarorienterad forskning* (pp.11-26). Lund: Studentlitteratur.
Svensson, P.-G. (1996). Förståelse, trovärdighet eller validitet? I Svensson, P.-G. &Starrin, B. (Red.), *Kvalitativa studier i teori och praktik* (ss. 209–227). Lund: Studentlitteratur.
Tiller, T. (1995). Action Learning and Action Research – Opportunities and Dilemmas. In Svein & Dowling (Eds). *Reflections on Educational Research: The Qualitative Challenge.* Landås: Caspar Forlag A/S.
Trowler, P.R. (1998). *Academics responding to change : New higher education frameworks and academic culture*. Buckingham : Society for Research into Higher Education & Open University Press.
Wenger, E. (1999). *Communities of Practice. Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.