

Sør-Trøndelag University College

Facts about the institution

Name of institution	Sør-Trøndelag University College (Høgskolen i Sør-Trøndelag)
URL of institution	www.hist.no
Country	Norway
Number of employees	580 (academic staff 380)
Levels in the educational systems	Tertiary
Interviewed persons	Thorleif Hjeltnes, Vice Dean Geir Maribu, Assistant professor and Per Borgesen, Dean

Introduction

Sør-Trøndelag University College is a dual mode publicly financed higher education institution consisting of several departments. Large scale e-learning has mainly been done in one of these departments, Department of Informatics and e-Learning (AITeL). This has been done more or less independently of processes in the other departments at the institution. Therefore, it is the model applied in AITeL that is described here.

History

Distance education as e-learning has been supplied by the predecessors of AITeL since 1986. From the start, development has been done in close cooperation with an organisation named TISIP. TISIP is a private research foundation that does research and development work and offers courses for businesspeople, public institutions, universities and colleges.

From 1986 to 1990 TISIP was involved in developing the first software in the world that should allow learners to operate through a graphic interface. Although this project was not sustainable, AITeL and TISIP gave technical and other support to several national distance educational networks at university college level during these years. During the years 1992-1995 AITeL and TISIP took part in the JITOL project (Just In Time Open Learning in the Delta programme). In the project, educational software and two courses were developed.

Development of large scale e-learning started with the NITOL project in the years 1994-1995. The project was funded by the government and developed by the NITOL group, a formal cooperation between four Norwegian Higher Educational Institutions (Sør-Trøndelag University College, Norwegian University for Science and Technology, Agder University College and Stord/Haugesund University College). A central component of the project was to develop a number of online courses. In addition, the NITOL group also supplied a complete business model and the necessary infrastructure to run the courses.

TISIP acted as the common course secretariat for the group, and also developed software for student administration and organised a common web site where sales information, access to the courses, student administration etc were organised. This was important, since the student administration and learning environment systems used for on campus courses at the participating institutions were not built to handle distance education.

The courses became popular and by the year 2001 AITeL, who was the largest supplier of courses, had 5745 enrolments. In 1999 organisation of the courses was handed over from NITOL to a new organisational unit called The Network University (NVU). Each institution in NVU took

responsibility to develop activities further. After some years administration of courses was left with the member institutions, and AITeL together with TISIP continued to develop and sell courses on a stand alone basis. By autumn 2005 AITeL also took over the responsibility for the course administration, but still used the software developed by TISIP. TISIP is still responsible for the developing digital learning resources. The number of course enrolments has decreased during the last years, and was about 2500 in 2005. An important reason for the decrease was the fall in the ICT market, since most of the offers are ICT courses.

Because informatics and e-learning are the subjects for research and teaching at AITeL, competence in e-learning is a natural component of the competence of all academic staff members. Thus, the competence has been innate in the organisation since the e-learning field emerged, and the competence has developed gradually as the field itself has developed. In addition, every academic staff member has to take at least one formal pedagogic course that lasts half a year. Some of the topics in this course are related to e-learning. Almost all academic staff members at AITeL give e-learning courses.

A standard model for e-learning is used in most courses. However, continuous development is going on, and some courses use more advanced technology than others. For example, some courses use online conference tools for synchronous communication and document sharing, tools for giving lectures using slides in combination with audio and video or tablet pc's with handwritten formula development. Experiences from these trials are used to identify new ways of designing standard courses and thus further develop the e-learning model and increase competence among teachers.

Research has been and still is central in these processes. For example, current e-learning activities are direct consequences of research done in the JITOL and NITOL projects in the 90-ies. Both AITeL and TISIP have been continually involved with research activities and have been both partners and coordinators of EU Socrates e-learning projects and projects under the e-Learning and Leonardo Programme. AITeL has also had several engagements with the governmental agencies for e-learning and distance education in higher education (Norway Opening Universities and its predecessor SOFF – The national agency for flexible learning in higher education). The research and development work has been and still is important to be able to take part in international research in the field and to further develop the e-learning model of the institution. In addition, all courses are subject to through evaluation. Complete evaluations are done for each course every second year and provide a basis for upgrading and adjustments. The evaluations rely on student feed back. Focus is on content of the course (for example whether it is relevant and up to date), learning activities and administrative systems and routines.

Technical issues

Earlier AITeL had a single system to administer the whole process starting with the student buying the course until the exam was finished. This worked well and provided the necessary efficiency to run large scale distance education in a cost effective manner. However, requirements from the top management of the institution (not the leadership of AITeL, but of the entire university college) changed all this. All the e-learning activity must now be put into the procedures and systems used for the rest of the students, i.e. the on campus students.

This means that AITeL now runs with four systems that are not well integrated. The systems are: 1) A webshop for buying courses, 2) an accounting system for invoices, payment through credit cards online etc., 3) a student administrative system to register the student at correct study programme, organise the exams, etc and finally 4) a learning management system for all the learning activities. Not only are these systems poorly integrated. They are also not prepared or planned for e-learning students. The main problems that have resulted from this is that data has to be transferred manually between systems, that the systems do not support flexible start up, progression and exam dates and

a number of problems with the LMS used (for example that there are no open areas where potential students can take a look at learning material and activities in courses they consider to enter).

While an integrated single system was a key to success earlier, the disintegrated systems that AITeL is forced to use today is a severe threat to survival of the operations. Thus, although technical competence is (of course) high at AITeL (because informatics and e-learning is the subject for research and teaching), organisational changes have left AITeL with a poor technical solution.

From a student perspective, all courses are based on widely used software and do not require students to buy additional software or hardware (in addition to a standard computer).

Courses

Information technology is the subject for about 90% of the courses. The rest are about economy, marketing and entrepreneurship. To begin with, courses were designed in a way that allowed student to download material and work largely offline. Now, activities increasingly demand online presence because of activities such as chats, video conferencing and streaming video. This is possible because most students now have broadband connections. However, large proportions of the learning activities are normally still possible to do offline.

Courses have fixed start-up and exam twice a year. Between the start-up and exam there is some flexibility in progression. It is also possible for the student to continue a course in the next semester if he/she is not able to fulfil the course as planned.

Most communication is asynchronous, for example discussion forums, mail, downloading learning materials, deliver exercises and other work, looking at slides presentation with video and multiple choice tests. But activities in some courses rely on synchronous communication, in particular chats in relation to project discussions and guidance for groups of students.

Management, strategy and attitudes

Sør-Trøndelag University College has been through several organisational changes from 1986 to 2006. The institution was established in 1994. Before that, distance education activities were located at Trondheim Technical College. In 2002 there was a drastic organisational change, where five autonomous departments was dissolved and replaced with 7 smaller departments with less autonomy and a stronger central administration. The responsibility for further education is formally still under the administration of the departments, but, as described above, the departments are now obligated to use the same LMS system and the same student administrative systems, even if they are not well suited for distance education. This has also resulted in the termination of the contract between TISIP and AITeL.

Parallel with this, AITeL has experienced that the leadership has changed attitude from being very supportive and willing to understand the mechanism involved in running large externally financed e-learning activity to become a lot more formalistic and in favour of one size fits all thinking. As mentioned above, this has already lead to less cost efficiency and in the end there is a real danger that large scale online distance education will come to an end as a consequence.

Locally at AITeL, payment model for teachers has been developed where the salary reflects extra work for developing digital resources and organising and carrying out the new e-learning activities. The staff is generally very positive towards e-learning, and the payment model is clearly one of the crucial factors for the success of AITeL. Student assistants are used to handle large student groups. This makes the work loads quite predictable for the teachers.

TISIP has employees specialised at taking care of all student matters related to distance education

courses. There are also personnel working with marketing, technical support, software development and so on. This is important for two reasons. One is that the e-learning activity is the main task and not an occasional extra task. Second, the systems surrounding the e-learning activities are customised to support selling, student administration and learning activities in an optimised way. However, the organisational changes at Sør-Trøndelag University College may make it difficult to use these procedures together with AITeL.

Despite lack of support by the top management at Sør-Trøndelag University College, the institution still has a strategy for online education. In the strategic plan for 2005 – 2010, it is stated that the institution wants to be a central partner in the field of further education by developing decentralised and flexible courses both on and off campus and develop sustainable technological based solutions. Several concrete actions have been designed to achieve this, including developing technological infrastructure and extend the use of e-learning both on and off campus. However, there is apparently a discrepancy between these aims and the lack of support for the large scale operations from the top management.

Sør-Trøndelag University College has developed routines for quality assurance in education. These are also applicable to the field of online education. In addition AITeL has developed special routines for e-learning, as described above. AITeL see good quality as important to keep satisfied students over time. In surveys, more than 60% of the students answer that they want to take another e-learning course by AITeL, and as much as 96% answers they will recommend AITeL courses to others.

The institution has high credibility both in the Ministry of Education and Research and among students and the public. For example, the institution is well known among potential students and (as indicated above) a good reputation among our customers. Regarding government and public administration, there were some initial problems, for instance lack of approval of student loans. This was solved by raising the matter in the Norwegian Parliament. AITeL was also allowed to have the first fulltime study programme given as online education and financed through the institutional budget by the Ministry of Education and Research.

Economy

An important contribution to cost effectiveness is that payment to teachers is proportional to the number of students following a course. Other costs are shared among all the courses, like administration, development of digital resources, marketing etc. Courses are priced quite low compared to many other distance education providers. The philosophy of AITeL is to serve many students at low costs rather than fewer students on high-cost offers. About 1/3 of the students pay for their courses by themselves and 2/3 have the courses paid by their employers.

As mentioned above, another important contribution to cost effectiveness previously was a unified and integrated technical system that could handle students from enrolment to completion of a course. The loss of this system has led to a 30-50% loss in efficiency in operation of important routines. From 2001 to 2006 there has been a gradual reduction in enrolments by approximately 10% per year as a consequence of the fall in the ICT market. The combination of a high cost technical solution with reduced number of students is actually a big threat to the survival of large scale distance education at AITeL.

Additional factors

As AITeL sees it, producing learning material (texts, lessons) of high quality is crucial for obtaining sustainability and a critical mass of students. Producing such material introduces issues on copyrights. There is an ongoing discussion at AITeL on how to handle these issues.

Conclusions

These factors are seen as vital for the success and survival of AITeL as a mega provider of online education:

- Funding of a large project by government money was important for establishing a model for large scale e-learning based distance education.
- Research has been and still is important for developing efficient models for e-learning based distance education.
- Integrated technical systems allowed the institution to run operations with a high degree of efficiency and this was an important factor for sustainability. Now the institution is experiencing the flip side of this. The integrated systems have been abandoned and replaced with less efficient (and not integrated) systems designed for on campus operations. This has led to loss of efficiency and may threaten survival of the large scale operations.
- Moderate prices on courses contribute to recruitment.
- Teachers are paid per student and are helped by student assistants if needed. This ensures that teachers have manageable workloads and is important for motivating them to work with online education. It also contributes to cost effectiveness in the organisation by balancing outcomes with incomes.