

## **Online Learning Programs as Learning Organizations: A Case Study of Information Management Programs at Anadolu University, Turkey**

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### **ABSTRACT**

This study consists of the results of a study in which facilitators' attitudes toward effectiveness of various media used in the Information Management Associate Degree Program (IMP) of Anadolu University, Turkey. The study has shown that textbooks are not viewed as efficient as multimedia programs and web environments by facilitators although they indicate that textbooks should still be used in online courses. The participants also found multimedia programs distributed on CDs more effective than the web environments.

**Keywords:** Online learning program/s; learning organization/s; Anadolu University; Open Education Faculty; Turkey.

### **COMPUTER-ASSISTED INSTRUCTION DEPARTMENT**

In order for researching and implementing the advantages of computer growth in education, Anadolu University took the first important step in 1989 (1). The idea of using computers for diversifying the programs and improving the services of Open Education Faculty both in quality and quantity had been developing among the faculty management for a period of time. Finally two persons started working for getting attention of the university management.

Unexpectedly, a long way was taken in a short time and 12 young people were employed. Except one, all of those employed were graduated from various faculties in the university. Not only were they lack of computer skills but also they were lack of experience on the use of computers in education. Majority of the staff, like the others employed afterwards, were working for different foundations that belong to university. A few students from engineering faculty in addition to these were working part-time.

In 1990, this team took responsibility to develop software for the Ministry of National Education under the contract of a signed project in cooperation with IBM Turkey. Because of the project and its advantages, the team was increased in number in a short time. According to the project, a primary school course was chosen and the courseware was developed for an academic year. The same year, with the help of some other faculties 200 school teachers were trained on computer-assisted instruction.

Because of the work intensity and diversity, the team experienced both increases and decreases in the number but continued its development. In 1991, another project was done again for the Ministry of Education but this time for secondary school programs. 4 courses were chosen and related courseware was developed. In parallel to the courseware development, authoring software was also developed by

the staff in order for the development and presentation of the courseware. Teacher training went on in 1991, too.

This project started by the Ministry created a public awareness about computer use in education and also helped Anadolu University gain respect and experience after developing quality and sound courseware. During Fall 991, the team again showed efforts for holding a symposium at the Anadolu University and so got attention from Ministry bureaucracy and those researchers studying in the related field.

The young team had saved a good amount of know-how after 2 years of experience and gained popularity both at the university and in related communities overall in Turkey. In parallel to the respect and financial support it brought in to the university, the team moved in to its own building provided by the management and experienced no problems in getting necessary equipments, which was not the case in many other projects.

Here, some comments about the beginning phase of the team could be useful and elaborative for what is to be discussed later in this paper.

First, there were no standards among the team members about their status although they were employed by several foundations that belong to the university. And this was to be the case for a long time. Secondly, the team called Computer Assisted Instruction Department (BDE) had no formal status in the university, and this is still the case. Thirdly, staff had no job description and department did not have an organization structure either. And this is still the case, too. Finally, department was open to collaboration with any other departments on the campus basically with School of Communication, Open Education Faculty, and Education Faculty as long as it needs. For example, the writer of these sentences, herself, had worked for the preparation of teacher/learner guides developed for the courseware under the project of Ministry and she also had been in the teacher training activities as an instructor.

The following year The Ministry of Education seized the department's activities after new government took over. As a result the number of people working in the department was decreased. This actually took place as drop-outs from the job. Some left upon seeing that there is no academic future in the department works and some left since there was no job guarantee. Actually this was the case in the previous years but since there was a big staff circulation it was not felt that much. After 1992 there was no employment at the department for a long time, so the number of the staff was very limited.

In 1993 and 1994 an original project was developed and started in order to diversify Open Education Faculty services. As a result, computer labs were established in various parts of the country of which each held 20-30 computers. In these labs, distance learners started studying the course materials that CBI department developed. A large number of these labs called Computer Assisted Academic Advisory Centers are still operating at the present.

At the same time the department continued to its services. Among these were the teacher training, computer-assisted instruction courses for face-to-face learners at other schools, various information and presentation software production, two instructional software productions for IBM Turkey, and last but not the least the computer use efforts for disabled learners.

The main function of the department until the year 1997 was developing projects for lab establishment in different cities, realizing these establishments and providing support activities, and producing advisory courseware for those schools

which give distance learning courses. After a two-year bright period, 1992-1997 can be said to be a "non-productive" period for the department.

During this period, departments' usual services and issues were continued. Mehmet Emin Mutlu who is older than others and is more experienced comparing to others was assigned to the leadership of the department. But since the department had no formal status on the campus it did not a formal management and naturally a formal director either. Although Mr. Mutlu was drifted to this position by the willingness of his colleagues at the department, he was seen as a representative of the department by others outside the center.

Another thing that the department experienced at this time that it developed almost all the projects itself. In other words, without any demand from the university or faculty management all the projects were developed by the department and those which university management approved were implemented. In addition, relations with other faculties, especially with education faculty were strengthened.

Again during the same period, the department showed great efforts to remain up-to-date in both hardware and software issues. Mr. Mutlu had been experienced on this area and so he was assigned to follow the developments in technology in parallel to department's sensitiveness for developments. With such efforts his place was also strengthened in the department. Following the new management takeover at the university in 1999, the department moved in to its new place at Open Education Faculty building. Before long, it started tryout tests via internet and experienced an unexpected amount of attention. But this attention did not surprise them that much because the staff had closely observed the distance learners' needs while they were developing Computer Assisted Academic Advisory Services.

In the following year, multimedia CDs were produced for various courses and delivered to the students along with the textbooks. Researches have shown that academic achievement of those who used CDs increased significantly (2).

Before long, the courseware that was presented in the framework of the Computer Assisted Academic Advisory Services was started to be offered online.

Today, Computer Assisted Instruction Department has 40 personnel in coherence with the eight-person core team. The department has diversified the distance learning activities of the university a great deal in 6 years. During this time, in courses at education faculty, successful students were observed and given a chance to work as interns of whom some were employed to work full time later times.

On the other hand, the department has not a clear status yet neither in the university nor in the faculty management. Meanwhile Mr. Mutlu completed his academic studies and was assigned to be Vice-Dean in the Open Education Faculty. Thus the place of the department became clearer in the university but it still does not have an organizational diagram that defines tasks and the jobs in the department. Technically, there is no difference between Mr. Mutlu and any member of the core team in terms of status and it's the same situation for those new comers' situations compared to experienced ones. But still a hierarchy is sensed because of reciprocal respect and habits.

### **INFORMATION MANAGEMENT ASSOCIATE DEGREE PROGRAM**

Maybe the biggest project that the department developed was the Information Management Program which is the first "associate degree" program offered online in Turkey (3). Advantages of the way the department has been organized may be

seen better by taking a look at the structure and development process of this program.

The idea of developing a program that will continue completely online goes far back to the first years of the department. By then, neither the university nor the country in general had required technical infrastructure to implement such a program, so the idea has been delayed for years but never put away on shelves. When tryout exams started online, distance learners have been better analyzed and it was recognized that more learners had access to internet than it was assumed. It was also found out that many of those students had been reaching internet from their work places but not from their homes.

In the framework of formal and informal relations with those students, it was concluded that an internet-based program was feasible and any program to be offered should consist a work-related content in order for increasing this feasibility. This idea was gradually matured in the department and structured by the end of 1999 as an internet-based two-year associate degree program. The program was presented to the university management upon getting approval from the faculty management. After the approval of the faculty, Microsoft-Turkey was contacted and with the cooperation of this institution program development process was started.

Support from Microsoft-Turkey came to the project as providing the registered students with the necessary software and software related booklets or guides with a discount. With this support textbook writing problem had been solved on the other hand.

In the following weeks, course content of the two-year program was clarified in the department and except the courses that are compulsory for any higher education learner in Turkey, courses such as Operating Systems, Desktop Publishing, Spreadsheets, Organizational Communication, Group work, and Multimedia Application were decided to be offered. Course instructors and advisors were determined at the same time.

Later on the following months, instructional materials were developed with an intensive work load and meanwhile the decisions were made about the operation of the program activities including the services to be provided, time schedule, instructors, and so on. It was planned that each learner would be given 5 assignments during the first year, and these assignments were to be related to a virtual company and its operations that was formed by course developers.

The name of virtual company formed was Anadolu Publication and it had operations same as any real company would have. In terms of financial, logistics, human resources and any other related operations, the department sought for help from other departments on the campus, but preferred to develop the company virtually itself after some problems related to work load of the other people asked for help.

An important issue to note here is that the department used its own work force and initiative to form such a virtual company so that the learners would do real world like projects. And of course this increased the staff's work load as a result.

Another point to note for is that during the time in which the idea of information Management Program evolved in to a well structured program, all decisions were made collaboratively. Besides, acting as a team in the department prevented competitive efforts and questions like "that made this decision?" was regarded strangely.

The most important difference of the Information Management Associate Degree Program is that all the works done are on a virtual company. This application gives

learners a chance to apply their learning on a simulated real life example and provide permanent learning experiences to the learners. It is well known that such real life exercises provide richer learning outcomes. It is also well known that developing such real life examples and simulations is a hard job to do. This hard job was realized in the Computer Assisted Instruction Department in a very short time along with many other projects. The most important factor that is required for the development of a project is that the required efforts for such a project were shared among the department staff.

Although the program activities are based on a virtual company, the program has many other sound characteristics. On every course each first year student is given 5 assignments and these assignments are evaluated seriously. At the end each learner is given appropriate, elaborative feedback. Also, learners feel free in terms of time and space having the ease of reaching materials and advisors outside the working hours as well as reaching classmates anytime anywhere at their own ease. This helped the program overcome the possible routine problems encountered in traditional learning environments.

Experts in the department, starting from the first year, had a chance to communicate to the learners face-to-face during the exam periods (4) of Open Education Faculty and thus they had a chance to get feedback from learners about the system. In fact, student assignments, advisor observations, and internet based communication provided the program with important feedback so far. But face-to-face communication with students during the exams provided valuable feedback which in no other case would have been provided. Efforts related to this are still continuing.

As a result of the observations for two years, during the second year, student assignments were decided to be a team work rather than being individual responsibility. Thus it was planned that a gap that is characteristic to distance learning was to be filled. During the second year of the program, learners take courses like Organizational Information Management, Planning and Control Tools, Internet Information Systems, Data Base Management Systems, Advertising and Marketing Tools, Graphics Applications, and Office Applications Development besides their higher education compulsory courses. For each of these courses learners are to complete 5 assignments.

In both first and second year courses, learners are provided with video cds and textbooks as well as internet-based instructional materials. Textbooks are provided by Microsoft Turkey, but all of the other materials are produced, reproduced and distributed by the department. For the distribution process the faculty's logistics are used.

Upon completion of the first year activities, second year's materials and activities were also started to be designed. Feedback provided till then was used in designing new materials. For example, it was decided at the end of feedback analysis that the assignments on virtual company should be related to each other in a complementary manner.

## **EVALUATION**

Computer Assisted Instruction Department of Anadolu University is one of the rare learning organizations in all around the world. In fact, the department must be very similar to those organizations that experts like Argyris and Senge were thinking while they were developing learning organizations theory. Hence, having a difference from efforts to overcome problems and to reach a better functioning organization structure at the present organizations, the department provides valuable information about the possibility of learning organizations.

**It should be better stressed that while no other formal organizations met the requirements, the department had experienced changes in the personnel number changing from 8 to 200 from time to time and had got help from other faculties when necessary to direct 500 people to the same target, and had done all of these without an organization diagram and job descriptions.**

**Also, a limited number of people who were educated ordinarily and had not much experience in the area were able to realize quality works in nation wide in a short time when there was not enough know-how in the field. To better understand the importance of the works of the department, one should note that same projects in all around the world are done with many experienced and qualified personnel in longer periods of time. Excluding the option that such people with very special characteristics came together accidentally we can infer that this is a result of the organization style of the department.**

**Computer Assisted Instruction Department, on the other hand, served to the field by producing knowledge and experience which the country did not have beforehand and thus determined norms almost every phase. In other words the department in its 15 year history has become an organization that feeds outside environment rather than being an organization that was fed by outsiders.**

**For these reasons, if we evaluate the Computer Assisted Instruction Department as a learning organization, we can easily say that it is more efficient and successful comparing to traditional organization structure of the learning organizations. Especially, in a changing and wavy atmosphere of a new developing field, it is maybe the most important strength of the department that it could use the energy that environment produced to develop itself.**

**We now can take a look at the appropriateness of the structural characteristics of the department to the characteristics expected in learning organizations determined by experts like Argyris and Senge. At this point, it is necessary to review five factors determined as characteristics of learning organizations (5-6): Individual competence, intellectual models, shared vision, and learning as teams, and system thought.**

**In terms of individual competence in the department, this concept should be handled somehow differently. Almost everybody among the personnel is not graduated from a well-known school in Turkey. It can not be said that they were graduated from top schools at the university as well. They are also not that bright students graduated with degrees from their schools. Roughly, any institution that is to establish distance learning program today could hardly choose the present Computer Assisted Instruction Department personnel. But the value of the projects they developed, the quality of the papers and articles they presented at scientific platforms and knowledge they possess when talked to show that each of the personnel is competent about the use of computers as an instructional tool.**

**Senge indicates a correlation between individual competence and "learning effort" (7). At this point, department personnel are in a continuous learning process. Everyone working at the department has a natural motivation in order for following the developments in relation to the department operations. During the in-service training activities for 15 days every year, department staff helps each other's learning. But more surprisingly, almost everyone in the department can start making use of one another's learning in a short time. Thus, in spite of rapid technological changes, they were able to remain up-to-date as a whole.**

**According to what one of the staff told and what many of the others remembered at the same time, during the first year while they were attending to a meeting, one of**

them disagrees with another one saying "nonsense" to his opinion. One of the formers of the department disapproves his behavior and says: "It is free to speak nonsense here, but it is forbidden to say "nonsense" to anyone else." We can see even today that department personnel have conserved their intellectual flexibilities upon having grown in such a culture since the beginning.

At this point it can be said that intellectual patterns and assumptions Senge talks about (8) are not effective on the Computer Assisted Instruction Department. Hence, intellectual models discipline can be told to exist at the department.

In the process Information Management Associate Degree Program was designed and implemented, a lady from the core team of the department stayed away for a while from the works upon having a baby. When she returned to department later on, she adapted herself easily in to a project that was just started. There are so many other values in the department that the staff has been sharing and the existence of such values helped that lady to participate in Information Management program easily.

When any new project is in question, the staff takes expectations and needs of those in the project into consideration. According to traditional organization structure understanding, the work that the organization is going to do is determined beforehand. Whether it is a service or product, the production characteristics are determined by experts.

Tasks and steps to be taken in the process and individual responsibilities are determined explicitly in advance. Thus, everyone in the traditional organizations performs tasks and responsibilities determined by some other people according to a plan and they take their positions in the project according to this plan. On the contrary, in the Computer Assisted Instruction Department, everyone takes positions in coherence with each other with no other effects. Everyone tries to fill one another's gap and to fulfill the shared standards on the quality of the product. In other words, all processes of the department are "implicit" processes.

From this perspective, it can be said that there is a common point between the shared vision of the department and the learning as a team. Human brain is also consists of neurons which have no explicit plans and each taking positions according to others. Accumulation of the implicit relations among neurons by time means the whole brain learning. And this learning is the department's whole learning rather than people learning individually in the department.

It can be said that the Computer Assisted Instruction Department is not one that evolved to be a "learning organization" by time but rather it was established to be a learning organization with its formation and functions from the beginning.

The most important structural difference that makes the department a learning organization is the fact that it was structured to function by "implicit" relations among staff rather than explicit plans.

This helped the department have a shared vision in a short time, learn together, produce individual competences from shared learning and other synergic effects, change its environment and collect feedback from this environment, and change itself to new developments.

When compared to its equivalents in the world, Computer Assisted Instruction Department can be seen as a necessity at least for some sectors taking into consideration that it was able to realize productions, to help the field with its know-how and to develop standards with a limited budget and personnel.

## CONCLUSION

This study intended to investigate success and sustainability of an online learning program (the IMP) by using Senge's disciplines as predictors for having learning organization characteristics. A series of semi-structured interviews with program administrators and staff as well as observations were held in October 2004 to gather data. According to the analyses conducted in November, it can be concluded that the IMP have had a long way for being a learning organization in terms of staffing and organization structure.

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### Footnotes

1. This particular attempt happened in my office. I witnessed the most amount of the history here in this part. Also, I did interviews recently with related people in order to prepare this paper. As a resource to the summarized history in this part following address can be visited: <http://www.bdeb.aof.edu.tr/bde/index.html>

2. In order for diplomas can be valid in Turkey, exams must be given face-to-face. For this reason Open Education Faculty holds three exams for each academic year throughout Turkey.

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