Integrating Technologies into Teaching and Learning

The use of technology in teaching was significantly expanded again this year. Fifty-two courses made use of a variety of technologies for synchronous teaching: video-conferencing, *Ofek*, and InterWise. The growing number of courses using *Ofek* technology required a fourth *Ofek* studio, and the *Ofek* system will now be able handle 60 courses each semester.

Some courses are taught entirely via *Ofek* or video-conferencing, while others incorporate technologies as an alternative to tutorial sessions. This is particularly suitable for students who wish to study at home or for those who reside in peripheral areas. The system also answers the needs of students in whose study center a study group was not opened. This year, *Ofek* classrooms in the study centers were closed, and the *Ofek* sessions are broadcast directly to the Internet and to students' personal computers.

Forum of Departmental Technology Coordinators

A forum of departmental technology coordinators was established to enable cooperation between the university bodies that develop technological teaching aids, and the course coordinators who use them. The forum helps the departments and course coordinators to implement the technological processes and deals with various issues: developing a training course in technologies for new course coordinators; planning for posting course booklets on course websites; computerizing the assignment of tutors and tutorial schedules; using the new question bank ("*matmon*"); creating a university-wide pool of seminar papers.

Training Teaching Teams

In 2007, we held workshops for training teaching teams the various technologies they need in their work. For new course coordinators, the workshop dealt with computerizing courses, setting up a course website and practicing cooperative learning in a Wiki environment. There was also a workshop for all course coordinators who use websites, which focused on reorganizing websites due to upgrading of the OPUS learning environment. About 130 coordinators participated in 15 sessions.

Pe'er – "Opening the Treasures of the Mind"

http://ocw.openu.ac.il/

Through the *Pe'er* project, the OUI offers the general public access to study materials in electronic format. Most of the electronic books also include a full audio version narrated by professional narrators. Users can listen to the books through the Internet or download them to their personal computers and listen to them on mobile players. Some courses include video lectures by the authors or experts in the field, filmed at the OUI studios.

The *Pe'er* website also includes online learning aids specifically developed for OUI students and up to now accessible only through course websites. Study items include lesson plans, presentations, glossaries, video lectures, interactive exercises and other learning aids.

The *Pe'er* project is based on the OPUS learning environment, to which applications and targeted improvements were added, for example, allowing course coordinators to label teaching materials according to international standards. This will enable us, in the future, to integrate these materials into international databases.

By early October, 4,850 users had visited the *Pe'er* site. (Users must register for system identification purposes; however, access is open to everyone free of charge.) 4,728 items from 99 Open University courses have been made available through the *Pe'er* website. To date, e-textbooks from 16 courses and audio books from 6 courses have been posted. In the coming year, textbooks from 20 additional courses will be added.

The OPUS Learning Environment

Teaching teams and students use the OPUS learning environment as an inseparable part of distance teaching and learning. The environment was upgraded and changed this year in order to answer the needs of the *Pe'er* project and those of students and staff. The system was divided into three parts: Forums, teaching materials for students, and materials for *Pe'er*. All the materials on the course websites are now available to students from a single menu.

Teaching teams can combine materials from different sources (such as the glossary, multiple-choice questions, explanatory pages, etc.) into one framework; for example, a specific topic covered in the course.

In a typical month, between 16 June and 16 July 2008, course websites were entered 360,000 times. Visitors used or viewed about 150,000 different Internet pages. The total number of hits (pageviews) on course websites was 5.5 million.

Activity in the *Ofek* studios

Ofek studios and video-conference classrooms are used to transmit tens of tutorial sessions in various courses, to record learning materials (short focused clips, expert lectures integrated into course websites, as well the development of entire video courses transmitted via the course websites), and occasionally for administrative tasks. This year the studios were also used for experiments aimed at increasing the scope of synchronous and asynchronous teaching, and of the tools available to teaching teams.

During the year, about 40 tutorials and various lessons were filmed, tens of symposia were prepared for broadcast, and five courses based on filmed lectures were prepared ("Data Mining," "A History of Western Music," "Price Theory," "Consolidated Financial Statements" and "Intermediate Financial Accounting").

Multimedia Courseware

In the area of courseware, most of the effort this year focused on savings, by converting existing courseware on CDs to online versions that can be viewed over the Internet. In this way, only students without access to the Internet are sent a CD. New units were added to courseware for two courses, "General Biology I" and "Financial Theory: Financial Management of Business Firms."

Collaborative Online Assignments

A Collaborative Online Assignment (COA – *mamash*) is a new kind of assignment currently offered in a limited number of OUI courses. It is a cooperative Internet assignment for a group of students using a shared technological tool. Most such assignments are performed in a Wiki environment and others are implemented through blogs, forums or shared Excel worksheets.

Guidelines were formulated for COAs, specifying, among other things, that the number of assignments in a course will not change and that the weight of these assignments will not exceed 50% of the final course grade. Furthermore, COAs may be mandatory or optional assignments, at the discretion of the course coordinator, and in special cases, the coordinator can offer an alternative assignment to a student unable to submit a COA. Guidelines were also issued concerning evaluating students and compensation for checking assignments. COAs were offered in 27 courses.

The Online Assignment System

The Online Assignment System was expanded and changed from a system that only transmits files to a system that enables academic monitoring of grades. Features added include a comprehensive and accessible database of exam and assignment grades in study groups, including statistical data by various cross-sections. The information is available to tutors for all their study groups, and they can now also enter and update all assignment grades, irrespective of mode of submission (online or by mail), through the system.

Assignment and Exam Management – The *Matmon* System

The *matmon* system was developed to improve the development and checking of assignments and exams. The first version of the system was installed in several academic departments and its integration is accompanied by training and an active forum.

The system helps the teaching staff to develop and assess exams and assignments, and enables the creation of an exam and assignment database as well as an item bank for each course. The database enables easy and efficient retrieval by characteristics, and serves as an archive. It includes statistical data on exams over the past ten years

and exams from the last three years. Designed with an advanced and user-friendly interface, the system includes a security mechanism that provides access only to course coordinators for their own courses.

Testing New Technologies

Podcast

The podcast system is used to distribute audio and video files directly to users in a format that enables them to view and listen using a variety of mobile devices. The OUI conducted an experiment in the use of podcasts for teaching and learning purposes, focusing on two target audiences: enrichment for the general public (short lectures by the teaching staff in their area of expertise); for academic courses (enrichment material, weekly focus on topics, documenting tutorials, etc.).

Synchronous Technologies

Use of new tools for web conferencing: A trial was conducted using WebEx as a substitute for the InterWise system currently used by the OUI, with very favorable results.

Transmitting videoconference sessions "from anywhere" using a Tablet PC: This synchronous technology is based on a computer with all functions necessary to transmit a lesson. This year the technology was used to transmit an OUI seminar given by a lecturer at Haifa University to a videoconference class of students on the Beer Sheva campus. In another course, a single lesson was transmitted at the beginning of the year from Columbia University by a lecturer currently studying there.

Expanding the Use of Support Technologies for Students with Learning Disabilities

As in past years, the OUI conducted training workshops in the use of support technologies for students with learning disabilities. WebEx software was successfully tested to provide distance tutoring to students with learning disabilities in the periphery, in the course "Introduction to Statistics for Students of Social Sciences I."

Website of the Center for Students with Learning Disabilities

A dedicated website for OUI students with learning disabilities was launched this year. The website also serves individuals interested in learning disabilities. It contains updated information about learning disabilities, details of services offered by the OUI Center for Students with Learning Disabilities including contact information, as well as a discussion group for students using the services of the Center.

Certificate of Merit Awarded to the Open University

Certificates of merit were awarded at the national recognition conference of *ThePeople* (part of the "People and Computers" group) to companies and organizations, whose information systems provide a critical infrastructure for the organization's operation and outstanding performance in its field. The Open University received a merit award in the field of education for providing access to academic education through advanced information technologies.