

# The Digital Open University: Four Decades at the Forefront of Teaching and Learning Technology<sup>i</sup>

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Since its foundation, the [Open University](#) has taken steps to maintain its status as a unique, leading institution in the development of contents and methods for distance learning and teaching. Indeed, even in a world in which everyone employs technology in order to reach students wherever they are, the Open University continues to leverage its singularity. In an attempt to understand how this is done, we spoke with key figures at the University in the field of digital technology and innovation.

## How it all began

"The central idea behind the establishment of the Open University in England, as in other countries including Israel, was to harness the most advanced technologies for the benefit of teaching and learning," relates [Prof. Sarah Guri-Rosenblit](#), Dean of Development and Learning Technologies. "In the 1960s and 1970s, the technologies were mass communications media – television and radio – and we developed courses in which a daily radio and television slot was aired incorporating interviews with leading experts in the field."

## Running to Stay in Place

No organization can permit itself to avoid change, was the view of [Prof. Yoram Eshet-Alkalai](#), Head of the M.A. Program in Education: Technologies and Learning Systems and founder of The Research Center for Innovation in Learning Technologies. Paradoxically, the technologies change so rapidly that continuous changes are essential just to maintain the University's present position. As the Red Queen in Alice in Wonderland put it: "It takes all the running you can do, to keep in the same place." **Dr. Ina Blau**, Senior Lecturer in the Department of Education and Psychology and Board Member of the Research Center for Innovation in Learning Technologies explains that the Open University has always been innovative in the development of quality textbooks and in distance learning for students all over Israel

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and abroad. Indeed, the technology makes it possible to leverage this unique quality by developing digital books, interactive curricula and advanced e-teaching systems for distance learning that connect a lecturer to students wherever they are. The great challenge is to choose the appropriate technology and to use it effectively to advance teaching-learning processes in digital environments. [Prof. Nitza Geri](#), Head of the Research Center for Innovation in Learning Technologies, emphasizes the importance of research in the field and states that appropriate integration of technology in teaching and learning necessitates research and evaluation which indeed is the goal of the [Research Center for Innovation in Learning Technologies](#) – a lab for interdisciplinary collaboration for 50 scholars from diverse fields of knowledge. The Center conducts various academic activities: research seminars, symposia and conferences. For more than a decade the Center has organized the Chais Conference for the Study of Innovation and Learning Technologies that serves as a meeting place in which hundreds of the leading scholars and development professionals in the field of innovation and educational technologies in Israel exhibit their research.

### **Innovation in Practice**

The [Shoham Center](#) for Technology in Distance Education, established within the Open University some twenty years ago, plays a leading role in developing and integrating smart pedagogical solutions and training teaching staff in the use of innovative technologies. According to [Edna Tal-Elhasid](#), Head of the Shoham Center, technology is incorporated into teaching across the board in all courses of the Open University without exception. The goal is to turn the learning of geographically dispersed students into a quality experience that is effective and enjoyable. Integrating technologies does not only change the learning experience but also the role of the lecturers who become on-line facilitators. This process links the lecturers more closely with the students and forms ongoing, unmediated connections between them and their students. The variety of tools that the Shoham Center uses allows the students to receive feedback and study guidance continuously, while the lecturers are assisted by the analysis of student activity on the course sites for improving teaching. [Dr. Yoram Kalman](#), Senior Lecturer in the Department of Management and Economics and Board Member of The Research Center for Innovation in Learning Technologies and a leading proponent of technology-enhanced projects at the

University, maintains that he has no doubt that the Open University with the Shoham Center is a leader in the field, "I have seen centers focusing on educational technologies in many locations in Israel and abroad, and I have no hesitation in stating that the knowledge that has been developed and crystallized in the Shoham Center is at the cutting edge, from an international perspective too."

### **One video is worth a thousand words**

The Open University's worldview advocates the principle that a teaching method should not be restricted in time and place – that it should embrace a variety of distance teaching-learning systems. For example, over the last few years, the sphere of recorded lectures has been developed. At present, in dozens of courses in a variety of fields of knowledge, students are offered course contents based on video lectures or on filmed dialogues between experts. **Prof. Guri-Rosenblit** explains that the filmed materials are up to date and contain documentation on the best experts at the University and elsewhere; hence, in certain cases, they can substitute for entire textbooks or chapters in them. She adds that the video enriches the student's experience, especially when it is accompanied by digital study materials such as simulations of human physiology, virtual lab for the study of chemistry or special under-water videos for the study of oceanography.

In discussing her research on video learning, **Prof. Nitza Geri** asserts that video can be interactive and of a high standard but must be judiciously integrated, and under no circumstances should entire video lectures be introduced as is. "I began by studying learning by means of video seven years ago, and some of my conclusions are that use should be made of short segments and that passive viewing of videos should be turned into active and interactive learning. Research and technological development enrich each other and Shoham is already implementing the insights deriving from this research by creating short, interactive video segments with added graphics that enrich the learning experience and allow feedback in real time." **Tal-Elhasid** adds that the video player developed at Shoham allows the student to watch the film at different speeds, and, in the near future, advanced features will be added that prompt active learning. For example, the ability to add bookmarks and notes will permit the creation of a kind of personal summary of the video from among the segments selected by the student, the creation of a personal playlist, and so on.

## **The Windows of the Virtual Classroom are Open to the Future**

This paraphrase of a poem by Yehuda Amichai reflects a situation in which, each semester, over 3000 online lessons are taught in real time in hundreds of courses for Bachelor's and Master's Degrees. Online lessons are broadcast in real time to students' computers, tablets and smartphones all over Israel and around the world, as an alternative to or in addition to class meetings. The lessons are recorded and are available for repeat viewing for the benefit of those that did not take part in the live meeting. **Tal-Elhasid** adds that lecturers may teach an online lesson from the Shoham studios, from the classroom, and from home by means of the Zoom videoconferencing platform. The system transmits high quality two-way video that promotes teaching-learning interactions similar to the interactions in a face-to-face classroom. The Open University has nine video studios, a number that has no parallel in any academic institution in Israel, and they are in use throughout most of the day, six days a week. As she puts it, "This is comparable to the best available internationally! The studios are equipped with teaching posts for self-operating by the lecturers, just like a cockpit with huge digital screens and a control panel, allowing for a variety of options. The lecturer is also the film director, and at any given moment he selects what the students will see, whether it be a tangible object, a diagram on a smart board, the students' gallery of screens, or only video of the student who is asking the question. Recently, a new model has been installed that integrates face-to-face learning in the classroom with the remote students at home. Of course, the lecturers receive technological support and pedagogical training in all these models."

## **Flexible Learning**

The studying at the Open University is flexible, as distinct from the "one size fits all" principle, explains **Dr. Kalman**. In other words, it is suited for the various constraints facing the student. A large part of this flexibility can be attributed to technology. For example, if it is difficult for a person to study continuously for two hours, the student can watch the video lecture or the film of the live lesson for 20 minutes and take a break. Because of learning disabilities, or because a student's mother tongue is not Hebrew, the student may prefer to study through listening instead of reading; he has audio textbooks, read by professional narrators, at his disposal in some of the courses. A digital version of the textbooks that can be downloaded for personal use is also

available for more than 150 courses. **Dr. Kalman** relates how he developed a course on managing technology and innovation in which the challenge was to design a live, interactive digital version that would be fast and easy to update, particularly because the course focuses on an innovative topic which changes continuously. Nevertheless, it was important for there to be a printed version because this is a compulsory course for the Bachelor's Degree and it does not suit everyone's learning style to study from a digital book. The solution was to develop absolutely identical two versions – digital and printed; the printed version incorporated QR codes that can be scanned by mobile phones, thus facilitating access to digital contents and examples from the e-book.

### **Open and Free Learning**

The extent to which the University is an active partner in the initiative of ensuring that the general public has access to experts and knowledge is demonstrated by the following projects. Under the auspices of the [Peer Project](#) – Opening up Intellectual Resources – the public has been given free and full access to digital and audio books in 120 courses in various fields of knowledge. In the framework of the world movement towards MOOCs – massive open online courses – the University has produced five [MOOCs](#) in four languages: Hebrew, English, Russian and Arabic. The courses are intended for personal study at the learner's pace of progress and include lectures, exercises, and links to digital textbooks. They have aroused much interest in Israel and abroad, including among learners in Arab countries with which Israel has no diplomatic relations. At the initiative of, and with funding from, the Committee on Planning and Budgeting of the Council on Higher Education, the Open University developed a series of online courses on [Academic English](#). The website is open to all free of charge and contains materials for learning English for academic purposes on four levels. During the summer, a variety of exercises will be added to those lectures already available to the general public together with the option of receiving personal feedback on the pace of progress in learning.

### **Experiencing Learning in the Information Society**

The future holds many promises but also some challenges. **Prof. Guri-Rosenblit** argues that technology provides a golden opportunity to enrich teaching and learning. However, the learner as well as the teacher must know how to use the new digital tools in the best way. In an era when the flood of information is overwhelming, the

challenge is to distinguish between what is essential and what detracts from the essential, and not to be thrust into a situation in which "getting information from the Internet is like getting a glass of water from the Niagara Falls," as Sir Arthur Clarke put it. Indeed, one of the basic assumptions today is that the Y-Generation, which makes up a substantial part of our students, knows how to do amazing things with digital technology, but they do not necessarily know how to study with these technologies. "We invite students to grapple with the challenges of technology so as to allow them to develop 'digital wisdom,'" explains [Dr. Tamar Shamir-Inbal](#), a member of the teaching faculty for the Master's Program in Learning Technologies and Systems. "In our Master's program we do not teach the technology but we teach **by means of** the technology, thereby imparting a collaborative learning experience, learning in virtual teams and designing digital artifacts. These are the critical skills for lifelong learning and for the workplace. In a course of study dealing with learning in the technological era, we experience the learning in the information society in practice. The students are not 'learning to swim by correspondence' but rather are 'diving into the water.'" The community of learners and the use of social networks (Google+ and WhatsApp) stimulate reflection on the learning process throughout the course. The learning community is part of the rationale for experiencing collaborative learning, dialogical thinking and peer support. Sometimes this is perceived as a burden and a challenge, but on completion of the degree, students mention these competences as advantages, as added value for their personal and professional lives.

"We know that for a high standard of learning, the learner must be active," remarks **Prof. Eshet-Alkalai**. As a matter of fact, the Open University has always taught in the style referred to today as the "flipped classroom" in which new learning contents are studied alone at home and then are discussed in the classroom. This is a learning process that requires self-discipline and active participation, which is somewhat opposed to student nature. Today digital technologies support these processes. "For example," says **Dr. Blau**, "in a study investigating distance teaching through the Zoom videoconferencing platform, we found that in online lessons much emphasis was placed on active learning and productive dialogue among students. In some cases, the students were given control of the smart digital board and really led the lesson, presenting insights and the outcomes of their studies to their classmates, and conducted the discussion. We saw how, in practice, the best way to learn is to teach."

**Dr. Shamir-Inbal** describes how the students in her class do not only absorb learning content from textbooks. They actually edit and update the course content and write comments in the digital textbook– they are active partners in the design of learning materials; some of their contributions become an integral part of the course.

**Prof. Eshet-Alkalai** points out that the basic assumption in permitting a digital textbook and course content to be continually updated by students is that the material is in a state of constant flux, and is not a fixed and complete product. It may be inconsistent with human nature and the nature of organizations which try to preserve the status quo and strive for industrial peace, but digital technologies arouse functional noise. "In the innovative courses we orchestrate a learning experience that can be compared to that of a drummer marching to his own special beat that adds a novel, important sound to the orchestral harmony. Every organization requires a unique innovative voice that technology makes possible."