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## **A COMPARISON OF THREE OPEN UNIVERSITIES AND THEIR ACCEPTANCE OF TECHNOLOGY ENHANCED LEARNING**

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### **Summary**

*We compare three open universities the Open Universities in the UK (OUUK), the Netherlands (OUNL) and Japan (OUJ). Originating in the modern idea of an Open University each university has developed its own pedagogical model. The OUUK developed Supported Open Learning based on: 1. Distance open learning: allowing 'learning in your own time' working on set activities and assignments. 2. Quality resources: printed materials, set books, audio and video and home experiments. 3. Systematic support: provided by course tutors, a regional network of centers, central library and technical support. The OUNL offers 'supported independent open learning'. Students study at their own time, pace and place. There are no semesters, academic years or student cohorts. Courses are small and most support is built into the materials. OUJ has used television and radio broadcasting for instruction. In addition OUJ uses textbooks, guidance by correspondence, and classes at one of 50 local study centres. Tutor support is not part of the pedagogic model though individualized tutorials are given at the final stage of the student's course of study.*

*Having describe and compare these we examine how these models have responded to the emergence of Internet technologies including Web 2.0 and national circumstances.*

### **Introduction**

In this paper we compare the development of three Open Universities and their responses to the rise of Internet technologies, the Open Universities in the UK (OUUK), the Netherlands (OUNL) and Japan (OUJ). The universities have a common origin in the idea of an Open University but each university has developed its own perspective on the pedagogical model applicable in terms of national policy regulatory regimes and conditions. We describe and compare these pedagogical models and examine how these models have responded to the emergence of Internet technologies including Web 2.0 and national circumstances.

There is no single satisfactory definition of what amounts to an open university (Tait 2008). Tait argues that an open university is not fixed but it has a stability derived from its aims and that "what remains constant is the development function, and I suggest that it is helpful to define the purposes of an open university in this way." (Tait 2008, p93). From this point of

view open universities are political institutions concerned with broad issues that the higher education system cannot or will not deal with; such as building capacity, individual opportunity and social justice; encouraging change in the higher education system and nation-building. If these are the broad aims then each particular Open University also has its own mission related to the local political and social context in which it works.

The OUUK from its foundation in 1969 allowed open access to undergraduate degree courses and does not require formal qualifications. Students are generally over 18 years of age but since 2006 Age Discrimination legislation allows access to students over 16. Most OUUK courses can be taken by students in the British Isles and the European Union with a more limited range of courses available worldwide. All teaching is in the English language. OUUK has a full postgraduate program with Masters degrees, research training, PhDs and professional doctorates such as the EdD. The OUUK is also research active and ranks in the top 50 UK research universities.

The OUNL was founded in 1984 has open access, provides facilities for lifelong learners and has no requirement for formal qualifications to enter the undergraduate degree program. Provision is primarily focused on Dutch language education, although some courses are in English. Students at OUNL should be at least 18. OUNL education is at a distance and not bound to place or to time and pace. As with OUUK the university provides second chance education and the student population consists of mainly adult students, studying alongside work and private obligations. The university has 12 study centres in the Netherlands and 6 in Belgium, with 3 additional support centres in the Netherlands. Degrees accredited at the OUNL are at Bachelors and Masters levels.

Also founded in 1984 OUJ has a form of open access but the undergraduate degree is only open to those who have graduated from high school and have the basic qualification to enter university. If an applicant does not have the basic qualifications and is over 15 years of age, he/she can take non-degree courses and enroll in a degree program after completing 16 credits. The OUJ exists to provide life-long learning rather than to serve as a professional training institution. At an undergraduate level, there is only one school which is the School of Liberal Arts. All courses are taught in Japanese. About 70% of the courses are taught by the faculty members of OUJ and the rest are taught by adjunct faculty from other universities. Currently OUJ has Bachelors and Masters programs, but is developing its own doctoral programs.

### ***Three Pedagogic Models***

The OUUK developed Supported Open Learning (SOL) based on three key factors.

1. Distance or Open Learning
  - a. Learning 'in your own time'
  - b. Reading, undertaking set activities and assignments
  - c. Possibly working with others
2. Resources
  - a. Printed course materials, set books, audio and video cassettes, CD/DVD materials, home experiments, course and program web sites (previously broadcast TV programs)
3. Systematic support
  - a. A course tutor, a regional network of 13 centres, central library and technical support
  - b. Tutorial held within regions, day schools and online (e.g. languages, summer schools)

A review of Supported Open Learning (SOL) in 2004 summarised the state of the practice as iconic but noted that the “conceptions of SOL have to some degree departed from practice.” (Swann 2004)

The course team is the basic unit for the design of OUUK courses and they write course materials, devise activities and coordinate with central services. The course team set out activities, typically specified in a ‘Course Guide’, which explain how the student is expected to study and provides a timetable. The student’s progress together as a cohort and the timetable is enforced through continuous assessment deadlines. Associate Lecturers, employed on part-time contracts, maintain day-to-day contact with students. There are face to face tutorial and residential components on some courses. Typical tutor groups would involve approximately 20 students assigned to an Associate Lecturer. The OUUK separates teaching into a number of separate functions. Course production involving the design of a course or program, the preparation of resources and media for presentation is done centrally whereas day to day contact and tutoring is provided locally through regional centres and Associate Lecturers.

Students at the Open University of the Netherlands (OUNL) study at their own time, place and pace. There is no academic year, and students can start, stop and pick up their study where they left off. The pedagogical model is independent, active learning and the course materials are designed to support this kind of learning. Programs are completely modular. The course is the core ‘building block’ within the curriculum and when they finish all courses within one program, they receive either their Bachelor or Master title. Courses are primarily print-based: course books, study guides and textbooks form the centre complemented sometimes by video, audio or multimedia programs. Television broadcasts were briefly introduced at the inception of the OUNL, but this was replaced by videotapes and DVDs because it interfered with the ability to study free of time and pace.

Most courses are developed in a multidisciplinary team and delivered by means of a centrally organized infrastructure. The OUNL has its own production and distribution facilities (Kirschner et.al 2002). Pedagogical support is built into the materials as much as this is possible. The university offers students exercises, questions, tests and (automated) feedback in the study guides. The course materials challenge students to study actively and students have to regularly write papers, carry out projects and do (mini-)research. If students encounter problems they can contact their course tutor via mail, phone or an online discussion forum. The OUNL has study centres where students can get study advice and support. The study centres are also used for face-to-face meetings with tutors and for writing exams. In a limited number of courses there are face-to-face tutorials in study centres, for example, on foundation and skills training courses. Face-to-face tutorials are an issue because they interfere with freedom of time, place and pace, however they also contribute to the social and motivational part of learning.

To ensure freedom of pace assessments also need to be flexible. For the majority of courses students can take an exam whenever they are ready and for half of its courses OUNL has developed a computerised system which generates a personal multiple choice exam from an itembank (SYS-examination). Students can make an appointment these exams at a study centre of their choice and on courses with oral exams or written assignments students can also decide when to be assessed. A limited number of courses offered by OUNL have group exams held three times a year.

The OUJ has used television and radio broadcasting for instruction since its inception. Education through the medium of television was already familiar to most Japanese people even before OUJ started because the Japan Broadcasting Company (NHK) had offered its second channel solely for educational purposes. The NHK educational channel offered programs for children and mothers, school use, adult viewers and lifelong learning.

According to Abe (1989), this educational channel had contributed to "establishing among the Japanese the custom of learning by television" (p. 9). During the 15 weeks of each semester, 45-minute lectures are broadcast once a week for a two-credit course and twice a week for a four-credit course. Broadcasting is via commercial satellite, analog terrestrial UHF, digital terrestrial and cable television channels. A significant percentage of lectures are still broadcast over radio and radio lectures can be listened to online. Besides broadcast lectures OUJ uses textbooks, guidance by correspondence, and classes taught at a set of learning centres. All the broadcast lectures are accompanied by textbooks which are sent to students in advance. A textbook for a two-credit course is about 100 pages long.

Individual academic tend to be responsible for developing and producing courseware, including writing textbooks. The individual academic is also responsible for delivering the course and marking and grading tests or papers. Tutor supports, is not part of the pedagogic model of OUJ though individualized tutorials are given at the final stage of the student's course of study. Currently there are 50 learning centers throughout Japan where direct personal contact between the instructors and students are made possible. Students have to complete at least 20 credits of classes at study centers in order to graduate. There are usually 10 classes per course per semester, each of which lasts for two hours and 15 minutes. Students need to attend at least five of these to receive one credit for the course.

The OUJ follows the regular academic calendar and students can enter the program twice a year: April or October, and can graduate twice a year; March or September. As the main mode of instructional delivery is still broadcasting and because attendance at study centers is still mandatory, those who reside outside Japan cannot become a student of OUJ. During a course, typically a student will be given assignments and submit those assignments through postal mail. Graded assignments are returned by postal mail and completion of all the assignments is a requirement for a student to take a final exam. Final exams are usually conducted at the learning centers. Group assignments are rare, but in some face-to-face classes, an instructor may give group assignments. Correspondence between students and teachers are still done mostly through postal mail though an increasing number of instructors use email.

### ***Network and Digital Technologies***

Mason and Kaye (1990) argued that the distinctions between distance and mainstream place based education were blurring with the introduction of Internet communication. The convergence hypothesis suggests that we can divide the models for open universities into two crude periods:

1. An initial industrial/broadcast model. Based on TV and radio and largely print based content worked on by individual students.
2. A second wave CMC based model that added online interactivity, group work and collaboration to the previous mix.

This second model did not revolutionize the previous model; rather the Internet added a new dimension of online interaction. For example in the OUUK:

The roots of this approach [SOL] are in the use of high-quality media in print, audio, video and broadcast television with students offered tutor support through day-schools, telephone and formative commenting on assessments. However, the Open University is now one of the largest providers of online education with over 200,000 learners online and single presentations of online courses that have exceeded 10,000 enrolments. This change in focus has been accompanied by adjustments in the models for participation in courses and in approaches to production. (McAndrew and Weller 2005, p281)

A question facing the open universities now is whether Web 2.0 technologies will require another step change and if this change will be more fundamental.

The OUUK and the OUNL have both begun to move to a more fully integrated online infrastructure. The OUUK has recently completed the move to a new platform the Open University Virtual Learning Environment (Sclater 2008, Jones 2008). This platform, based on Moodle, is part of a university wide integration of services into a flexible and cost effective Web based system. Reliance on face-to-face interaction has been reduced with, for example, optional synchronous online sessions replacing face-to-face classes in languages. Assessment systems are also being revised with online submission of tutor marked assignments and the development of sophisticated and adaptive computer marked formative and summative assessment.

The OUNL is now in a transition phase going from print-based to web-based materials, although all courses were supported by Studienet from 1997. About 15 % of all courses are completely web-based. The OUNL is currently evolving towards a digital university and it is expected that in a couple of years all courses will be web-based and all services will be available via the web. The prime medium shifts from printed materials to Internet based manuals for delivery of instruction, enabling interactions and up-to-date instructions taking news and topical matters into account, although textbooks remain paper based

The OUJ, on the other hand, remains a broadcast institution and has a special relationship to television and radio. The OUJ also maintains 50 learning centers throughout Japan where direct personal contact between the instructors and students are possible. Two portal systems are being used at OUJ: the Campus Network Homepage for course-related announcements and the System WAKABA for registration and academic records but the active use of digital and network technologies for educational purposes still remains to be seen. Although broadband Internet availability is much higher in Japan than in Europe the use of Internet technologies in distance education is underdeveloped.

### **Conclusions**

The suggestion we want to make is that the adoption of Internet and web based technologies is not determined simply by the development and availability of the technologies themselves but is deeply affected by institutionalised pedagogic practices. All three universities are located in advanced industrial countries with good infrastructure. However the use of Internet and web based technologies varies between them in style and quantity.

The OUUK and the OUJ both have restrictions in terms of study times, with student cohorts and in Japan broadcast sessions. The OUJ has restrictions on study place, as the student has to be able to receive the broadcast and access one of the learning centers to complete courses. The OUNL emphasises individual flexible study time more strongly than the other two universities and this is reflected in the kinds of technologies and related methods that the university has adopted. The OUUK and OUNL have central production of courses using course teams, whereas the OUJ relies on the individual lecturer for the content and television production directors for the look and feel of the lectures. This makes the provision at the OUUK and OUNL more reliant on standards that apply across all courses and a centralization of some aspects of the design.

Both the OUUK and the OUNL are also based on active forms of self-study whereas the OUJ system remains focused on a broadcast model and more transmissive pedagogical methods. While broadcast is still a central feature of the OUJ model, television and radio are only used for publicity purposes in the OUNL and the OUUK.

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