Opening the Gate on Learning Pathways
—The Next Frontier in the Open Educational Resource Movement

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The OpenCourseWare (OCW) movement is a step in the development of the larger Open Educational Resources (OER) movement, taking individual learning objects at relatively small levels of “granularity” to learning pathways defined at the “course” level. The movement from open information or content, to open educational materials, to open courses, is already well established. The members of the OpenCourseWare Consortium (OCWC) now can count over 4000 courses available in some form of the “open” format. But courses themselves can be seen as steppingstones on more extensive pathways we label “curricula” or “degrees.” **The creation of open degrees is the next logical step in the OER movement.** This progression is natural as learners and educators around the world seek recognition of the mastery of larger and larger bodies of knowledge beyond the course level. Indeed, the mastery of ever more extensive intellectual domains furthers the unbounded ideal of the Open Knowledge movement which is to make the entire sum of human knowledge available to everyone, everywhere, at any time, for free. We quickly realize that information or content is not knowledge in and of itself. It must be incorporated into human experience through the teaching and learning process. Thus the progression in the OER movement from materials to courses to degrees is one way of viewing human progress toward open knowledge.

As in other aspects of higher education, the technology enabling open degrees prompts an examination of the goals of higher education. What is the purpose of a degree, particularly an undergraduate degree? This question is asked over and over again, at least in American institutions of higher education, as successive faculties and administrators struggle to make sense out of their undergrad curricula, a curricula defined by historical precedent rather than reference to any knowledge base, as confined to about four years of study. In the US, recent developments in national accreditation have forced institutions, schools, colleges, departments to more carefully and fully describe “desired student outcomes.” Within the parameters of a single institution serving a reasonably well-defined student profile, within a particular national context and culture, and created and monitored by a relatively small number of faculty, this new accreditation requirement will be met fairly soon. But now, through the use of new technology and the human response to it, the parameters are expanded and opened. Where will the necessary boundaries be drawn?

There are two traditions in the granting and attaining of degrees, and the choice between these two traditions will condition the structure of open degrees. Higher education in the United States contributed the notion of the student credit hour which became a standard element of the measurement of educational attainment at the degree level. The student credit hour concept grew out of a concern that higher education institutions had about the quality of secondary education, a concern that came to a head at about the turn of the century. College and universities in the US began to specify the extent and duration of the education of students entering higher education from high school and required high schools to conform

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The creation of (open) degrees has some parallels with the creation of (open) courses, but there are some problems with this analogy. It is tempting to view the creation of degrees as the stringing together of courses in such a way that they add up to enough learning to grant a degree. Just as the creation of the course consists of the selection and sequencing of learning objects connected by a narrative thread that creates the context for the course, so the creation of a degree might be seen as the selection and sequencing of (open) courses. The problem with this analogy is the notion of the narrative connecting thread. It is the essence of a degree that the learning experiences that constitute the degree be related in some way to a desired outcome, an outcome which is usually not defined by the mastery of content. Rather, the degree is usually defined by the qualities that are instilled by the learning experience in the learner—critical thinking abilities, being able to learn how to learn and adapt to a changing world, being able to understand and use different ways of knowing. These non-content-specific qualities are usually conveyed in the interstices of the courses and their content, by faculty, and purposeful reinforced by the physical learning environment. It is the “narrative thread” between and through the individual courses which is important in this regard, and that thread and purpose is the responsibility of the faculty operating through an institutional infrastructure that both demands and rewards its successful implementation.

So, while it is tempting to view the 4000 some courses available in an open format as the primary resource for an open degree, we all quickly realize that the degree is more than the sum of its courses. In this conception of a degree, the basic difficulty for us who are striving to create open degrees is the way in which the underlying philosophical purpose of degree education can be expressed and achieved. As we examine this problem we see that underlying purpose is significantly dependent on learner context, that cultural economic, ethnic, religious, and other human variables that condition the learner experience and therefore should influence the teaching. While we might easily imagine a universally appealing degree, achieving it would be very difficult. Defining the target audience narrowly begins to solve this problem at the expense of lower levels of use and impact. Defining the target audience very broadly will decrease the relevancy, appropriateness, and ultimately, the effectiveness of the educational I treatment. Because it is expected that some distant learning method will be used to deliver any open degree (in that openness assumes ease of access) we not only have the appropriate learner context missing in our action, we also have the absence of personal contact among students and teachers in which the context issue could be ameliorated through the creation of a new context. It is an open question whether such a mitigating context could be created in a distance education environment.

So what? Despite these difficulties and even if an open degree was demonstrably much less in quality than most degrees delivered under conventional means, what benefits and objections would remain? If open degrees, even at much lower levels of quality (and I am not arguing that they would have to be lower in quality), could be delivered to those multiple millions of students who can benefit from higher education around the world and in developing countries especially, should lower quality or a markedly different experience of a degree be a deterrent? In the full scheme of things, wouldn’t the world be in a better place if more people were educated?

But there are more problems in creating open degrees than just the moral issues generated by the form and heterogeneous context of higher education. To be truly open, it is generally understood that a degree would also have to be low cost. The lower the cost the more accessible any degree is, especially in the developing countries of the world. While it is a wonderful idea that open courses could lead to open
to the student credit hour measure. This measure quickly spread to higher education as respectable institutions tried to protect themselves from the earliest versions of "diploma mills." The definition of the "student credit hour," or SCH, formed the atomic level of courses and degrees with a general agreement that an undergraduate degree should consist of about 130 SCH. The advantages of this system in the US are clear. This system allows students to "bank" units and, for instance, apply SCH (in the form of quarter for semester units) earned at one institution toward a degree from another institution. The system also facilitated all kinds of comparative cost accounting, student achievement, accreditation reviews, faculty workload assignments, and financial aid calculations. The adoption of a relatively uniform definition of the SCH has undoubtedly led to the benefits of flexibility of US higher education, a flexibility that has wonderful benefits to students and society. On the other hand, there are some significant disadvantages. The SCH is clearly a measure based on "time on task" rather than the attainment of learning outcomes. It dissociation from the ultimate objective of educational treatments is a deficiency that US higher education continues to struggle with today as is evidenced by the previously mentioned emphasis by accreditation agencies on student outcomes.

The alternative tradition of defining degrees might be called the tutorial/testing tradition. In the pure form of this tradition a student does not attend class. Rather, the student's learning is guided by a tutor in a kind of self-study situation and attains a degree when the tutor (and/or a group of faculty) determines that the student has learned enough to deserve a degree, often as a result of some kind of examination. This was an early model used in most European countries. Of course, the pure form of this tradition could not be sustained into modern times and it certainly could not survive the global movement from elite to mass higher education that began just after WWII. In Europe, the substitution for the early tutorial form was the institution of a highly prescribed and rigid set of courses with little room for deviation (electives or changes of majors) by students with periodic academic performance being assessed purely on the basis of performance on examination, either at the end of a course or a semester or even an entire degree. The advantage of this system is that it is based almost entirely on student outcomes (at least as measured by exams) rather than being affected by the surrogate measure of time spent in learning.

There is an interesting interplay between the two systems which the open degree movement can take advantage of. First, the US credit hour system, primarily because of the flexibility it gives students to change institutions and fields of study is or has been widely adopted in other countries. In Europe, the Scandinavian countries were early adopters of the system, as were France and Britain, with Germany and Portugal, partly under the influence of the ERASMUS program, recent converts. This leaves Spain and Italy, the Balkan countries, and most of the countries of the former Soviet Union in the traditional system.

(1) The convergence toward the student credit hour as a unit of measurement toward degrees is countered by practices that echo traditional methods. Dr. Christine Geith provides a very useful list of these methods which are currently in use both in the US and in other countries. (2) This list and an accompanying chart includes the ability of students to gain the equivalent of SCH by "challenging" a particular course (or degree requirement) either by examination or portfolio assessment, and/or the awarding of credit for life experience. Also included is the granting of credit through a certification process (usually a test of some kind) by a third (non-university) party. As these two systems come together, space is opened for the open degree movement, which can take advantage of the variety of forms now available to students seeking degrees.
degrees, the cost of content in higher education is a relatively small part of the total cost of a degree. In fact, in higher education in the developed world, most of the hard content of a course is supplied in material that students purchase in addition to the tuition they pay—in textbooks and course material provided by the book store. The highest costs of degrees are associated with the nimbus of services and infrastructure that support learning, including the services of the instructor, but also including, of course, services such as counseling, grading and student records, enrolling and scheduling. The costs of physical plant or the supporting technological infrastructure, not to mention library services are also high costs of higher education. Thus the ability of the OCWC to influence the actual cost of education through its inventory of open courseware is quite limited.

This analysis leads to several conclusions and predictions. First, the problem of creating a context for an open degree will be solved through a multiplicity of approaches, each designed with a relatively narrowly defined audience as its target. While there may be some very large providers of open degrees, there will also be, as there is now in online instruction, many providers. The open degree industry will remain a cottage industry. Second, significant involvement by forces outside of higher education will need to be brought to bear on the cost issue. Ultimately, governments will need to be involved—no other force has the resources or the institutional will to effect large scale changes in the underlying cost structure of degrees. Second, open degrees many not be the answer at all. The traditional notion of a degree (four years, 130 SCH) may not be the most efficient learning package for large numbers of people in developing countries. Does a food and beverage manager of a major hotel in China need a degree to do her job effectively? Or can she, as a literate person, gain the specific knowledge she needs to do her defined job? While this may be an heretical notion it is not the first time that the idea of the cost of overeducating has been raised, and if ever there was a time when we should address it is now.

The OCWC should actively engage strategic partners in exploring the idea of open degrees at the same time it understands the parameters under which it must operate. The consortium and even its members cannot go it alone in this and must first engage in a number of relatively limited experiments with selected target student audiences and a limited number of institutions to discover that is possible. Much of the fabric of an open degree has been woven. We now need skilled educators to make the clothes to fit and leaders with foresight and imagination to produce the goods at an affordable price.

Notes
