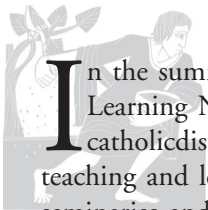


Building an Online Course for the Catholic Distance Learning Network: Teaching Theology and Science in Cyberspace

Sebastian Mahfood, Ph.D. and Michael Hoonhout, Ph.D.



In the summer of 2007, the Catholic Distance Learning Network (CDLN), online at www.catholicdistance.org, offered a course on online teaching and learning to 11 faculty members from eight seminaries and theological institutions. The schools represented in the course (Kenrick-Glennon Seminary in St. Louis, MO; St. Paul School of Divinity in St. Paul, MN; Catholic Theological Union in Chicago, IL; the University of St. Thomas School of Theology at St. Mary's Seminary in Houston, TX; St. Mary Seminary in Cleveland, OH; Holy Apostles College and Seminary in Cromwell, CT; Seminary of the Immaculate Conception in Huntington, NY; and St. Meinrad School of Theology in St. Meinrad, IN) are preparing to offer their first courses to one another's students in the spring and fall of 2008.

The Premise on Which This Online Course Was Built

The courses being developed promote the global vision initiative that drives the network, engaging the areas of evangelization/inculturation, ecumenism/unity, interfaith dialogue, and authentic human relationships. Topics include religious pluralism; the shaping of places for worship; liturgy and the art of ritual; the ethics of power and racial justice; the history, theology, and pastoral applications of the liturgical year; the psalms as Christian prayer; the theology of the priesthood of Jesus Christ in Hebrews; inter-religious dialogue; and the relationship between theology and science. It is hoped that the development and offering of courses like these

“It is hoped that the development and offering of courses like these will strengthen the efforts of seminaries to collaborate in sharing human and material resources with one another.”

will strengthen the efforts of seminaries to collaborate in sharing human and material resources with one another.

Developing the network as a means by which to bring resources together involves a commitment on the part of seminaries and theological institutes to open themselves to the possibility of a new teaching model—that of the entirely online classroom within the face-to-face, or residential, community. This model requires that lecture content and the activities appropriate for interaction with the lecture be made accessible in cyberspace. It also requires that faculty and students communicate with one another through discussion boards and chat rooms rather than physically come together at the same time within the same place. The advantages of the former have been explored by theological education for the past decade as seminaries have transitioned into hybrid courses where faculty use tools like course templates to house their content and provide means by which stu-

dents might prepare for their face-to-face courses. This is the bridge to the latter, which strengthens the versatility of instructional design by combining lecture materials with complementary lab activities. The community of learners can also interact more dialogically with one another, which means that in every learning experience everyone can be encouraged to more fully engage one another's ideas both immediately and over time after considered reflection. A residential online learning environment, then, could be a viable means by which to do theological studies.

To explore this idea of whether distance learning could work within a residential community, Kenrick-Glennon Seminary offered in the spring of 2005 an online course in Dante's *Divine Comedy* to its seminarians and extended the invitation to the archdiocesan priests in St. Louis. The opportunity drew 12 students, 10 of whom were residential, who went through one canto a day for 100 days. Members of the class were provided access every morning to a new Web site that explored some of the issues within each of the areas through which Dante traveled on his way to the celestial vision. Interaction was through a blog posted on each of the Web sites, and students were required to develop online their semester project over one aspect of Dante's journey. While much of the content dissemination could have been accomplished in a traditional classroom setting, the online experience enabled the course professor to embed at appropriate moments within the course 150 video clips from interviews with 20 theologians and religious who had on-site teaching responsibilities, drawing the entire faculty into the interpretation of the world Dante based on pagan mythology and medieval scholasticism. The success of this experience was also measurable in how it demonstrated the way in which interdisciplinary involvement could so easily be achieved in cyberspace.

At this point in the development of the educational technology initiatives of many Catholic seminaries, we know that a growing number of faculty have a presence on the Web and are producing materials for dissemination to their students via cyberspace—in whatever form that takes, email, discussion boards, podcasts, and standard Web pages. We also know that with a little organization, a lot of this developing material can be packaged in the form of discrete learning modules that can be brought together to form the content for an entire online course. Beyond this, a great many of the classes that are still delivered in the traditional face-to-face manner have content that is already organized and, therefore, likely ready for modulation within a course

“We have to find a way to make our content interactive and engaging, a way to satisfy the needs of a community of learners who gather for dialogue around it.”

template. Merely posting our content online, though, is not enough to take advantage of the transformative environment that the World Wide Web provides. We have to find a way to make our content interactive and engaging, a way to satisfy the needs of a community of learners who gather for dialogue around it. Once we do that, we will be better able to realize the promise of cyberspace as a community-building tool capable of bringing together a myriad of cultures.

Given the opportunities that an online course can bring to a single residential community, it is a small conceptual step to the realization that an online course also might have value for multiple residential communities. Colleges and universities already have done the fieldwork in the development for credit of not only online coursework but also of whole degree programs. People who live hundreds of miles from a given institution of learning (or who live only five minutes away) can complete classes and earn degrees online. The online learning experience is versatile in dealing with scheduling conflicts to which traditional courses, set in a certain time and at a certain place, are prone. Online teaching and learning, then, is already a viable means of credentialing, and it is already recognized by both regional and international accrediting agencies. The challenge for us as educators in theological studies within communities not only of learning but also of formation, then, is no longer to make efforts to determine whether online learning works—we know it does—but to find ways to make it work for us. In pursuing this, we first need to be clear about what it is we want to accomplish, which is simply to use the new collaborative processes the Web makes possible to share our courses with one another and explore the new vistas that will arise because of it.

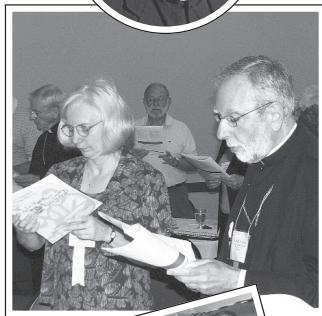
The Catholic Distance Learning Network, which was designed to be a structure through which faculty in seminaries and theological institutes could offer their

Come to The Summit!

**April 20 – 23, 2008
Orlando, Florida**



Help Shape the Future of Pastoral Leadership!



Findings from the Emerging Models of Pastoral Leadership Project funded by the Lilly Endowment, Inc., will be presented at A National Ministry Summit.

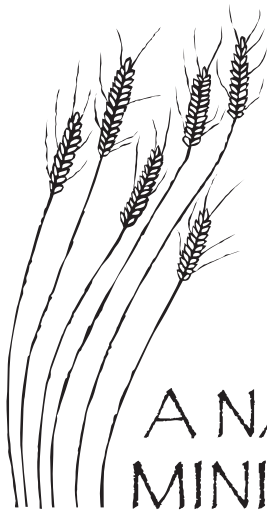
The Emerging Models Project has conducted studies in the following critical areas of pastoral leadership:

- Best Practices of Parish Leadership
- Pastoring Multiple Parishes
- Parish Life Coordinators and Sacramental Ministers (Canon 517.2)
- The Next Generation of Parish Leadership
- Implications of Emerging Models for Human Resource Management



The Project's six partner organizations will meet to set an agenda for the future development of effective pastoral leadership and invite all those involved in pastoral leadership to participate.

Watch for registration information at www.emergingmodels.org/summit.



A NATIONAL MINISTRY SUMMIT

Emerging Models of Pastoral Leadership

Modelos Emergentes de Liderazgo Pastoral: Encuentro Nacional



courses online, not only provides pedagogical training and instructional design support to faculty, but also has a responsibility to navigate the participating institutions through the various challenges each will face coordinating the enrollment and administration of the students. These two concerns have the potential to overlap fairly often within the context of a network dedicated to Catholic institutions that vary in terms of their degree programs and students even though they all share the primary purpose of forming men for the priesthood in the United States. Some institutions, for instance, enroll into their courses only those seeking ordination, while others open themselves to the laity pursuing theological degrees. The potential problem that this creates is the need to apply a general assessment structure to a diverse student population while not losing the ethos of the sponsoring institution in the transaction.

The resolution is to rely on the basic nature of online courses, which, because they seek to model and build collaborative communities of learning, are necessarily activity based. Each activity within a given course should be able to demonstrate a relationship with one or more of the learning goals just as each of the learning goals on a given syllabus should be able to demonstrate a relationship with one or more of the program goals of the institution from which the course is being offered. This ties each of the activities ultimately to the mission statement to ensure that each course continues to promote the integrity of the institution that is sponsoring it, even if it is heavily dominated by students originating elsewhere. In working through avoidable problems like these, the network fosters a culture of planning that will hopefully sustain its own mission of strengthening the relationship between its member institutions.

Aside from establishing an administrative structure, the network has a mission to promote exemplary teaching practices in the professors it certifies in distance learning. It does this by offering an eight-week online summer course in online teaching and learn-

ing and providing each of the participating faculty with an on-site instructional designer who can shepherd him or her through the technical training that is necessarily advanced alongside the pedagogical training. The goal is to enable each of the participating faculty to have confidence in the prospect of offering a course online by providing that person with at least the minimum skill sets in the technical aspects of online course development.

“The online format also allows what is essentially an elective course to draw a larger, more diverse and more interested group of students than would normally be found among the seminarian and lay students at the home institution.”

One example of this can be found in the development of a course titled “Theology and Science,” which was developed this summer by a dogmatic theologian from the Seminary of the Immaculate Conception in Huntington, NY. The goal of the course is to provide an understanding of how to integrate the findings of modern science with the Christian teaching on creation to produce a contemporary theological cosmology—that is, a view of the natural world as God’s work of glory that incorporates even as it transcends the findings of science. It will also give students opportunities to develop the pastoral skills need to communicate this theonomous vision of reality to others and to answer the false reductions of scientific materialism and creation science.¹ It is being offered through cyberspace in part because of the wealth of pertinent materials available on the Web: governmental and education sites dedicated to the teaching and history of science, numerous cultural examples in cyberspace of a conflicting relationship or inadequate integration between science and theology, and the power of graphic media to convey the startling beauty and intricate order found in God’s manifold creation. The online format also allows what is essentially an elective course to draw a larger, more diverse and

more interested group of students than would normally be found among the seminarian and lay students at the home institution. The professor had taught the subject before in a traditional classroom setting, and thus had a course structure, notes, and resources materials to draw upon. What the professor did in preparation for the teaching experience was to modulate his lecture materials and embed various activities within each module, establishing a systematic process that is easily transferable to other online courses he might create for the network.

Converting the Face-to-Face Course to an Online Course

Converting the face-to-face syllabus to an online syllabus is more than merely reparsing the lecture materials and integrating activities; it requires rethinking the idea of a learning community that is gathering not physically but cognitively around a particular set of materials based on a specific topic of interest. Students in online courses are present to one another entirely and only through their active participation in the various discussion forums (either synchronous or asynchronous) created by the professor. They are present, that is, only through the texts they offer the community and only in the interaction with texts offered by others within the community. For that reason, the activities in each week of the course have to provide a context for students to engage one another and the professor. Their active engagement of the materials takes many forms, such as posting to discussion threads, individual or collaborative project-development, short essay writing, journaling on blogs and the like, but is always community oriented. These collaborative activities in turn become the basis for their evaluation. In reflecting the ethos of a community of learners, then, the syllabus for an online course has to weigh participation more heavily than would the syllabus for a face-to-face course, both explicitly in the stated objectives and expectations of the course and implicitly in the way interactive assignments are designed to demonstrate student learning to all engaged in the online course, in contrast to the traditional feedback of written papers and exams viewed only by the professor in a face-to-face course.

For an online course, then, any given week should have a structure that facilitates this kind of community interaction. The overall structure for each week can follow a set pattern (since this facilitates student engagement with the online learning process) even as particular components in that structure vary from week to week (since this helps sustain that engagement). Like most

online courses, the general format to the structure of “Theology and Science” is threefold: initial orientation, individual learning of material, interactive and collaborative assignments that demonstrate and reinforce that learning. The first part, the orientation that initiates each week, consists of an opening prayer, introduction of the week’s topic, and overview of the week’s assignments. Next, the learning of the material by each student occurs through the watching of a video lecture by the professor and the reading of the assigned course texts. Finally, the students are asked to complete varying online assignments designed to give him or her the opportunity to reiterate, share and apply what they have learned with others in the course. Let us look at these specific elements more closely.

“Despite the inability to gather the community in real time and a common place, each week will begin with a short video of the professor’s reading aloud the psalm or prayer.”

Although, as an online course, “Theology and Science” is offered outside of a seminary’s communal prayer life, as a theological course with pastoral implications it does not wish to lose on account of the cyber setting the important role of prayer for theology. Since it intends to foster a theological vision of creation rooted in the praise of God, every week’s module begins with an appropriate prayer, such as a creation hymn from the Book of Psalms or the Canticle of Creation by St. Francis of Assisi. Despite the inability to gather the community in real time and a common place, each week will begin with a short video of the professor’s reading aloud the psalm or prayer. The students will be required to follow along with the scriptural passage or prayer text before them and pray along with the professor, to inculcate the praise of God and gratitude for creation that is the basis for a theological engagement of nature. Although the online members will engage in this exercise asynchronously, their sincere engagement will still allow them to pray together as one in Christ, even if not at

the same time or place.

The next element in the structure will be a short orientation to the week. The orientation for week two, for instance, reads as follows:

This week’s primary topic is the relation between science and theology. What you need to learn are the different models that those who have done some reflection on this topic have proposed. There exist different models for the relationship between these two disciplines because in our world today there are some who see science and theology in competition and conflict, others who think that it would be best if the two were understood as distinct with little overlap, and others who believe that a deep integration of the two is possible. To give these models names, the first is a model of Confrontation, the second is Separation, and the third is Correlation. These models will prove very helpful throughout the course in giving a framework for understanding the many historical moments and particular questions where science and theology both have something to say about the created world. Knowing them also can help you to be ambassadors in your pastoral ministries to personally model a coherent and helpful integration of these two disciplines and perspectives to those fearful of either science or religion.

The written orientation provides the context for the 20-minute audio lecture that will follow. This lecture, in order to reveal itself fully to the listener, cannot simply be 20 straight minutes of unbroken audio—it has to bear within itself the possibility of being stopped, explored, and restarted—just like what would happen to some degree in a face-to-face class when a student raises his or her hand to interrupt the lecture and ask a clarifying question. For that reason, the lecture, which is synched to a PowerPoint slideshow, has stops embedded on many slides with links that take the viewer to a public questions blog page or a clarifying activity that offers the viewer some engagement with the material before he or she can continue to the next point. To be inclusive of students who have physical hearing impairments or technological limitations on their computers that preclude audio—or even of students who prefer to print things out for easy reference later—each lecture is also available in text form. To accommodate those who

like to take the lecture on the road with their iPods, the lectures are also available in .mp3. Each lecture is followed by a selection of readings that support the lecture and develop the topic further.

Just as in a real-world classroom the readings and lecture would be followed by discussion and demonstration exercises (e.g., papers and exams) that make the connection between what has been learned and the student's experience, so too in this online learning module the readings are followed by various assignments that foster appropriation and overcome the possible isolation of online learning by being highly collaborative. Online, asynchronous discussion takes place in dedicated forums, with the professor seeding the conversation with initial questions based on the readings, and the students themselves developing and sustaining the dialogue by offering their own interpretations and responding to the postings of others.

The discussion of the material will be complemented with various online activities, again designed for collaborative engagement and providing an opportunity for the student to demonstrate understanding, which in turn serves as a basis for the professor's assessment of the students' work. In the case of the second week of "Theology and Science," the reading material on the different models for the relationship between theology and science will be reinforced by an Internet scavenger hunt:

Students will find examples from the Web exemplifying each of the different models (could be text, audio, video) and post these in the discussion forum for others to view with their own arguments as to why each fits that model (reasons taken from assigned reading and lecture). If students find that they disagree with someone's classification of a posting, they should respond with their reasons as to why another model is a better fit.

This activity invests the student in the determinative reasons for each model and provides them with a basis for internalizing the point of the lecture. Yet the work of each student is viewed and evaluated by all the others, not just the professor. The communal posting gives other students the opportunity to work and learn together, even as it gives the professor a concrete basis for assessing the quality of each student's learning.

These discussion forums and related activities are dedicated to the understanding and application of the

ideas and concepts in the course, treating the analytical aspects of the history, relation, and methodologies of theology and science. Yet when the assigned readings concern the more aesthetic or theological appreciation of nature as God's creation, which is a related but different goal of the course, the students will be expected to respond differently, in a manner that corresponds to this objective. Instead of posting in discussion forums, the students will journal in their own personal blogs set up for the course, as well as read and respond to the blogs of others. These personal blogs—consisting not just of personal reflections but also of relevant links and media that show the beauty and design of God's creation—will also serve as a semester-long project, with a vote at the end for best in quality. An example of this kind of activity, again from the second week of the course, reads as follows:

After completion of the readings, blog in your personal journal a response to one of the following reflection questions:

- a) What are the instances in your life when you felt your religious faith or viewpoint threatened by science?
- b) What pastoral situations have you experienced in which the tendency to separate science and theology was a wise approach to take?
- c) What are the characteristics of someone in your personal life who exemplifies for you an integrated understanding of science and theology?

The idea behind asking the students to choose one of three questions is a pedagogical strategy called choice-making. Choice-making provides students with a sense of control over the prompt they choose and creates areas of fresh discussion within the two areas they did not choose. Students are expected to review one another's blogs and may find themes in other perspectives or on other prompts that inspire reflection and comment.

An important consideration for designing weekly activities within a course involves the time commitment expected of the students. Although the professor can design the activities first and then add up the time needed to complete all the assignments for a particular week, it is better to start from a standard formula to determine the expected time commitment and fit the online activities within that time frame. This is a matter of taking the time standards expected for a face-to-face

course, based on course credits, and adjusting them for the online setting. While face-to-face courses separate the student's time commitment between the hours spent together in class and the individual hours dedicated to reading, studying, and writing, online courses group these weekly hours together and expect the student to dedicate the same amount of total hours to the course, giving the student both the flexibility and responsibility to fill those hours throughout the whole week. Since each face-to-face class meets for approximately one hour each week per credit hour, and then expects about another 1.5 hours for individual learning outside of class, one can expect from the student an average of 2.5 hours per credit each week. Thus a 3-credit course requires a weekly time commitment of 7.5 hours, and a 2-credit course about 5 hours.

In applying the same time expectation for each week of an online course, one needs to calculate how long each activity should take and add up the hours. Reading assignments take the same amount of time, approximately one hour for every 25 pages of text. A 20-minute audio lecture with embedded links to various Web sites or to supporting materials in the form of text, audio, or video, will take longer than the 20 minute length of the presentation because of the time needed to follow up on those embedded discursions—about an hour in total.

Discussion board activity requires ample time for reading and responding. Students typically will need 30 minutes to read discussion threads and take up to 20 to 30 minutes to develop and post their own comments. Writing thoughtful reflections for one's own blog can take 40 minutes, with more time need for reading the blogs of others. Time needs to be built in, too, for the collaborative projects students are expected to accomplish over the course of several weeks. In ways like this, one can calculate how long one is asking the student to interact with the course, although it can at best be only an estimate given that some students will require more time to read and write than others (as happens in face-to-face courses). To prevent slow Internet connections from significantly lengthening the time a student needs to engage the course material and complete activities, the minimum technological requirements for the course will be posted prior to course registration, with a medium- to high-speed connection being a technological prerequisite for admission.

As far as accountability exercises, it is best to have only one per credit hour. A 2-credit face-to-face class might have a paper and an exam, and a 3-credit face-to-

face class might have a paper, a project, and an exam. In the world of online teaching, exams are rarely very helpful since they always have to be considered open-book, for the goal is not to test memory but facility with the materials, and exams cannot be done collaboratively. Three-credit online courses may go the route of participation/interaction/collaboration (say, a formal discussion board and a reflective blog), a project (done in pieces throughout the semester culminating in a 3-page paper and a 15-minute presentation), and an activity-set (say, a handful of really short assignments spread out over the duration of the course). Whatever method is set up, the time it would take an average person to engage each week ought to be tabulated so that no week gets overloaded, a good reason for breaking larger projects into smaller ones.

Since "Theology and Science" will be a 3-credit course, assessment of students will be based upon three sets of activities: the weekly assignments and two extended projects, one individual and one group. Participation will be evaluated weekly in terms of the quantity and quality of the student's contributions to the discussion forums. The accomplishment of individual week activities, such as the Internet scavenger hunt, are to be judged in terms of how well the student has demonstrated his or her grasp of the principles or issues in lecture and reading materials. The individual project will be the personal blog or journal, evaluated by the class at the end of the semester in terms of quality of construction and impact upon others. The group project will be the construction of a historical timeline of the relation between theology and science, with groups of three students working together on a different period to show both the contributions of historical figures and the paradigm shifts in theological and scientific worldviews.

Conclusion

All the work that goes into the development of an online course is meaningful for the development of face-to-face courses because pedagogical strategies will transfer into hybrid classroom environments. It is for this reason that the network can consider its efforts as broader than its stated mission. Because we know that the investment we are making in the development of human and material resources ultimately lends itself to the improvement of Catholic seminary education in general, we do not require any of the faculty we certify to offer the course they build over the duration of their time with us. They are invited to do so as an extension of their seminaries into the greater world of theological studies.

“All the work that goes into the development of an online course is meaningful for the development of face-to-face courses because pedagogical strategies will transfer into hybrid classroom environments.”

The way it works is that when a professor makes the choice to offer his or her course through the network, he or she first works with the academic dean to schedule it against his or her regular teaching load for electives. It is first offered to the students at the host institution. If those students fill all 15 slots, the course becomes closed to other participating schools. If the course

does not fill all 15 of its virtual seats, the number of remaining seats are given away free of charge to students in participating schools on a first-come-first-served registration basis. Each host institution will develop its own policies for administration of their online course offerings beyond these guidelines.

As we approach the first round of course offerings in the spring of 2008, we expect that our experiment, which began with 23 academic deans and rectors attending the NCEA pre-convocation workshop in the fall of 2006, will continue to prove to be a valuable means for collaboration between Catholic seminaries in ways we cannot now express.

Michael Hoonhout, Ph.D., is associate professor of systematic theology at the Seminary of the Immaculate Conception in Huntington, New York.

Sebastian Mahfood, Ph.D., is associate professor of intercultural studies and the coordinator of instructional technology at Kenrick-Glennon Seminary in Saint Louis, Missouri.

Endnote

1. More information about the course (but not the course itself) can be found at www.michaelhoonhout.com.

**What are the basics of financial management that every pastor & principal should know?
Why are Catholic schools sometimes vulnerable to fraud and embezzlement?
What can you do if enrollment and/or fundraising goals are not met?
Are we doing enough contingency planning?**

NCEA offers Catholic School Financial Management Workshops throughout the United States every year.

Readers of Seminary Journal will always be welcomed at these workshops!

WORKSHOP TOPICS OFFERED:

(The host diocese chooses two topics for a day tailored to its specific requirements.)

Introduction to the Basics of Catholic School Finance Management
Beyond Bingo: Launching, Maintaining & Growing a Development Program
Building a Strong Operating Budget
Catholic School Viability & Financial Benchmarking
Developing & Using Cash Flow Budgets
Developing & Using a Capital Budget
Essential Business Practices
In-depth Look at Strategic Planning
Planning & Enhancing a Marketing Strategy
Reading & Understanding Financial Statements and Ratios

These are inter-active workshops, intended for teams of pastors, principals, school finance managers, and board members. Typically, a diocesan Catholic Schools Office hosts the event, with a presentation and group activities facilitated by a leader from the National Catholic Educational Association



**Want more information about this NCEA Program or a current schedule of upcoming workshops?
Contact Claire M. Helm at (202) 337-6232 or helm@ncea.org.**