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Online Instruction as a Pedagogy: Implications for Higher Education Faculty

Edward L. Meyen

Because online instruction incorporates instructional design and management, asynchronous learning, the process of communication, technology, and the opportunity for accountability in the teaching/ learning process, it can be considered a form of pedagogy. For online instruction to evolve as a mature form of pedagogy as have other approaches to teaching requires a major investment in instructional design and content decisions. In addition, attention must be given to the roles of instructors and students in managing instruction, to resources, and to the uniqueness of the online teaching/learning process.

The practice of teaching online does not alter the fact that effective teachers must be experts in their content fields. Nor does it lessen the importance of understanding and applying the principles of sound teaching and learning. Teaching online does require, however, that faculty members develop additional teaching skills. Specifically, they need to adapt those teaching skills that have served them well in traditional forms of instruction to teaching online as well as acquire and/or perfect techniques that are effective in asynchronous teaching environments. Face-to-face interaction is replaced with other forms of communication that can be equally effective. For some instructors, communication via computer options is more effective for online instruction. Finally, instructors need to be more systematic in the design of the content they teach and in the structuring of learning experiences for their students. Examples of how online instruction operates into a form of pedagogy rather than a delivery system include the following:

Instructional Design
Before the instruction is made available to students, instructors must decide on the design features they need in order to deliver online instruction and then structure the content to precisely fit those features. In essence, instructional design and content expectations drive decisions related to technology. Traditional instruction also involves an investment in design, but in online instruction it is required. In this context, online instruction is unforgiving. Instructors must design what they teach or create conditions that will cause students to learn.

Instructional Management
In online instruction, student work and communications are transmitted electronically and instantly. These products of online instruction may take the form of responses to activities, exams,

Edward Meyen is a Professor of Special Education at the University of Kansas.

reports, or abstracts of articles and projects. Such a wide range of response options dictates the need for an instructional management system that is systematic and convenient, as both instructors and students must be able to easily access their work and feedback.

Asynchronous Nature of Online Instruction
In face-to-face instruction the instructor responds in prearranged, real time to student questions and comments. In online instruction, on the other hand, both students and instructors interact via electronic communications at times that are most convenient to each. For students, asynchronous instruction provides flexibility in when and where they receive instruction. It also allows them more control of the quality of their work as they are able to keep refining their work until they are satisfied with their responses before submitting them. A similar situation exists for faculty, who also can manage where they teach and when conditions are right for them to teach.

The Process of Communication
In addition to the communication that naturally evolves during instruction, teaching online allows the instructor to design activities and assessments that require students to demonstrate their under-standing of the subject matter. This creates opportunities for instructors to efficiently individualize their responses to students' work. For example, a student may be one of 30 in a class, but the dynamics of online instruction allows the student to view himself or herself and the instructor as the only people involved in the learning process. This personalization of teaching changes the student-faculty relation-ship dramatically and positively.

Technology Capabilities
The capabilities of technology go far beyond just providing an anytime-anywhere delivery system. For example, streaming tech-nology allows instruction to integrate voice and video on demand. Features can be designed to allow students to manage instructional resources, to access sources on the World Wide Web (WWW), and to perform activities designed specifically for the instruction in which they are engaged. Furthermore, feedback can be immediate, allowing students to be reinforced or corrected for their performance and helping them to always know where they are in the sequence of assigned work. The challenge in using technology for instructional purposes lies in ensuring that decisions on which technology to use are driven by the demands of instruction, not the capabilities of tech-nology. As the capabilities of technology are employed in online instruction, changes in teacher behavior will occur. Such changes will likely emerge in the environment of higher education, as will the teaching behaviors of individual faculty.

Accountability
The public nature of all content, technical features and communica-tions between students and the instructor in online instruction creates an opportunity for a level of accountability that is not present in other forms of teaching. Thus, the quality of content, the instructional design, the effectiveness of the feedback and the timeliness of responses provided by the instructor are open to review if deemed necessary.

Personalization of Instruction
In addition to being responsive to the attributes of students as is the case in traditional instructional formats, online instruction also causes instructors to be responsive to the phenomenon of students behaving as if they were the only student enrolled in an online course. This

common student perception is the result of the personalization of online instruction. For online instructors to have to adapt their responses and allocate their time to the needs of individual students may be the most difficult challenge in viewing online instruction as a pedagogy.

The above are some of the elements that characterize online instruction as a pedagogy and differentiate it from being merely a delivery system. While these characteristics are made possible by technology, their collective impact is a form of pedagogy that is embedded in an electronic delivery system. The flexibility in time and place offered by online instruction means that it has the potential of being as integral to instruction on campus as to distance education. Ultimately, the pedagogy of online instruction may routinely become an integral element of most instruction at the postsecondary level.

Conflicting Views of a Delivery System

Given that few faculty have personal experience in developing or teaching online courses, it is understandable that faculty tend to view online instruction as a delivery system rather than a form of pedagogy. Policymakers have even less experience in this area. As a result, both groups tend to think of the technology that makes online instruction possible and the act of teaching online as being one and the same. That is, instead of thinking of technology as a consequence of instructional design decisions, they often view online instruction from the perspective of delivery and as a form of distance education much like correspondence study and interactive television courses. As a result, faculty and policymakers often redefine online instruction as distance education and generalize the negative views they may hold of distance education to online instruction. Or, they focus only on the technical features that allow instruction to be disseminated via the Internet.

The literature reinforces these notions because it often categorizes online instruction as another form of distance education. The confusion is further exacerbated by the fact that historically academic policies governing continuing education or distance education were typically developed administratively with nominal faculty involvement. This often occurred because many academicians have not been supportive of distance or continuing education.

For those reasons, most faculty are left without direct experience in online instruction to help them frame their personal understanding of it. This has often contributed to a lack of support for and even indifference to online instruction on many campuses. The challenge of achieving the potential for quality instruction that online instruction offers is to create conditions that will help faculty view online instruction as a form of pedagogy and to invest in improving their online teaching just as they have in their traditional teaching. Once this is accomplished, research and development focusing on instructional principles and strategies specific to online instruction will become a more legitimate and popular form of inquiry. And the teaching and learning process will be greatly improved and enhanced as a result.

The Context of the Online Instruction Movement and Its Status as a Pedagogy

The history of higher education may hold no parallel to the emergence of a new form of teaching prompted by technological changes. Changes in pedagogy have tended to be evolutionary; the seminar, didactic forms of instruction, mentoring, and internships have all emerged over time. Their evolution was natural, not caused by a specific event or a new capability. In other situations, new forms of instruction have evolved due to circumstance (e.g., the large lecture came about because of a need to meet efficiently instructional demands created by expanding enrollments).

Online instruction, on the other hand, has not resulted from research to create a new form of pedagogy or as a consequence of a natural evolution in teaching. Rather, it has been driven by the logic of applying advanced technologies to instruction. Much of the advocacy for online instruction comes from outside the higher education community; that is, from *consumers* of higher education and from industry. A large and growing population of learners view online instruction as access to higher education– many even prefer the pedagogy of online instruction. This situation makes change more difficult than if the online instruction movement had evolved from within the higher education community.

Because technology makes possible this new pedagogy, higher education is faced with having to build and refine a pedagogy without the benefit of an evolutionary process. In many ways, industry has more experience than higher education in this area since they were the first to experiment with advanced technologies for training purposes that in many cases are global in nature. Most colleges and universities, by contrast, have taken a cautious approach. They have often been reluctant to invest in developing the pedagogy of online instruction and have, at times, conveyed the impression that the value of online instruction is questionable. The faculty views online instruction as a way to reduce teaching positions. However, while many comprehensive universities have taken this conservative approach, other institutions have been less cautious. For example, for-profit institutions in the form of virtual universities using online instruction have emerged. In addition, community colleges have been responsive to the opportunities offered by online instruction, as have many regional universities that have strong commitments to outreach. Consortiums have been formed allowing large number of universities to have a presence in the online market. Industry has also entered the online instructional market.

The institutions slowest to use online instruction appear to be the comprehensive research universities. While some have joined consortia and others have developed online degrees, comparatively few have made a systematic investment in developing resources and policies to support online instruction. This reaction is ironic because their mission in graduate education has embraced the practicing professional who represents the very population that is proving to be most responsive to online instruction. This population values the flexibility offered by online instruction, finding it advantageous to their personal and professional life styles not to have to travel to campus on a prescribed schedule.

The context of the online instruction movement is further differentiated from the way other forms of pedagogy have emerged in higher education by the slowness with which faculty governance on many campuses has become involved in issues associated with online instruction. Normally faculty governance takes the lead in setting academic policies. In this case, they have often found themselves responding to proposed policies.

Implications for Higher Education in Building Online Instruction as a Pedagogy

For experience to maximally contribute to the evolution of online pedagogy, online teaching must be approached knowing that the

pedagogy is in an evolutionary state. This calls for an inquiry approach to one's teaching in contrast to traditional forms of teaching where we draw upon what we know about methodology and routinely work to improve our teaching accordingly. There is no significant literature base to draw upon that is specific to teaching online. Instructors are creating as they adapt and develop instruction. Once online instruction has been developed and faculty are engaged in teaching, they have a product, which has become defined as a form of intellectual property. The implications (i.e., inquiry and intellectual property) will be discussed from the perspective of their relationship to pedagogy.

Inquiry

While there is a knowledge base on teaching adult learners, there is paucity of research pertaining to online instruction. As a result, higher education faculty are left to draw on their personal experience in teaching. They can draw from the literature on teaching generally, but must make inferences as to what works best in this new instructional environment. These knowledge bases in distance education and in the field of communications offer some direction too. Finally, what little literature has emerged from web-based instruction is new, not always research-based, and often published in forms that are typically not accessed by faculty in higher education. This complicates efforts to become informed about what is available and effective. It also adds to the challenge of instructors teaching online who want to add to the knowledge base and to share what they are learning. The positive side of the situation is that research in the area of online instruction is an open field filled with opportunities to create systematic research programs and to make a significant contribution. Like scientists who conduct research in the laboratory and teach about what they have learned in that environment, online instructors have an opportunity to make online instruction a teaching and research environment by fully integrating what they are learning into their teaching and at the same time adding to the knowledge base.

Once faculty begin to teach online, they often encounter the need for information that is often not available. Many such questions can be systematically studied either individually or in collaboration with colleagues who are also teaching online. The following are examples of research questions that have implications for developing the pedagogy of teaching online:

1. Can instructors influence student behaviors such as motivation, rate of completion, quality of work, and quality of student-generated communication through the language they use in their communications with students?

2. What is the relationship between time required of an instructor to respond to students' communications and the quality of students' work?

3. What are the features of online instruction that are most important to students and do these features vary depending on whether the student is completing the instruction off or on campus?

4. What are the evaluative perspectives of students after experiencing online instruction compared to traditional forms of instruction?

5. What do students who express high and low levels of satisfaction with online instruction miss most about face-to-face instruction and can these concerns be accommodated through the pedagogy of online instruction?

6. Are there particular features of online instruction that stimulate higher-order thinking skills or contribute more than other features to positive student outcomes?

7. What are the most effective strategies to use when engaging students in collaborative projects during online courses?

8. What student attributes distinguish between students who value online instruction and those who do not? Do student attitudes toward online instruction affect student performance?

9. What instructor attributes distinguish between instructors engaged in online instruction and those who are not or who prefer not to participate?

10. Is there a relationship between the number of work samples on which an instructor provides feedback to students and student performance and attitudes toward online instruction?

11. What principles of effective classroom teaching generalize to online instruction and what new principles emerge from online instruction?

12. How can communication features used among students, such as chats and threaded discussions, be made more instructional?

13. What are the implications of teaching online for setting academic policies and structuring faculty workload and the way faculty use their instructional time?

14. What is the impact of online instruction on the traditional relationship between instructor and student? Do students view the impact as positive or negative?

15. Are certain topics or content best learned through online instruction or face-to-face instruction or is the distinguishing factor primarily a matter of attitude toward one or the other forms of instruction?

16. What is the impact on learning when students are given more control over when and how they learn prescribed material?

Intellectual Property

The topic of intellectual property rights is a concern on most campuses today. This concern stems largely from the emergence of the digital age and how the digital environment has influenced what academics do. With posting of information on the WWW taking the form of publishing, faculty members teaching online are finding that much of what they do is defined as intellectual property. That is, whereas traditional forms of instruction have rarely taken the form of intellectual property, the situation has changed dramatically due to the use of the Internet and the WWW for instructional purposes.

Higher education governing boards and universities are revising their intellectual property policies as they strive to gain control of this new form of intellectual property. It should be kept in mind that neither the content nor the responsibilities of the professor have changed. What has changed is the form of the instruction as it is created for delivery via an electronic environment. The form has the attributes of a product with the potential of being marketed. By defining instruction as intellectual property, without either appropriate policies in place or experience to draw upon in their administration, faculty members find themselves in the position of having to be concerned about the consequences of what they teach relative to their future use of the instruction they have created. That is, while a professor can teach a course in a traditional lecture form and have full control over lectures, exams, assignments, activities, projects and experiments, when using these very same elements of the course in teaching online, he or she may find it necessary to negotiate rights regarding further use

of the course, content or course features. In some cases faculty need to be concerned about someone else being assigned to teach the course they have created for teaching online. These circumstances have serious implications for the evolution of online instruction as pedagogy as well as for the teaching role of faulty members.

The underlying rationale for defining online instruction as intellectual property and for institutions moving to exercise some form of ownership seems to be related to the investment made by the institution in resources for the technical development and delivery of online instruction. This is not unreasonable. However, it is the programming and the instructional design that is derived from this investment. The content and the learning experiences created to produce instructional outcomes remain integral to what a professor does when teaching in traditional modes. Owning the technical design of the online course is somewhat analogous to owning the laboratory, lecture hall, and/or classroom. Issues of ownership do not influence teaching within these environments. Instead, they are governed by academic ethics and sound teaching principles, as they should be.

The situation is exacerbated by the fact that the online teaching movement became viable before either faculty or institutions addressed the academic policy implications of online instruction. The result is a scramble to frame policies without the benefit of experience. This may have a serious consequence for faculty both in terms of the policies being created and their future role in developing academic policy.

Following are examples of questions that need to be addressed in the development of intellectual property policies.

1. If an instructor includes original work in an online lecture, who owns the intellectual property rights to the lecture?
2. If the instructional design of an online course is unique, does the person creating the design own the property rights to the design?
3. How do instructors protect lectures and other content they place online as part of their teaching responsibilities?
4. If instructors resign and move to another institution, can they take the online course with them?
5. Because the development of a course is much like writing a book, what are the implications for copyright?
6. If online instruction is owned by the institution, what are the implications for the instruction delivered through other modes?
7. If a staff member performs work for hire, does this concede all rights to the employer?
8. What happens when in the process of placing a course online a staff member creates a new technology solution?
9. Who owns the online responses of students to assigned activities?
10. Are students free to use information received in a lecture without attribution?
11. If a student creates a product as part of a class project, does he or she own the rights to the product?
12. Can an instructor make reference to a student's work during an online discussion without the student's permission?
13. How is the concept of work-for-hire applied to online instruction?
14. Can an institution assign an online course developed by one instructor to another person to teach?
15. How are policies on intellectual property best administered when online instruction is involved?
16. What conditions are necessary before an institution can claim ownership to intellectual property created by a faculty member?

Quality Control of Online Instruction

While there is widespread concern about the quality of instruction offered in higher education, particular attention is being paid to the quality of online instruction. Although this stems in part from its newness, many faculty find it difficult to view online instruction as being as effective as face-to-face instruction. This attitude tends to translate into calls for more careful scrutiny of online instruction than is typically applied to traditional instruction. One of the advantages of online instruction is that all elements of the content and the instructional process can be subjected to evaluation. For example, the content must be detailed in advance, all elements including exams, readings, content presentations, activities, and resources must be prepared in complete form. Even the responses of students and the feedback provided by the instructor can be reviewed if necessary. Additionally, archival data can be easily retrieved on the timeliness of instructors' responses to student work and the exchange of communications. Thus, the substance of the instruction and the discourse between the instructor and the student is available for evaluation if necessary. These features combine to establish the conditions necessary to make evaluation an artifact of online instruction. By comparison, these conditions are not as easily established, and in some cases not possible, in traditional forms of instruction.

Beyond the evaluation conditions that are unique to online instruction, the context of teaching online adds to the opportunities to influence the quality of online instruction. The teaching context differs from traditional forms of teaching due to the emphasis placed on instructional development and design. Teaching techniques are incorporated into the course design making development an integral part of the online teaching process. In some respects it can be argued that development is 75% of online teaching because structuring the content and integrating activities into the instruction occurs during development.

Online teaching requires the instructor to apply the full array of skills required to produce and deliver instruction. This is not to suggest that in traditional forms of instruction instructors are not concerned with the design and development of instruction in addition to the process of teaching, but the design and development demands of online instruction provide an additional dimension of quality. Unless an investment is made in design and development online instruction cannot be made operational.

Academic policies exist in most institutions to enhance quality and to ensure equity in the instructional conditions experienced by students. The asynchronous nature of online instruction makes it necessary to examine most academic policies as to their appropriateness for online instruction.

The following questions are illustrative of the issues that warrant attention in framing polices that enhance quality of online instruction:

1. Will separate standards for online instruction be established as criteria for approving online courses and/or degrees?
2. Because online instruction must be designed in extensive detail and can therefore be subjected to close evaluation, will the process for approving online courses and degrees be more intense than for traditional courses?

3.   If an institution requires that the teaching effectiveness of faculty be evaluated in traditional courses, will teachers of online instruction be subjected to the same evaluation?
4.   Will the development and teaching demands of online instruction be factored into the determination of faculty teaching loads?
5.   Will online degrees and/or courses be differentiated from traditional degrees and courses on transcripts and other official records?
6.   How much flexibility does an instructor have in determining what constitutes the level of credit to be received for instruction provided online?
7.   What restrictions, if any, will be placed on instructors using the Internet or WWW to access student performance?
8.   Will arrangements be allowed or encouraged whereby individual faculty or teams of faculty members develop a course, which is subsequently taught by a graduate teaching assistant or someone other than the faculty developer(s).
9.   What administrative strategy will be put in place to ensure that faculty understand the relative importance placed by the institution on the development and teaching of online instruction?
10. Will online courses be offered through academic departments or continuing education, and if the latter, will they be treated the same from the student perspective?

Summary

Treating online instruction as a delivery system rather than a form of pedagogy can have a negative effect on its evolution as a quality form of instruction. To reverse this tendency, instructors must approach their online teaching from the perspective of building the online pedagogy. This has implications for professors in areas such as inquiry, quality control of their online teaching and in the framing of policies governing intellectual property rights. Although the number of online courses and degrees is increasing, online instruction remains in its infancy as a form of pedagogy. It is reasonable to assume that in the future, as the development of online courses becomes more widespread, that it may become a form of scholarship much like the writing of textbooks. Publishers are beginning to publish teaching resources online. Virtual institutions are buying online courses. And faculty, functioning as entrepreneurs, are developing online courses. With the demand for traditional textbooks changing and online courses taking on the attributes of products, the conditions are ripe for a new form of instructional scholarship to emerge, which could have a positive influence on the pedagogy of online instruction.

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