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# Considerations for Supporting Faculty in Transitioning a Course to Online Format

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## Abstract

The move toward offering more online instruction at many academic institutions frequently takes the form of conversion of a traditional course to online format. Despite its prevalence, this special form of course development has received little research attention. This paper presents the results of an exploratory study of the faculty perspective on the process of course conversion and handling of associated pedagogical and technical challenges as well as institutional factors and administrative considerations. Semi-structured personal interviews were conducted with eleven instructors from three universities. The study was focused on key decisions related to course redesign, such as motivation for conversion, content modification and format of presentation, delivery and development technology, as well as changes to pedagogical strategies. Main factors impacting these decisions are identified and analyzed in terms of their relative influence. The need for greater flexibility in technical and administrative support of the course conversion efforts by faculty are discussed along with other practical implications and possible directions for further study.

## Introduction

Online education in web-based format is the fastest growing segment of higher education in the United States with two thirds of higher educational institutions offering online courses and, increasingly, fully-online degree programs (Allen & Seaman, 2007). Administratively, there are practical benefits in making courses available online: ability to serve larger number of students at reduced cost. Often, the online version of a course is offered in parallel with, or as a replacement of the traditional classroom version of the same course. That is, the online section of the course represents a change in teaching mode rather than a new course development. This change in course delivery requires more than the format conversion because online courses call for different pedagogical strategies for engaging students compared to traditional classroom environment (Hawkes & Coldeway, 2002).

Online pedagogy is characterized by greater student-centeredness (Berge, 1998; Schifter, 2000), with instructor role changing from provider to facilitator of learning (Harasim, 2000). At the same time, when online and classroom sections of a course coexist in the academic schedule, there is an underlying assumption of equivalence between the two versions in terms of learning outcomes and educational value for the students.

This exploratory study was grounded in the empirical observation that it is not uncommon for the conversion of the course to online format to be done by the instructor of the original classroom version of the course. While such conversion is a frequent path in online course development, little is known about how this process occurs, particularly from the perspective of participating faculty members. Yet, better understanding of such course redesign process is of significant value for both instructors who prepare courses for online teaching and for the administrators who need to support the move to online instruction in their institution. Instructors can benefit from learning how their colleagues who teach in both formats adapt the course for different instructional modalities in a way that fulfills the course objectives. Administrators can benefit from understanding the key factors that facilitate or hinder the course conversion process. This is of particular practical importance, since the transition to online course delivery is generally facilitated and often encouraged by the institution's administration. The present study attempts to address these questions from the faculty perspective, with the focus on decision making about material selection, formats of presentation, use of technology, and changes to pedagogical strategies. The emphasis is on various personal, institutional and technical factors that influence those decisions in the process of converting a course for online teaching.

## **Literature Review**

Most of the literature on online course development is prescriptive in nature (Xu & Morris, 2007) or focused on broader issues of instructor engagement in online teaching (e.g., Birch & Burnett, 2008; Parthasarathy & Smith, 2009) and adopts the program level view (e.g., Covington, Petherbridge & Warren, 2005). While this higher-level view is important to administrators, it fails to consider associated workload cost on faculty. The research into course-level development activities by the faculty is scarce. This scarcity can be attributed to several factors. First, online teaching still constitutes “a relatively new frontier in education” (Tallent-Runnels et al., 2006) with corresponding lack of suitable course development models (Xu & Morris, 2007). Second, development of online courses is often done not “from scratch” but takes a form of “repurposing learning materials from the traditional classroom to online courses” (Liu, Bonk, Magjuka, Lee & Su, 2005), making the process substantially different from traditional course development. Finally, the technical complexities of online course development frequently make this a multi-player endeavor (Hixon, 2008), in which the role of individual faculty members may be less noticeable.

## **Course Development Models**

There appears to be two distinct models of online course development. One is the “lone ranger” approach, in which course development or conversion is driven by the faculty member teaching the course (Bates, 1997). The second model that became increasingly common in the past decade is that of the collaborative, project-based course development (Chapman & Nicolet, 2003; Hawkes & Coldeway, 2002; Hixon, 2008). Comparative analysis of the team-based vs. faculty-driven online course development done by Hawkes and Coldeway (2002) based on a number of case studies concludes that each of the two models can be successful depending on the context as well as the level of administrative and technical support provided by the institution.

The “Lone ranger” model is rooted in academic cultural tradition with faculty having substantial autonomy in course development and a sense of ownership of the course (Chapman & Nicolet, 2003). This approach is marked by greater flexibility and speed of development, is potentially more adaptable to students’ needs, and is often experimental in nature (Hawkes & Coldeway, 2002). Hawkes and Coldeway note that in such a scenario, the faculty member is combining the roles of subject matter expert, instructional designer, media developer, and, sometimes, programmer, and the success of the process is thus contingent on the faculty possessing the requisite knowledge and skills.

The project-based model is in stark contrast with the traditional course development model centered on the faculty member. The project is conducted by a team in which faculty play just one of the roles, typically that of subject matter expert, with the central managing role played by the instructional designer or similar specialist (Hixon, 2008). Combining analysis of published studies and observations of course development teams, Hixon notes the reduction of faculty role in the process of course development and related decision making. The main advantages of project-based models are utilization of a variety of skills that are unlikely to be present in one individual (Oblinger & Hawkins, 2006) and use of project management practices in combination with instructional design theory to ensure consistency and quality of courses (Chapman & Nicolet, 2003). The collaborative team-based online course development can also be characterized by standardized quality control procedures and it is particularly appropriate for large-scale distance education programs (Hawkes & Coldeway, 2002). It is worth noting, that while the “lone ranger” scenario is feasible with little to no administrative support, the project based model depends heavily on institutional infrastructure and personnel, technology and administrative policy.

## **Role of Technology**

Development of online courses is integrally tied to the various software tools and systems used to deliver the instruction. Most higher educational institutions adopt some sort of a Learning Management System (LMS) for support of both online courses and traditional classroom instruction (Morgan, 2003; Papastergiou, 2006). A typical LMS is a web-based system that includes a number of synchronous and asynchronous tools to support both learning and administrative functions (Black, Beck, Dawson, Jinks & DiPietro, 2007). The LMS, such as Blackboard ([www.blackboard.com](http://www.blackboard.com)), Moodle ([moodle.org](http://moodle.org)) or Sakai ([sakaiproject.org](http://sakaiproject.org)), provided and supported by an institution, frequently becomes the main technological platform for online teaching (West, Waddoups & Graham, 2006). While there are great similarities among LMSs in terms of toolsets (Black et al., 2007), there are differences in implementation of those tools that can impact instructors’ teaching strategies (Morgan, 2003). Moreover, the software tools and features of most contemporary LMSs tend to be generic and all-purpose in nature (Feldstein & Mason, 2006), which can be a serious limitation unless instructors are provided with additional specialized tools to accomplish their pedagogical goals. When an institution uses a single LMS as the

only, one-size-fits-all platform for online education, the pedagogy is constrained since the generic nature of the system can make it less than ideal for the goals of a given course (Puntambekar, 2006).

The presence of technology component in online teaching results in faculty having to combine purely pedagogical roles with technical ones, often becoming not just course developers, but also media designers and technology integrators (Liu et al., 2005). Such role fusion is particularly pronounced with the “lone ranger” model. The acceptance of technical roles by instructors adds substantially to the time and effort they have to invest in developing an online course, something that is not always recognized by university administrators (Shea, 2007). While some of the respondents in the Liu et al. study appreciated the opportunity to expand their technical skills, others felt that the time investment was not justified in terms of impact on learning. Mandernach (2006) offers a compelling first-hand account of experiences with developing online courses that went from basics of uploading some learning materials to the course site to “bells and whistles” of incorporating increasing variety of cutting edge media and experimenting with assorted collaborative tools only to scale back to more basic tools. The reason was the realization that the “bells and whistles” provided little additional learning value while creating substantial cost to instructor in terms of time and effort as well as technical difficulties for students.

### **The Course Development Process**

The research into faculty participation in online course development tends to discuss the subject in general terms, describing the models and abstracting from details of the process. The 2007 study by Xu and Morris is one rare attempt to capture the nuances of course development decision making through in-depth study of the meetings and online communications of a course development team. The team included four faculty members as well as an instructional designer acting as project coordinator. The process proved to be closer to traditional course development with heavy focus on content and little collaboration on instructional process. The authors note inconsistencies in decision making and clear disagreements between faculty and the project coordinator. Most of the conflicts tended to be over content vs. form of presentation and ultimately reflect the underlying disagreements over pedagogy and faculty desire for autonomy in course development. The study underscores the need for better understanding of how course development actually happens, the kinds of decisions that are made in the process and the various factors that affect the decision making and the resultant course design. Such understanding can be helpful to administrators as they allocate the resources for online course and program development.

### **Methods**

In order to better understand the process of course redesign for virtual learning environments, it is important to seek input from those who do it. The research questions to be addressed by this inquiry include:

- What are the primary motivations for expanding course delivery to online format?
- What pedagogical and technical challenges do faculty face in preparing and delivering their courses online for the first time?
- What resources are available to instructors to support the course conversion and what additional resources do they need?
- How does moving to online format impact instruction in general?

To explore these questions, semi-structured interviews were held with faculty who have recent (i.e., within the past two academic years) experience converting a face-to-face course to online format. Each interview lasted approximately one hour with the investigator keeping written notes during the interviews using word processor on a personal laptop. Immediately after each interview, a more comprehensive set of notes was generated following the recommendations by Lincoln and Guba (1989). The information obtained from interviews was augmented by review of online course materials for the courses discussed and, in some cases, follow-up clarification via email.

The expanded interview notes were subjected to several iterations of review and annotation to identify main themes and develop codes related to those themes using the constant comparison principle (Lincoln & Guba, 1989). The main categories and sub-categories that emerged from analysis are:

- Main decisions:
  - Motivation for course conversion
  - Modification of course content

- Form of content presentation
- Technology used for course development
- Technology used for course delivery
- Additions/modifications to pedagogical strategies
- Influencing factors:
  - Institutional factors
  - Players and roles
  - Technology factors
  - Other factors

The two main categories (decisions and factors) form an overlapping matrix which is presented in Table 1 and is used in this paper as a framework for result reporting. Each table cell marked with “x” indicates that a factor impacts the particular course conversion decision, with dominant factors for each type of decision (explained in the “Results” section of this paper) highlighted in bold italics. Blank cells mean that a given factor did not appear to be important for the decision type. The two cells at the intersection of technology decisions and technology factors are grayed out to avoid redundancy.

	Motivation	Content Modification	Content Form	Development Technology	Delivery Technology	Pedagogical Strategies
Institutional Factors	<i>X</i>		X	<i>X</i>	<i>X</i>	X
Players & Roles	X	<i>X</i>	<i>X</i>	X	X	<i>X</i>
Technology Factors		X	X			X
Other Factors		X				

Other salient comments and observations by study participants that do not fit the main coding scheme were also marked in transcripts with the most interesting observations included in this report.

## Results

### *Subjects and Courses*

Eleven faculty members (six female and five male) were recruited from three universities (indicated in this paper as university A, B or C) that are part of the same public university system in a Southern state. Nine of the subjects were full-time faculty members and two were adjunct instructors, with the majority teaching undergraduate level courses in a variety of arts and sciences subject areas (see Table 2 for details). In all cases, the courses were fully online, except the course taught by Subject 11 which retained some face-to-face meetings and should rather be classified as a blended or hybrid course. The data from that interview is included in the analysis due to similarity with themes present in other interviews. The conversion process was a solo effort for Subjects 1, 8, 10 and 11. In all other cases the course redesign was a team effort involving instructional designers and technology specialists. The size of the project team ranged from one technology consultant acting “like a mechanic for the course” to a team of a dozen various specialists coordinated by an instructional designer acting as a project manager.

Subject	1	2	3	4	5	6	7	8	9	10	11
Gender	F	M	F	F	F	M	M	F	F	M	M
Institution	A	B	A	A	A	A	A	C	A	C	B
Course level	UG	UG	UG	G	UG	UG	UG	G	UG	G	UG
Subject area	Digital Media	Foreign Lang.	Bio-ethics	Special Ed	Vete-rinary	Food Science	Arche-ology	Inf. Science	Crop Science	Libra-rianship	Relig. Studies

### *Motivation for Course Conversion*

The most common motivations for conversion of a course to online format, each cited by eight of the study participants, are desire to make a course accessible to more students and the general institutional push for expansion in online educational offerings. Exploration of online teaching possibilities was as strong motivator for three of the subjects. Two of the study participants brought up professional growth and skill expansion as motivators with two more mentioning life/work balance convenience. While such personal factors were mentioned less frequently than institutional needs, it was clear from the interviews that some level of personal interest in teaching online was present in all cases.

As can be seen from Table 3, the institutional factors clearly dominate in the decision to convert a course to online format. Typical comments from study participants included references to “continuing trend towards online courses in this university”, shortage of classroom space and the need to “reach out to more potential students.” The two “pioneer” instructors were both interested in exploring new pedagogical frontiers: one wanted to “pave the way” for teaching traditional studio courses online and the other wanted to utilize the capabilities of Second Life to teach ethnography skills in an immersive way.

	# of subjects
<b>Institutional factors</b>	
Institutional push/needs	8
Student access/demand	8
<b>Personal factors</b>	
Pedagogical exploration	3
Professional growth	2
Personal convenience	2

#### *Course Content Modification Decisions*

Three of the study participants used the conversion process as the opportunity to substantially revise the course content in terms of topics covered, course structure, and materials used (e.g., textbook added or changed), while others revised, modified, or added some of the course elements to fit the online format. The modifications to course content typically went beyond what one subject labeled as “natural per semester improvement and refinement.” For example, in using Second Life for the primary purpose of immersive ethnography, one instructor saw an opportunity to include in the course the discussion of “post-modern theory on constructed identity” as students created their avatars. Two other instructors saw the conversion to online format as an opportunity to add an interdisciplinary dimension to the course, such as adding history and cultural studies to a foreign language course, or infusing social and political themes into a crop science course.

The most common content modification is inclusion of resources that exist on the web, such as videos, interactive learning modules or government documents. Most of the faculty interviewed talked about the way a web-based course naturally enables inclusion of these materials and resources, and, as one subject put it, provides the “ability to link things in.” The availability of high quality multimedia and interactive resources on the open web was noted by more than half of the subjects. “If somebody did it better, no point for me to recreate, so I send them [students] there” is a typical comment.

Using links to materials published on the open web, such as YouTube videos, also appears to be a common workaround for dealing with licensing and copyright issues. The latter was a frequently mentioned concern with at least four of the study participants who talked at length about having to find replacements for audiovisual materials (e.g., images, documentaries) they used to show in class in a way that avoided copyright violations. One instructor, who teaches a course that relies heavily on images, found the search for suitable pictures that fall under Creative Commons license to be a serious challenge in developing online content, something she wishes she had more help and support with from her institution. She did her best, but confesses “I am not sure if all my pictures are legal.”

Generally, when it comes to content, all faculty members interviewed saw themselves as course authors and sole decision makers about course content and overall structure, even when conversion involved a team of instructional designers and technical consultants. Their role was seen as decision makers or advisors on the form of content presentation only. Typical comments were along the lines of:

“I was the architect and he [Instructional Technology Consultant] was the carpenter... I made the blueprints... I see myself as course designer and him as technology constructor.”  
“Substance was created by me, the ideas, but the format and delivery I had help with.”  
“I was in charge on stuff that mattered.”

The faculty member’s role as instructor and course author is the single most important factor in content modification, with affordances of web technologies and factors such as copyright issues having impact on specific decisions.

### *Content Form Decisions*

All but two experimental courses (taught by Subjects 1 and 11) include a lecture component presented in a variety of forms. All nine courses with lecture elements include HTML modules created by the instructor (with or without help from technical specialists) that provide introduction to each lesson or course unit and summaries of main points as well as links to assignments, readings and other resources. Whether the HTML module constituted the main content of the lesson or merely the introduction to the main content, it is something that faculty say they put a great deal of thought and effort into and tend to develop based on their old lecture notes. While faculty were the main decision makers in developing the HTML modules, instructional designers also played an important role, from consulting on best practices for content presentation and structure to helping write the modules (as one subject described it, “she [instructional designer] expanded bullets [from lecture notes] into pretty sentences”). The decisions to include textual materials such as additional notes, study questions, or presentation transcripts in non-HTML format (e.g., MS Word, PDF) are less systematic and tend to be instructor-driven.

Three factors converge in shaping decisions about non-textual lecture presentation: (1) the technology and personnel provided by the institution, (2) instructor preference, and (3) recommendations by technical consultants. The utilization of existing lecture materials appears to be an important consideration, and thus narrated PowerPoint presentations or a combination of recorded lecture with PowerPoint slides became the most common lecture format (present in six of nine courses with lecture component). According to one of the subjects, “it was the best way to use what I already had, but still fulfill needs for the course.” There seems to be some tension around these decisions between the best practices suggested by instructional designers and instructor preferences. While the instructional designer-influenced decisions tend to be based on learning theory and guidelines for accommodations of different learning styles, the faculty decisions are much more idiosyncratic. For example, instructional designers tend to recommend dividing the multimedia lecture into smaller chunks, but a faculty may disagree (“She insisted that [recordings] should be no longer than 5-7 min. I thought that was preposterous”) or agree with it in principle, but feel that it does not meet the students’ needs (“I know it is best practice to chunk, but [there is a] need to address students’ concern about not getting a real lecture”).

Inclusion of specially-created graphics and other multimedia materials tends to be driven by available media personnel and coordinated by the project manager. This is illustrated well by the following comment from one of the subjects: “Media people did some animation. They thought [course] material could be helped by graphic material.” In one case, an instructor actively requested creation of multimedia for his course which includes both flash animation and live actor footage, but this seems to be an exception.

Overall, instructional designers and the technology that they have at their disposal have the most impact on the form of the content presentation. Of course, the very availability of these human and technical resources depends on the institutional policy and practice.

### *Development Technology Decisions*

The decisions about software and other technology used to create course content are intertwined with decisions about content form. In fact, the two seem to influence each other in a kind of classic “chicken and egg” problem. In some cases, the technology was clearly selected to provide desired content form:

“I chose it [LecShare] for several reasons. First, it is relatively inexpensive and does exactly what I need it to do, which is to publish captioned PowerPoint presentations in a variety of formats ... The second reason is that I know the inventor of the program, so I feel that if any changes or customization is necessary, that he can make them.”

However, in other cases, the availability of technology and the push from the instructional designers may force the decision on the instructor. For example, in a few cases, having MediaSite software and technical support personnel available influenced the decision to include a video lecture even when the instructor did not like the “talking head” presentation or thought there was “not much for students to be gained by hearing [her] read the text” when the transcript had to be included anyway to accommodate students with disabilities.

Generally, the choice of development technology is likely to be confounded to what is available and supported by the institution unless the instructor is both very technically proficient and willing to experiment. This was the case with one of the “pioneer” faculty who created on his own a series of “quests” for his students to master both Second Life and the basic course concepts. His reason for not relying on institutional technical help - “I know more than the people I could ask to do it”. However, this appears to be rather an exception to the general pattern.

### *Delivery Technology Decisions*

Each of the three institutions from which the subjects were recruited has a single or preferred LMS for course delivery. Thus the decision on main delivery technology for the course is “built in” in most cases. However, instructors often find the LMS available to them to be limited in ability to support their teaching. In three cases, instructors chose alternative platforms such as blogs (WordPress, Blogger) or Second Life. All of these instructors were technically savvy and did not require technical assistance. In four more cases, additional special purpose tools were included such as synchronous communication software (e.g., Elluminate) or subject-specific, commercially available software (e.g., online foreign language tutorial). Moreover, several instructors experienced desire to incorporate more tools for specific purposes, the tools that in their opinion work better than what is built into the LMS or is otherwise readily available at their institution. They are not always able to do so. The concerns tend to be about cost (“I want to do Wimba, but will have to pay for it myself”) or lack of institutional support for the tool (“While University hosts WordPress, this is intended as a research platform, so it is not supported per se”). While technically savvy instructors can and do overcome the latter limitation, their colleagues relying on technical support from the institution are limited in their ability to expand the arsenal of course delivery tools.

### *Decisions on Pedagogical Strategies*

Lecturing remains an important component in online versions of the courses. Two main approaches are taken by the faculty when deciding on how to handle lecture: (1) convert lecture format, preserving its role in the course (typical for a survey type undergraduate course that consists of mostly lecture in face-to-face format), or (2) reducing the role of lecture in favor of other teaching strategies such as student discussion or individual assignments. One instructor explained this change in pedagogy saying, “I set the table, but learning is your [student’s] work”, a sentiment echoed by another subject who switched from lecturing to “sending [students] to original sources” and expecting them to learn from those sources according to the framework set in the lesson introduction.

Some form of discussion was present in all but two courses. Typically, the discussion is handled via asynchronous online forums, but several instructors felt the need for more interactive synchronous discussion. Elluminate, chat tools built into LMS (Moodle, Blackboard) and, in one case, Second Life were used for these purposes. Asynchronous forum discussion was used for group work and as a proxy for class attendance/participation. This represents another area of conflict between faculty teaching philosophies and recommendations from instructional designers. The latter tend to suggest very structured approaches of group discussions with collective final postings and/or a certain number of original and reply individual discussion postings required per course unit. These are seen by some faculty as reasonable and necessary decisions for online course format. Yet, some of their colleagues resent what one subject labeled as “coercive pedagogy” and believe the engagement in class discussion should be voluntary and spontaneous. However, the same instructors note that the common problems with class non-participation are amplified in online class and force them to make “on the fly” decisions about incentives and penalties.

When it comes to assignments, written assignments (papers, essays, reports) tend to be handled identically for online and face-to-face courses, and instructors see this as one of the ways of preserving equivalence between the course formats. Group projects and presentations, on the other hand, require modifications. Typical modifications include greater emphasis on the research component, replacement of oral presentations with written reports, and replacement of group projects with individual assignments. The latter decision was made by three of the faculty interviewed and is planned by two others for the next iteration of the course in response to challenges of group work in asynchronous mediated environment.

Desire by faculty to preserve the equivalence between face-to-face and online sections of the course typically leads to the decision to avoid changes to formal tests and quizzes. When changes to testing were made, they were driven by other factors. Affordances of LMS for inclusion of quizzes into the course combined with a push for this form of assessment by instructional designers led to a greater number of quizzes in a few of the courses. Also, the testing and grading tools built into the LMS forced three of the instructors to modify the question format, such as switching from essay or short answer to multiple choice questions. This was caused by the LMS software interface issues such as requiring multiple file downloads and excessive back and forth navigation.

Ultimately, the decisions about pedagogical strategies are the prerogative of faculty. Even when influenced by other factors the instructors try to follow what they believe to be good teaching practices. Several of the study participants were interviewed when they were in the middle of teaching the online version of the course for the first time and they all made comments about various pedagogical changes they want to make based on what seemed to work or not work in the inaugural offering of the course.

### *Shifting Boundary between Face-to-face and Online Courses*

One interesting observation that emerged from the study is that of shifting boundary between face-to-face and online courses. Most study participants mentioned using institutional LMS to support traditional classroom instruction prior to considering online teaching (e.g., to post materials or handle administrative aspects of the course). Three of the faculty interviewed also talked extensively about incorporating progressively more online teaching tools into their face-to-face classes, effectively making them hybrid before converting to fully-online. At the same time, three other subjects felt the need for some face-to-face interaction with and among students, and expressed wishes to move to hybrid instruction mode with most of the course being taught online with some on-campus sessions. Two more instructors mentioned plans for development of hybrid courses in the future. Finally, faculty teaching their courses in both modes (face-to-face and online) consistently talked about finding themselves incorporating more online elements into their face-to-face classes as well as trying new things in the online class that emerge from the traditional one, suggesting the overall trend to more blended instruction.

## **Discussion and Implications for Practice**

### *Supporting Faculty as Decision Makers*

While the institutional factors appear to be most significant in the decision to convert a course from face-to-face to online format, the findings of this study suggest that the faculty members remain the main decision makers on what and how to teach in the new version of the course. This seems to be true even in the cases where the course conversion was a team effort. This is more consistent with findings by Xu and Morris (2007) than with the notion that the project-based course development model removes the faculty from the key decision making role (e.g., Hixon, 2008). The faculty members interviewed for the study clearly see the courses they teach as theirs regardless of the format of teaching, with a sense of investment in course development and responsibility for its success. Moreover, for seven of the study participants conversion of the course to online format was an addition to, not replacement of the face-to-face version of the course. That is, the two modes of teaching exist in parallel or as per-semester alternatives. This may account for the preservation of the sense of course ownership and the decision making authority. Administrators who want to encourage more of their faculty to develop online versions of courses should be sensitive to these issues and develop policies that recognize and support the role of instructor as the course author.

Although the faculty members claim authority over most significant course conversion decisions, the role of the institutional and technology factors should not be ignored. The instructors want and need institutional support in the form of consultations with technical specialists, access to variety of course development and teaching tools, and training. The extensive time and effort needed for course conversion was noted by all of the faculty interviewed. Typical comments were along the lines of “development almost killed me” or “it was ten times more work than regular class.” Yet, in most cases, instructors did not receive sufficient compensation for the extra time in the form of course release or financial incentives. Struggles with technology were also frequently mentioned, ranging from software glitches (e.g., a version upgrade “wiped out” the narration recorded by instructor) to reluctance to deal with more technical aspects of the course development (e.g., “I am a scientist, not web designer”). Thus, help in the process is needed and most instructors who received help with course development appreciate it, as illustrated by the following statements from different subjects:

“Building the course alongside an instructional designer was pivotal”



“It would be a weak course without them [development support unit]”  
“[development support unit] were amazing. I would just have an idea and they will have five people sitting around the table brainstorming how to get a point across”

Yet, this essential help needs to be offered in a way that respects the faculty role as the course author and his or her individual teaching style rather than pressuring the instructor into doing things a certain way. A few of the instructors talked about changes to the future offerings of the course that would effectively represent a “push back” from them against decisions imposed by instructional designers.

The main question for practice is what kind of support, and in what quantity, is needed to assist faculty in redesigning the courses for online teaching. Seven of the subjects in this study were from the same institution and six of them worked with the same development support unit, yet, even for these cases, there does not appear to be a “one size fits all” answer. At the low end, the instructors need help with creating basic HTML pages, and at the high end they need multimedia tutorials developed specifically for their courses. While some instructors are satisfied with tools built into institution-provided LMS, the majority feel the need for additional tools to support the teaching goals. This requires help ranging from assistance in finding and selecting appropriate tools to financial and personnel support for tool purchase and implementation. Clearly, academic administrators have to be more flexible in supporting online instruction at their institutions if such programs are to succeed. When limitations in available resources force faculty to make course development decisions that constrain pedagogical objectives, it is appropriate for administrators to consider offering greater variety of resources at the institutional level. One option is to encourage experienced instructors to share what they have learned by providing incentives such as course breaks or supplemental salary. Another is to devote more technical personnel to researching different technology tools that may facilitate online teaching and to educating faculty about those tools.

#### *Study Limitations and Future Work*

This study was exploratory in nature and, as such, subject to several limitations. Firstly, the study participants were recruited from institutions in the same geographic area and the majority of participants (seven) were from the same university. Moreover, all three institutions are similar in being large universities with graduate programs. Expanding the study to different states, including smaller-size institutions and two-year colleges could produce less convergent findings. Secondly, the study, by design, presents the faculty perspective only. Examining perspectives of other players in the course conversion process could produce a different picture of decision making patterns.

Even with these limitations, the study identified several key dimensions of the course conversion process, each deserving further exploration. One area of future work would be the study of shifts in course goals that result from the change in teaching format of which the current study presents several examples and the instructional impact of these changes. This shift may be more noticeable not in teaching the main content of the course, but in the peripheral goals of creating successful learning environment, or making sure the students are, as one subject put it, “properly socialized into profession”. Administratively, these changes in course goals and objectives need to be monitored and evaluated in terms of fit with the overall curricular structure and in terms of necessary pragmatic support for the kinds of changes that are deemed desirable and consistent with the institution’s academic goals as whole.

Another direction would be to evaluate more carefully the real and perceived losses (e.g., reduction in synchronous discussion) and gains (e.g., ease of linking additional content) of the online course format and their overall impact on instruction, student retention and satisfaction. Case studies of effective way to mitigate the losses while fully capitalizing on the gains would be of value to current and future online educators. The present study also suggests that many faculty believe that different forms of hybrid instruction might offer “the best of both worlds.” It would be useful to examine what aspects of the course and what types of subject matter create particularly high demand for inclusion of the face-to-face interaction as well as how to best handle the logistics of blended instruction. This would be a very important area for further study in terms of both pedagogical practice and administration of online education.

Finally, the study suggests that successful transition of instruction to online environment is not simply a matter of faculty interest and motivation but a complex process, heavily dependent on the level of institutional support. Administrators need to be willing to commit technical and human resources necessary for such transition. This calls for further research into the resource needs for the creation of successful online learning environment.

Conversion of academic courses to online from traditional classroom format is a reality at many academic

institutions. Such conversion represents a particular type of course development that requires special support in terms of policy, technology and other resources. The present study highlights the importance of better understanding of this understudied topic and introduces some possible directions for further research inquiry in this area.

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