REPURPOSING CONTENT FOR ONLINE LEARNING: A CASE STUDY OF THE CANADIAN OPEN UNIVERSITY

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ABSTRACT

Following the adoption of new Strategic Plans, Athabasca University has been in the process of transforming its print-based courses to online content delivery for the past five years. This paper aims to report on the recent developments and issues on this transition, specifically, the steps and strategies the Educational Media Development team took to assess existing content and how to repurpose them for e-learning. Strategies such as how to adapt print production to online learning; the integration of various components of course websites; and the move towards integrating content into learning management system such as Moodle. This content development and migration process is particularly complex in the context that is characterized by self-paced, individualized study, continuous enrolment and an asynchronous mode of distance education delivery at the undergraduate level.

1. INTRODUCTION

Throughout the last decade–and during the mid 1990s in particular- there was a shift in educational policy towards integrating online learning as core educational practices in Athabasca University, Canada's Open University. One of the outcomes of that educational policy shift has been the adoption of new Strategic University Plans (SUP) that resulted in an in-depth review process of distance and e-learning curriculum development practices. The SUP of 2002 made a significant break from the past. It projected online delivery to be core delivery and print-based to be optional for the University by 2006. This was a wake up call for the traditional print-based delivery adherents within the institution since processes, designs, and production procedures had to be reoriented toward online production and delivery (Bossé & Powell, 2004). Concurrently, the role of e-learning in the University's overall distance education effort is maturing from isolated pilot projects to an integral part of course delivery and support (Bossé & Powell, 2004). Overall, the consolidation of e-learning practices has been an on going effort at all levels of the institution rather than one sweeping reform. This case study aims to report on the recent development and issues of this transition. Specifically, the steps and strategies the Educational Media Development team took to assess existing content and how to repurpose them for e-learning.

2. EDUCATIONAL MEDIA DEVELOPMENT FRAMEWORK

Athabasca University's Educational Media Development (EMD) department was established in 1995 as a central unit to manage the design and development of print-based course delivery and digital technologies for education and research. According to the mandate, EMD aims to provide the university community with the administrative, creative, and technical infrastructure to:

- design and develop high-quality course material
- enhance delivery of courses and services to students

The department plays a key role in the implementation of course design and development, copyright, and other relevant policies and standards, and provides central coordination of the course development process. EMD is composed of editors, visual designers, instructional designers, copyright officers, and digital media technologists (typesetters), and has existed in its present form for almost five years. The instructional designers are a more recent addition to the group, and it is largely their explorations and findings that have influenced the consolidation of e-learning in distance education within the department (Bossé & Powell, 2004).

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stone of the workflow process. In a nutshell,
the role of the editor is 'to ensure the course
materials are correct, coherent, internally
consistent and that they conform to the
University's editorial standards; the role of the
visual designer is to ensure illustrations, charts,
graphics or other visual designs are reproduced
correctly, are internally consistent and conform
with the University standards; the instructional
designers consult on instructional strategies
and assist with selection, design and production of
courses while incorporating instructional design
principles' (Course Authors Guide, 2002, p.7-8).
The EMD staff liaises continuously with
respective Academic Centres, the Library, Course
Materials Production Unit, Computing Services,
Learning Services, and the Office of the Registrar.

3. BACKGROUND ON CONTENT AND CURRICULUM DEVELOPMENT

The introduction of the E-Learning Plan, which
flows from the SUP (2002-2006), renewed the
effort by the instructional designers to share
and gain consensus on best practices from their
experiences with online course projects in dif-
ferent academic centres. Authorization of more
online delivery would mean greater volume of
online production and support. It also had sig-
nificant implications about which the editors
and copyright officers were very much aware of.
Previously, if there were copyright, content, or
budget issues which prohibited placing material
online, those material could be delivered in print.
From then on, new solutions needed to be
found in order to deliver all these mate-
rial online. Consequently, consolidating
current processes, practices and standards
was seen as essential to adapt to the shift.
Athabasca University has been employing
a seven-phase course development model
over the past 25 years (Course Coordina-
tor's Guide, 2003). This process ensures that
course development is consistent across the
University and is aligned with operational
plans. The seven phases are explained below:

Phase 1: General Program Planning

This concerns with the long-range educational
planning that determines the criteria by which
new or existing programs are developed,
revised, or cancelled.

Pre-phase 2: Short Proposal

A short proposal for a new program is
circulated among the Academic Centres. It
allows for a full discussion of options to
cross-list courses and modularizes others for
adaptation to different disciplines, thereby
helping to avoid duplication of effort before
significant investment is made in program
development.

Phase 2: Individual Program Planning

This is the phase to determine courses,
levels, and course relationships within programs
identified in Phase 1. This planning is based on the
approved proposals developed according to
guidelines set by the University's Academic
Council, Governing Council, and Advanced
Education.

Pre-phase 3: Preliminary Course Proposal

At this stage, a preliminary course
proposal is circulated to provide
opportunities for cross-listing, modularization,
joint use of curricula and avoid duplication.

Phase 3: Individual Course Plan

In Phase 3, course planning takes place
leading to a detailed development process
for the specified course, the Phase 3 Re-
port. The Report includes details such as the
components of the course, delivery mode(s), cost,
and the resources required to develop the course.

Phase 4: Course Materials Preparation

Here, course material are prepared in
accordance with the course
specifications described in the Phase 3 Report.

Phase 5: Delivery and Tutoring

Delivery and tutoring of the course are undertaken according to the delivery specifications described in the Phase 3 Report.

Phase 6: Course Evaluation

The focus of Phase 6 is on evaluation of the teaching effectiveness of the course. It involves collection of data from a variety of sources.

Phase 7: Course Revision

Each course is assessed annually according to the following criteria: the relevance of the material; the currency of the texts and other purchased materials; the rigor of the course content; the accuracy of the materials; the currency of tests and assignments; and the transferability to other universities. A revision is conducted on the basis of the assessment.

Thus far, this course development model has worked well in a print-based course delivery mode with the assumption that once the print materials have been produced, it leaves little room for changes until the next revision cycle. It is a one-way, waterfall approach to course production with a very tightly integrated structure where workflow follows from one unit to another. For the online environment, however, this model cannot be replicated. Online course development requires a much more agile, iterative and adaptive cycle that works with the medium.

4. REPURPOSING CONTENT FROM PRINT TO E-LEARNING

In 2003, the University received a $1.5 million CDN, fast-tracked, one-time grant from the Alberta Learning Access Fund to develop and implement an E-learning Accelerator project. The outcome of this project was to redevelop 150 high enrollment courses for online delivery to be completed by fall 2005. The project charter stated that the University was not charged to create new courses or to build a Learning Management System (LMS) from scratch.

The courses were selected by registration volume and the idea was that a maximum number of students would benefit from this project. Courses across disciplines such as Psychology, Computer Science, English, Business and Commerce were included and a taxonomy of online categories was devised to guide the enhancement of these courses. Our first challenge in creating e-learning courses was to define what "online learning" means to our institution. By identifying taxonomy, we aimed to define what this project was trying to achieve and what levels of online learning we were engaging the students. The taxonomy that defined various level of online learning is listed in Table 1:

Names	Contents
Functional	Provide practical/peripheral information such as syllabus, e-mails, tutor informational
Distributional	Provide relevant course material such as text, video, audio, e-journals
Interactional	Provide learner interactions such as simulations, games, quizzes.
Communal-Individualized study	Provide pear-to-pear or pear-to-tutor communication via discussion forum, chat rooms, VOIP in a self-paced learning environment with flexible start dates.
Communal-Group study	Provide pear-to-pear or pear-to-tutor communication via discussion forum, chat rooms, VOIP in a self-paced learning environment with flexible start dates.

Table 1: Taxonomy of Online Learning

With funding from this E-Learning Accelerator project, incremental stages have been developed to migrate all 150 print-based courses online. To initiate the process, a basic course template has been designed and established (See Figure 1 below). This template was made available online for all interested parties as a starting point for presenting course material online. The course development team incorporated the functional and distributional aspect of online learning from the printed version of the student manual as the first level of online engagement. The standard information included course description, course materials, course objectives, study schedule, student evaluation, grading criteria, etc. The team's visual designer also attempted

to standardize the look and feel of all Athabasca University courses while providing enough room for personalization within each course. For example, course coordinators/professors worked with instructional designers to add interactive quizzes, links to downloadable reading files, e-journals and websites as well as more complex learning objects. These websites are open-access with password protected areas for online discussion forums and any copyrighted material that are only available for registered students.
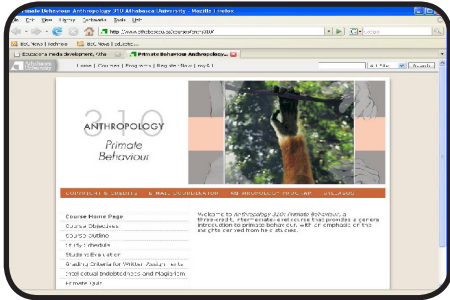
In terms of developing e-learning material, our focus was on the transition of print material to online enhancements. For the focus of the E-learning Accelerator project, the course teams did not design courses from scratch. The aim was to integrate online components to existing print course materials rather than replacing them. It served as an interim solution before the University could decide on an LMS as an institutional wide platform for e-learning.

5. INTEGRATING CONTENT INTO LEARNING MANAGEMENT SYSTEM

Moodle is Athabasca University's online Learning Management System (LMS) of choice. A LMS, by definition according to Paulsen (2002), is "a broad term that is used for a wide range of systems that organize and provide access to online learning services for students, teachers, and administrators. These services usually include access control, provision of learning content, communication tools, and organizations of user groups." Prior to the selection and implementation of Moodle in 2005, the University operated largely on a print-based format and deployed three online learning platforms. As the University was moving to online course delivery mode, there was a

need for a more centralized, flexible system to support the ongoing development of electronic interactive content. As a result, Moodle has emerged as the single, University-wide LMS. There are many advantages of selecting Moodle over other LMSs. For instance, Moodle has been developed as an Open Source software project; hence, it is available free of charge with no licensing cost attached. Worldwide, there are over 1,150 organizations in 81 countries registered as Moodle users. It has a growing community of practitioners and an active online discussion forum where developers and educators actively contribute to the creative usage and added functionality of Moodle. In addition, Moodle is built on a user friendly template with "social constructionist pedagogy"(Moodle website, 2007). It also allows for the integration of a wide variety of learning objects and interactivities such as blogs, wikis, discussion forums, quizzes, and chat rooms which are easily configured to suit our self-paced, asynchronous study mode at the University. As part of the strategic plan to implement Moodle, the project has been broken down into two phases. For Phase 1, the aim was to:

• Determine system architecture and then install Moodle
• Test and pilot system using test courses
• Develop templates, workflow and guidelines
• Convert pilot course content and pilot-templates
• Integrate Moodle within existing University systems
• Develop user support and training
• Develop research and development environment
• Train staff in their respective centres

For Phase 2:

•Implement Moodle across all academic centres in a group(department) by group process

During Phase 1, eight undergraduate courses were made available on March 21, 2006, with registration for May 1 and June 1 start date as test courses. The undergraduate courses chosen for the pilot phase were high enrollment courses with online components and

interested professors and tutors. These courses are across disciplines including Accounting, Criminal Justice, Computer Science, English, Health Studies, Women's Studies, and Management Science. A maximum of 20 students were allocated for each course. At the time of this writing, all graduate courses have Moodle course websites and the University is aiming for October 1, 2007 as the start date for undergraduate courses made available across several Academic Centres.

6. CHALLENGES AND OPPORTUNITIES

Definition of online courses

Our first and foremost challenge lay in defining online learning. What exactly constitutes e-learning? What does an online course looks like? Although we have identified the taxonomy as mentioned above, the University as a whole still needs to further define which level of online learning experience to provide the students. There has been a lack of user feedback in this regard. At present, more pilot studies and evaluations need to be done. In addition, the changing nature of e-learning means the staff are constantly updating the definitions and re-evaluating the decision making process on online course development within EMD.

Managing change and expectations

Staff and faculty across the University were accustomed to print-based course delivery with a rigid production process. The course development workflow has traditionally been a very tightly integrated, linear process with the emphasis on production rather than a collaborative and iterative cycles of course design. Furthermore, the roles of the team members within EMD were often unclear and some are overlapping and changing as we moved from print to online delivery. For example, the role of the Instructional Designer is shifting - the new role is many folds and that includes project management, needs analysis, course design and development, liaising with various stakeholders, conducting evaluation and quality control, etc. Globally, "the role of instructional designer has risen as a result of the increasing presence of

web-based instruction." (Pan, Deets, Phillips, & Cornell, 2003). As a result, over the last five years, the number of instructional designers has increased from one to seven within EMD. The increase in number of instructional designers has resulted in a shift in mentality towards online learning. Instructional designers are perceived as change agents to bring in new ideas, perspectives and skill sets to the course team at large. As the University moves along toward adopting e-learning as the core practices, staff also need to deal with the change in roles and responsibilities within the course team.

Change in course design

c to be driven only by technology forces. Currently, very little research has been conducted regarding this mode of learning and the effective u se of LMS for it. Opportunities are available for further research studies in this area. There is a small number of pilot projects under development to further investigate what kinds of instructional models work best for courses that do not have a semester-based structure, with students joining in and leaving the course at any given time. Specifically, Moodle is designed for paced study, with semester system like the majority of the LMS available in the market. At the institutional level, we need to think strategically how to adapt and configure Moodle to accommodate our niche market.

Large scale deployment/implementation of courses in LMS

Due to the large scale deployment of courses, we have learnt to adapt by selecting a rapid implementation template for migrating content to Moodle. One of the practices is to use Moodle as an entry point but not extent past putting the functional content such as syllabus, course outlines, online discussion and course announcements. Course content will be added at a later date when all courses are made available in Moodle. Currently, the majority of the course websites have only basic functions available and are used

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7. CONCLUSION

To conclude, the world of higher education, particularly in distance learning institutions is changing. There are changes in instructional design, learning technology, curriculum production models and management of personnel. The development of course design must keep abreast of such changes, in order to continue to provide quality instructional and learning material. At Athabasca University, we need to be mindful of these changes in order to survive the increasing global competition in the distance learning market. At an individual level, staff and faculty also need to acknowledge and manage this change with cross-functional communication, open dialog and clear role definitions and expectations supported by upper management.

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