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Web-based Teaching and Training: A Frequency-based Approach

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Abstract

To those involved in teaching and training, the 80/20 rule is probably one of the most universal phenomenon, e.g., 80% of questions come from 20% of students and 80% of time spent is on 20% of subjects. This article describes our experience in designing and beginning to create a prototype web-based teaching and training (WBTT) program at the Franchise University (FranchiseU; The URL is <http://www.bus.lsu.edu/franchise>). Our objectives include demonstrating how the concept of the 80/20 rule can be used to create a WBTT program satisfying the major requirements of "education brokerages" on the Internet. To illustrate how the program operates, we describe its organizational model.

Education Brokerages on the Internet

In their pioneer paper on Electronic Markets for Learning, Hamalainen, Whinston, and Vishik (1996) define "education brokerages" as ones who provide "a new just-in-time, on-demand approach to electronic educational products offered by virtual universities through intermediaries." They also suggest that a new model of course production, delivery, and presentation is needed for education brokerages. The model shall include, (1) allowing an individualized approach, flexibility, and ease of dissemination; (2) enabling the collaboration between learners and experts throughout the world via WWW; and (3) integrating online resources into the course materials for accessing. In this paper we propose an 80/20-based methodology for building a WBTT for education brokerages. It integrates Barlow's (1995) Frequency Marketing, Ives and Learnmonth's (1987) Customer Service Life Cycle (CSLC; The URL is <http://isds.bus.lsu.edu/cvs/repost/bpr/cslc>), and Alter's Work-centered Analysis (WCA; The URL is <http://isds.bus.lsu.edu/cvs/reposit/bpr/wca/workanal.html>).

The Frequency-based Approach

Frequency marketing, deriving from the frequent-flyer programs beginning in 1981, is an idea of rewarding a business' most frequent (and profitable) customers based on the 80/20 rule. Applying the concept to WBTT, we may classify learners and services into "frequency" classes, respectively. The frequency is defined in a general sense. It could be the number of occurrences or the required attention level. For examples, the frequency classes for the learners may be frequent, infrequent, and potential; and for the services may be basic, intermediate, and advanced. The combination of the two classifications generates nine versions of processes for WBTT.

Inside each process, the CSLC may be used to model the services received by the corresponding learners. In the content of WBTT, the model recognizes four stages through which a learner will pass for the service:

- Before requesting any service, the learner will have *requirements* specific to the service, which is available, but the learner is unaware of it or doesn't know where to find it.
- Having decided to use the service, another set of questions related to *acquisition* arises. In this stage, the questions of the learner will be more focused relating to how easy it is to use the service and the time needed to use it.
- Now that the learner has signed up with the service, questions related to the *ownership* arise as to the use, support, and maintenance.
- The end of the cycle, or *retirement*, brings about additional opportunities for the use of the WBTT system. Learners will again be looking for new services, thus they may become learners again. Thus, the life cycle may loop back to the requirement stage when there is a need for learning a new course.

To build the information system for WBTT, the framework of WCA may be used which consists of six interrelated elements: business process, "a related group of steps or activities that use people and information to create value for internal or external customers"; products or services, the "output of the business process"; customers, "those who use the outputs of the business

process”; participants, the “people who enter, process, or use the information within the system”; information, such as “data input, related data, and output”; and technology, the “tools that either perform, work directly, or are used to perform work.”

Based on the three models, the frequency-based approach (The URL is <http://isds.bus.lsu.edu/cvs/repos/bpr/wca/freqwca.html>.) to WBTT can be described below:

1. Classify the *customers* (learners) into the frequency classes, e.g., frequent, infrequent, and potential.
2. Classify the *services* into the frequency classes, e.g., basic, intermediate, and advanced.
3. *Prioritize* the nine processes in the frequency matrix. Each process has its own WCA supporting the CSLC.
4. *Intensify* the focus of the CSLC in each process. Although each process has the four stages to care about, the intensity of care needed for them is quite different among the processes. For example, for the process providing basic services to frequent customers, the focus shall be more on the later parts of the cycle, i.e., ownership and retirement, since customers know who you are and what they want. On the other hand, for the potential customers requiring advanced services, the focus shall be on the early parts of the cycle, i.e., requirements and acquisition; both are designed to show who you are and what specific services you provide.
5. Identify and document, for each WCA, *participants* and the *information* they need, e.g., the scenario management describing what shall be done by whom in the regular and irregular scenarios.
6. Configure the *technology* for the WCAs, e.g., enabling the prompt classification of a customer request and trigger the appropriate process to serve the customer.

The Franchise University

We are currently building the WBTT program for the FranchiseU with the mission to provide the highest franchise training and education programs to franchise professionals and employees throughout the world. The intended learners consist of two categories: franchisors and franchisees. The franchisors category can be classified as: (1) established franchisors, having more than 100 franchise units; (2) new franchisors, having between 1 and 100 units; and (3) prospective franchisors, having 0 franchise units. The franchisees category: (1) established franchisees, managing more than 5 franchise units; (2) new franchisees: managing 1 and 5 units; and (3) prospective franchisees, managing 0 franchise units.

The services are based on the Franchising book developed by Justis and Judd (1998). The services can be classified as basic, intermediate, and advanced. Basic services are designed for the front line employees of franchisors and franchisees. The services will be provided through the Internet with the online support of the educators. Intermediate services are designed for middle level managers of franchisors and franchisees. The services will be provided through the distance learning facility with an interactive mechanism. Advanced services are designed for senior executives of franchisors and franchisees. The services will be provided through the person-to-person consulting at the seminar location provided by Kwik Kopy.

Efforts are in progress on the nine different WCAs for franchisors and franchisees. For example, consider the WCA 1 for providing established franchisors and franchisees with basic services. The vision of this process is a series of interactive, modular franchise management courses which include instruction, exercises, testing, glossary, help sections, hypertext links to references, graphics, audio, access to e-mail, and ultimately video and animation. Courses will average 2.5 hours of instruction/interaction in approximately 15-20 minute modules. Taking the basic services for established franchisors and franchisees as the first priority provides us further insight to do the WCA on other processes. For example, many of the Internet-based courses developed will help new and experienced executives understand today's issues in franchising. Educated executives will generate the demand of services of all levels from learners of all categories. The prioritization order of the frequency matrices will change over time once the Internet-based basic service modules are in operation smoothly.

The next step of the frequency-based approach is to identify the intensity of focus of each process with respect to the stages of CSLC. For example, in providing basic learning modules to established franchisors and franchisees, the focus of customer service shall be more on ownership and retirement. In the ownership (online learning) stage, concepts will be presented in a self-paced, how-to, interactive environment. Each module will be indexed by behavioral or skill-based learning objectives. The user can pull up a glossary window at any point during the lesson to get a definition/explanation of a highlighted term. Using HTML, module and other reference material will be online hyper-linked where appropriate. Users can use e-mail to ask questions, seek content or tech support, or submit tests. In the retirement (after-learning) stage, there will be two levels of training evaluations. Level 1 will be on the reaction to learning and will be conducted through an online survey. Level 2 will be on knowledge gained. The evaluations will include pre- and post-tests with immediate scoring forwarded to the learner and to the FranchiseU for analysis, generation of corporate reports, and certificate issuance.

Using the basic services for established franchisors as an example, the participants in the process include learners, marketers, developers, facilitators, webmasters, and programmers. Each of the participants plays many different roles and has various types of information need. Since the marketers are the main public contact persons, they play the role of the process owner whose most important thing to do is to show the positive effect of the learning on the business bottom line of the franchisors and franchisees. Consider, as an example, the three most crucial numbers tracked in a franchising system: the total sales, the cost of goods sold, and the cost of labor. A franchisee has to report the numbers monthly to the franchisor who will use them to evaluate the performance of the franchisee. A franchisor may be interested in the average learning performance indicator of the franchisees after several modules have been learned.

To deliver the information needed by the participants, various hardware and software systems are needed. The FranchiseU has decided to outsource the management of the required systems to several leading WBTT providers.

Discussions

Using the frequency-based approach, the WBTT program being developed at the FranchiseU satisfies the three major requirements for education brokerages on the Internet (Hamalainen, Whinston, and Vishik 1996):

- (1) Using CSLC to model the needs of learners in each process of the frequency matrix allows us to provide flexible and customized services for learners to disseminate knowledge easily.
- (2) Collaboration between learners and experts are conducted throughout the world via WWW. Such collaboration will be much more encouraged after successful person-to-person consultations with senior executives.
- (3) Valuable online resources are also integrated easily into the course materials for accessing.

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