

eCommerce and eLearning

A White Paper by

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eCommerce Opportunities within eLearning

The installation of an Integrated Online Learning System (IOLS), such as LearnFlex™, provides a number of opportunities for revenue generation through the inclusion of an eCommerce capability. While a typical Learning Management System (LMS) has some potential for revenue generation, it is often limited to the extent that the LMS is focused on tracking and reporting of learning results, rather than the delivery of a total educational experience.

An IOLS pulls together the tracking and reporting functions of a LMS (or a LCMS – Learning Content Management System – if there is the tracking of content objects), along with such saleable resources such as courses, reusable learning objects, media assets, interactive communications facilities, and performance support features. Adding an eCommerce module to an IOLS is a quick way to utilize these resources to increase net revenue of an organization.

It should be noted, however, that there is a difference between eCommerce and eBusiness in regards to online learning. eCommerce refers to the ability to purchase goods and services on the Internet, while eBusiness refers to any way that an Internet based system can impact the bottom line of a business. eBusiness, therefore, is a much broader concept than eCommerce, and includes the impact of online learning systems on cost savings, increased sales leads, improved productivity of staff, etc. Essentially, eCommerce success is judged by the amount of revenue generated by a web site, while eBusiness is evaluated by Return on Investment (ROI). The net revenue generated by eCommerce facilities in an online learning system can be part of the overall ROI of the system.

The emphasis that we place on *net* revenue reflects the fact that eCommerce is only successful if it is marketed and managed properly. The presence of eCommerce capabilities in a web site does not guarantee a successful income stream. While it is beyond the scope of this paper to suggest methods of web marketing and management, the *costs* of eCommerce marketing and management activities should not be forgotten in calculating net revenue. As well, *how* you design and promote your courses and related product merchandise will have a significant impact on your success. The Internet should be viewed as an adjunct to your existing education delivery channel, in that it offers learners easy access to your courses and services that are currently available in a traditional format.

There are a number of choices to be made in any implementation of eCommerce in an online learning system. These include deciding on methods of billing, modes of payment, which financial institutions to work with, how to ensure the security of the system, and the types of information to be tracked and reported. These choices are outlined below.

Models of Billing

The two principal methods of billing in eCommerce are “pay per use” and charging for a subscription:

- 1) **Pay per Use:** These transactions are used for paying for one time access to such items as reference materials, access to a course, transcript or certificate downloads, books, supplies. Billing can be based on time used to access an online item such as a document, or be based on a set price for hard goods such as printed books. The system would process the transaction once and the user would get access to the item until time was used up, or the item would be downloaded or shipped to the buyer. These transactions can also be paid in installments (Month/Yearly), with the amount of credit on account being shown to a user on demand.
- 2) **Subscription:** This system is generally used for access to a reference library, knowledge network or additional assistance tools. These transactions are generally billed in monthly increments and can be automatically renewed. These services are not based on usage or access but on a fixed period of time.

Methods of Payment

eCommerce systems typically have a number of ways in which payment can be made. These include the following:

- 1) **Credit Card Processing:** The following credit cards are supported with the LearnFlex™ eCommerce transaction gateway: Visa, Amex, MC, JBC and Enroute. Also US and Canadian currency processing is available.
- 2) **Private Label Processing:** Private label processing is used to process to a private credit card brand. The LearnFlex™ private label processing bridge will allow for the integration to an ISO 5430 compliant banking system.
- 3) **Custom Processing Bridge:** A custom billing bridge can be developed to support any billing system that allows for real time data imports and exports.
- 4) **On Account – Off Line Billing:** The on-account system will allow a user to register for a course but will hold their registration for a set duration of time until payment can be verified. This feature is very useful for cash, cheque and off line billing systems that cannot be easily or cost effectively integrated with either the LearnFlex™ Custom Processing or the Private Label bridges Supported Banks

LearnFlex™ eCommerce facilities can process payments through a number of financial institutions:

- 1) **Canada:** Major Charter banks and most credit unions can be linked to the LearnFlex™ eCommerce component.

- 2) **USA:** All US banks that are electronically connected to the Federal Reserve can process transactions to and from the LearnFlex™ eCommerce component.
- 3) **Europe:** Any major European bank that has a connection to the US Federal Reserve can be used with the LearnFlex™ eCommerce component.
- 4) **Others:** Any bank not currently supported can still have funds transferred using a supported bank account and an automated funds processing trigger. These need to be negotiated individually; as unique issues can arise that will influence the feasibility of this option.

Additional Items

Other items included in the LearnFlex™ E-Commerce system are as follows:

- 1) **Trial Accounts:** The LearnFlex™ eCommerce system can accept a transaction request for a course that has a payment delay on it. This means that a course can be set up with the guest account feature enabled and the number of hours to delay payment set (maximum of 1440 hours or 60 days). The user must cancel the course prior to the delay date being reached to stop a charge to his/her account. If using the credit card method of processing, the credit card will be authorized but not captured until the delay date has occurred. During the time the user is in delay mode, his/her credit card will be re-authorized every 7 days to ensure the authorization number does not become stale and to ensure that sufficient funds remain in the account.
- 2) **Guest Accounts:** The LearnFlex™ eCommerce system allows for non-billable user accounts to be set up. These accounts have pre-defined expiry dates that allow the user either full or limited access, depending on the parameters set.
- 3) **Refunds:** Depending on the parameters set by a course administrator, eCommerce settings will define when a course can be cancelled. Cancellations can be refunded on a pro-rated basis. The actual process for a refund is that the transaction gateway refunds the entire purchase, using the internal Transaction ID. Then the internal Transaction ID will be used to authorize and capture an additional transaction that includes the penalty charge. An administration screen will also be available to allow for phone or physical refund requests to be processed.
- 4) **Charge Backs:** A charge back can be created when a credit card client calls their credit card issuing center and disputes a charge. Once a charge is approved and logged, the credit card processing center will reverse the charge and remove the money from the merchant's account until the issue is sorted out. An administrative screen for charge backs will be available to allow for a corrected

export, and the reconciliation of, the transaction data.

- 5) **Coupons:** Coupons can be issued to provide additional incentives to new or current clients. These coupons can be targeted at specific items, groups of items or groups of learners. The coupons can have expiry dates (to the second).
- 6) **Discounts:** Discounts can be applied conditionally based on number of units ordered or the value of a particular item, depending on the business rules set up in the administration of the eCommerce system.

Security

The LearnFlex™ eCommerce component uses 128-bit encryption to transmit data, which is the same level of security used by the banks in processing data through the ATM system.

- 1) **Secure Socks Layer (SSL):** The LearnFlex™ eCommerce Module requires an Internal Secure Certificate to be installed in order to accept Credit Card numbers. This ensures that an encrypted channel is created to transfer information from a client computer to a server. It also gives the user a way to verify that they are in fact sending their credit card information to the correct server and not an imposter.
- 2) **Transaction Bridge:** As noted above, the transaction bridge between LearnFlex™ and the payment engine uses a 128-bit PKI transmission channel. This ensures that all information being transmitted between systems is encrypted. It also ensures that both LearnFlex™ and the transaction provider are the authorized parties to receive the information.

Reports

The LearnFlex™ eCommerce engine can generate the following reports:

- 1) **Activity Summary:**
 - a. Indicates the totals of settlements processed for the period for credit cards (by card type), on account, taken or pending and adjustments;
 - b. Balances the settlements to the currently taken or returned orders; and,
 - c. Provides the current bank balance.
- 2) **Sales Journal:**
 - a. Reports all courses and cancelled courses for the period and is sorted and sub-totaled by region.
 - b. Details allow for preparation of journal entry and GST, PST (sales tax) filings.

3) **Orders Report:**

- a. Initially all orders are displayed with relevant information by order line. You can select orders by “order status” such as PENDING, IN PROGRESS, COMPLETED and CANCELLED.
- b. You can sort selections by course number, customer name, target learner group or community group.

4) **Courses Journal:**

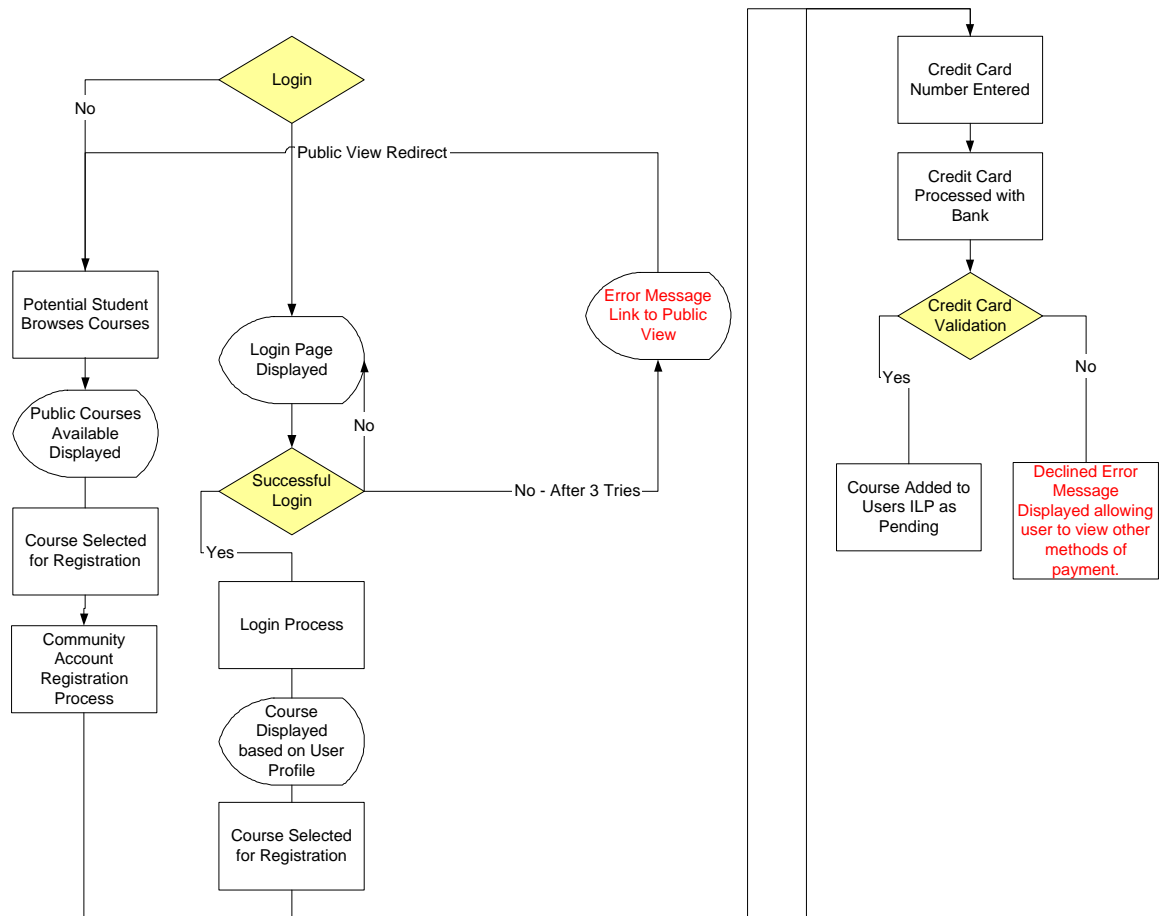
- a. Initially all orders are displayed with relevant information by order line. You can select orders by “order status” such as PENDING, IN PROGRESS, COMPLETED and CANCELLED
- b. Sort selection by course number, customer name, target learner group or community group.
- c. Details allow for journal entry preparation of sales by course and analysis of sales.

5) **Settlements Journal:**

- a. Reports all courses settled during the period for credit card (sub totaled by card type), not settled, on account, and bank adjustments.
- b. Balances to sales journal and details the banking transactions and on-account transactions.
- c. Details allow for journal entry preparation of deposits and on-account and reconciliation of bank accounts.

The following schematic diagram shows how the LearnFlex™ eCommerce module works:

LearnFlex™ eCommerce Diagrams



Conclusions:

eCommerce involves the secure exchange of information over a public network. In the case of educational transactions, it is generally a two-way guarantee of delivery and payment. To effect this guarantee, the environment must be secure. The same environment must be established for a large number of other information exchanges such as accessing a confidential file, finalizing a contract or transmitting competitive information.

For each of these transactions the business process is the same - an exchange of information takes place which binds both parties, whether to the terms of a contract or the delivery of an online course. The LearnFlex™ eCommerce Module has centralized the core elements and back office processes associated with doing business on the Internet into one unique solution. It manages the commercial transactions for your organization in a fast, user-friendly and highly secure environment including:

1. Verifying & authenticating students and instructors;
2. Receiving and tracking students needs and fulfilling them;
3. Calculating taxes, payment totals and deposits;
4. Notification of all pending transactions;
5. Processing and settlement of payments;
6. Providing an easy financial information extract to be imported into your accounting solution; and,
7. Providing a way to track market information and feedback about your online education delivery.

LearnFlex™ makes it easy to securely sell your products and courses to students, staff and community members around the world 24 hours a day, 7 days a week. This goes a long way to ensuring the success of your eLearning Internet business.

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