A Study of E-Learning Initiatives @ IIT Delhi

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Abstract: While we see an evolution of learning practices to impart education to the humanity, a different approach was always noticed in each practice having unique characteristics. With advent of Internet, e-learning has become attracting vehicle to take education far and wide. This paper shares the experiences of e-learning initiatives in IIT Delhi.

Keywords: E-learning, ICT, Continuing education

1. Introduction

While we see an evolution of learning practices to impart education to the humanity, a different approach was always noticed in each practice having unique characteristics. In India, traditional learning started initially with Gurukulam, where pupils were imparted teaching by Gurus – learned experts. Gurukulam is a place where the disciples stay with Guru and learns everything comes out of Guru mukha. Gurukulam was followed by Class Room Teaching, where a teacher usually talks or delivers lectures to the students. Class Room Teaching was followed by teaching through improved modern audio-visual aids such as Overhead projectors, Slide Projectors, multimedia projectors etc. Here, the teaching is imparted through slides prepared on a specific subject matter and shown on the projectors with parallel explanation by the concerned teachers or lecturers.

With advent of ICT and Internet, universities and institutions of higher learning are seen to be engaged in deploying these technology in improving the learning and impact of learning process (Beller 1996, 1997). Hence emerged the ‘E-learning’ that is refers to Internet based learning delivered electronically, in part or wholly or through multimedia platforms. The courses reside on the website of the company/university offering the course which runs over the computer the user connects from (Friedman and Beller 1997). It may combine and integrate on-line technologies with older distance education teaching aids text with pictures and voice and video demos and animated examples and interactive chat with other students and course experts and much more (Cookson 2000). It proves a powerful medium particularly for part time work based students who find erratic attendance requirements and study difficult (O’Donoghue & Singh, 2001). The benefits of
utilising online collaborative activities are well documented such as: time for digesting the information and responding, enhanced communication among the learners, both as regards quality and as regards urgency, knowledge being acquired and transferred among the learners among themselves, the ability to conduct an open discussion, where each learner gets more of an equal standing than in a face-to-face discussion, access to information and to discussion ability, responses may be made around the clock with no restrictions. The impact of e-learning on the world of business has been significant, particularly in meeting the needs of ‘time poor executives’ who cannot be out of the office for five days whilst still running their business (Redfern & Naughton, 2002 and Hoare 2001). A review of latest literature on the above issues have been carried out by O’Neill, Singh, and O’Donoghue (2004)

This paper compiles some of the learnings emerged out the initiatives taken up at IIT Delhi.

2. IIT Delhi's Initiatives on E-learning

Three E-Learning courses under the umbrella of ‘Online Executive Development Programme’ (OEDP) have been established collaboratively by both Indian Institute of Technology Delhi (IITD) and Macmillan India Limited (MIL) to provide online courses to working executives on the Internet. The E-Learning courses offered under OEDP are easily accessible and offer the flexibility of time and ease of learning that have been a long-felt need of working executives. This has been initiated through a Memorandum of Understanding between IITD and MIL. OEDP is treated as a Continuing Education Program (CEP) of IITD and it is an Internet-based Delivery System and made available to Learners who are practicing management professionals. Under OEDP, the following three courses are offered:

i) Finance for Non-Finance Executives (3 months)
   It includes extensive coverage of concepts such as financial statements, ratio analysis, break-even analysis, cost concepts, decision-making, capital budgeting and an introduction to the forex markets thereby providing the participants with an insight into financial management. The objective of the course is to widen the horizon of knowledge and skills of the participants so as to enable them to understand business processes in a holistic way and to prepare them for larger responsibilities.

ii) International Finance (2 months)
   The course aims to provide participants a broad exposure to the different dimensions of financial management in the international context with an emphasis on exchange markets, exchange rate, currency derivatives, exchange risk management and international investment decisions. The course seeks to
enhance skills of the participants by providing comprehensive insights, case studies and online interaction.

iii) Supply Chain Management (2 months)

The course is designed to equip the participants with concepts, tools and techniques of Supply Chain Management (SCM) so that they may understand the strategy, operation and IT-enablement of the supply chain they manage. It also aims at developing the decision-making capability in the SCM area.

Only graduates and above, having a degree from recognised Indian or International Universities are eligible to receive the 'Certificate of Participation' on completion of the above courses. Considering the geographical locations, physical nature of certificates and the importance of the certificates, certain time is spent. The process of registration is simple and can be completed online. Participants residing outside India can also register for these courses online. The author and coordinators of the above three courses are faculty members from the Department of Management Studies from IIT Delhi. The Coordinators prepare the Executive Development Program for delivery on the Internet. MIL gives Continuing Education assignment to the Coordinators for providing complete course packages on their respective subjects. The course packages consist of:

- Detailed study material and learning objectives for the subject.
- Coverage and learning objectives for different topics in the study material.
- Case studies, practical problems and exercises.
- Set of questions for the Learners.

Periodic updation of the course content is done by the coordinator. MIL provides an Internet-based Learning System (ILS) accessible on the Internet to Learner(s). MIL, in consultation with IIT Delhi, also updates the interactive features of the Learning System from time to time. The ILS is operated and run continually by Macmillan as a continuous learning, knowledge interchange, evaluation and certification platform inclusive of administrative procedures for enrolment of Learners and receipt of Learning fees from them. The ILS is run on the websites of MIL. The operating procedures of this ILS are designed and implemented by MIL in consultation with the coordinators.

The coordinators periodically interact with the Learners at a predetermined time for chat, online classes and for answers to questions sent by learners through email. These questions are expected to be reasonable in number and relevant to the learning program. Since it is an ongoing process, every time there are new set of learners who participate in chat sessions. E-Classes are held based on a predetermined schedule and timings taking into consideration the convenience of the participants, who are mostly working executives and are expected to be engaged with various management responsibilities. The windows below show the exercises of the above program. The course is dealt with in different modules to
facilitate easy grasp of the subject and teaching. The course is dealt with in different modules to facilitate easy grasp of the subject and teaching. OEDP facilitates Groupchat also. It allows people to communicate in real time over the Internet and it is for the exclusive use of group members. Any member of a group can start or participate in a chat. It promotes sharing of knowledge and expertise. OEDP allows the participants to have access to the exercises submitted by their fellow participants for reading and also giving their comments. This helps participants to get feedback from their E-classmates and also to improve their performance. Queries are inevitable in any study. OEDP also encourages participants to raise their queries and address the same to the concerned faculty coordinators for clarification or explanation. This exercise takes place electronically. Another important feature of OEDP is Discussion Forum (DF). It is a tool that allows participants to hold and record conversations on the Web. It is asynchronous in the sense that participants can take part whenever they want, from any point of Internet access. DF organizes conversations by topic and date, so students can follow a thread of conversation. On completion of the program, a Certificate of participation is provided to the learners by CEP, IIT Delhi. The criteria for participation are pre-determined by CEP, IIT Delhi and made available to the learners on the ILS.
Collaboration charges and royalty are paid to CEP, IIT Delhi by MIL for running these Online Executive Development Programs. The OEDP offers the following benefits to the participants:

- Downloadable study material – designed and written by the faculty at IIT Delhi.
- Assignments for self-assessment – at the end of each course module.
- Periodical E-class – Chat sessions - on specific topics with the faculty
- Discussion Forums, and other interactive features like Egroup, Topic Chat
- Online tests with instant performance feedback
- Case studies providing insight into practical aspects of learning
- Query answering by the faculty of IIT Delhi
- Media elements like Audio based on study material

3. Response Analysis

<table>
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<tr>
<th>Responses of Participants of ‘International Finance’ E-Learning Course</th>
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<tbody>
<tr>
<td>I have been frequently commenting on global economic performance as a</td>
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<tr>
<td>Research Analyst. The purpose of joining this program was to abreast my</td>
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<tr>
<td>knowledge on international finance which is different from international</td>
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<tr>
<td>economics. The material provided by IIT-Delhi &amp; MacMillan helped me to</td>
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<tr>
<td>look at the components of international finance with a new perspective.</td>
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<tr>
<td>Further the opportunity provided to interact with IIT faculty Dr.S.S. Yadav</td>
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<tr>
<td>during the e-classes were thoroughly helpful. I am sure that such online</td>
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<tr>
<td>programs are likely to enhance the understanding of alien subjects to working</td>
</tr>
<tr>
<td>professionals. I also appreciate the instant responses provided by e-macmillan</td>
</tr>
<tr>
<td>to my clarification throughout the program (M.Maheswaran, Research Analyst,</td>
</tr>
<tr>
<td>Frost &amp; Sullivan).</td>
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| I am a believer in constantly learning and refreshing ones skills. The three |
| courses which I took in conjunction with e-Macmillan were extremely |
| thorough and quite easy to follow. I was able to complete three courses in the |
| span of four months, because the system allows the student to move at his or |
| her own pace. I found the interaction with the faculty from India’s finest |
| institutes, enriching and stimulating. I would have never had the opportunity |
| or the time to study with such great faculty (Eric Swanson, General Manager, |
| The Leela Palace, Bangalore). |

| The Course in International Finance offered by e-Macmillan has been an |
| enriching learning experience for me. I found the course had unparalleled |
| subject matter which was comprehensive and up-to-date. The material served |
| both as a ready reference material as well as an educational tool. The unique |
| product features like the online classes and query answering gave me the |
| choice of e-learning supplemented with traditional instructor led training. The |
| course enabled an engaging and dynamic work environment and reference |
Responses of Participants of ‘Supply Chain Management’ E-Learning Course

The e-learning course on SCM by Macmillan has been methodically unfolded chapter by chapter, and the study material very informative and elaborate. The online tests were very interesting and I used it as a rapid fire test. The E-classes were also superb. I enjoyed e-chatting with the professor and cleared doubts and learnt from his vast knowledge and wisdom. Overall the short duration e-learning online development course on SCM has been very beneficial to me to counter day to day challenges at work, and has further stimulated me to think and adopt new and better technologies to overcome routine problems (Terence D’Souza, Marketing Services Manager, Pharma GlaxoSmithKline Pharmaceuticals Ltd.).

The contents of the module are really in tune with the current practices. SCM is the basis for a company’s competitive edge in a market place. Today it’s...
one of the in-things in the total process of why some organizations perform better than others. It is a way of putting an organization into the main stream of profitable business (Ananth Ram Loknath, Assistant Manager, GlaxoSmithKline Pharmaceuticals Ltd.).

This is a superbly structured course for people who like to understand the basics of SCM. However, more interaction should be made compulsory. For the professional already in SCM activities this is a very relevant discourse in debating present issues with the erudite faculty (Saurav Ghosh, Manager Sales, Blue Dart Express Ltd., Calcutta).

Based on the above responses, the following observations could be made:

- The participants are generally working executives at the middle level management.
- E-Learning program is highly beneficial and satisfactory to them as it is well designed and subject-specific.
- It provides rich study material and facilitates knowledge sharing and updation through E-classes, online test and exercises.
- The course material is easy to follow and the best part it is easy dissemination of knowledge base.
- There is a real value for the money spent on the courses.
- These courses help the participants widen their knowledge base and also in their career growth.

These courses facilitate knowledge sharing.

**Teachers**

Based on the opinion of few faculty members the following points emerged.

- E-learning provides an effective and efficient way of upgrading and updating our knowledge on internet as it facilitates learning through different methodologies and interaction.
- OEDP is an excellent initiative in this direction to promote e-learning among working executives.
- Many learners reacted positively to the effectiveness of this program. It was also mentioned that their dimension of knowledge got widened through interaction with experts, chats, discussion forums, well-designed course content, etc.
- The website of Macmillan provides complete details of the courses offered along with the details of eligibility criteria, fees, faculty coordinators with their academic and professional background, facilities and benefits derived by the participants of the courses, testimonials from the participants who have completed their course(s) through OEDP, etc.
- The website also provides FAQs section, from which one can get his/her doubts or questions answered/clarified. Here one can also see the various queries raised by others and the responses thereto.
As far as the design of the program is concerned, the courses are effectively dealt with in modules and the interaction is facilitated through E-Chat, Discussion Forum, E-Class, Queries etc. Periodic assessment of the participants is done through online test, exercises, etc. Classes are conveniently scheduled to facilitate working executives opt for the timings of their choice.

- It also offers individualized instruction, which print media cannot provide, and instructor-led courses allow clumsily and at great cost.

- Additionally, synchronous e-learning is self-paced. Advanced learners are allowed to speed through or bypass instruction that is redundant while novices slow their own progress through content, eliminating frustration with themselves, their fellow learners, and the course.

- Along with increased retention, reduced learning time, and other aforementioned benefits to students, particular advantages of e-learning include:
  - On-demand availability enables students to complete training conveniently at off-hours or from home.
  - Self-pacing for slow or quick learners reduces stress and increases satisfaction.
  - Interactivity engages users, pushing them rather than pulling them through training.
  - Confidence that refresher or quick reference materials are available reduces burden of responsibility of mastery.

The above points indicate the merits of IIT Delhi – MacMillan’s OEDP. The program is efficiently designed with the convenient scheduling of classes, modules, chats, discussions, online test and exercises and particularly with the involvement of expert faculty members from IIT Delhi. In view of their high profile and expertise, the course content is expected to be of high standard and with their excellent academic background and teaching and research experience, the participants are expected to gain lot of advantage by way of learning through this program.

**Cost recovery measures**

The e-learning strategy needs critical examination in terms of its effectiveness to justify its investment, performance and success so that it can be improved or redesigned to adapt to the current or changing environment to reap the most out of it. Major source of cost recovery remains the fees. Macmillan India charges learning fees from learners enrolled. The duration and the course fees for the above three online programs offered are as follows:
Finance for Non-finance Executives | 3 months | Rs.6000/- (US$225)
International Finance | 2 months | Rs.6000/- (US$225)
Supply Chain Management | 2 months | Rs.6000/- (US$225)

Macmillan India pays CEP, IITD Rupees three Lacs per year for 3 years. Besides payment, royalty of 5% is paid to the authors.

**Major constraints**

As far as its constraints are concerned, it offers only a limited number of courses restricting the number of participants taking advantage of e-learning. More areas or subjects could be explored to bring under the ambit of this program so that the executives working in areas other than the ones offered under this program are benefited. It will also widen this program’s application and scope. It can be improved with more number of courses in important areas, which will be of interest to other segments also. It could well be designed to accommodate courses to cater to the needs in education sector with specific reference to offering instruction, guidance, counselling, etc. to students undergoing different courses at different levels and to those who are giving competitive examinations. Students, who cannot afford to have computer with internet access at home, can access internet through cyber cafes and take fullest advantage of the courses/programs offered under e-learning. Technology-independent e-learning design should be explored to reduce the incompatibility and also increase its adaptability. In brief,

- The courses offered under the program are very limited and narrow the prospects of E-learning under OEDP to only a few areas.
- Technology issues of the learners are most commonly technophobia and unavailability of required technologies.
- Reduced social and cultural interaction can be a drawback. The impersonality, suppression of communication mechanisms such as body language, and elimination of peer-to-peer learning that are part of this potential disadvantage are lessening with advances in communications technologies.

**4. Concluding Remarks**

Specialised courses always pose an entry barrier for small players who do not have good faculty support such as faculty from IIT Delhi. As the participants will increase, the course fees can also be brought down to be economical. The specialized course potential could be extended in the areas like HRM, Marketing, Operations Management, etc. Similar course packages could be extended to
different levels of participants, viz., novice, participants with 1-2 years experience, participants with more than 2 years’ experience etc. The content could be accordingly restructured to suit these levels. The courses may be kept open for educational institutions which are large in number and do not have good faculty base that is otherwise available with E-Learning programs. This will generate more revenue. Marketing of the E-Learning Program under case study could be strengthened through advertisements and publicity that may be carried out widely among industries and organizations. The problem due to bandwidth is not in the hands of IIT Delhi or Macmillan as it depends on the internet terminal available with the participants.

References


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