

E-learning System in Statistical Training Institute of Korea

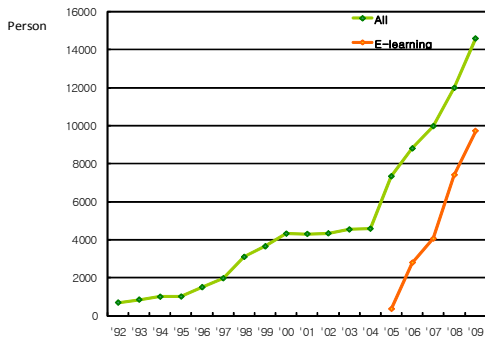
Kyung Ae Park

Director of Statistical Training Management Division, Statistical Training Institute, Statistics Korea

kaypark@korea.kr

1. Introduction

The Statistical Training Institute (STI), an affiliate of Statistics Korea, provides a variety of contents through e-learning programs, encouraging voluntary and self-motivated study among trainees. The absolute and relative number of e-learning trainees continues to increase-Figure 1>. E-learning is popular among busy public officials, especially to KOSTAT staff of local offices, as it offers the opportunity to study at anytime, anywhere-Table 1>.



<Figure 1> Number of Trainees Completed STI Programs by Training Method

<Table 1> Results of Training by Courses and Background of Trainees in 2009

| Classification of Courses | Total | Public Officials | | | General Public | Other Nations |
|---------------------------|--------------|------------------|---------------|-------------|----------------|---------------|
| | | Headquarter | Local Offices | Others | | |
| Total | 14741 | 1430 | 6902 | 2434 | 3992 | 53 |
| Professional | 14516 | 1416 | 6897 | 2434 | 3769 | - |
| - Statistics | 3019 | 959 | 1218 | 303 | 539 | - |
| - Packages | 805 | 121 | 212 | 273 | 199 | - |
| - E-learning | 9719 | 190 | 5216 | 1505 | 2808 | - |
| - IT | 973 | 146 | 251 | 353 | 223 | - |
| General* | 19 | 14 | 5 | - | - | - |
| Special** | 206 | - | - | - | 153 | 53 |

* General includes leadership development for KOSTAT directors only.

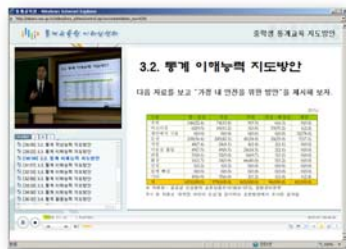
** Special includes courses for Korean students and foreign trainees.

2. Contents

Operators of the e-learning always face the task of selecting topics fit to e-learning environment and creating well designed programs and contents. Regular courses are usually developed through outsourcing, and it normally takes two to six months to develop a course. Contents are developed in light of educational engineering considerations, content delivery and user interests and attention, and related content specialists invest huge amount of time in the development <Figure 2, 3, 4>. Recently, quality control has become a major issue: How to assure that contents are error-free throughout the entire course of content creation, modification and changes. On the other hand, IT-related contents and contents offered by other organizations are shared and adopted to reduce the budget.



<Figure 2> Making Contents using FLASH program



<Figure 3> Making Contents using Multimedia Tool



<Figure 4> Video Lecture Room at Statistical Training Institute

<Table 2> shows the details of e-learning courses currently offered by the STI. Courses are always open so that anyone who wishes to take them can do so simply by accessing the Internet homepage. The e-learning center (http://sti.kostat.go.kr) offers not only open courses, but also videos of actual class sessions and various e-books and materials so that trainees may access and study them at anytime.

<Table 2> E-learning Courses of Statistical Training Institute

| Category | Course Name | Eligibility | Method of Evaluation |
|------------------------------------|---|---------------------|--|
| Basic Statistics (5) | - Statistical Way of Thinking (17h) - Basics of Research Methods(10h) - Basics of Sampling Theory (14 h) - Industry Classification (14h) - Job Classification(14h) | ALL | Essay-based Task Evaluation |
| Advanced Statistics (6) | - Statistical Analysis Using SPSS (30h) - Statistical Analysis Using Excel (14h) - Understanding the Recursive Analysis (20h) - Analysis of Time-series Data and Practice (16h) - Understanding the Financial Statements (20h) - SAS through Examples (20h) | ALL | Essay-based Task Evaluation |
| Statistical Survey Guidelines (12) | - Analysis of Mining and Manufacturing Trends (16h) - Analysis of Service Industry Trends (6h) - Consumer Price Index (9h) - Economic Activity Population Survey (6h) - Survey of Household Trends (9h) - Survey of Population Trends (6h) - Survey of Agricultural Economy (21h) - Survey of Fishery Economy (11h) - Survey of Agricultural Production Trends (8h) - Survey of Fishery Production Trends (8h) - Survey of Land Size Statistics (7h) - Survey of Livestock Trends (6h) | KOSTAT survey staff | Multiple choice-based Random Questions |
| Open | - Survey of Corporate Activities (4h) - PowerPoint 2007 (30h) - Practical PowerPoint Through Examples(15h) - Statistical Laws and Institutions(4h) - Basic Statistical Research of Business Enterprises (17h) - Computer Usage Capability(17h) - Survey Methodology (4h) | ALL | None |

3. Management

The e-learning programs use the LMS (Learning Management System), and proceed from the course application to confirmation of list of trainees, course taking, evaluation and completion-<Figure 5>. Completion is determined applying 60% of progress and 40% of evaluation. A trainee who has failed to complete a course is prohibited from taking another e-learning course for the next three months. The number of homework reports is determined based on the principle of one essay per 10 hours, and the instructor grades the presented essays to evaluate the trainee's study progress. Also, to enhance the study efficiency, the number of study sessions a trainee can take is limited to four, and a trainee may take only one topic a month.



<Figure 5> E-learning Management System

4. Strategies

The e-learning programs offer convenience. But, they also pose problems such as low control, low level of completion, difficulties in fair evaluation, and low level of educational efficacy. At the STI, we try to overcome such shortcomings through the following efforts. First, we have adopted the "Seven Touch" principle, which requires at least seven introductions and encouragements through e-mail messages and SMS, beginning before the first session of the formal training and continued throughout the length of the course. This method substantially raises the completion rate, as the training operator shows persistent interests in the progression of trainees. Second, we strive to enhance the level and efficiency of evaluation through, for example, problem solving-type reports that require trainees to solve different problems on the same subject topic. It augments the effect of learning, because the trainees solve the problems personally before presenting the results. Third, we supplement the e-learning through "Blended-Learning". Finally, we have automated all steps of the courses such as the introduction, participation, question and answers and evaluation within the system to increase the operational efficiency of the e-learning programs.