

Chapter 13: Fostering e-Learning Experts



Learning Objectives:

Be able to organize the changes brought about in yourself as a result of studying this text.

Be able to critically examine and propose improvement regarding the design of this text by taking account the history behind the writing of this text and its placement.

Be able to analyze the range covered by the ID competencies by applying it to yourself and to form opinions concerning the fostering of e-Learning experts.



Summary of this Chapter

- e-Learning Fundamental aims to have readers internalize the basic concepts behind Instructional Design (ID), along with its design, development, and evaluation techniques. It is also designed to enable them as users to select e-Learning proposals. The degree to which this has been achieved will be examined by looking back over the text.
- e-Learning Fundamental text was corrected, amended, and compiled by obtaining input from the participants during the trial stage, with recourse given to the experiences and perceptions of a veteran ID practitioner (the author). The chapter will take up one example of e-Learning by taking a look behind the scenes during the trial stage.
- e-Learning Fundamental was designed as a three course set of introductory classes at the graduate school level. It is envisioned that (the planned) e-Learning Design (for increasing expertise on the vendor side) and e-Learning Management (for increasing expertise on the user side) will continue after this.
- Professional skills in 4 fields, 23 competencies, and 122 performance statements have been proposed as ID competencies in 2000 by the ibstpi. The chapter provides readers with a sense of the breadth and amplitude of the professional skills of ID practitioners by providing a tentative translation of these competencies.

Section 1 Looking Back Over e-Learning Fundamental for You, the Reader

This final chapter of the e-Learning Fundamental text will give some thought to what has been accomplished so far and what can be done in the future. First off, I would like you to get a taste of the following words of wisdom.

The claim that anyone can author online training is false, to put it mildly. First of all, no matter what a vendor claims, you can't go to a three- or five-day tool-based course and instantly become an online training or multimedia author. There is no magic button that can be pressed to automatically create high-quality online training. It takes experience, mentoring, and a lot more training in instructional design to do that, especially if the aim is highly interactive, innovative training. If a program promises that you can "build courses like the professionals," or that it will "totally automate the instructional design process for you," it's time to get very skeptical.

(Rosenberg, 2002, pp. 174)

Does this course fall under the category of those that "it's time to get very skeptical?" In the sense of verifying this, lets once again read over the "Intended Users" and "Objectives" which have been publicized on the Website for this course.

Intended Users

This text was written with a focus on people involved with e-Learning, or graduate students or working adults with an interest in the subject (including concerned parties from universities), and people with learning experience using e-Learning materials. It is envisioned as a text (two credits) to be used at graduate schools for working adults and in similar contexts. While it is preferred that one have experience in creating instructional materials or experience as an instructor, regardless of whether this is in e-Learning or another field, this is not considered a mandatory requirement. Those which have completed a blending instruction course following preliminary study of this text will be issued a certificate of completion by the e-Learning Consortium.

Objectives

This serves as a foundation for incorporating e-Learning into education for working adults. In this capacity, the aim is to have students internalize the basic concepts behind Instructional Design (ID), along with its design, development, and evaluation techniques. It is also designed to enable them as users to give instructions to correct excesses or deficiencies in e-Learning system proposals (or else to select the best one out of several proposals).

To those who have learned the basics of ID, Intended Users is a description of the entrance and the Objectives is a description of the exit. Furthermore, the phrase that indicates “what you will become capable of” in the objective is the one that states “It is also designed to enable them [the students] as users to give instructions to correct excesses or deficiencies in e-learning system proposals (or else to select the best one out of several proposals).” In other words, it was NOT claimed that “you will become capable of creating e-Learning systems or materials,” nor did it say that “you will be able to write proposals.” It should be verified that the objective that has been raised is the extremely modest yet fundamental one of enabling the student to judge the strong points and weak points of proposals and correct the weak points, or else to determine which the better proposal is when two are laid side by side. Your mind-set may be uncertain when it comes to the degree to which you have “internalized” the basic concepts behind ID and its design, development, and evaluation techniques. But at the very least you would NOT be overwhelmed if you were told that “you are now able to do anything by standing on you own two feet as an instructional designer through this course.” This is because such an advanced goal was NOT expected from the beginning!

At the same time, taking a look at the entrance (namely, the intended users) shows that this is comprised of “people involved with e-Learning, or graduate students or working adults with an interest in the subject (including concerned parties from universities), and people with learning experience using e-Learning instructional materials.” What is jointly required of them is common knowledge, wisdom, and basic academic abilities as graduate students or working adults, as well as experience using e-Learning materials as learners (not creators). For this, a broad demographic ranging from people that do not know the first thing about e-Learning up through persons involved with e-Learning actively on the front lines (vendors, users, system providers, etc.) was envisioned. It was stated that “it is preferred that one have experience in creating instructional materials or experience as an instructor,” and so while it is recommended that you have had a background in education, this was NOT an indispensable prerequisite. In other words, if the learning process for this text is seen as taxing because of a lack of educational background, then this was NOT because of a lack of experience on the your part, but rather a failing in the layout of this text. In either case, if you did not have a strong inclination to learn about ID, you would probably not have read as far as this chapter.

This text was written to serve as a preparatory text for the e-Learning Fundamental (two-day group instruction) blending course that was offered by the e-Learning Consortium. At the same time, it was estimated that most of the people that have a copy of this book cannot take the blending course, but just study this text. On this account, while this text is a preparatory text, it has simultaneously needed to serve as a complete self-learning material in and of itself. The e-Learning Fundamental Learning Support Site (<http://www.et.soft.iwate-pu.ac.jp/eLF/>) has been set up for readers of this text. A structure that supports self-learning was furnished with the goal of creating a single e-Learning environment through a Text + CD-ROM + Web environment.

The CD-ROMs included with this text were recorded at the extension course entitled e-Learning Fundamental 2003 that was held from September 16-22, 2003 as part of the process of designing and developing this course. The responses from the enthusiastic lecture-goers that attended this experimental extension course have been compiled as the “Student Responses” at the end of each chapter (Note: Not included in English version of this text). Aside from these, valuable proposals were also received which were used to form the framework for this text and the blending course.

In the reminder of this chapter, I would like to begin by providing a behind-the-scenes look at how I, as an instructional designer, went about planning, designing, and implementing this course on a trial basis through the aforementioned process. I feel that there are many things here that can serve as reference in preparing e-Learning courses, including things that must never be imitated (teaching by bad example). Next, regarding the question of what comes next for e-Learning Fundamental as an introductory course, I will touch on some plans that are currently being conceived. This is to help the reader formulate an image regarding the possibilities that the readers have in terms of the direction in which they take their next step (naturally I do have some plans which I have kept to myself for next year). Finally, I will introduce examples that have been compiled regarding the professional skills (competencies) of ID practitioners. This is designed to allay anxieties over the question “If such a broad range of topics makes up an introductory course, what needs to be learned and to what degree in order to become an expert?” I hope this will serve as a reference in approving the expertise of ID practitioners in Japan and creating enhanced frameworks.

How has studying this text up gone for you so far? Try to reflect back over this question as you read this chapter.

Section 2 History of the Development of e-Learning Fundamental and a Behind-the-Scenes Look at its Trial Run

The Space Collaboration System special lecture entitled “e-Learning” sponsored by the Ministry of Education, Culture, Sports, Science and Technology (MEXT)’s inter-university research institute called the National Institute of Multimedia Education (NIME) was started from a three-part configuration. An overview of the lecture series is provided below.

■ Summary ■

Changes have arisen in the matters like the state of affairs and systems surrounding institutes of higher education in the wake of the advancement of information technology. In particular, the provision of e-Learning and other types of more flexible learning environments have reached the practical level. Here it is the aim of the lecture series to provide the skills and know-how pertaining to basic theory, practice, and operation which are considered necessary in order to create instructional materials and conduct classes suited to such new learning environments. The plan consists of courses covering the objectives of:

- Being able to select proposals as a user (Fundamental), September 16-22
- Being able to create plans and operate and manage e-Learning as a user (Management)
- Being able to create proposals and support the planning, development, and operation of e-Learning as a vendor (Design)

In addition, it also examines the granting of qualifications in cooperation with the e-Learning Consortium Japan.

[Source: <http://www.nime.ac.jp/~project/SCS-eL/>]

In envisioning a specialized course at the graduate level, I wanted to combine three 2 credit, 15 period lectures to make an e-Learning basic lecture series. This was the intention behind the plan. “e-Learning Fundamental” was situated in an introductory position and mainly deals with the ID fundamentals needed by both the users and vendors. For those that complete the course, “e-Learning Management” was set up as an advanced course for users of e-Learning, with “e-Learning Design” set up as an advanced course for the vendors. The introductory course was then established on this premise.

13-2-1: Analysis of the Content of e-Learning Fundamental

The goal of “e-Learning Fundamental” is to enable students to select “the best solution” when receiving multiple proposals, or to point out excesses or deficiencies of a proposal and to suggest revisions from the standpoint of a user. The course aims to have students acquire fundamental knowledge and skills on ID. The learning objectives refer to acquiring a perspective for “checking proposals and being able to conduct comparative examinations and request corrections” in practice. Acquiring a perspective concerning (and knowledge on) what to focus on when assessing proposals has come to be treated as pivotal when ID is learned.

In contrast with this approach of giving precedence to knowledge, an approach of introducing ID by first acquiring skills by hands-on activities is also possible. This approach would focus on the learning objective of “design and develop a short instructional material that is suited to the learner and the environmental conditions, when learning objectives are given.” The first course I took at Florida State University’s graduate school adopted the latter approach. It had the students experience the ID process by creating an example of instructional materials for self-learning. Based upon this experience, I created a text that can be used at undergraduate level (Suzuki, 2002) that guides a hands-on activity of paper-based material development. It would have been also feasible to adopt this approach for this intensive course as well.

However, a drawback with a hands-on learning-first approach is that it makes it difficult to grasp the complete picture of ID. This is because (1) the analysis stage, including everything from the needs analysis through the selection of objectives, is omitted, (2) the procedures of ID process is made the focal point, and what is more, (3) the instructional materials that can be created over a short time period are limited to a small one out of necessity. This carries the risk that ID that encompasses large-scale learning support systems, including design at the system-level, will be undervalued.

Therefore, for this course I decided to deal with ID applicable at the system-level, while placing material design level ID at the center when certain learning objectives are given. Taking technical trends into consideration with a view toward the applications of ID to e-Learning resulted in a plan for the content of e-Learning Fundamental as shown in Figure 13-1. An experimental course was planned by envisioning intensive courses (two credits) with three periods per day over five days. The contents from the initial planning stages were disclosed to the course applicants over the Internet. The configuration included daily themes and daily reports. The first draft of the curriculum was partially revised due to matters like scheduling adjustments among the lecturers. In addition, “preliminary reports (the End of Chapter Reports in this text)” (before viewing the lectures) and “lecture comments” (after viewing the lectures, not included in this text) were adopted in place of the daily reports, and an experimental course was carried out.

Figure 13-1: First Draft of the e-Learning Fundamental Curriculum

Date	Theme	2nd period	Lunch	3rd period	4th period	Homework
		10:30 – 12:00		13:00 – 14:30	14:40 – 16:10	
Sep. 16 (Tue.)	1) What problems were resolved through this proposal?	[1] Introduction & definition of e-learning: preface (illustrations, statistics, trends, etc.)		[2] The e-learning development process (ID overview)	[3] Evaluation techniques for e-learning (Kirkpatrick's four levels, etc.)	Daily report (1)
Sep. 17 (Wed.)	2) Is this proposal highly adequate in a technical sense?	[4] Elements comprising e-learning (what can be designed?)		[5] Prehistory of e-learning (communication, distance, CBT, multimedia, etc.)	[6] The technology and standardization underpinning e-learning (platform, SCORM, etc.)	Daily report (2)
Sep. 18 (Thu.)	3) Is this proposal highly adequate in a pedagogical sense?	[7] e-Learning system design (progress management, mentors, etc.)		[8] e-Learning course design (content analysis, unit composition, etc.)	[9] Designing learning support for e-learning (Gagne's nine events of instruction, etc.)	Daily report (3)
Sep. 19 (Fri.)	4) Is there strong continuity of learning via this proposal?	[10] Motivational design in e-learning (ARCS model, etc.)		[11] e-Learning and self-directed learning (mastery learning model, etc.)	[12] e-Learning and the information society (informatization of education, lifelong learning support, etc.)	Daily report (4)
September 20 (Saturday)						
September 21 (Sunday)						
Sep. 22 (Mon.)	5) Are the requirements for realizing this proposal low?	[13] Continuing adult education theory 1: Inter-company education & educational reforms		[14] Continuing adult education theory 2: adult graduate schools	[15] Wrap up & discussion	Daily report (5)/Final report

Note: From the e-Learning Fundamental conference materials

13-2-2: Designing Learning Support for e-Learning Fundamental

The content was carefully selected and the instructional strategies for the course were scrutinized only for courses handling content in which the main emphasis was placed on ID. Figure 13-2 denotes concepts of learning support design which were proposed at a working group of the Japanese Society for Information and Systems in Education three and a half months prior to the start of the experimental course (Suzuki, Mitsuishi, Hatano, Komatsu, 2003). It was not possible to realize in the experimental course exactly as it was intended, but the attempt was made to manifest this concept, which was also continued in the blending course based on this text.

Figure 13-2: e-Learning Fundamental Educational Instructional Strategies

Evaluation plan	The objectives in the form of evaluation methods are to be clearly indicated in advance. Three areas will be incorporated: (1) Lecture Comments (30%) in which students post comments for each lecture onto a thread-style discussion board, (2) Daily Reports (40%) whereby students submit reports each day for every point of view on deciphering proposals, and (3) Final Report (30%) in which students compare two proposals and compile their reason for selection and adoption requirements.
Establishing context	The style for the course is not one in which fundamental items are explained in sequence. Instead, it creates situations for comparative examinations of e-Learning proposals and allows students to acquire fundamental knowledge through circumstances in which they apply said knowledge in the context of resolving problems. Understanding where and how the knowledge learned can be applied raises the applicability of the results of learning.
Information presentation	Rather than explaining new items for the first time in the lectures, the details of the lecture contents shall be prepared as an advance text to allow the students to prepare for the lessons. The lectures will incorporate application and interpretation elements to the extent possible, such as by grasping a general synopsis of the contents of the text and performing comparative examinations of the responses from lecture students to the preparation problems created in advance.
Learning activities	Quizzes through which students can confirm their understanding of the general concepts of ID theory and technical movements of e-Learning dealt with in the course over the Website shall be prepared. This is to be used by students as a risk-free practice area where they can clear up mistakes and misunderstandings without being subject to be assessed.
Mentors & peers	Persons in charge will be assigned to each venue in order to respond to questions. Concurrent with opportunities for questions addressed generally (discussion board, etc.), such persons are to undertake their roles as providing mentoring for private questions and the state of progress. In addition, group assignments will be created and collaborative tasks incorporated as needed.
Certification system	Themes will be created each day, and partial course certification will be provided by passing the daily reports. A certificate will be issued to students who complete all of the 5 daily reports as well as the final report. For the future, the possibility of this being recognized as graduate school credit and the possibility for partial exemptions from qualification requirement will be explored, and its placement will be clearly defined.

Note: Compiled into a table format from Suzuki, Mitsuishi, Hatano, and Komatsu (2003).

13-2-3: Constituent Elements and the Development System for the e-Learning Fundamental Trial Run

e-Learning Fundamental was conducted on September 16-22, 2003 as a Space Collaboration System (SCS) special lecture course with Tohoku University as the chairing institute. It was carried out by linking venues based around national universities all over the country. SCS is a fully interactive distance education system which projected an image of the lecturer, the presentation materials, as well as the scene from each venue onto three monitor screens. For the discussions, in addition to the chairing institute where the lecturer was located, two other venues could be viewed simultaneously from all venues. The major constituent elements and development systems have been compiled into Figure 13-3, along with my word of gratitude for all those involved.

Figure 13-3: Constituent Elements and the Development System for the e-Learning Fundamental Trial Run

Constituent Elements	Preparatory Period	Development System (Titles Omitted)
Start		Proposal: Takashi Sakamoto of NIME, Komatsu of NTT-LS
Support group		Sponsor: National Institute of Multimedia Education (NIME) Co-sponsor: Research Division/Education Division, Graduate School of Educational Informatics, Tohoku University Co-sponsor: Advanced e-Learning Research Station, University of Electro-Communications Backing: Japanese Society for Information and Systems in Education Cooperation: NTT Learning Systems Corporation (NTT-LS) Support: e-Learning Consortium Japan (eLC)
Planning and drafting content and teaching methods	Monthly meetings from November 2002	Supervision: Yasutaka Shimizu of NICER Planning/design: Suzuki; Komatsu of NTT-LS Planning support: Nishioka of Hitachi, Ltd., Takano of NTT-LS, Mitsuishi of Tohoku University, Hatano of NIME
SCS lecture relay	July 11, 2003 Application test September 2, 2003 Final rehearsal September 16-22, 2003	2 administrative officials (Abe, Suzuki) in the chairing institute (Tohoku University), 1 operations director (Mitsuishi of Tohoku University), 1 operations assistant (Higuchi of Tohoku University M2), 2 operational guides (test stage: Hatano of NIME; appointed lecture dates: Nanbu of Joetsu University of Education) SCS departments: 1 to several directors (administrative officials, teaching staff)
Lecture recording	Application on said days	2 camera operators (Takano, Kudo of NTT-LS), 1 operating assistant (Below D1)
Writing/lectures		Suzuki, Komatsu of NTT-LS, Nakabayashi of NTT-X (guest lecturer)
Lecture assistance	September 15-22, 2003	Preparation of materials, liaison and coordination, provision of lunches, accounting, tea, others (Shita D1, Ono M2, Okamoto M2)
Construction and operation of an exclusive Website	May 30, 2003 Start of service September 4, 2003 Large-scale update	Website construction (Suzuki), logo and screen design (Shibata, 4th), attendance registration CGI (Noro, 3rd), discussion board CGI design and operation (Shibata, 4th), web server management (Inoue, 4th), creation of collection of links to related instructional materials (Ichikawa, Ono M2), lecture quiz creation and development (Ichikawa), development of CGI for managing lecture students (Ichikawa)
Related WBT instructional material design and development	April 2003 Preliminary practice assignment August 2003 Examination and sequential disclosure	Planning (Suzuki), design and development (Ito, 3rd; Koshihara, 3rd; Shibata, 3rd; Chiba, 3rd; Noro, 3rd; Matsumura, 3rd; Yamazaki, 3rd; Yamashita, 3rd; Tanaka, 3rd; Mitsuru Takahashi, 4th), debugging and problem framing (Okamoto M2, Ono M2), development guidance and project management (Fujiwara, Ichikawa)
Preliminary reports and assignments/ submission of lecture comments/ questions in lectures	September 5, 2003 11:58 first postings (by Ishikawa)	129 students attending this course (68 from the University of Electro-Communications, 14 from Kansai University, 12 from Tohoku University, 7 from Iwate University, 6 from Nagoya University, 5 from Kyoto University, 3 from Tottori University, 3 from Kyushu University, 2 from Shinshu University, 2 from Kumamoto University, 2 from the University of the Ryukyus, 1 from Akita University, and 1 from Oita University)

Notes: Volunteer testers without any affiliation belong to Iwate Prefectural University. D1 = First year of a graduate school doctoral course, M2 = Second year of a graduate school master's course, 3rd = 3rd year undergraduate student, while those without academic year descriptions are faculty. The number of students that attended was obtained from the number of registered attendants who wrote in (contributed to the course) one or more time as of the end of the lecture on the fourth day. I would like to once again express my appreciation for the contributions from each of the many students that attended the trial lecture.

The implementation structure for e-Learning Fundamental had to be set in place in a short period of time. For the course, the assets at my laboratory as of then were fully mobilized and preparations were promoted under a cooperative structure of my existing staff and students. From a project management perspective, I believe we made it over a fairly risky bridge, and as such it does not appear as if describing the details of this process would be of much use as a reference. The fact that there was a cooperative structure made up of a considerably large number of people has been compiled into Figure 13-3 to once again make me aware of this fact.

When forging ahead into unknown territory (of e-Learning), one veteran instructional designer (Suzuki) reached the product in a rather roundabout and uncertain way by making liberal use of the rapid prototype method. This was done with the assistance of experts in the field (both Komatsu and Nakabayashi), and by relying on my experiences and perceptions from other fields while involving a great many collaborators from my immediate environment. In addition, since it was an experimental trial run, “co-design” (mutual design)-like relations were anticipated with the participants, and this could be described as an excellent example in which this was splendidly realized. Under no circumstances could it be claimed that “good e-Learning materials can be produced if they are made in this manner.” In this sense, it could be described as learning by “bad” example in that this was too risky and unstable. It perhaps could be described as an extremely commonplace example that progressed in a manner largely identical to the development of actual e-Learning projects. It is difficult for me to ascertain the degree to which the actual front-lines of e-Learning development resemble this recent example.

It is safe to say that the application of theoretical frameworks as they stand must not even be considered to be instant. In reality, things are not that simple. But perhaps the frameworks, theories, and models dealt with in this text can serve as a guidepost for discovering solutions by flashing across one’s mind when snag has been hit. Veterans persist with decisions by relying on their intuition, but the other side of such intuition conceals various frameworks, theories, and models which are melded into their flesh and blood. This is probably nothing more than a difference between mastering such things solely through experience, or else by supplementing it with academic training such as this text.

Educational technology is an academic discipline which aims to have novices quickly approach the level of veterans to the extent possible by analyzing and integrating the masterful work of veterans in an “exportable” form (Azuma, 1976). While it may not be possible to become a veteran through academic knowledge alone, I am confident that being able to provide expertise serves as a reference for beginning students treading down the path toward becoming veterans. Furthermore, even though the veterans do not learn anything new through this, it most likely serves as an opportunity for them to view things that they have uncovered within their own experience in a more objective light. For this text, I would be pleased if the reader picked up on the fact that a desire to provide expertise has been incorporated into various parts of the text, which interweave and introduce various theories and (my own) practices (both explicit and experiential knowledge) which can be of as much use as possible for you.

Section 3 What Comes Next for e-Learning Fundamental

When the trial run of e-Learning Fundamental was completed, this text could then be offered up for public scrutiny. Now then, what can we look forward to next? NIME's SCS special lecture on e-Learning was started through a triple-feature plan. The schedule was changed so that the course would be conducted as the two sequential courses of e-Learning Management and e-Learning Design which are held for six months each. But since the project plan is on a year-by-year basis, nobody can make any promises for next year.

This research effort is under an assistance of a Grant in Aid for Scientific Research from MEXT (MEXT Grant in Aid for Scientific Research subsidy-based research (C) (2): Organization of Instructional System Design Content as e-Learning Fundamental Theories and Creation of Instructional Materials (Research in Charge: Katsuaki Suzuki); Course number: 15500632). This research is to be producing some results over three years, and its objectives are as indicated below.

This research shall be conducted with the goal of arranging the contents of Instructional System Design as the fundamental theory for e-Learning and creating instructional materials. More specifically, over the three-year period for which the granting of research funds are requested, a syllabus equivalent of three two-credit foundational courses at the graduate school level will be created and e-Learning materials (including video-on demand: VOD) will be developed around the lectures to be experimentally conducted. The goal is to organize the outcomes of cutting-edge research on Instructional System Design, mainly in the United States, within the process of designing and preparing this course and e-Learning materials. It then aims to organize and provide this in the form of a fundamental knowledge base for e-Learning, which is rising to prominence in Japan. The lectures carried out experimentally will secure the attendance and participation of a broad group of people, including working adults and graduate students, opened to the public via SCS. This will ensure the social validity of the content and instructional methods, as well as the effectiveness of the methodology.

The developments in e-Learning-related technology in recent years within educational technology research and practice have been remarkable. Interest in e-Learning has increased in both an academic and a social sense. Conversely, the results of research on Instructional System Design, which predates e-Learning in its adaptability to instructional material development in general and in being recognized for its practical value in several countries, have not garnered significantly high interest in Japan. Amidst the rising interest in e-Learning the phrase "instructional design" has come to be used, with this referring to various things like the design of the screen configuration and ensuring usability. It would be difficult to describe the situation as one in which the research results of Instructional System Design are properly acknowledged. Compiling the results of this research will serve as a foundation of knowledge shared between educational technology researchers and the creators of e-Learning, as well as between the vendors and users of e-Learning. If this is accomplished, then it can be anticipated that this will allow for the creation and provision of more effective e-Learning environments.

[Reprinted from the application form for Grant in Aid for Scientific Research]

More specifically, plans for each fiscal year have been applied for in the following manner. The following text describes a three course structure comprised of Advanced Information Theory (envisioned subject name at the graduate school level) 1-3 which consists of basic theory (Fundamental), design theory (Design), and management theory (Management).

<FY2003>

A graduate level intensive course called Advanced Information Theory 1: e-Learning Fundamental Theory will be held on an experimental basis during the summer recess. The trial run of the course will be conducted in a manner that can be viewed by national universities over the country via SCS, with Tohoku University, where the applicant is engaged as a visiting professor, and NIME, where the author is engaged as a collaborative researcher, serving as the chairing institutes. These lectures will be recorded (by obtaining informal consent) with the cooperation of the e-Learning Consortium, and convert them into e-Learning materials. Students to audit the lectures will be widely recruited, and the content will be carefully investigated by obtaining participation from a broad range of practitioners and researchers, including working adults and graduate students. For the implementation of this research, Grant in Aid for Scientific Research has been accepted in order to make it possible to utilize existing facilities. In so doing, we will be able to allocate the majority of the research expenses to preparatory surveys for enhancing the lecture contents and data analysis following the holding of the lectures. The objective of the intensive course Advanced Information Theory 1 is to instill in students the basic knowledge and skills grounded in Instructional System Design to a degree which would allow them to select the best solution in terms of instructional materials from the standpoint of effectiveness and operability, when receiving multiple proposals as a user of e-Learning materials. For the holding of this course, studies will be undertaken on leading examples of e-Learning within Japan and abroad, as well as trends in Instructional System Design and the potential of applying these to e-Learning during the first half of FY2003. Following the holding of the intensive course Advanced Information Theory 1, the task of making improvements for the holding of a revised edition the following fiscal year will be undertaken during the second half of FY2003. At the same time, a basic study and planning design will be promoted for Advanced Information Theory 2 and 3 to be held the following fiscal year.

<FY2004 and FY2005>

The trial run of Advanced Information Theory 2 and 3 will be held at the same time as the revised version of Advanced Information Theory 1, which was originally held on a trial basis in FY2003. The courses take the changing circumstances in both Japan and abroad into account in organizing and offering advanced content proceeding from fundamental theory in line with the following objectives. Advanced Information Theory 2: e-Learning Design—To be able to create planning proposals and support the planning, development, and operation of e-Learning as a vendor of e-Learning systems and instructional materials. Advanced Information Theory 3: e-Learning Management—To be able to create requirement definitions and operate and manage e-Learning as a user of e-Learning systems and materials. After the third year when the research is completed the trial run for the three graduate-level courses (two credits each) will conclude and the contents of the lectures themselves will be decided upon. On top of this, e-Learning materials will be completed for the sake of learning about e-Learning fundamental theory, design theory, and management theory centered around the lectures as the core. While the application for this research is being carried out by the applicant on their own, the plan calls for adopting measures to enhance the substance of the research (including network theories, etc.) through a broad range of research collaborators.

[Reprinted from the application form for Grant in Aid for Scientific Research]

The present provisional content configuration (draft) at the planning meeting for the advance courses are as indicated in Figures 13-4 and 13-5. Although these will be changed as planning will be advanced, it is possible to give the reader an idea of what it is about. In terms of the implementation for these courses, it can be expected that it will be more practical and highly concentrated courses with a smaller number of students.

Figure 13-4: Composition of e-Learning Management (Draft – First Version)

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1. Introduction & primer on continuing education
 2. Modalities for corporate training which teaches instructional design
 3. Basics of corporate training and corporate training in an information society
 4. Expansion of corporate training through e-Learning & corporate universities
 5. Case example looking at the bench mark model – Pattern 1
 6. Case example looking at the bench mark model – Pattern 2
 7. Case example looking at the bench mark model – Pattern 3
 8. Evaluation of corporate training and e-Learning
 9. Comparison of examples of utilizing e-Learning in Japan and the United States and examples of e-Learning in Japan
 10. Research on examples of e-Learning in Japan
 11. Making training more efficient; implementation in Japan
 12. EPSS; implementation in Japan
 13. Competency management; implementation in Japan
 14. Informatization of training; implementation in Japan
 15. Discussion
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Note: From the e-Learning course composition conference minutes (January 24, 2003)

Figure 13-5: Composition of e-Learning Design (Draft– First Version)

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1. Introduction & the needs of continuing education
 2. Points of instructional design that the proponent should take note of
 3. Functions that can be proposed through e-Learning
 4. Points of proposals that easily gain the consent of the user
 5. The latest e-Learning systems and functions—Corporate training
 6. The latest e-Learning systems and functions—Higher education
 7. Research on e-Learning system examples
 8. Research on examples of system integration
 9. Standardization—I
 10. Standardization—II
 11. The latest technology for e-Learning
 12. How to create asynchronous content
 13. Points of creating synchronous content
 14. Research on successful examples of proposing e-Learning systems
 15. Discussion
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Note: From the e-learning course composition conference minutes (January 24, 2003)

What comes next after e-Learning Fundamental? I still cannot catch a definite glimpse of this. But having gone to the trouble of beginning in this endeavor, I would like to see it lead to something next. Of course, various collaborators are needed in order to do this. For the future, my intention is to move forward one step at a time toward the realization of an initial plan while various different people lend their assistance.

Section 4 Competency and Career Paths of Instructional Designer

In bringing this chapter to a close, the criteria for the professional skills of instructional designers which have primarily been debated in the United States will be introduced. A list of the 4 professional fields and 23 competencies (Richey, Fields, & Foxon, 2000) for ID compiled by the International Board of Standards for Training, Performance, and Instruction (IBSTPI) is provided in Figure 13-6.

Figure 13-6: Description of ID Fields and Competencies (2000 Edition, IBSTPI)



ibstpi is currently comprised of 15 members who are affiliated with government agencies, major corporations, and consulting companies from Australia, Canada, the United Kingdom, Norway, Holland, and the United States (Note: The author joined a director in January 2007). It began its activities in 1978 as an organization for pulling together the competencies of ID practitioners, compiling the first edition in 1986. Moreover, while ID practitioners' social cognition and activities via corporate training were still in their infancy, an ID textbook based on the first edition of this list of competencies was published (Rothwell & Kazanas, 1998). This had a considerable impact on things like professional regulations for ID practitioners which came later and the formulation of educational curriculums at graduate schools (Richey, Fields, & Foxon, 2000).

Conversely, over the roughly 20 years that have elapsed since the time when the first edition was compiled, the basic theory behind ID has developed and the expectations on ID practitioners have grown at the ground level where it is put into practice. In addition to these, there have been other significant changes, such as the advent of the knowledge based economy and society and the popularization of Internet technology. As such, the professional skills demanded of ID practitioners have changed as well. Owing to this, a revision of the first edition of the competency list was compelled, and the 2000 edition was compiled.

ID practitioners appeared on the scene in the 1970s as a specialized profession that was newly attached to expert groups which had been referred to until then as educational psychologists, media experts, and training experts. Their primary duty was seen as developing instructional materials. However, such expertise came to be demanded in other areas, including the implementation and maintenance of educational systems as a whole, needs analysis for the development of human resources, as well as future predictions and the management of reform.

This growth reflects an emphasis not only simply on producing a more knowledgeable workforce, but increasingly upon improving employee on-the-job performance and solving organizational problems. Correspondingly in today's market, instructional design to many is not merely an organized approach to product or course development, but is instead a generic process for analyzing human performances problems and determining appropriate solutions to such problems. In addition, designers and training managers must often predict future problems and likely organizational changes and project ways to prepare employees for those new situations (Pieters, 1997). It is this dominant orientation that serves as the foundation of these new IBSTPI design competencies (Richey, Fields, & Foxon, 2000, p.29)

Whereas the first 1986 edition only stipulated conduct, the second edition of competencies added competencies required of ID practitioners at an intellectual level, such as the new addition of "Professional Foundations." These changes have been described as proceeding from the maturation of the ID field and the expansion of the cognitivist theoretical foundations which underpin ID. Here, competency is defined as "a knowledge, skill, or attitude that enables one to effectively perform the activities of a given occupation or function to the standards expected in employment" (Richey, Fields, & Foxon, 2000, p.31).

In formulating the second edition of competencies, this was done based on the 10 premises indicated in Figure 13-7. These premises are concerned with ID itself, the circumstances that

ID practitioners are placed in, as well as the content of the professional duties that instructional designer fulfills.

Figure 13-7: Premises in Formulating the Second Edition of ID Competencies

1. Instructional designers are those persons who demonstrate design competencies on the job regardless of their job title or training. There are many people who are involved in ID professions despite not holding the job title of an ID practitioner and not coming out of a specialized graduate school. In addition, there are a lot of cases in which advanced ID practitioners also serve as project managers.
2. The ID competencies pertain to persons working in a wide range of job settings. While it cannot be denied that these proposals have a tendency to fit better with cases of corporate entities, they can also be applied to ID practitioners who work in primary and secondary education, higher education, lifelong learning institutions, government and municipalities, and other areas.
3. Instructional design is a process most commonly guided by systematic design models and principles. Aside from the systems approach, there are other approaches such as communicative (method of moving forward while obtaining the consensus of those involved in the design process), pragmatic (method of repeatedly running trials and making improvements by relying on the senses of those involved), and artistic (method via the subjectivity of the developer and user) ones. We believe that much of ID practice relies on the traditional systems approach.
4. Instructional design is most commonly seen as resulting in transfer of training and organizational performance improvement. It is not just about creating training programs and instructional materials like those of the past.
5. Instructional design competence spans novice, experienced and expert designers.
6. Few Instructional designers, regardless of their levels of expertise, are able to successfully demonstrate all ID competencies. The vast majority of ID practitioners handle only some of the ID competencies.
7. ID competencies are generic and amenable to customization.
8. ID competencies define the manner in which design should be practiced.
9. ID competencies reflect society and disciplinary values and ethics.
10. ID competencies should be meaningful and useful to designers worldwide.

Note: Richey, Fields, & Foxon (2000), pp. 36-42, compiled into a table by Suzuki.

The first sentences are described as the premises, and those from the second sentence onward are its explanatory notes.

In addition to the professional skills in 4 fields and 23 competencies, Richey, Fields, & Foxon (2000) have proposed a total of 122 “skills underpinning the competencies” at the performance level. Furthermore, while ID practitioners in charge of ID as a whole are present at small-scale organizations, ID professionals who are in charge of only parts of ID according to their specialty are becoming common at large-scale organizations. ID professionals are classified as: (1) analysis and evaluation professionals, (2) e-Learning professionals, and (3) project management professionals. Tables are provided which arrange the performances required of each type of professional.

Viewing tables which have been classified into particulars makes it possible to gain a sense of the breadth and amplitude of the professional skills required of ID practitioners and once again calls to mind the assumption that there are no ID practitioners who can encompass all of these. Efforts were made for this text with the intention of covering as wide a range as possible, but if asked, I would be uncertainty over how much ground was actually covered. The only thing that is certain is that this hints at the fact that the world of ID is more than sufficient as a career path that one can deliberately engage in.

Well then, to what extent will you deepen the professional competencies of ID? Or to where and whom will you extend it to? I would be pleased if even more people were to take notice of the world of ID.

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	End of chapter report assignment (Chapter 13)	
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Write a report on one or more of the following three assignments:

- 1) Compile any questions or doubts that occurred to you while reading this chapter (Chapter 13), as well as any comments, opinions, impressions, and so on. Including any previous personal anecdotes related to the descriptions in this chapter, added information, or anything that you have examined and the results (affix the name of the source of information) in your consideration will serve to deepen your understanding.
- 2) In light of the objectives and placement of e-Learning Fundamental, carefully consider the scope and configuration covered in this chapter, as well as the described methods, in a critical manner. As this chapter is meant for the improvement of ID practitioners, what would you revise and how? Furthermore, what points were done well (sections that do not require modification)? If anything was lacking what would you like to see added? What items do you think should be removed with regard to succeeding courses? Give some thought to these questions. Moreover, what are your expectations for the blending course to be held upon reading this book, as well as the e-Learning Design and e-Learning Management courses scheduled for preparation following this text? Compile your ideas.
- 3) Analyze the competencies for ID practitioners compiled by ibstpi in 2000 in light of case examples of e-learning which you are aware of and the role played by ID practitioners in your immediate vicinity. Think about such questions as: Does this list sufficiently cover all of the necessary competencies? If there are any unnecessary items, what are they? What items are lacking?