




## ANALYZING TARGET AUDIENCE: STARTING POINT OF INSTRUCTIONAL SYSTEMS DESIGN


BY  
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## Analyzing Target Audience?

Who are your audience?  
 Do they like studying with computers?  
 Do they like the subject that you are to teach?

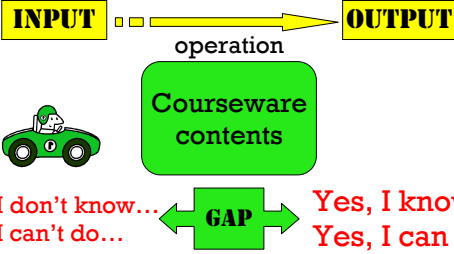
What can they already do?  
 What motivate your audience?



**Entry Condition of this Lecture:** This lecture assumes that the audience has studied an overview of how to develop a courseware (e.g., ADDIE Model), before taking this lecture.

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### Output – Input = Gap to fill



No, I don't know...  
 No, I can't do...

Yes, I know it!  
 Yes, I can do it!

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### Analyzing Target Audience: Starting Point of ISD

- **Audience Analysis (Input)**
  - **What factors of learners should be considered when designing?**
- **Writing Learning Objectives (Output)**
  - **How the audience will be changed because of your courseware?**
- **Gagne's 9 Events of Instruction**
  - **What should a good courseware provide for learners?**

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### Audience Analysis for Instructional Systems Program: A case study

Graduate School of Instructional Systems  
教授システム学専攻  
熊本大学大学院 社会文化科学研究科

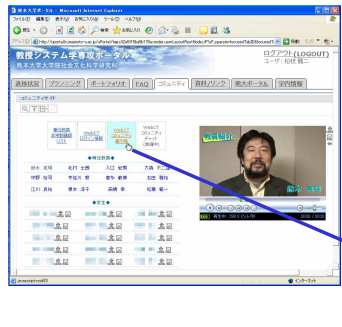
Master of Science in Instructional Systems  
 100% online Program started in April 2006  
 Training e-Learning Professionals with 4I's:  
 Instructional Design, Information Technology,  
 Instr. Management & Intellectual Property

Enrollment: 15 students in their 30-40's  
 All working full-time in various locations

<http://www.gsis.kumamoto-u.ac.jp/>

課程紹介 案内を希望される方は、「資料請求」ボタンを押してください。  
 課程紹介 案内を希望される方は、「資料請求」ボタンを押してください。  
 3006.2.10  
 FAOを公開しました。→詳細はこちら

### Web Site for Community Building at Instructional Systems Program

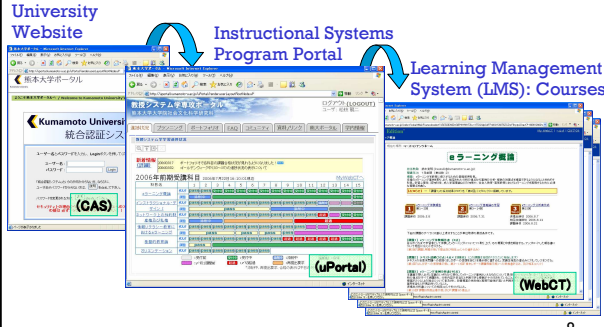


**Community Functions**

- Faculty Self-Introduction Video
- Links to Students' Web
- Community BBS

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### Single Sign-on from University Website to Program Portal to LMS



University Website → Instructional Systems Program Portal → Learning Management System (LMS): Courses

(CAS) (uPortal) (WebCT)

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### Program Portal for Students: Monitoring Own Progress in All Courses currently enrolled

**Monitoring Functions:**

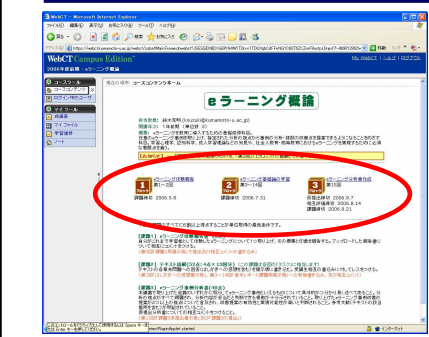
- Assignment Due Dates:** overdue, due in a week, being accepted, not yet available
- Status:** passed, resubmission required, grading in progress
- Direct links** for each of the assignments

2006年前期受講科目 2006年7月24日 10:33:04現在

科目名	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
eラーニング概論	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始
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ネットワークの基礎	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始
高度及び組織	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始
情報システム概論	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始
おけるシステム	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始
基礎的計算機	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始
システム工学概論	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始	未開始

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### Course Contents on LMS (WebCT CE6) e-Learning Fundamentals

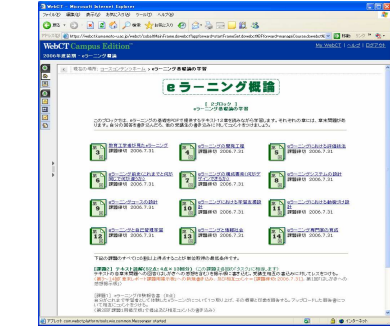


**Course Top**

- .3 blocks in this course
- .Descriptions about course assignments

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### Course Contents on LMS (WebCT CE6) e-Learning Fundamentals

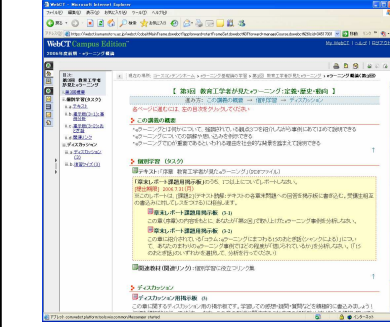


**Block Top**

- .12 units are in this block (a total of 15 units)
- .Description of assignments in this unit

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### Course Contents on LMS (WebCT CE6) e-Learning Fundamentals



**Unit Top**

Directions of the study:

- Read the text (PDF) and other materials (HTML/Links)
- Answer to the study questions (BBS)
- Critique and collaborate each other (Reply in BBS)

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WebCT Campus Edition™ An Example Screen of Bulletin Board System (BBS)

Index of this unit

Answer to Study Questions

Critique & Collaborate

Audience Analysis for Instructional Systems Program: A case study

Enrollment: 15 students in their 30-40's  
All working full-time in various locations

- Mature Students (30-40's)
- Working alone at home/office, but Capable of Independent Study
- Minimal Faculty Support
- Encourage Collaborations and Learn from each other
- Time Management may be an issue: → Mainly Asynchronous Mode

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What factors of learners should be considered when designing?

- **Cognitive**
  - Epistemic beliefs: Learner's assumptions about how learning occurs (complexity, flexibility, nonlinearity, etc.)
  - Cognitive style: Preferred, consistent, individual characteristics in organizing and processing information (field dependent vs. independent, narrow/wide scanning, constricted/flexible conceptualization, distractions and focus attention), leveling (depth of processing in memory), reflection/impulsivity (rate of response and response), conceptual differentiation/integration (ability to categorize), risk taking/cautiousness (in solving problems)
  - Spatial ability: capacity to visualize, perceive, represent, and cognitively manipulate spatial relations
  - Metacognition: awareness of one's own knowledge and the ability to understand and manipulate individual cognitive processes
- **Motivation**
  - Awareness, acceptance, and understanding of the required task or learning outcome
- **Knowledge**
  - Sufficient knowledge and study skills, study habits, computer literacy, Internet
- **Social context**
  - Skills to collaborate with peers

**MANY FACTORS TO CONSIDER**

Miller, S.M. & Miller, K.L. (2000). Theoretical and practical considerations in the design of Web-based instruction. In B. Abbey (Ed.), *Instructional and cognitive impacts of Web-based education*. Idea Group Publishing, 229-240.

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What factors of learners should be considered when designing?

- **How much do they know about the subject you are going to teach?**
- **How much experience do they have in using the media you are going to use? Can they navigate their own learning?**
- **How well can they read?**
- **In what context are they going to use your courseware: study alone, teacher-supported, collaborative?**

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Audience Analysis for Ms. Wonderful: A case study

For Ms. Wonderful, who teaches 5<sup>th</sup> graders,

- Not mature students
- Need lots of attention & directions
- Eager to learn, but be bored very quickly
- Like Games and Competitions
- Like Visuals and Sounds, especially animations and pictures
- Varied reading ability

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Analyzing Target Audience: Starting Point of ISD

- Audience Analysis (Input)
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- Writing Learning Objectives (Output)
  - How the audience will be changed because of your courseware?
- Gagne's 9 Events of Instruction
  - What should a good courseware provide for learners?

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### How the audience will be changed because of your courseware?

**Output – Input = Gap to fill**

More knowledge, skill, and attitude than before?

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### Pretest, Posttest, Entry Test

- Posttest:** Did you master what you studied? (go next or review)
- Pretest:** Do you already know what I am going to teach? (skip or learn)
- Entry test:** Do you know the basics necessary to start this lesson? (start or review the basic first)

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### What are the Posttest, Pretest, and Entry Test for the Omelet Lesson?

Goal: to be able to make an omelet  
Audience: capable of making a flied egg

- Posttest:** Make an omelet with two eggs (Performance test).
- Pretest:** Can you make an omelet? Yes? Then describe how? OK, then make one.
- Entry Test:** Can you describe how to make a flied egg? Yes, describe. OK, then make one.

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### Pretest, Posttest, Entry Test for the omelet lesson

- Posttest:** Make an omelet with two eggs (Performance test).
- Pretest:** Can you make an omelet? Yes? Then describe how? OK, then make one.
- Entry Test:** Can you describe how to make a flied egg? Yes, describe. OK, then make one.

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### ABCD of Learning Objectives

Given necessary cooking tools and 2 eggs (**Condition**), 5<sup>th</sup> grade students who can make flied eggs (**Audience**) will be able to make an omelet (**Behavior**) that is eatable and in good shape, in 10 minutes (**Degree**).

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### ABCD of Learning Objectives

- Audience:** Who are your learners? Any entry behaviors to expect?
- Behavior:** What are they going to be able to do when they finish?
- Condition:** When they are evaluated, what are available and what are not? Can they use the textbook?
- Degree:** How well are they expected to do it? How fast? How accurate? How many times, out of how many?

→ Always a good idea to share these with your learners when they start your courseware.

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**Analyzing Target Audience:  
Starting Point of ISD**





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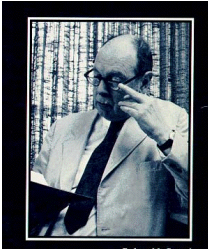
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**9 Events of Instruction  
to help learning processes**




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- **Founder: Robert M. Gagne (1916-2002), the author of "The Conditions of Learning" and god-father of Instructional Design Research Community**
- **Basic Components of Good Instruction, to facilitate the learner build internal conditions for effective learning**
- **Proposed based on Cognitive Psychology (especially information processing model of human learning)**


*Robert M. Gagne*  
*Robert O. Lawton Distinguished Professor,  
Department of Educational Research  
and Learning Systems Institute,  
Florida State University*

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**Young Dr. Suzuki with his  
Doctoral Committee Members**




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**Prof. Robert M. Gagne's Lecture**


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**Recorded in 1982 at Florida  
State University, U.S.A.**



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**Gagne's 9 events of  
instruction**





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- 1. Gaining learner's attention**
- 2. Informing learner of the objective**
- 3. Stimulating recall of prior learning**
- 4. Presenting stimulus materials**
- 5. Providing learning guidance**
- 6. Eliciting performance**
- 7. Providing feedback**
- 8. Assessing performance**
- 9. Enhancing retention & transfer**

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**9 Events for Ms. Wonderful:  
A case study**




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Ms. Wonderful usually opens up her class by a game. Then she tells her class what to study today, then tries to relate it to students' daily life. After explaining the new material, she will ask some of the students to come up and solve some problems. She would correct if any mistakes are made. She usually review when she thinks the class have forgotten it.

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Gagne's 9 events of instruction  
**1. Gaining learner's attention**  
**2. Informing learner of the objective**  
**3. Stimulating recall of prior learning**

INTRODUCTION

To watch for important information

Selection / Control

Attention

Basics needed for new learning

Working Memory

Long-term Memory

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Gagne's 9 events of instruction  
**4. Presenting stimulus materials**  
**5. Providing learning guidance**

PRESENTATION

New Information

Connect new information with old information

Remember with meanings

Working Memory

Long-term Memory

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Gagne's 9 events of instruction  
**6. Eliciting performance**  
**7. Providing feedback**

PRACTICE

Clear mistakes with advices

Feedback

Working Memory

Deeper learning

Long-term Memory

Q & A

Performance

Take out from memory

ADBI Workshop 33

Gagne's 9 events of instruction  
**8. Assessing performance**  
**9. Enhancing retention & transfer**

TEST & REVIEWS

Test to confirm

Test to remember

TESTS

Performance

Take out from memory

Applications make memory stronger...

Long-term Memory

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9 Events for Ms. Wonderful:  
 A case study

- .Ms. Wonderful usually opens up her class by a game.
- .Then she tells her class what to study today, then tries to relate it to students' daily life.
- .After explaining the new material, she will ask some of the students to come up and solve some problems.
- .She would correct if any mistakes are made.
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Gagne's 9 events of instruction

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- 4. Presenting stimulus materials**
- 5. Providing learning guidance**
- 6. Eliciting performance**
- 7. Providing feedback**
- 8. Assessing performance**
- 9. Enhancing retention & transfer**

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### 9 Events for Instructional Systems Master's Program: A case study



- .No need to capture their attention (#1)
- .Clearly inform objectives (#2) in the form of **Course Assignment and Passing Criteria**
- .Recall **personal** prior experiences (#3)
- .Present Information (#4) in **mainly text and links**
- .Learning Guidance (#5) to **relate theory to their personal experiences and cases**
- .Practice (#6) in **unit tasks** (BBS)
- .Feedback (#7) **from each others'** comments and critiques
- .Test (#8) in the form of **Course Assignments**
- .Support Retention and Transfer (#9) by making finished courses **available for next semesters**

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### What are 9 events for your courseware production?






- 1. Gaining learner's attention**
- 2. Informing learner of the objective**
- 3. Stimulating recall of prior learning**
- 4. Presenting stimulus materials**
- 5. Providing learning guidance**
- 6. Eliciting performance**
- 7. Providing feedback**
- 8. Assessing performance**
- 9. Enhancing retention & transfer**

→ **Checklist** based on Gagne's Nine Events of Instruction

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### Merrill's 5 Principles of Instruction

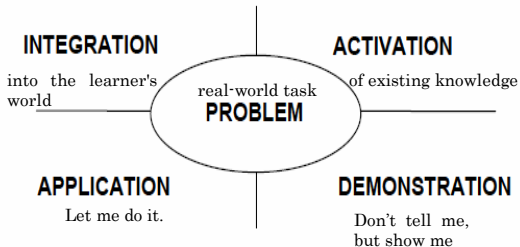



Figure 1 First Principles of Instruction Diagram

→ **Checklist** based on Merrill's Principles

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