Motivational Courseware Design using the ARCS Model

1. Checklist for Multimedia Instructional Design
   - What makes courseware engaging?

2. The ARCS 4 factors
   - What is the ARCS model? What are the four factors for engaging courseware?

3. Motivational design process
   - What are the major steps to make courseware engaging to the learners?

©2007 Katsuaki Suzuki, Ph.D. All right reserved. Prepared for ADBI Workshop.

1. Title Screen (Event 1)

- Capture user’s attention? (A-1)
- Related to the content of the material? (A-2)
- Not forcing users to view long animation? (A-1)

Some Examples of Multimedia Courseware

Thanks to Prof. M. David Merrill

With Professor M. David Merrill, June 2005

(Events 2 & 3)

5. Practice and Feedback

(Events 6 & 7)

Checklist for Multimedia Instructional Design (Suzuki, 2004)

1. Title Screen (Event 1)

- Capture user’s attention? (A-1)
- Related to the content of the material? (A-2)
- Not forcing users to view long animation? (A-1)

Some Examples of Multimedia Courseware

Thanks to Prof. M. David Merrill

With Professor M. David Merrill, June 2005

(Events 2 & 3)

5. Practice and Feedback

(Events 6 & 7)
## 2. Introduction (Events 2 & 3)

- Give users the feeling "This is for me!"? (R-1)
- Objectives are clearly stated, easy to understand? (R-2; C-1)
- State Usefulness and Values of attaining objectives? (R-2)
- Users can judge if they have prerequisites? (C-1)
- Give review opportunities for prerequisites? (C-1)

## 3. Menu Structure

- Provide a menu so that users can select order of learning? (C-3)
- Overall structure is clear to the users? (C-1)
- Divided into short sections to prevent boredom? (A-3)
- Users know how much they finished and how much more to complete? (C-1)
- Sections the users finished are marked as completed? (S-2)
- Advices are given when users have options to select? (R-3)
- Menu can be accessed soon after starting? (C-3)

## 4. Information Presentation and Learning Guidance (Events 4 & 5)

- Not page after page information presentation consecutively? (A-2)
- Ask questions to motivate the users from time to time? (A-2)
- Order the contents from easy to more difficult? (C-1)
- Users can detect weak points from early stages? (C-2)
- Have adequate concreteness with familiar examples and illustrations? (R-1)

## 5. Practice and Feedback (Events 6 & 7)

- Provide practice opportunities in risk-free situations? (C-2)
- Informational feedbacks are given for wrong answers? (C-2)
- Affective feedbacks are given for correct answers? (S-2)
- No negative/critical feedbacks for wrong answers? (S-2)
- No interesting feedbacks for wrong answers? (A-1)
- Chances for re-try are given? (C-2)

## 6. Evaluation and Ending (Events 8 & 9)

- Hold evaluation criteria constant throughout the material? (S-3)
- Passing criteria and evaluation conditions are clear in advance? (S-3)
- Affiliate success to users' effort? (C-3)
- Position users' success in a bigger picture (future advances)? (R-2)
- Provide immediate opportunities to apply knowledge/skill that user just mastered? (S-1)

---

Engaging instruction:
- **Not entertainment, but engagement**
- **Motivation as input**
- **Motivation as output: Continuing motivation in life-long learning area**
  - I studied very hard, and now I can do it, but I don't want to do more, if I have a choice.
- **Self-regulated Learning (SRL): From teacher control to learner control**
  - Motivation as a self-control skill for own learning
Layer Model of e-Learning Quality (Suzuki, 2005)

- Engagement (Motivation) is in the top layer of the Layer Model.

<table>
<thead>
<tr>
<th>LAYER MODEL OF E-LEARNING QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ++(stable)------------------------(unstable)--</td>
</tr>
<tr>
<td>2. ++(accurate)----------------(inaccurate)--</td>
</tr>
<tr>
<td>3. ++(easy to use)------(difficult to use)--</td>
</tr>
<tr>
<td>4. ++(effective)-------------(not effective)--</td>
</tr>
<tr>
<td>5. ++(engaging)-----------(not engaging)--</td>
</tr>
</tbody>
</table>

Motivational Courseware Design using the ARCS Model

1. Checklist for Multimedia Instructional Design
   - What makes courseware engaging?

2. The ARCS 4 factors
   - What is the ARCS model? What are the four factors for engaging courseware?

3. Motivational design process
   - What are the major steps to make courseware engaging to the learners?

What is ARCS model and why it is important?

- ARCS Model was born in 1983 in USA
- Founder: John M. Keller
  - Professor, Florida State Univ.
- Challenges of Learner Motivation can be divided into 4 categories: ARCS.
  - Attention
  - Relevance
  - Confidence
  - Satisfaction

ARCS MODEL OF MOTIVATIONAL DESIGN

- Based on many psychological research
- Geared toward learner
  - Katsu is my student, so please kindly listen to him.
- Easy to use for instructional designers and instructors

ARCS MODEL OF MOTIVATIONAL DESIGN

Attention

Interesting!

- If your material captures learner’s attention, it is because it’s interesting!

Relevance

I see the importance!

- If the learner can see the value of studying the material, it is Relevant to the learner’s need.
- Relevance can come from the results of learning (e.g., improved ability); it can also come from enjoying the process of learning (e.g., competition).
Confidence
I can do it if I try!

If the learner feels it's possible to master, s/he is Confident in learning.

Satisfaction
I am glad I did it!

If the learner feels happy about the outcome of learning, s/he gets Satisfaction.

Satisfaction will become continuing motivation for next learning.

Theories underlying the ARCS Model

Practical Model with many Psychological Models behind

Attention    Relevance    Confidence    Satisfaction

Stages of Desire (Maslow)
Achievement Motive (Atkinson)
Reinforcement Value (Abelson)
Curiosity (Berline)
Anxiety (Miller)

Locus of Control (Lotter)
Self-Efficacy (Bandura)
Expectation-Value Theory (intrinsic vs extrinsic motivation)
Self-Determination (deCharm)
Learned helplessness (Seligman)
Attribution Theory (Weiner)

ARCS MODEL OF MOTIVATIONAL DESIGN

I hope my ARCS model can help you to analyze motivational challenges of your students. If you have any questions, ask Katsu, or directly me.

ARCS MODEL OF MOTIVATIONAL DESIGN

I hope my ARCS model can help you to analyze motivational challenges of your students.

What are the 4 factors for engaging courseware?

- Different learner has different reasons why they are not engaging.
- ARCS 4 Factors will guide you to decide what is (are) the problem(s).
  - Is it because lack of Attention, Relevance, Confidence, or/and Satisfaction?
- The worst thing to do: try to motivate learners who are already motivated and want to learn your courseware.
  - In this case, the best thing is not to try to motivate them, but start your instruction now.

Subcategories of ARCS
(Keller & Suzuki, 1988)

A
A-1: Perceptual Arousal
A-2: Inquiry Arousal
A-3: Variability

R
R-1: Familiarity
R-2: Goal Orientation
R-3: Motive Matching

C
C-1: Learning Requirement
C-2: Success Opportunities
C-3: Personal Control

S
S-1: Natural Consequences
S-2: Positive Consequences
S-3: Equity


(c)2006 Katsuaki Suzuki, Ph.D
Motivational Courseware Design using the ARCS Model

1. Checklist for Multimedia Instructional Design
   - What makes courseware engaging?

2. The ARCS 4 factors
   - What is the ARCS model? What are the four factors for engaging courseware?

3. Motivational design process
   - What are the major steps to make courseware engaging to the learners?

Components of ARCS

- Systematic Process for pinpointing
- Collection of hints for motivational improvement
- Motivational Strategies
- Design Framework

Process of ARCS Motivational Design

- Did it work? What should be done?
- What are the fewest set of strategies?
- What is/are motivational problem(s) of learners?
- Strategy Selection
- Audience Analysis
- Evaluation & Revision

Simplified Method of Motivational Design (Suzuki & Keller, 1995)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Attention</th>
<th>Relevance</th>
<th>Confidence</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learners</td>
<td>How are they motivated?</td>
<td>Interesting?</td>
<td>Important subject for them?</td>
<td>Good at this subject?</td>
</tr>
<tr>
<td>Task</td>
<td>Are the task all motivating?</td>
<td>Are attention getting features?</td>
<td>Importance of learning natural or easy to see?</td>
<td>Task difficulty seems high?</td>
</tr>
<tr>
<td>Strategies</td>
<td>Stressing benefits and overcoming drawbacks</td>
<td>Persuasive messages for task importance?</td>
<td>Need persuasive messages to show relevance?</td>
<td>Seem to small subs tasks?</td>
</tr>
</tbody>
</table>

Simplified Method of Motivational Design

SMMD (Suzuki & Keller, 1995)

A case of international e-mail lesson for 7th grade students: LEARNERS

A - Elective, not required, course (+) - High interest (+)
R - High commitment (+)
C - Low skill in typing (-) - Low skill in conversational English (-)
S - Newly formed class of students (-) - Familiar teacher (+)
## A case of international e-mail lesson for 7th grade students: TASK

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| A | New (+)  
  Attractive(+)  
  Adventurous(+) |
| R | High public interest to the Internet(+)  
  Useful for the future(+) |
| C | Seems difficult (-)  
  First exposure (no prior experiences) (-) |
| S | High applicability of acquired skill (+)  
  Exciting outcome of learning (+) |

©2007 Katsuaki Suzuki, Ph.D. All right reserved. Prepared for ADBI Workshop

## A case of international e-mail lesson for 7th grade students: STRATEGY

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| A | Not needed  
  Not needed |
| R |   |
| C | Set learning tasks cumulatively, from low to high  
  Team teaching with an Assistant English Teacher  
  Use translation software |
| S | Warm-up activity for group self-introduction |

©2007 Katsuaki Suzuki, Ph.D. All right reserved. Prepared for ADBI Workshop

---

### Motivational Courseware Design using the ARCS Model

1. **Checklist for Multimedia Instructional Design**
   - What makes courseware engaging?

2. **The ARCS 4 factors**
   - What is the ARCS model? What are the four factors for engaging courseware?

3. **Motivational design process**
   - What are the major steps to make courseware engaging to the learners?

©2007 Katsuaki Suzuki, Ph.D. All right reserved. Prepared for ADBI Workshop

---

Motivational Courseware Design using the ARCS Model

- **KATSUAKI SUZUKI, PH.D**  
  Professor and Chair  
  Instructional Systems Program  
  Graduate School of Social and Cultural Sciences  
  Kumamoto University, JAPAN  
  ksuzuki@kumamoto-u.ac.jp  
  http://www.gsis.kumamoto-u.ac.jp/ksuzuki/

©2007 Katsuaki Suzuki, Ph.D. All right reserved. Prepared for ADBI Workshop