

A1.1 Introduction to e-Learning  
 A1.2 Choices of Media

In this course, we will look at the ways of learning and explore the concept of e-learning.

Studying at school in Japan has often been criticized as depending too much on lower-order skills such as mechanical memorization and recall of facts or procedures, and not developing the higher-order thinking skills such as problem-solving and analysis.

There are many lists of thinking skills. The most famous is Bloom's Taxonomy of Learning. **Individually and then in groups, re-order the following from (1) easiest to (6) most difficult ;**

- analyse
- apply
- judge
- recall
- synthesize
- understand

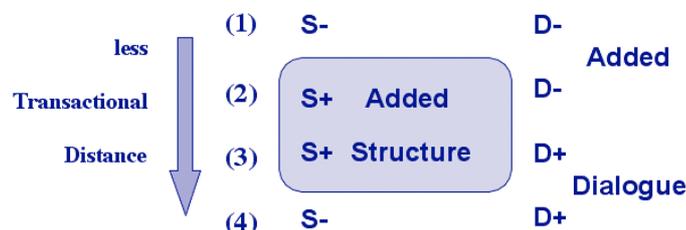
Other taxonomies include those by Gagné, Merrill, and by Leith.

These were designed to help teachers organize their lessons from an easy low level gradually through to more difficult higher-order levels, in a traditional classroom with the teacher in front of the students. The aim is for students to achieve the highest level.

Improvements in open and distance education (ODE) have been made recently. So much so, that ODE provides an effective alternative to traditional education. The ODE interactions have been categorized in terms of the psychological transactional distance between the student and the text (where 'text' here means the content and capabilities to be learnt or acquired by the student).

The possible interactions depend on which media are used. Media include handwritten or printed text by post, and text by fax, email or internet, voice by telephone, radio, audio-cassette, DAT, CD or internet, visual images by print and post, phone, fax, TV, AV, CD, hybrid-CD, DVD, HDD and so on.

These media have been organized into levels of transactional distance according to how much they are student-centered without teaching structure S, and at the same time how much dialogue D they allow between the student and the teacher or text, from (1) with much distance, through to (4) with least distance, as follows ; -



e-Learning is defined as learning using electronic media for the interactions. A model of e-learning has now been designed in which the student moves in four stages from an initial un-educated position faraway to a final educated position very close.

What is Learning ?

In cognitive constructivism, learning involves the acquisition of new information and connecting this with pre-existing prior knowledge. Sometimes – especially in adults – old knowledge is replaced.

There are four distinct ways of learning. It is important to understand the difference between cooperative learning and collaborative learning – which hinges on whether or not in the group there is a ‘knower’ of the information about to be learnt by the others.

Cooperative learning needs at least one member of the group (for example the teacher, or an older student) who ‘knows’ the content to be learnt by the other(s). Learning takes place through the ‘knower’ sharing, repeating, rephrasing, summarizing, reorganizing, or translating the point to be learned.

Collaborative learning follows a scientific process of testing out hypotheses. A participant publicly articulates his (or her) own opinion as a hypothesis and being open to the value of conflict allows this to be negated if possible by others, in which case the original participant or another offers up a modified or alternative hypothesis for public scrutiny. In collaborative learning, disagreement and intellectual conflict are desirable interactions. All participants share in co-constructing the new knowledge together.

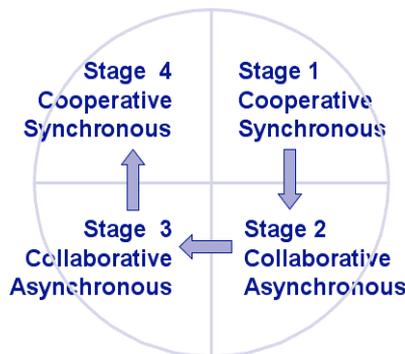
The Four Ways of Learning

Learning-Alone		Learning-in-a-Group	
Independent	Individual	Interpersonal	
<b>Freedom</b> over content and method of learning	<b>No Freedom</b> over content and method of learning  or pre-negotiated freedom	<b>Cooperative</b>  Group with a ‘knower’	<b>Collaborative</b>  Group with no ‘knower’

Social constructivism says that learning occurs best in groups, using feedback from others.

Do you agree ? Why or why not ?

Now, we can choose which media are best suited for each level of thinking. The low-order levels are cooperative and interactions should be at the same time, so synchronous media are best, and so on – to give this e-learning model. Write the related Bloom levels of thinking into each Stage.



The Kawachi Model of e-Learning

We can summarize the activities that are appropriate for each Stage, as follows ;

e-Learning Activities in each Stage

	in Theory	in Practice
Stage 1	S - D -	Self-introduction, share prior experience and knowledge, brainstorming
Stage 2	S + D -	Theorize, give reasons behind own thinking, develop metaphor, creative and lateral thinking
Stage 3	S + D +	Guided exploration of alternative theories, hypotheses testing, vertical thinking
Stage 4	S - D +	Test out a new way, experiential, widen repertoire, make public or practical the theory chosen from Stage 3

Write a list of media and their advantages and disadvantages, in your notebook.

Media	Advantages	Disadvantages
for example radio	low running-cost easy to do easy to update	only voice, no pictures one-way, not interactive fixed-time broadcast need to record

Notice each media has both advantages and disadvantages. Therefore always use two or more media, so the advantages of one can compensate for the disadvantages of another.

Media must be chosen to be closest to the real processes.

Individually and then in groups, decide which media suit each Stage 1 ~ Stage 4.

In Japan, colleges, teachers, students and the employers have all said they would like less theory and less Structure, and instead more Dialogue, to make the learning more fitting to their purposes.

Do you agree ? Why ?

In practice, this means moving

Stage 1 >>>> Stage 4

and omitting Stage 2 and Stage 3 which deal with theory. In Stage 2 and Stage 3, you must question your own view, as well as question the texts and teachers. These stages deal with discovering, analyzing and solving new problems.

It is well known that students find the asynchronous collaborative learning in a group difficult to navigate. Some scaffolding support should be introduced. This should be added Structure ( S + ).

Added Structure as Scaffolding for Stage 2 and Stage 3

by the course or institution	by the teacher or online tutor
for example  Setting a collaborative task such as students together designing a multimedia reusable learning unit	Purposively initiating the intrinsic motivations to learn in each student

Lifelong learning involves repeating cycles.

Young students may be motivated to learn to get a certificate for their first job.

What motivations do you think lifelong students have ?

