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Sustainable Human Resource Development in logistics services for ASEAN Member States

“Instructors’ Workshop on Training Fundamentals”

Arnoma Hotel, Bangkok (Thailand)
20th September, 2014 (Saturday)
by Thomas SIM (Singapore)
Chairman – AFFA WGET
Main Objectives of this Module

- to cover the gaps to be identified for analysis of Training Structure
- to assist the AFFA (trainers & course managers/administrators, etc.) to develop a holistic training program & materials in accordance to the FMST for the AFFA Region
- examine TOT fundamentals (curriculum dev. customization & training sustainability, etc.)
- to assist AFFA Trainers with the aim of introducing FIATA Training Program in the AFFA Region...
Delivery of this Program

Training Fundamentals (TOT elements)
• pedagogical & andragogical aspects,
  - covering methodology,
  - course planning & preparation,
  - course & curriculum developments,
  - training assessments,
  - standards, training resources,
  - course evaluations and CIR etc…

• Covered in 7 Modules…
Module 1: Principles of Learning
• Introduction – TOT Fundamentals
• Module Objectives
• What is Learning & How do we learn?
• ‘Andragogy’ – Adult Learning...
• Benjamin Bloom’s Taxonomy
• Robert Gagne 9 Events of Instructions
• David Kolb’s Experiential Learning Cycles
• John Keller’s ARCS Model of Motivation
Common Barriers to Adult Learning
Factors Affecting Learners & the Learning Process
the 7 Principles of Learning
Dunn & Dunn’s 3 Basic Learning Styles (VAK Model)
Honey & Mumford’s Learning Styles
How to enhance Learning in Adults
Reflecting on this Module...
The Changing Training Environments

- the developments in CBT & DLI...have **NOT** change the fact that the INSTRUCTOR continues to be one of the most important elements in the process of teaching & learning...!
- reflect on own educational experiences...
- make subject comes **ALIVE & INSPIRED** our learning experiences without modern technology...
The Changing Training Environments

• “chalk & talk” using blackboard is still a very effective method of teaching...

• discuss many methods of teaching, each with advantages & limitations in terms of helping students to learn effectively...

• the training environments differs from a traditional ‘teaching’ environment, where teachers delivers new knowledge in a school or university set-up...!
The Changing Training Environments

- learners are NOT the ‘regular’ students!
- mature adults who may have ‘given-up studying’ a long time ago...
- your initial important tasks – to bring them back to learning environment
- continue to engage their attentions...!
Fundamentals of Adult Learning (ANDRAGOGY)

What is ‘Learning’?
- is more than the acquisition of knowledge
- is a quest for meaning...
- helps you to make sense of what is happening around you >>>> MEANING!
- is a social process...
- occurs through interaction with people
- is about you interacting with your external environment >>>> INTERACTION
Fundamentals of Adult Learning (ANDRAGOGY)

What is ‘Learning’?

- provides you with a higher level of knowledge and skills that must be applied by DOING!
- this application of skill & knowledge results in the creation of a product or service >>>> COMPETENCE

- can enable you to change for the better
  >>>> CHANGE IN BEHAVIOUR
WHAT IS TO BE LEARNT?

In 1956, Benjamin Bloom identified 3 domains of learning:

(a) Cognitive (Knowledge)

(b) Psychomotor (Skills)

(c) Affective (Attitudes & Behaviours)
WHAT IS TO BE LEARNT?

Benjamin Bloom has also identified six levels of cognition.
- range from the simple recall or recognition of facts, as the lowest level, through increasingly more complex and abstract mental levels, to the highest order which is classified as evaluation.
BLOOM’S TAXONOMY

1. Knowledge: arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, and reproduce/state.

2. Understanding: classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate.
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BLOOM’S TAXONOMY

3. Application: apply, choose, demonstrate, use, dramatize, employ, illustrate, solve, interpret, operate, practice, sketch, write, schedule

4. Analysis: analyze, appraise, calculate, categorize, compare, contrast, criticize, examine, differentiate, discriminate, distinguish, experiment, question and test
BLOOM’S TAXONOMY

5. Synthesis: arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write

6. Evaluation: appraise, argue, assess, attach, choose, compare, defend, estimate, judge, predict, rate, core, select, support, value, evaluate
Questions?

tomsim@singnet.com.sg
HOW IT IS TO BE LEARNT?

According to Robert Gagne (1965), there are 9 events of instruction that activate processes needed for effective learning.

This is stated in his book called “Conditions of Learning” released in 1965. In his book, Gagne believes all lessons should include this sequence of events:
### Events of Instruction

<table>
<thead>
<tr>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Attention</td>
</tr>
<tr>
<td>Inform Learner of Objectives</td>
</tr>
<tr>
<td>Stimulate Recall of Prior Learning</td>
</tr>
<tr>
<td>Present Stimulus Material</td>
</tr>
<tr>
<td>Provide Learner Guidance</td>
</tr>
<tr>
<td>Elicit Performance</td>
</tr>
<tr>
<td>Provide Feedback</td>
</tr>
<tr>
<td>Assess Performance</td>
</tr>
<tr>
<td>Enhance Retention and Transfer</td>
</tr>
</tbody>
</table>
Questions?

tomsim@singnet.com.sg

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**Andragogy**
- Internal motivation
  - Psychologically prepared to learn
  - Problem solving focus
  - Prior experience element
  - Purposeful Self-directed learning

**Pedagogy**
- External motivation needed
  - Need conducive environment
  - New knowledge is essential
  - No prior experience
  - Navigation & guidance needed

Pedagogy & Andragogy (TOT) (Thomas SIM)
Characteristics of ANDRAGOGY

- **Self-Concept**: as a person matures, his self-concept moves from one of being a dependent personality toward one of being self-directed human being...

- **Experience**: as a person matures, he accumulates a growing reservoir of experience that becomes an interesting resource for learning...
Characteristics of ANDRAGOGY

- **Readiness to learn**: as a person matures, his readiness to learn becomes oriented increasingly to the developmental tasks of his social roles...

- **Orientation to learning**: as a person matures, his time perspective changes from one of postponed application of knowledge

- **Motivation to learn**: as a person matures, the motivation to learn is internal
Three Levels of Learning:

- Surface Learning
- Non-reflective learning
- Deep or Reflective Learning

Each and every learner perceives and processes information in different ways.

Each develops a method to discover solutions and resolve problems they encounter.
Three Levels of Learning:

Surface Learning

- Memorizing info for tests & assessments;
- Learning information piece-by-piece without integrating them into full picture;
- Fail to distinguish Principles from Examples...
Three Levels of Learning:

Non-Reflective Learning

• Learning info for immediate application;
• Understand how to use, but not how to apply in new context;
• See the full picture but unable to create new ideas…
Three Levels of Learning:

Deep & Reflective Learning

- **Aim to Understand** *(the Problem, the Process & the Principle)*;
- **Interact positively with the learning content**;
- **Able to relate new ideas to previous knowledge**…
Questions?

tomsim@singnet.com.sg

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David Kolb’s Experiential Learning Cycle

- David Kolb - Professor of Organizational Behavior in the Weatherhead School of Management.

- together with Roger Fry, he created his famous model out of four elements:
  - Concrete Experience (CE),
  - Observation and Reflection (RO),
  - the formation of Abstract Concepts (AC) and
  - testing in new situations ~ Active Experimentation (AE)
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David Kolb’s Experiential Learning Cycle

Kolb’s Experiential Learning Cycle

AE

CE

RO

AC

Pedagogy & Andragogy (TOT)

(Thomas SIM)
Concrete Experience (CE)

- *the individual’s prior experience within their industry.*
- *many of the participants will bring with them some years of experiences from their current workplace.*
- *when these experiences are connected to the course, they become actively engage in the learning process.*
- *at the same time, other participants may come to share and benefit from the experience of others.*
Reflective Observation (RO)
- the ability to continuously reflect on what they learn, how they learn and why they learn.
- they have to absorb the content of the course and systematically find relevance to their own frame of mind.
- this reflection is particularly useful in cultivating critical thinking, problem-solving and self-evaluation on the part of the participants.
Abstract Conceptualization (AC)

- As part of the learning process, participants have to internalize their learning and think of new ideas of how to apply their learning in the context of their situation.
- Every individual needs to seek out new ways to apply the skills they have learnt to their own industry.
- AC helps to develop conceptual thinking, mutual communications as well as their metacognitive skills.
David Kolb’s Experiential Learning Cycle

Metacognition (in Educational Psychology)

- refers to higher order thinking which involves active control over the cognitive processes engaged in learning.
- activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task are metacognitive in nature.
Metacognition *(in Educational Psychology)*

- metacognition plays a critical role in successful learning, it is important to study metacognitive activity and its development to determine how students can be taught to better apply their cognitive resources thru metacognitive control.
David Kolb’s Experiential Learning Cycle

Metacognition (in Educational Psychology)

- we engage in metacognitive activities everyday.
- metacognition enables us to be successful learners, and has been associated with intelligence
  (e.g., Borkowski, Carr, & Pressley, 1987; Sternberg, 1984, 1986a, 1986b)
- is often simply defined as: "thinking about thinking"
  (see Van Zile-Tamsen, 1994, 1996 for a full discussion)
David Kolb’s Experiential Learning Cycle

Active Experimentation (AE)
- this final phase allows the participants to put into practice their new found knowledge and skills to different industries.
- the role of the facilitator is to help the participants construct meaning during learning, and help them fine tune solutions that are pragmatic and relevant to the workplace.
Characteristics of an Adult Learner

Autonomous and Self-directed

- it is envisaged that the participants are autonomous and self-directed learners.
- they need to be free to direct their own learning.
- as such, they have a fairly clear idea of the learning they need for themselves and the specific areas that affect their performance at the workplace.
Characteristics of an Adult Learner

Accumulated a Reservoir of Experience

- they come to the program with a great deal of prior experience.
- some of them may already have many years of experience as leaders in their own organization.
- others may have explored the subject matter in great depth.
- this foundation and wealth of knowledge and experiences cannot be ignored but needs to be gainfully leveraged for the benefit of the entire group.
Characteristics of an Adult Learner

Seek Pragmatic Solutions

- Lessons have got to be short and crisp, and more importantly practical; long courses tend to dwell in too much theories and academic exercises
- what the participants need is a concise entry into the subject matter and then a discussion on how they can put it to use in their workplace
- while some may be interested in knowledge for its own sake, most of the participants will want to know explicitly how the knowledge can be put to use in their workplace.
Characteristics of an Adult Learner

Associates better with clear Performance Objectives and Learning Outcome

- young and aspiring executives enroll for a course when the program objectives are aligned with what they seek to attain in terms of their professional development.
- they would therefore appreciate a well-organized program with clearly defined training objectives and learning outcomes.
Characteristics of an Adult Learner

Learn through Understanding

• perhaps the most important characteristics of the participants are their ability to reason.
• at their level of intellect and capacity, mere consumption of knowledge is not good enough.
Characteristics of an Adult Learner

Learn through Understanding

• they must see the logic of the point and internalize it within themselves. Theories, formula and listing of principles and so on will fall on deaf years if these are not synthesized and brought together into one comprehensive model or concept.

• even then, it has to subject itself to the participants’ critical analysis and questioning.
Questions?

tomsim@singnet.com.sg

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What Motivates Adults to Learn?

- Job security
- Job satisfaction
- Financial reward
- Relevance to professional development
- Confidence in the company future
- Greater scope and challenge from the new job
- Gaining attention from superiors
Abraham Maslow’s Hierarchy of Needs Theory

What motivates an adult to learn?

- Physiological Needs
- Safety Needs
- Belonging Needs
- Esteem Needs
- Self-Actualization
- Being Needs

Pedagogy & Andragogy (TOT)

(Thomas SIM)
Abraham Maslow put it very simply and clearly – (particularly a child) if we want a person to reach the higher order development triangle, we must ensure that the more basic needs are met with...

- **Physiological Needs**
  Provision of the basic needs such as food, clothing shelter

- **Safety Needs**
  Feel safe and secure, free from physical or psychological harm

- **Belonging and Love Needs**
  To have positive relationships and feel valued

- **Self-esteem and Confidence Needs**
  To achieve, gain approval and recognition.
  To be able to trust in others

- **Self-Actualisation Needs**
  To develop our talent to the full

Human Needs
LAYER ONE: Physiological needs
This is our basic human need for food, water, sleep, rest, avoid pain, affections, etc.

LAYER TWO: Safety Needs
This is our human need to find safe circumstances, stability, and protection

LAYER THREE: Belonging needs
When physiological needs and safety needs are, by & large, taken care of, a third layer starts to show up. You begin to feel the need for friends, a sweetheart, children; affectionate relationships in general, even a sense of community
Abraham Maslow’s Hierarchy of Needs Theory

**LAYER FOUR: Esteem needs**
This is our need for the respect of others, the need for status, fame, glory, recognition, attention, reputation, appreciation, dignity, even dominance

**LAYER FIVE: Self-actualization needs**
This is the desire to fulfill our potentials, to “be all that you can be”...
They are a matter of becoming the most complete, the fullest, “you” – hence the term, self-actualization
Now, in keeping with his theory up to this point, if you want to be truly self-actualizing, you need to have your lower needs taken care of, at least to a considerable extent.

This makes sense:
- if you are hungry, you are scrambling to get food;
- if you are unsafe, you have to be continuously on guard;
- if you are isolated and unloved, you have to satisfy that need;
- if you have a low sense of self-esteem, you have to be defensive or compensate.

When lower needs are unmet, you can’t fully devote yourself to fulfilling your potentials.
Questions?

tomsim@singnet.com.sg

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Frederick Herzberg’s 2-Factor Theory

What motivates an adult to learn?

**MOTIVATORS**
- Achievement
- Recognition
- Responsibility

**HYGIENE NEEDS**
- Salary
- Work Conditions
- Status

**MOTIVATORS**
- Work (itself)
- Advancement
- Personal Growth

**HYGIENE NEEDS**
- Policy
- Company Car
- Security
Frederick Herzberg’s motivation and hygiene factors

- Herzberg was the first to show that satisfaction and dissatisfaction at work nearly always arose from different factors, and were not simply opposing reactions to the same factors, as had always previously been (and still now by the unenlightened) believed.

- He showed that certain factors truly motivate (‘motivators’), whereas others tended to lead to dissatisfaction (‘hygiene factors’)...
According to Herzberg, Man has two sets of needs:
- one as an animal to avoid pain, and
- two as a human being to grow psychologically.

Herzberg’s research proved that people would strive to achieve hygiene needs because they are unhappy without them, but once satisfied the effect soon wears off – satisfaction is temporary...!
Questions?

tomsim@singnet.com.sg

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John M. Keller’s ‘ARCS Model of Motivation’

A - Attention,
R - Relevance,
C - Confidence,
S - Satisfaction

the 4 conditions that must be met for a learner to be motivated to learn; should be sustained to keep the Learner interested in the topics
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Pedagogy & Andragogy (TOT)

(Thomas SIM)
The Common Barriers to Adult Learning

Familiar Phrases !!!!

TOO OLD TO LEARN...
NO TIME TO LEARN...
NOTHING NEW TO LEARN...
LOW CONFIDENCE...
LACK OF SELF-ESTEEM...
A WOMEN’S PLACE IS IN THE HOME...
The Common Barriers to Adult Learning

- I don’t need to need to learn
- Waste of time (lack of encouragement)
- There’s nothing new to learn (not convinced learning is part of growing)
- I have no time (insufficient support)
- I’m too old (inferiority complex)
- I already know what it takes (then ask him to attend TOT !)
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<table>
<thead>
<tr>
<th>WHAT THEY SAY</th>
<th>WHAT THEY REALLY MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too old to learn</td>
<td>Low or little educational qualification. Inferiority complex.</td>
</tr>
<tr>
<td>No time to learn</td>
<td>Company is not supportive. Course is too expensive. Unaware of course subsidy.</td>
</tr>
<tr>
<td>Nothing new to learn</td>
<td>Too senior in the job. Thinks that it is a waste of time.</td>
</tr>
<tr>
<td>Low confidence/ Lack of self-esteem</td>
<td>Low or little educational qualification. Inferiority complex. Lack of support or encouragement</td>
</tr>
<tr>
<td>A women’s place is in the home</td>
<td>Mindset problem. Lack of family support. Social-economic issues</td>
</tr>
</tbody>
</table>
Some strategies to overcome learning barriers

There are many strategies to help learners overcome the barriers to learning:

- Confidence building – No one is too old or too stupid to learn.
- Provide easy access to learning - Training subsidy, time off
- Provide flexible work schedule – Plan training as part of the individual’s work schedule or shift
- Create a positive learning environment – Reward and encourage lifelong learning in the workplace.
- Motivate learning – Learning buddy system, incorporate training into the individual annual work plan & annual appraisal
Questions?

tomsim@singnet.com.sg

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The Changing Training Environments

- does enroll for course = interested in learning?
- or is it company policy that requires they join the programme...?

YOUR ROLE AS AN INSTRUCTOR -

“TO MAKE LEARNING EFFECTIVE & MEANINGFUL, AS WELL AS REWARDING EXPERIENCE!”
The Principles of Learning

- teaching & training is only effective if it promotes LEARNING!

- Instructors – expected to be:
  - highly competent in subject domain
  - sound knowledge on how students learn...

Einstein

Genius mind
The Principles of Learning

- reflects a shift away from traditional role of the teacher as primary provider of subject knowledge to a FACILITATOR of learning!
The Principles of Learning

- know the key principles of learning
- the implications of these principles for teaching...
- ensure that your lesson planning & delivery provide more opportunities
- for motivating students & facilitating their learning...
Module Objectives:

• identify the key components of effective learning
• analyze factors that promote & inhibit effective learning
• evaluate the impact of principles of learning for practical teaching…
What is Learning & How Do We Learn?

- **learning involves**: acquiring new knowledge, skills, attitudes that results in some change in our ability to perform...

- **competence-based training (CBT)**: training that develops the skills, knowledge & attitudes req. to achieve competency standards
What is Learning & How Do We Learn?

- **competence-based training (CBT):**
  - seeks to promote a *change* that results in *greater competence* to perform...

- **competence standards:**
  - an *industry-determined specification* of performance that sets out the skills, knowledge & attitudes req. to operate effectively in employment. It is an *endorsed component* of a training package...
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Competence-Based Training (CBT)

Two aspects of competency

- **Core Competency**
  - Pre-requisite KSA

- **Functional Competency**
  - Essential KSA that significantly enhance performance
What is Learning & How Do We Learn?

- competence standards:
  - made up of Units of Competency which are themselves made up of Elements of Competency, together with Performance Criteria, a range of variables & an Evidence Guide...

- what then is Competency?
  - the knowledge, skills & attributes that are required to perform the activities of a given role or effectively fulfill a particular job function...
What is Learning & How Do We Learn?

- **Unit of Competency**:  
  - the knowledge & skill, & the application of that knowledge & skill, to the *standard of performance expected* in the workplace...

- **Elements of Competency**:  
  - one of the basic ‘building blocks’ of a unit of competency that *describe the specific key activities or elements* of the work covered by the unit...
What is Learning & How Do We Learn?

- **Dimensions of Competency:**
  - the requirement to perform individual tasks,
  - manage a number of different tasks,
  - respond to problems, breakdowns & changes in work routine,
  - deal with the responsibilities & expectations of the workplace &
  - transfer the skills & knowledge to new situations...
What is Learning & How Do We Learn?

• **Performance Criteria:**
  - the part of a competency standard specifying the req. level of performance in terms of a set of outcomes that need to be achieve in order to be deemed competent

• **Evidence Sources:**
  - suggested tasks, observations, documents or materials that can be used as evidence for assessing the particular competency element
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Pedagogy & Andragogy (TOT) (Thomas SIM)
### THREE SETS OF SKILLS

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<thead>
<tr>
<th>OCCUPATIONAL SKILLS</th>
<th>OPERATIONAL</th>
<th>SUPERVISORY</th>
<th>MANAGERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job specific skills</td>
<td>Prepare tools and equipment for hot-stamping</td>
<td>Co-ordinate visual display</td>
<td>Manage oil spill in closed water</td>
</tr>
<tr>
<td>required to performed one's work</td>
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<table>
<thead>
<tr>
<th>INDUSTRY SKILLS</th>
<th>OPERATIONAL</th>
<th>SUPERVISORY</th>
<th>MANAGERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad industry knowledge and skills</td>
<td>Trouble shooting</td>
<td>Principles of merchandising</td>
<td>Navigational skills</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EMPLOYABILITY SKILLS</th>
<th>OPERATIONAL</th>
<th>SUPERVISORY</th>
<th>MANAGERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic and portable skills applicable across all industries</td>
<td>Problem solving and decision making</td>
<td>Initiative and Enterprise</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workplace Literacy Series</td>
<td>Workplace Numeracy</td>
<td></td>
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</tbody>
</table>
Questions?

tomsim@singnet.com.sg

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What is Learning & How Do We Learn?

How have I learnt in different learning situations?

- “I attended a course”…?
- “I did some reading”…?
- “I asked a colleague”…?
- “I thought about it”…?
- “I tested the information thru’ ‘trial & error’”…?
- “I planned it”…“I kept practicing…”
Acquiring Relevant Knowledge (K)

• vary, depending on what is to be learned
e.g. language-learning requires much knowledge acquisition

• even in skills-based activities like playing football - still important knowledge to be acquired for effective performance, e.g. the Rules of the Game

• Key Process of knowledge acquisition is:
  MEMORY!
Thinking for Understanding (C)

- learners need to *make sense* of what they have learned
- know when, where & how to *use* this knowledge!
Thinking for Understanding (C)

- Understanding involves more than just "Memory"...
- requires us to think about what we are learning & make sense of it in REAL Life Applications!

without understanding, learning through memorization will have of little use, likely to be soon forgotten!
Doing...! (A)

- learning is often for the practical purpose of developing competency in any activity (e.g. work-related)
- learning by doing activities
- improvements in performance requires practice over time...
the 3 components of learning occurs in dynamic & they mutually support the overall learning process!
• Competent performance develops from the acquisition of:
  - appropriate knowledge
  - good thinking
  - doing, over time!
• different types & levels of competence will require more or less the 3 components...

Effective learners are competent at acquiring knowledge, develop understanding through good thinking & applying these in doing!
Factors that influence learning:

- your motivation
- the relationships you have with teachers & peers...
- your access to resources & time constraints
- your mood & situational factors
- your prior learning in a given area
- how you were taught
- how relevant you perceive the learning to be

Learning is a Social & Emotional process!
Questions?

tomsim@singnet.com.sg

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P1. Utilize & Stimulate the Senses

- mental activity is simulated through our 5 senses with the following % of how much each sense contributes to our learning:

- **Sight** 75%
- **Hearing** 13%
- **Touch** 06%
- **Smell** 03%
- **Taste** 03%
The greater the combination of our senses that are simulated in learning, the more successful the learning is likely to be...

It is estimated that we learn:

10% of what we read
20% of what we hear
30% of what we see
40% of what we see & hear
50% of what we discuss
70% of what we experience
90% of what we teach!
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Pedagogy & Andragogy (TOT)

(Thomas SIM)
ACTIVE approach to Learning!

Engage Students in:

- Thinking
- Question
- Doing REAL Work Activities!

Central to promoting Effective Learning!
P2. Recognize the Learning Curve

Learning = Continuous Process
Learning \times \text{does not progress at same rate}

Subject

\text{Learning Plateau}

\text{Learning Plateau}

\text{Learning Plateau}

\text{Learning Curve'}

Time
P2. Recognize the Learning Curve

• important to help students to become aware of the spurts & plateaus in their learning

• it will help them to maintain their confidence & motivation when experiencing plateaus in learning...!
P3. Don’t Abuse the Attention Span!

- Attention – plays a crucial role in learning

- without good attention – learning is likely to be partial & ineffective!

- our ability to maintain attention is Greater if we are motivated...
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Attention Graph

Pedagogy & Andragogy (TOT)
Findings:

P3. Don’t Abuse the Attention Span!

- Most people – memorize few numbers for up to 30secs.
- After 30secs, the numbers are omitted from memory.

How did this information get there?

- A stimulus – immediate interests to the receiver.
- Information will travel through the sensory storage area, making its way to the STM.
- STM – working memory...

Pedagogy & Andragogy (TOT)
P3. Don’t Abuse the Attention Span!

George A Miller
• cognitive psychologist introduced:

How much information can the STM retain?

• human can remember an average of 7 chunks of info
• ‘chunk’ = a meaningful unit of info, e.g. a word/name
• capacity of the STM memory can be increased by ‘chunking’ = organizing similar info together to maximize the STM...

• enhancing the chances of a memory being passed on to long term storage...
Questions?

tomsim@singnet.com.sg

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P3. Don’t Abuse the Attention Span!

- **Attention** – implications for teaching very important!

- **shows long period of talk by the instructor, without opportunities for student participation** – likely to be ineffective!

- **your own experience of being a student will fully bear this out...!**
P4. Encourage the Effective Use of Memory

- **Acquisition of knowledge** – a key component of effective learning...

- **need both to memorize & understand knowledge**...
P4. Encourage the Effective Use of Memory

a. How Memory Works?

- **STM – Short Term Memory System**
  - can only cope with approx. 7-bits of information at one go...

- **LTM – Long Term Memory System**
  - has almost an infinite capacity for storing info
  - contains all the info we can recall
P4. Encourage the Effective Use of Memory

a. How Memory Works?

- **effective transfer of info from STM to LTM**
  is crucial for acquisition of knowledge
- **to achieve the transfer**, it is essential that
  the info **makes sense** to the learner
  *(is meaningful)*
- **in a manageable chunk** *(7-bits)*
- **is organized**
- **sufficiently rehearsed** *(repeated)*
P4. Encourage the Effective Use of Memory

a. How Memory Works?

Model of the Memory Process

Incoming information
STM (7-bits)
forgetting
LTM (Infinite)

7-bits organized, meaningful, rehearsed

Pedagogy & Andragogy (TOT)

(Thomas SIM)
Encourage the Effective Use of Memory

b. How Forgetting Occurs?

- over 60% of factual information will be lost within 48hrs if there is no subsequent rehearsal or review of what was learned!

- skills & understandings are much more resistant to forgetting! (e.g. swimming, cycling, driving...)
P4. Encourage the Effective Use of Memory

b. How Forgetting Occurs?

• deliberately memorize something (e.g. for exam), we are in fact engaging in ‘rote rehearsal’

• by repeating something over & over again, we are able to keep memory vivid...however, it is impossible unless there is NO interruption!
P4. Encourage the Effective Use of Memory

b. How Forgetting Occurs?

- once he stops rehearsing the info, it will fade & disappear (e.g. remembering a phone # by repeating it aloud! However if someone talks to you before you get an opportunity to call, you will likely forget the number instantly!)
P4. Encourage the Effective Use of Memory

b. How Forgetting Occurs?

- ‘Rote Rehearsal’ – NOT an efficient way to transfer information from STM to LTM...

- putting info = meaningful codes also makes it more retrievable...(e.g. ‘folders’ in filing & classification)

- recovering info can be done by recognition & recall

- humans can recall memories that are stored in LTM and use them frequently...
P4. Encourage the Effective Use of Memory

b. How Forgetting Occurs?

• if the memory is forgotten, it may be eventually be recalled by hinting...

• the more stimuli a person is given (e.g. picture, etc.), the more likely a memory can be retrieve...

• that is why MCQ are often used for subjects that require a lot of memorization...!
P4. Encourage the Effective Use of Memory

c. Implications for teaching & learning

• students must be aware of these basic principles of memory...
• save them from making typical mistake of trying to memorize too much too quickly...
• keep info well-organized...
• allow student time to digest the content through question & answer sessions...
P5. Try to Motivate Students in their Learning

- Motivation – crucial for effective learning!
- Students can learn effectively & independently if they are interested...
- Challenge to Instructors – to make learning more interesting, meaningful & active!

Pedagogy & Andragogy (TOT)
P6. Accommodate Different Learning Styles

- individuals have own characteristics, ways of processing info, feeling & behaving in learning situations...
- different approaches & preferences in acquiring knowledge...
- overall picture – understanding of the task before they focus on more specific details & linkages...
- approach task in a more sequential manner - making linkages gradually & methodically
P6. Accommodate Different Learning Styles

Sensory Modality in Learning:

- **Visual** – seeing pictures, words, diagrams
- **Auditory** – listening to explanations...
- **Kinestatic** – actually doing the activity!
P7. Ensure Effective Feedback in the Process

• identifies the present state of learning

• highlights what needs to be learned & suggest how to proceed with such learning

• monitors progress in learning, helping to diagnose problems quickly & find effective solution...

• provides positive reinforcement for learning achievements
Questions?

tomsim@singnet.com.sg

Prepared & Edited by Thomas SIM – September 2014
Dunn & Dunn’s 3 Basic Learning Styles

- Visual
- Auditory
- Kinesthetic

Participant’s Retention Level
Dunn & Dunn’s 3 Basic Learning Styles

**Visual Learners** *(learn by seeing)*

A Visual Learner Learns Best by:

- Taking Notes and Making Lists to read later
- Reading information to be learned
- Learning from books, videotapes, filmstrips & printing
- Seeing a demonstration
Dunn & Dunn’s 3 Basic Learning Styles

- Talk aloud
  - Repeat verbal instructions
  - Tapes, sounds, music
  - Likes to have music background
- Good listeners - lectures
  - Small group discussions

Pedagogy & Andragogy (TOT)
Dunn & Dunn’s 3 Basic Learning Styles

Kinesthetic Learners *(learn by doing)*

A Kinesthetic Learner Learns Best by:

- **Doing, hands-on approach** *(manipulation, objects, simulations, live events)*
- **Physical involvement in learning**
- **Field trips to gain knowledge**
- **Small group discussion** *(2-3 in a group)*
Dunn & Dunn’s 3 Basic Learning Styles

Visual Learners *(learn by seeing)*

Auditory Learners *(learn by hearing)*

Kinesthetic Learners *(learn by doing)*

By using the appropriate learning strategy for each learning style, you can help to maximize the retention in the individual...!
Questions?

tomsim@singnet.com.sg

Prepared & Edited by Thomas SIM – September 2014
Honey & Mumford’s Learning Styles (1982)

Based on Kolb’s Experiential Learning Cycle, Honey & Mumford (1982) developed a model of learning styles by linking the different stages of Kolb’s cycle to produce a model of four descriptions of learning called:

- Activists,
- Reflectors,
- Theorists and
- Pragmatists.
Honey & Mumford’s Learning Styles (1982)

Activists

- involve themselves fully without bias to new experiences

- they are open-minded, enthusiastic; constantly thriving for new challenges but are bored with implementation and long-term consolidation.

- they would enjoy learning through games, competitive teamwork tasks and role-plays...
Honey & Mumford’s Learning Styles (1982)

Reflectors

• prefer to step back to ponder and observe others before taking action

- they are in general cautious, may be perceived as indecisive and tend to adopt a low profile
- the reflector prefers learning activities that are observational (like carrying out an investigation) and give allowance to ponder upon
Honey & Mumford’s Learning Styles (1982)

**Theorists**

- **adapt and integrate information in a step-by-step logical way**

- **they prefer to maximize certainty and feel uncomfortable with subjective judgments, lateral thinking and anything flippant**

- **the theorist prefers activities that explore the interrelationship between ideas and principles.**
Honey & Mumford’s Learning Styles (1982)

Pragmatists

- are keen to try out ideas, theories and techniques to see if they work in practice
  - they are essentially practical, down-to-earth people, like making practical decisions, act quickly on ideas that attract them and tend to be impatient with open-ended discussions
  - the pragmatist prefers learning activities, which are as close as possible to direct work experience.
Questions?

tomsim@singnet.com.sg

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How to enhance Learning Retention in Adult Learners?

- Activate his prior work experience.
- Relate what he has done to what he is going to learn
How to enhance Learning Retention in Adult Learners?

- Show him one example...
- Ask him for one of his/her example...
- Discuss how to apply it across other examples...
How to enhance Learning Retention in Adult Learners?

- Do an exercise or an activity.
- Make it interesting and meaningful.
How to enhance Learning Retention in Adult Learners?

- Get the class to reflect and critique one another...
How to enhance Learning Retention in Adult Learners?

- SUMMARISE WHAT HAS BEEN LEARNT
- REVISE IT AGAIN THE NEXT DAY...
Reflecting on this Module 1:

- This module provided a model of learning and some of the key principals.

- Certain implications for the practice of teaching have been clearly identified.

- Learning is a complex process, influenced by many factors...

- Students have their own distinct concerns, personalities & motivations.
Reflecting on this Module 1:

- as instructors, we try to understand both the general processes of learning & the uniqueness of each individuals we teach!

We constantly learn about how BEST to help Students learn in the most effective ways for them!
Questions?

tomsim@singnet.com.sg

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References:

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**Employability Skills** are defined broadly as foundation skills and qualities that are transferable and critical to effectively learn new skills and be adaptable in the workplace:

- Workplace Literacy and Numeracy
- Information and Communication Technologies
- Self-management;
- Work-related Life Skills
- Problem-solving and Decision-making
- Initiative and Enterprise
- Communications and Relationship Management
- Lifelong Learning
- Global Mindset
- Health and Workplace Safety.
Questions?

tomsim@singnet.com.sg

Prepared & Edited by Thomas SIM – September 2014
Sustainable Human Resource Development in logistics services for ASEAN Member States

THE END

Thomas Sim
tomsim@singnet.com.sg

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