LMS

(Learning Management System)

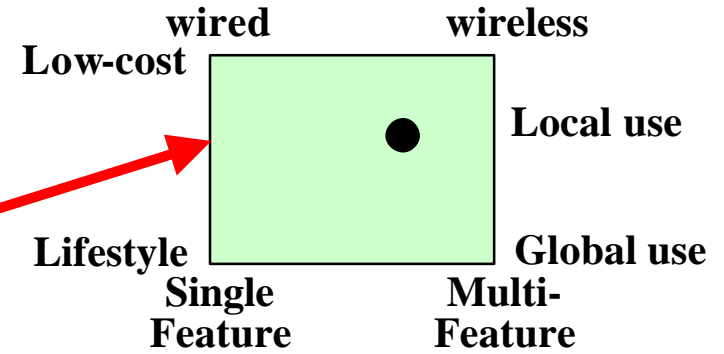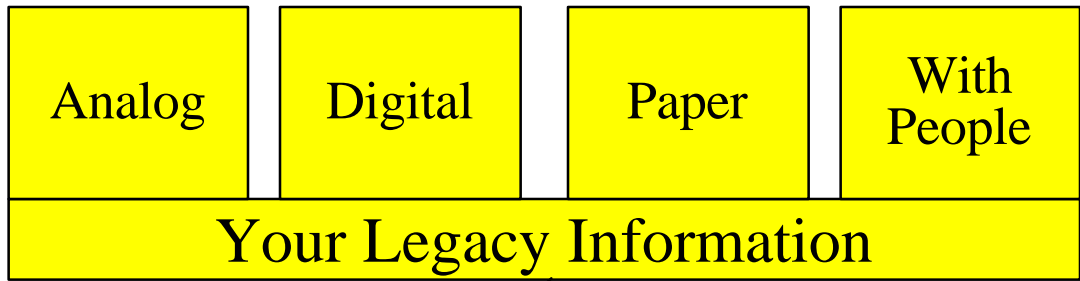edgevalue

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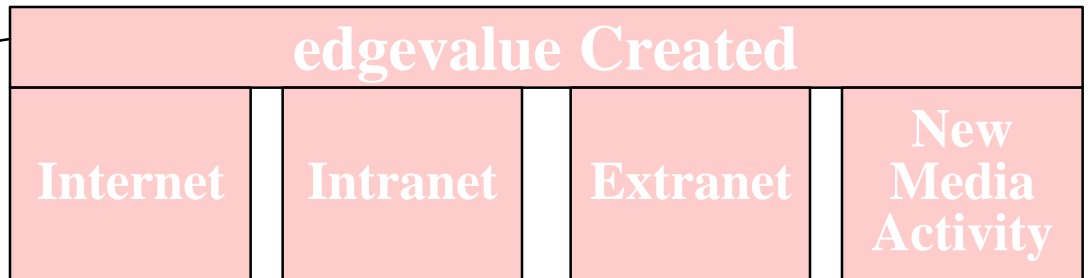email : casper@edgevalue.com

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Contents

1. Background on (e)Learning.

   (Read Casper Abraham independent white paper).

2. Prospectus Management

3. Syllabus Management.

4. Curriculum Management.

5. Participants Management.

6. Syllabus Personalization Management.

7. Learning Services Management.

edgevalue

Analog	Digital	Paper	With People
Your Legacy Information			

wired   **wireless**

Low-cost   **Local use**

Lifestyle   **Global use**

Single Feature   **Multi-Feature**

dextra CONTENT

| edgevalue Created			
Internet	**Intranet**	**Extranet**	**New Media Activity**

Multimedia Communications
a=text, b=audio, c=video, d=visuals, e=animation

Global Volumes : JUNE 2001

HTML Internet 100 TB	Online Hard-disks 1 EB+	Offline Digital 20 EB	Analog Film etc. 300 EB

Kilo=1024 bytes
Mega=1000 KB
Giga=1,000 MB
Tera=1000 GB
Peta=1,000,000 GB
Exa=1000 PB
Zeta=1000 EB
Yotta=1000 ZB

Target

- Mid-Career Skill enhancement.

0	**21**	**30**			**65**	**99**
Born	**Graduate**	**Learning Crisis**			**Retire**	**Die**
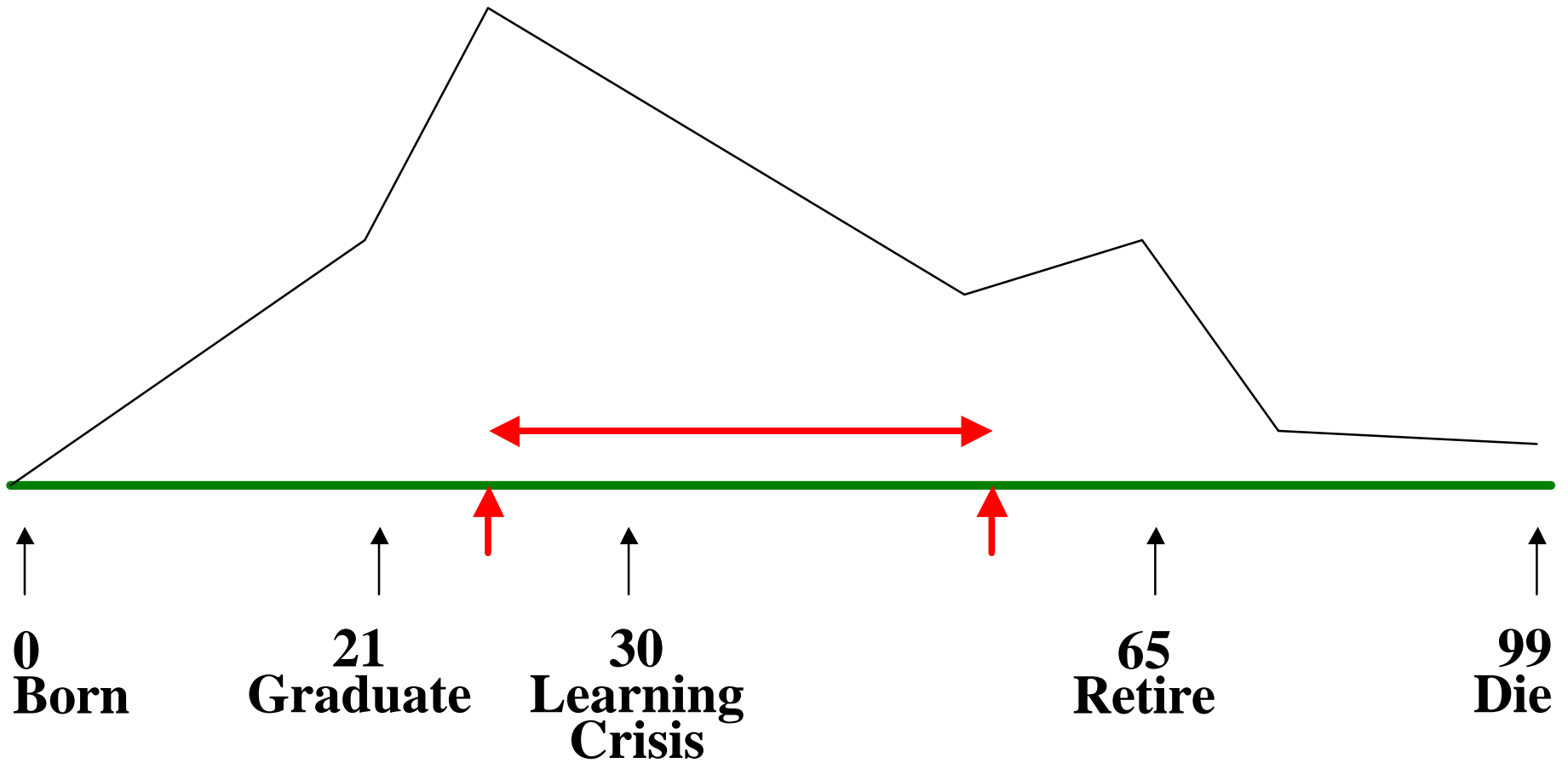
Education Options

A.   On-Going
1)   Any time, all times, discretionary.
2)   Any related and all topics under the sun, must be available.
3)   Professional(s).

B.   Informal
1)   Training Calendar. Learning Kiosk. SCMS
2)   Dated. Start and End dates to meet course objective(s).
3)   Course, Company Training. Sabbatical

C.   Formal
1)   Attendance.
2)   School. College. Distance Learning.
3)   Fees.

D.   Awareness.
1)   On-demand, immediate.
2)   Seminar. Talks. Book-Video-CD purchase.
3)   Pay for one-off item. Company sponsored.

E.   No-Interest.
1)   Casual, not under user control.
2)   TV, Cable, Book, Magazine, Gossip.
3)   Free. Hire-Borrow-Lend.

Education Options Table

Education Model	No_interest	Awareness	Formal	Informal	On_Going
Education Grade	E	D	C	B	A
Education Type	Casual	On demand	Attendance	Dated	Profession
Media	Lecture, Book access, Cable TV program	Book, Audio, Video, TV	School, University, Distance Learning, Taught	By this date learning, self-taught, contact classes	As and when needed
Payment	Free, Borrow, Cable, Rent, Hire	Subscription	Fees	Course	Wage_%age

Learning Basics

From a basis of Biology, Evolutionary
Process & Human Psychology.

- Pleasure or Aversion.   (Natural Selection)
- Variation in Response.   (Innovation)
- Alternative Response.   (Competition).
- Trial & Error.   (Evolutionary Processes).

Do not get confused between; Evolution, Biology & Natural Selection.

Dilemmas of Learning

Time

Immediate / Future
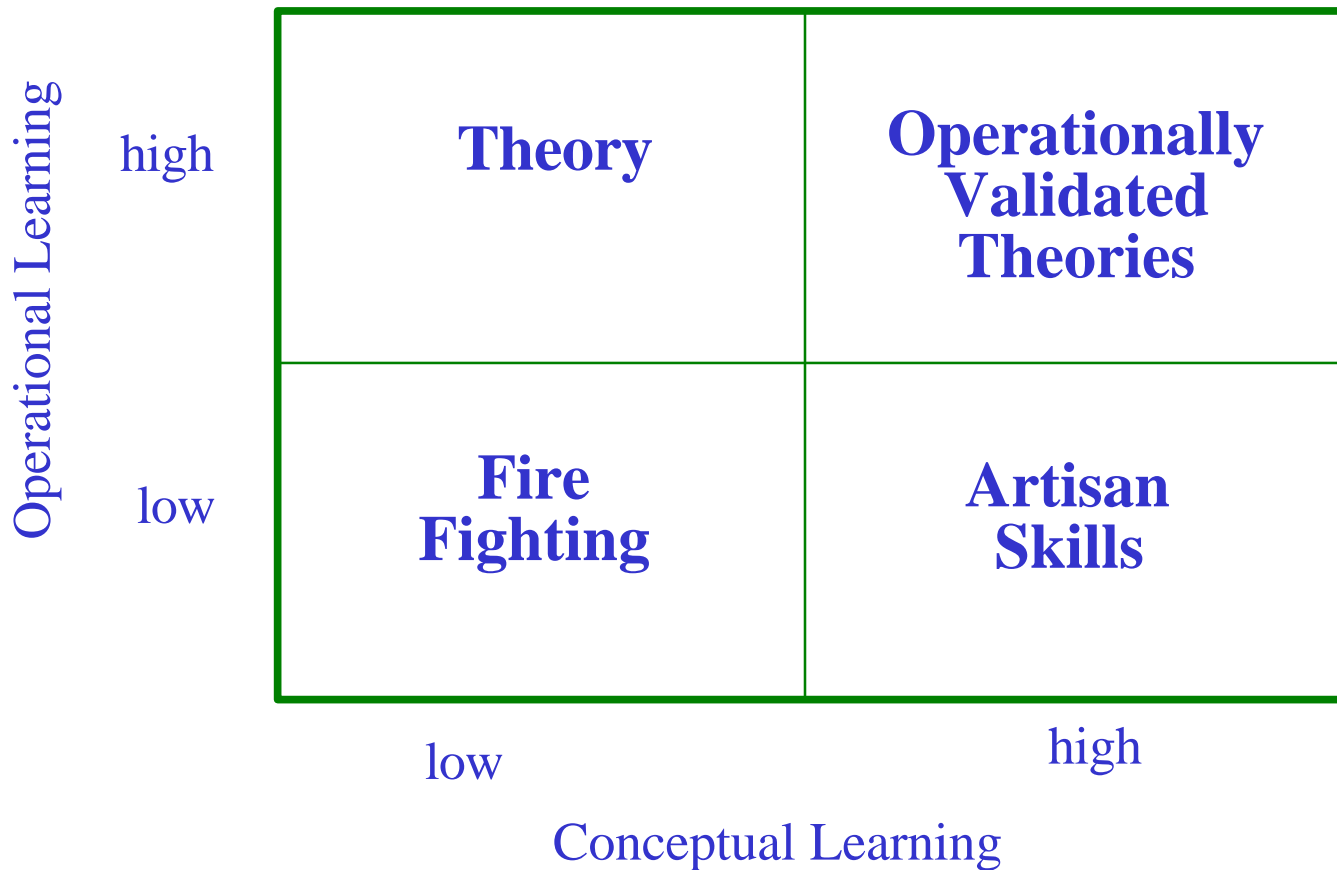
Space

Local / Global

Scale

Few / Many

Scope

Individual / Group

Learning from Failure

- Everyone is entitled to 'one' first-time failure BUT ...
- No one should ever REPEAT a mistake BUT ...
- NIMBY (NOT IN MY BACK YARD) 'decision'.

	Conceptual Learning low	Conceptual Learning high
Operational Learning high	**Theory**	**Operationally Validated Theories**
Operational Learning low	**Fire Fighting**	**Artisan Skills**

Factors

- **Why Learn.**
  - NOT all the knowledge, but 'only-this', 'objective', 'start', 'end', 'gap-measure'.
- **Who will Learn.**
  - Survival Anxiety > Learning Anxiety.
  - Psychology. Human endeavor. Desire. Capability.
  - Money, incentives, fiscals.
- **Combinations & Trade-off of :-**
  - 'Physical' and 'online' methods.
  - 'Current' and 'New' way of Learning.
  - 'Formal' vs 'Informal'.
  - 'Theory' vs 'Practice'
  - 'Monitored' vs 'Self-Learning'
  - 'Tested' vs 'not-required'

Learning Resources

1. Self-taught Theory.
2. Taught by some Theory.
3. Lectures.   Seminars.   Workshops.
4. Conferences.
5. Practical Observation.
6. Supervised Practicing.
7. Guru. Handed-down over the ages. Inherited knowledge.
8. Audio, Video, slides, Audio Visual aids & content.
9. Discovery. National Geographic. BBC & Nature.
10. Libraries. Museums.
11. Physical & Virtual Models. Passive & Interactive.
12. Case Studies.
13. Role Plays, Simulation or Virtual Reality.
14. Institutions. Distance Learning.   Contact Classes.
15. Mobile Classrooms.
16. Learn when and where you want to.
17. Mentored Practicing.
18. Lobbies. Standardization Bodies. Market Leadership.
19. 'On your own' and 'in your face' – LONER.

D. Awareness

- Choose Category
  - e.g. Electronics, appliances etc
- Choose Topic
  - Course Materials (online/ offline)
  - References (online/ offline)
- Check acquired know-how
  - Assessment
  - Interpretation
  - suggestions
- Exit/ Choose Another

C. Formal Education

- Course
  - Semester / Yearly / Hourly
  - Working hours per semester/ year
  - Paid / Free
  - Research / Project
  - Part Time / Full Time / Crash Course
  - Language
  - Pre-requisite criteria
- Subjects
  - No. of hours / Subject(sum of all topic duration)
  - Optional/ Mandatory
  - Theory / Practical
  - Reference Links / Books
- Topic
  - No. of Hours / Topic
  - Content Location
  - Dewey Decimal Code
  - Reference Links / Books
  - Faculty Name(s)

- Test Required
  - Online / Offline
- Grade or Marks
- Interpretation of Grade/ Marks
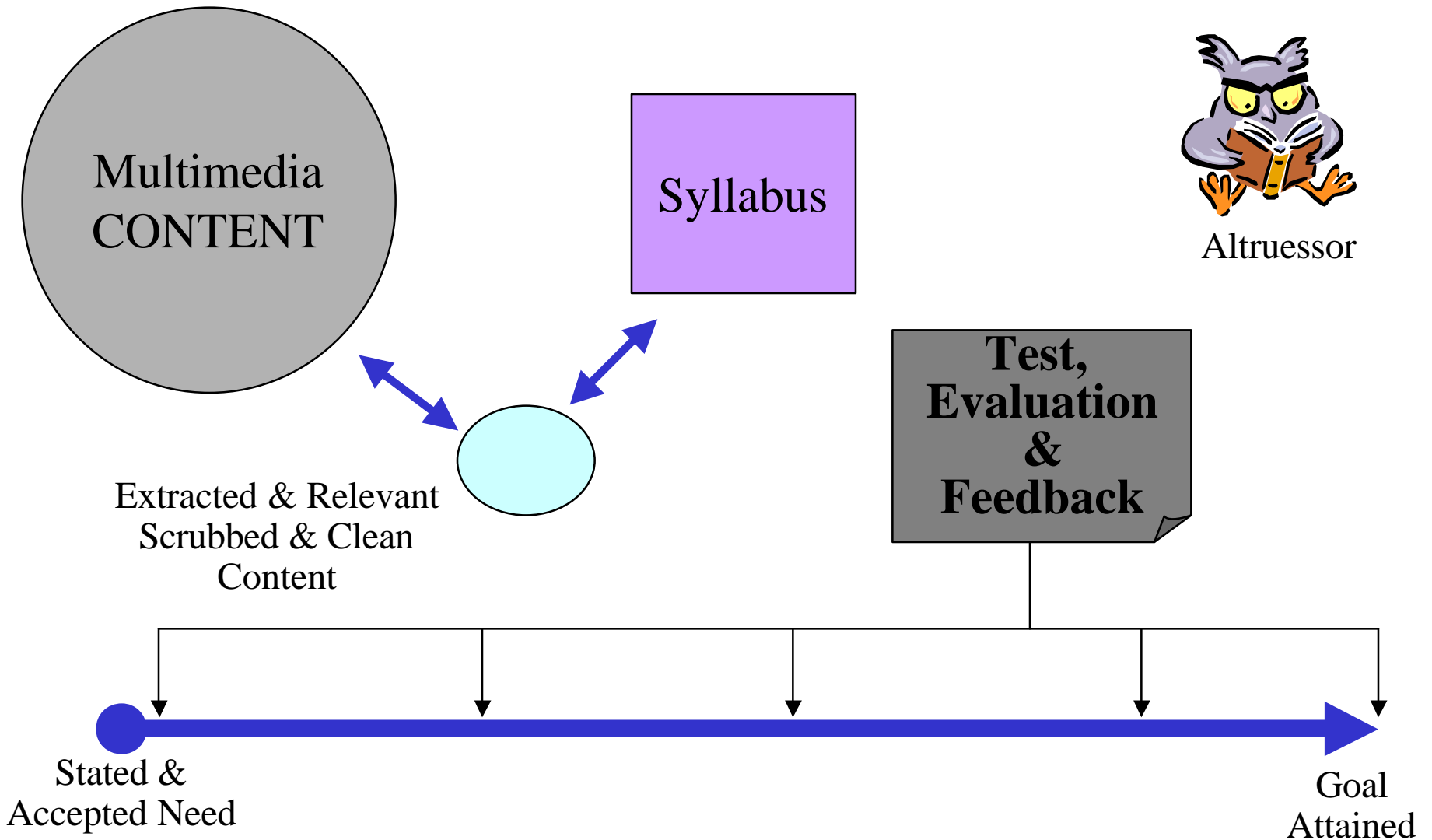- Certify/ Forward for certification

B. Informal Education

- Choose Domain
    - Search facility
- Choose Subject
    - Search facility
    - suggested subject
- Choose Topic
    - Search facility
    - suggested topics
- Check current know-how
    - Pre Assessment
    - Interpretation
    - suggestions
- Learn
    - Course Materials (online/ offline)
    - Practical (if applicable)
- Check acquired know-how
    - Post Assessment
    - Interpretation
    - suggestions
    - certification
- Exit/ Choose Another

A. On-Going Education

- Qualifications & Intelligence
- Experience & Skills
- Aptitude & Current situation
- Potential & Motivation

(Need More Info from CBA)

The Learning Components

Multimedia CONTENT

Syllabus

Altruessor

Extracted & Relevant
Scrubbed & Clean
Content

Test, Evaluation & Feedback

Stated &
Accepted Need

Goal
Attained

(e) Learning Components …

1. **Learning Kiosk Infrastructure.**
   - **Typically 1 server and about 10 PC-kiosks.**
   - **DVB-MHP based iTV at home(s), when available.**
2. **Content**
   - **Quality Requisite Content.**
   - **Near 100% of 'Content' in Soft Format.**
   - **Bibliography (rIB) of all available 'Content'.**
   - **'Content Management' Software.**
3. **Syllabus for each and every 'Learning Goals'.**
4. **Test & Evaluation**
   - **'Question Bank'. Managed, updated and upgraded.**
   - **Answering Templates.**
   - **Scoring Software.**
   - **Time of 'Guru'(s) for Score Interpretation.**
5. **'Alturessor', available for Moderation, Assistance, Help, Know how, Evaluation, eMail and phone support etc.**
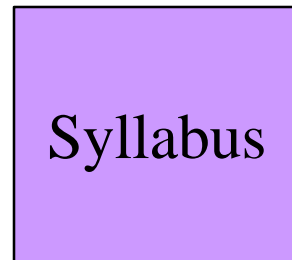
Content implies …

Multimedia CONTENT

- Library of Books
- Reference Material.
- Video
- Audio
- 35mm slides, OHP etc.
- Study & Teacher's Notes
- Past Examinations
- Case Studies
- Role Plays
- Simulators, Game Consoles etc.
- Access to 'Guru', 'Mentor' or 'Alturessor'
- Lectures, Workshops & Seminar

Syllabus implies …

Syllabus

- Syllabus, Curriculum & Learning Notes.
- Setting a Time-Frame. eg. Semesters, 2 weeks, Hours etc.
- What is to be learned. eg. Subjects, Topics, Lessons.
- Learning Goals & Objectives.
- Combination of THEORY & PRACTICE.
- Resources availability.

Stated & Accepted Need

Goal Attained

Content Extraction ….

- Making available only those parts of the content or resources to achieve the set Learning Goals.
- Such Content maybe :-
  1. Already available.
  2. Created.
  3. Acquired.
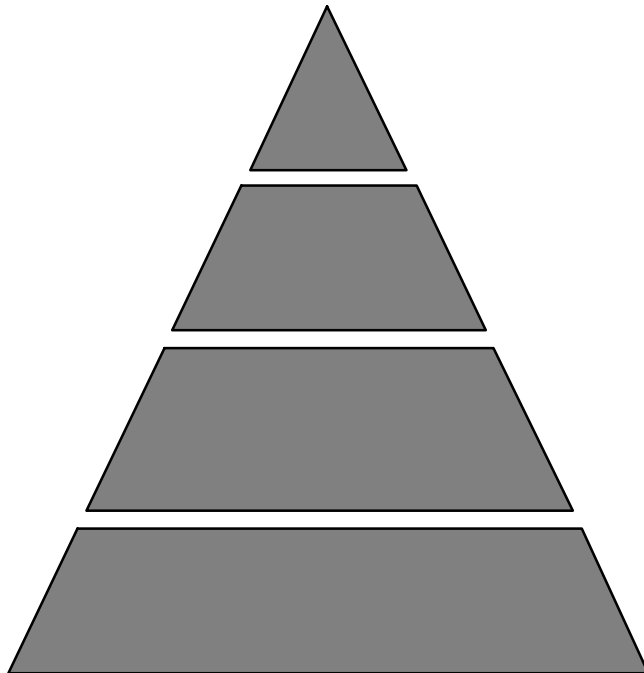 4. Referred to.
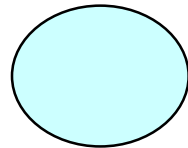
Stated &
Accepted Need

Goal
Attained

Content Delivery

Education, Entertainment & Information

Multimedia Communications

Integrated Software

Networking (read Internet)

Databases (Global one-point)

Content Media-types & Delivery

a	Copy to read, Script for voice, Script for Screen
b	Voice, Music, Effects, Background
c	Video
d	Photo, Line-Drawing, Schematic, Scale-blueprint
e	charater animation, engineering simulation

Example : 10 minute presetation. I have 6 points to communicate.

Points	Time	a	b	c	d	e	Comments
Point 1	30					x	
Point 2	60	x	x				
Point 3	120	x			x		
Point 4	180						
Point 5	150		x		x		
Point 6	60			x			
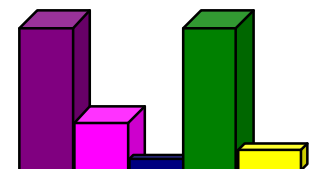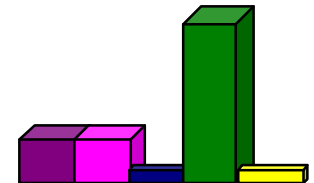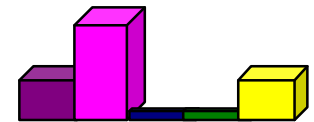
Test or Evaluation implies …

- Verifying at specific check-points, the Theory, Practice, Retention, Recall & Adaptation of the Learning at that point in time.
- Technically this implies :-
  1. A 'Question Bank'
  2. Extract from the 'Question-Bank' for the current test.
  3. A test answering sheet or template.
  4. Scoring mechanism, whether objective or subjective type.
  5. Interpretation, Decision & Feedback.

Test, Evaluation & Feedback

Stated & Accepted Need

Goal Attained
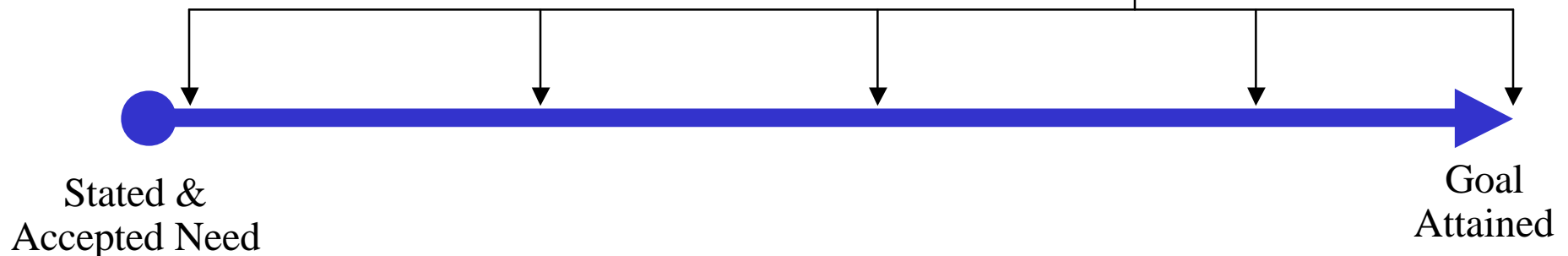
Altruessor

- **Altruistic Professor Mentor.**
- **Capable of understanding what a 'learner' needs, 'stretch-factor' and balance of 'self & assisted' learning.**
- **Suggest appropriate 'methodology'.**
- **Be available for off-line, on-line and face-to-face 'assisted-learning' support.**
- **Manage, add-to, remove and improve all relevant and related 'content' using the rINTELLECT rCMS framework.**
- **Manage the CARD database for that curriculum or syllabus.**

Example Applications …

1. ISO 9001, SEI CMM Level 5 Training.
2. 'Domain Expertise Training'. Healthcare, Automotive, Banking, Insurance, Finance, Government etc.
3. Language Learning. Arts. Music ABRSM. Technicians.
4. Management Basics.
5. Communications, Interpersonal, Culture, Finishing School Skills.
6. Technical Training such as Medical Transcription, Call Centres, Loans Processing, TeleSales, .NET or C# training etc.
7. Even for a full school or college syllabus.
8. Can be deployed in 'Distance Learning' mode.
9. Can also be commercially deployed. Pay as you use or Learn. Credit card for purchasing eBooks or when taking the Examination etc.
10. Medical Graduate School. Residency or Fellowship or Doctoral Programs.

Prospectus Management

Prospectus Management

- About Programs.
  - Full Extent. Horizontal & Vertical.
  - History of Programs.
  - On-going Programs.
  - Future Programs.
- Calendar(s)
- Alturessor(s). Contacts. Fees. Application, Rejection & Acceptance. Rules & Policies.
- Related Links.

Participants Management

Participants

- ## Altruesssor
  - Sets the course, Program Chief, Dean, Training Manager, Head of Department, Expert, Scientist …

- ## Altruessor Assistant(s)
  - One or more who may help him in achieving all set objectives. Access to most aspects of …

- ## Student(s)
  - One or more who start, end and follow the syllabus.

- ## Administrators
  - Infrastructure. Financials. Mass Inputs, Outputs. Time controls. Audits. Security. IPR, Approved Vendors, Paid-for Contributors.

- ## Helpers
  - Any and all others. Parents. Well-wishers. Contributors.

1. Altruessor

Who is an Altruessor?
Person responsible for facilitating the entire education process.

Roles of an Altruessor

- Single point of contact
- Create and maintain Syllabus
- Provide course contents
- Identify and allocate staff for various activities/ subjects
- Prepare tests and testing procedures
- Feedback and improvement

Altruessor(s)
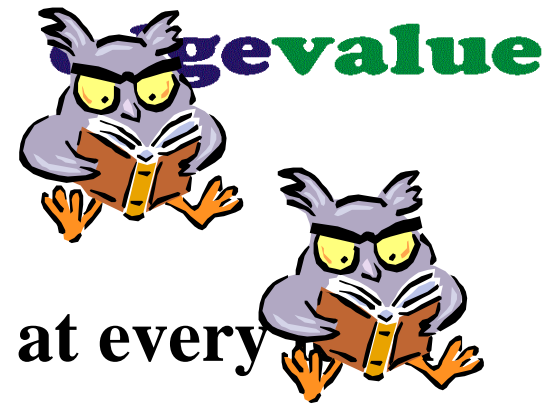
- **Depending on complexity; several at every [level] of need would be required.**

- **As defined in GiCA and using the Dewey Decimal Coding System :-**
    - **At the (1) Domain Level.**
    - **At the (2) Subject Level**
    - **At the (3) Topic Level**

- **rINTELLECT will allow and enforce leveling, moderation, and consistency between all Alturessors.**

2. Students

- Aptitude area.

- Choose a course area.

- Altruessor Interaction area.

- Syllabus (and personalisation) area.

- Course Management

- Testing & Feedback.

- Course Completion.

3. Administrators

- Altruessor Interaction.
- Faculty lists.
- Students lists.
- Fees.
- Allocation of resources.
- Facilities & MRO management.
- Other & Miscellaneous.

4. Helpers

- Content Identifiers. Researchers.
- Content Facilitators.
- Webmasters.
- Courier Services.
- Contact Class Faculty / Facilitators.
- Onsite & Remote Facilities Managers.
- Hardware, Software, Network providers.
- Suppliers, Vendors, Retailers etc.

Syllabus Management

'Single Record' or Course

1. Prospectus Coded. Program Coded. Course Cod
2. This Course Number.
3. Physical aspects of the Course. Timetable.
4. Alturessor(s). Assistants. Administrators.
5. Base Level (break even) of Students.
6. Required minimum resources. Books. Aids. Labs.
7. Wish list of resources. People. Visits. Tours. Field-work.
8. Personalized 'Syllabus' template.

SConfigurator

1. Method : A,B,C,D or E.
2. Typical & Assumed A or B.
3. dProcess DQTC
   ‣ Delivery Start Date-Time. End-Date-Time.
   ‣ Quality of Altruessor. Quality of Students. Quality of Resources. Quality at start. Quality at end. Quality Testing.
   ‣ Time in hours. Crash. Standard. Stretched.
   ‣ Cost(s). Budgets. Inflow-Outflow. Cash.
4. Hour by Hour
   ‣ SYLLABUS   (Template)
   ‣ NOTES(Alturessor + FAQ + dIB + dTALK)
   ‣ CONTENT.   (rIB, Links, +++)
   ‣ mySYLLABUS (Managed Copy of Template for Course)
5. Altruessor Profile(s) & Assistants. Match.
6. Student Profile(s). Apply-Accept-Reject.
7. Access. Levels. Password. Read-Write.
8. Technical. Space Needs. Bandwidth Needs.

Curriculum Management

Curriculum Design

- **Initial Steps**
  - The 'Alturessor'.
  - Altruessor, Assistant(s) & Participant types.
  - The program, course & syllabus.
  - 'Typical Participants' list(s)
  - Core Required 'inputs' & 'resources'
  - Likely Additional 'inputs' & 'resources'
- **Study**
- **Fit to SCMS framework.**
- **Add, upgrade, customise, deploy.**
- **Test**
- **Manage, Monitor, Add-Value.**
- **Repeat the above steps continuously.**

Process Program Break down

- Tree
  - Modules (AtoZ), Blocks (AtoZ) and Segments (00 to 99)
    - This to mapped to Subject, Topic & Header.
  - Define Page(s) with Objectives for each. Sub-Header.
    - Multimedia Content Availability.
    - Audio, Video, Image, Text, Hyperlinks
- Deploy CONTENT framework
- Populate the CONTENT Framework.
- Manage, Upgrade, Maintain your CONTENT

Related Modules

- CONTENT as detailed earlier.

- IB Search facility.

- CARD for participant(s) Management.

- LOCATOR. ID, Cards & Access Management.

- CATALOG. (If required and relevant).

- SECURE, BC and SERVICE service component options.

Technologies (eventually)

- Microsoft, IBM, Sun/Java AND Open Source.
- HTTP, XML, SOAP & UDDI compatible.
- OKI compatible.
- Interface & Integration compatibility with 99% of existing soft-copy 'data', 'information' and 'knowledge'.
- Development
  - Server side. All 3 above, start with one.
  - Administrator(s). MS VB & Visual Studio.
  - Client(s). Currently MS Windows. Handheld, iTV and emerging Devices. Fixed & Mobile,

The Human Factor

People will be people

- You can take the 'horse' to the water … but you cannot make it drink.

- The 'survival factor' must be higher than the 'anxiety factor' ….

- Must have the 'mental firepower' to cope ….

- I.Q.   E.Q.   S.Q.

Self-Learning Requirements

- Directive
  - See and target a direction and define what needs to be done.

- Adaptive
  - Go about doing this. Conceptual adaptation to other and related situations.

- Critical
  - Self-assessment, direction-correction, repeatability.

Source : Binet

Pareto applied to Organizational Learning

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10% WILL LEARN 'too well' and will leave the organization or work against the common objective(s)

Current state of Organizational Learning

The majority 80% will stay on a passive 'stay-put', 'non-learning' straight line unless survival anxiety exists or is introduced.

Desired state of Organizational Learning

10% WILL NOT LEARN nor change OR choose not to learn and will deliberately or inadvertently work against the organization's learning objectives.

A lifetime of 'topical' learning

Ability to teach this learning to others

Expert in this field

Find a Mentor + Self-Learning

Employable skills only on this learning

Trigger & Start of Learning

Informal Unstructured Learning

Retirement or anxiety to Learn has been stopped or fulfilled.

Trigger & Start of Learning

Time to learn.
Varies with Individual's, Team's and Company's IQ, Survival Anxiety, Expertise availability.

NOTE :
This is just for one subject or topical area of learning.

■ Theory   ■ Practice   ■ Negative Effects
Withholdi8ng know how, False information, non co-operation

Learning Threshold #1

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An individual's current, skills & mental firepower.

No stretch.
Not challenging nor sufficient motivation to Learn.

Ideal 'stretch' & Motivation to be set for an individual

Too much expected of the individual, cannot be motivated to reach this much. Willing individuals can have a burnout or other health related problems.

Learning Threshold #2

edgevalue

Will learn anyway

Won't learn anyway

Sufficient to Perform

An individual's current, skills & mental firepower.

Ignorance OR Partial know how

Training

Baseline
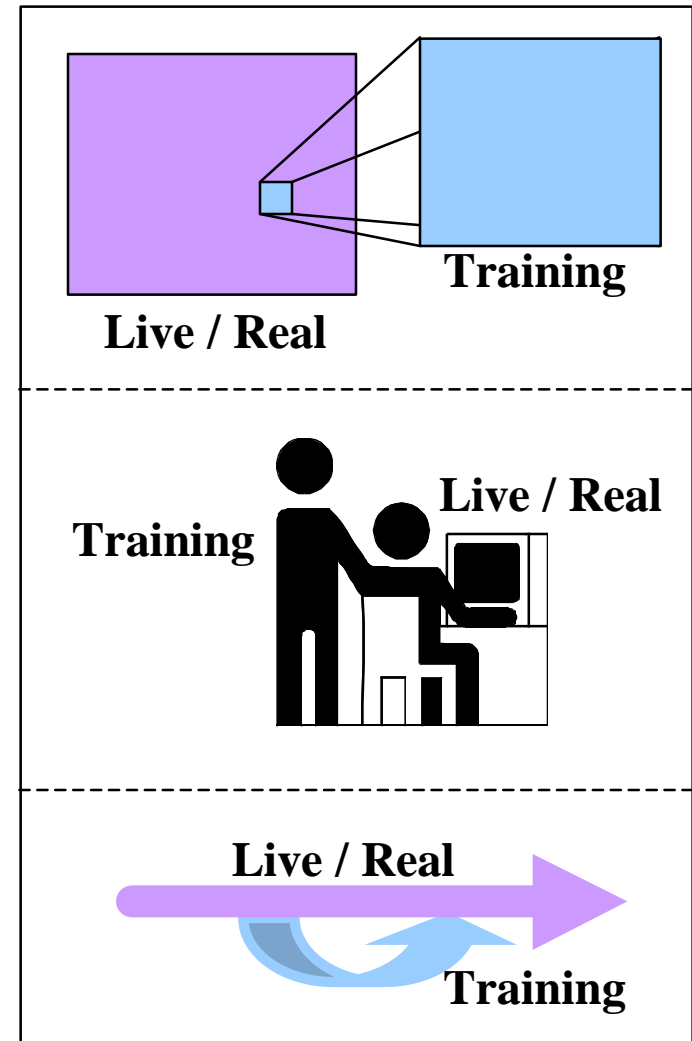
Recruitment

The LK2100 proposal

Real World Training

- Toggle from a display into a help; faq or training screen - then toggle back.

- Trainee, Protégé, shishya works while the CEO, Mentor or Guru observes.

- Deviate from 'Live'. Internship Practice in Hospitals. Case Studies & Role Plays etc.

Pre-requisites ….

- **At least 1 high-bandwidth quality hardware TCP/IP server …**
- **Even 2 multimedia PC's can be the Learning Kiosks, but depending on numbers you can consider 10, 25, 64 or 250.**
- **At least 1 of each, 'Head of Training' and 1 'Technical Operator'.**
- **From in-house or external the paid-for 'Time' of Altruessor, Guru, Expert, Mentor etc.**
- **All available 'Content' preferably in Soft Copy …else it will add to your costs …**
- **IF … you have remote access needs then you ALSO need a dedicated high-bandwidth quality INTERNET server ….**

edgevalue

LMS
(Learning Management System)

URL : www.edgevalue.com
email : casper@edgevalue.com

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