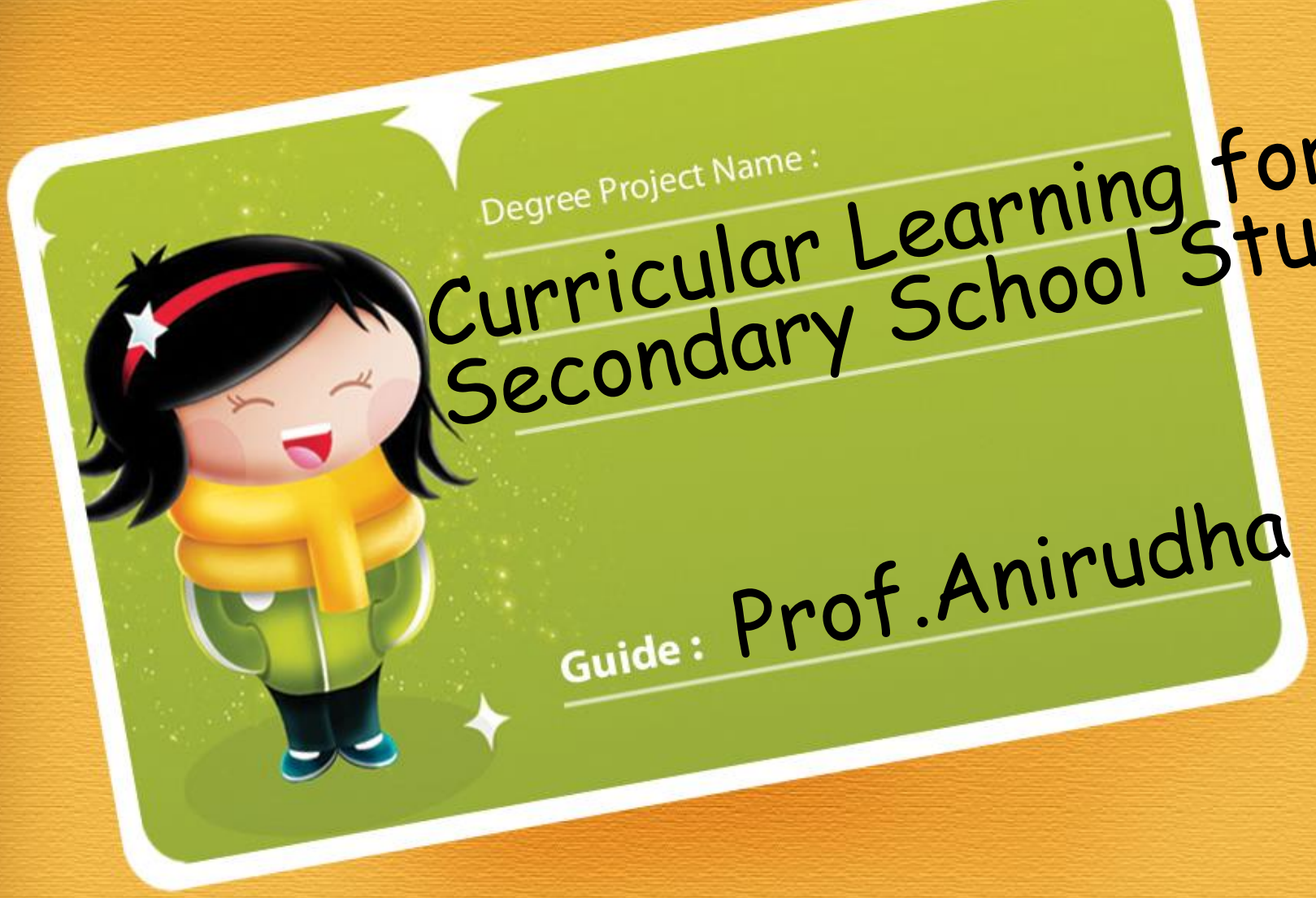
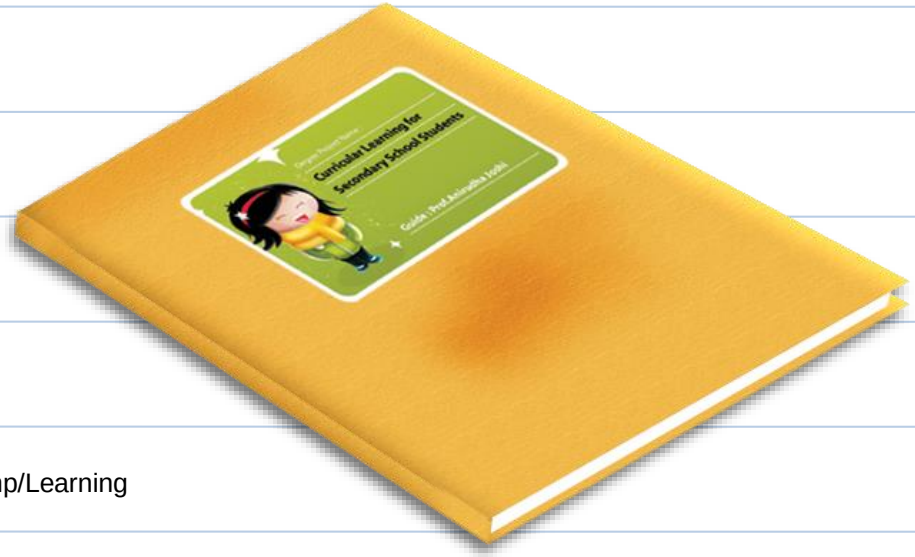

Degree Project Name :
Curricular Learning for Secondary School Students
Guide : Prof.Anirudha Joshi

Learning is continual.

It is ‘ not ‘ an activity that occurs outside of our daily lives.

It is the product of experience and the goal of Education !!



Ref: http://ltc.umanitoba.ca/KnowingKnowledge/index.php/Learning

Index

Ch 1. About the project

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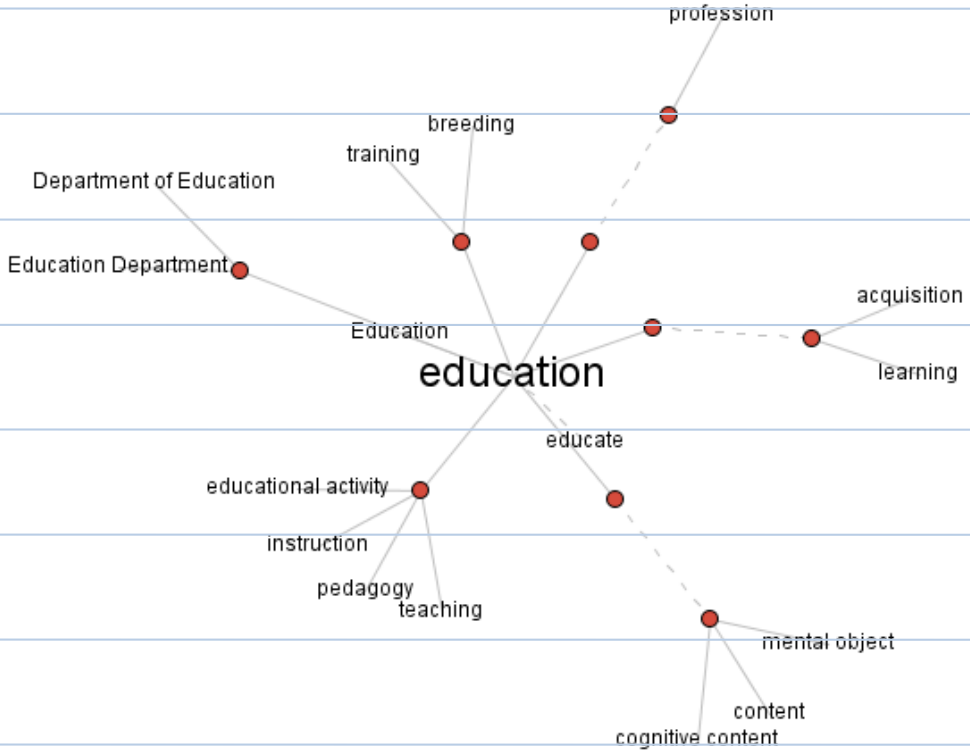
- **Know the possibilities and design opportunities available in the field of Education in India.**



Ref: http:// www.visualthesaurus.com

Ch 1. About the project

- Know the possibilities and design opportunities available in the field of Education in India.
- **Provide a new source of inspiration to students**

Ch 1. About the project

- Know the possibilities and design opportunities available in the field of Education in India.
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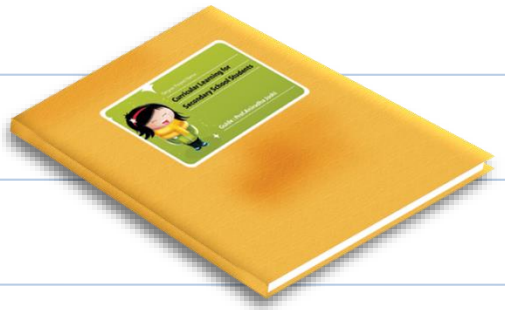
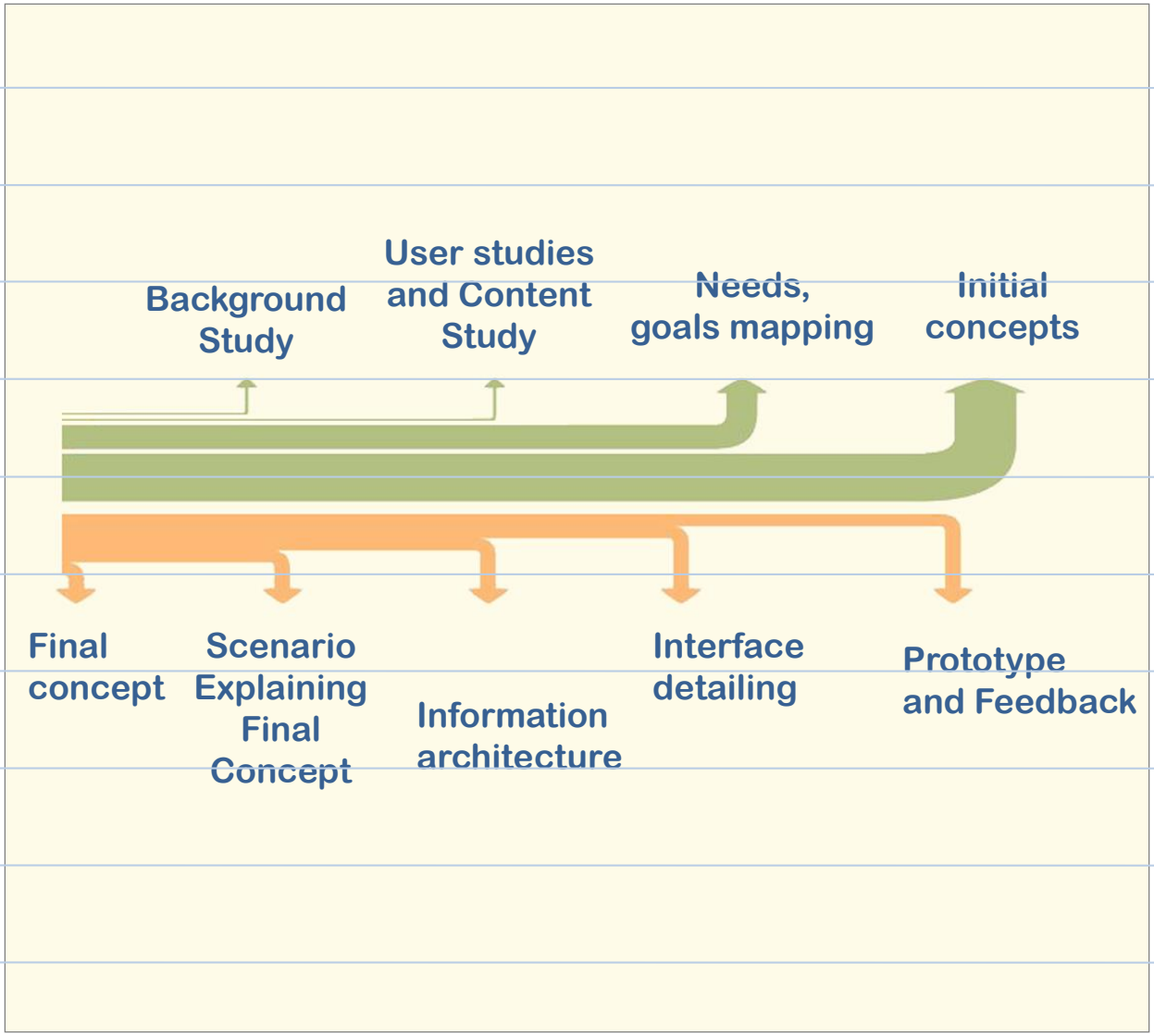
- **Provide alternative learning experiences**



Ch 1. About the project

- Know the possibilities and design opportunities available in the field of Education in India.
- Provide a new source of inspiration to students
- Provide alternative learning experiences
- **Enable use of technology to enhance their knowledge**

Ch 2. Methodology and Timeline



Ch 3. Background Study

Ch 3. Background Study

Learning Theories

Piaget's Stage Theory of Cognitive Development :

It is a description of cognitive development as four distinct stages in children.

Jean Piaget (1896-1980)

'child-centred' approach

develop conceptual growth

make it logical

Ch 3. Background Study

Learning Theories

Constructivist theory :

Constructivist theory views each learner as a unique individual with unique needs and backgrounds.

incorporate new experie

knowledge through inter

it

Ch 3. Background Study

Learning as Network forming …. Connectivism theory

Learning is the process of creating networks by joining nodes.

Here the nodes may be the people, organizations, libraries, web sites, books, journals, database

digital age learning

adjust to changing facts

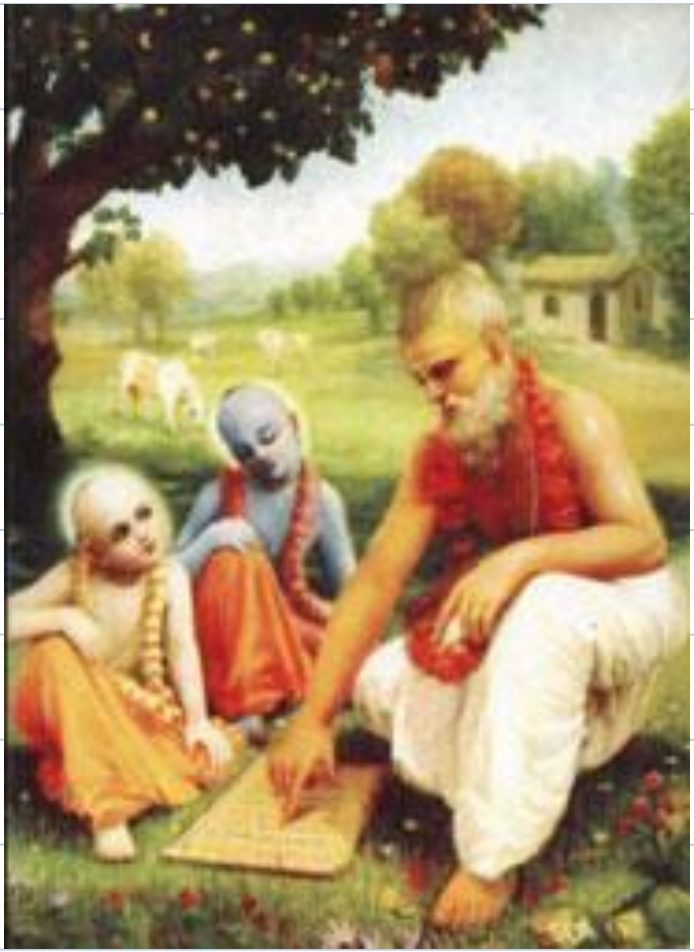
Ch 3. Background Study

Education system in India :

Ch 3. Background Study

Education system in India :

History – Ancient India followed tradition of Gurukul.



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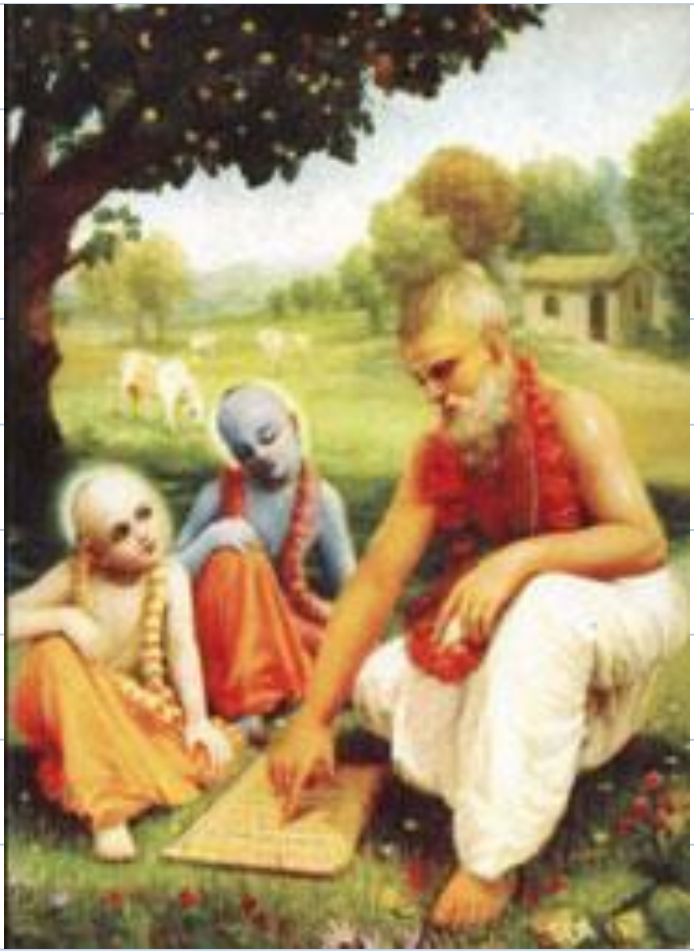

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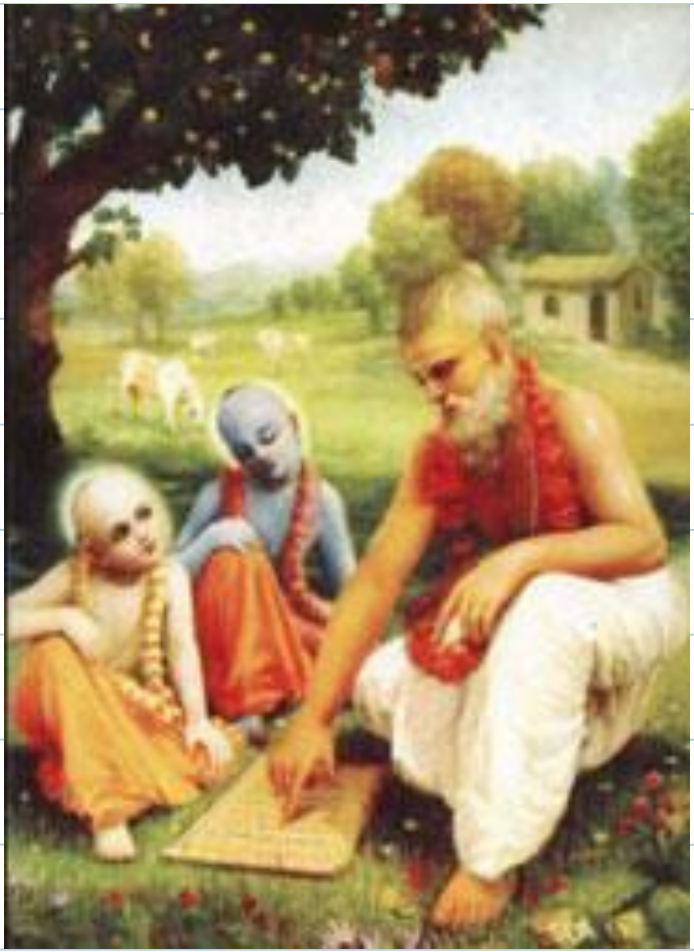


Ch 3. Background Study

What is the present system of Education in India ?

Ch 3. Background Study

We are all aware of the present

System of Education in India.

Ch 3. Background Study

We are all aware of the present

System of Education in India.

It is an implantation of the British

Rulers in the 19th century.

Ch 3. Background Study

Nursery

Lower KG
Upper KG

Primary

Class 1- 5
(Age 6-11)

Secondary

Class 6-10
(Age 11-15)

Higher Secondary

Class 11 – 12
(Age 16-18)

Graduation

Professional 4 yrs
Medical 5 yrs
Arts
Commerce 3 yrs

Post Graduation

1,1/2 to 3 yrs

$$a+b=t$$

$$(a+b)(a-b)=t(a-b)$$

$$a^2-b^2=ta-tb$$

$$a^2-ta=b^2-tb$$

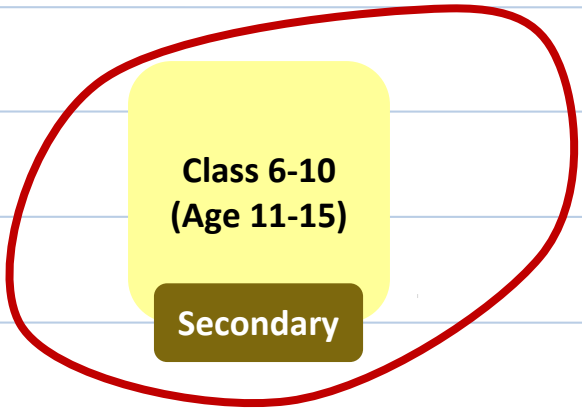
$$a^2-ta+\frac{t^2}{4}=b^2-tb+\frac{t^2}{4}$$

$$\left(a-\frac{t}{2}\right)^2=\left(b-\frac{t}{2}\right)^2$$

$$a-\frac{t}{2}=b-\frac{t}{2}$$

$$a=b$$

Ch 3. Background Study

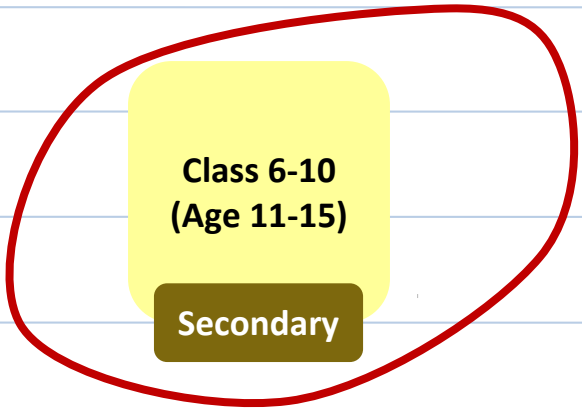


Why this age group ?

Ch 3. Background Study

most of the dropouts from schools happen at this stage

Ref: http://www.businessweek.com/magazine/content/05_05/b3918023.htm



Ch 3. Background Study

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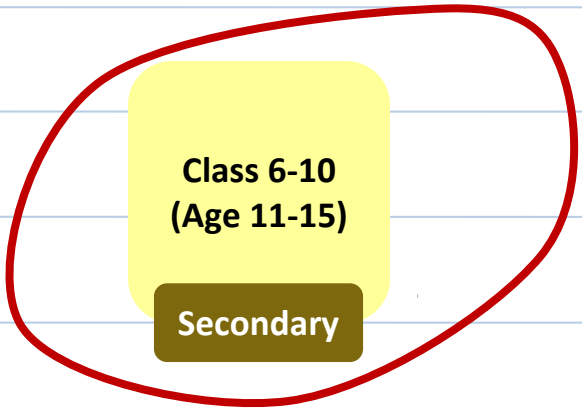

become concerned about hypothetical,

the future, and ideological problems

Ref: http://www.learningandteaching.info/learning/piaget.htm

Ch 3. Background Study

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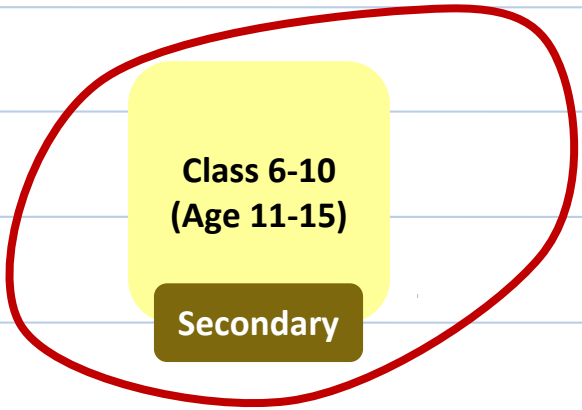


cognition reaches its final form

become concerned about hypothetical,

the future, and ideological problems

Ref: http://www.learningandteaching.info/learning/piaget.htm

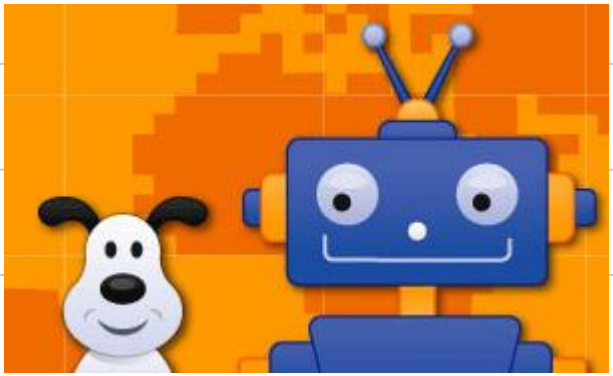
Ch 3. Background Study

Are their any existing technologies available for this age group?

Ch 3. Background Study

Existing Technologies :

Thinkquest.org



- An online learning platform
- Creates a project environment

  where teachers and students

  engage in collaborative learning
- where students participate in technology contests

Ch 3. Background Study

Existing Technologies :

Interactive whiteboard

- An Attachable Device
- Creates powerful motivation for the learners
- Provides the learner with an interactive experience

Ref: www.pearsonlongman.com/.../images/demo.jpg

Ch 3. Background Study

Inferences from Background study

Nothing is related to the school curriculum

Ch 3. Background Study

Inferences from Background study

Nothing is related to the school curriculum

Not designed as per Indian context

Ch 3. Background Study

Inferences from Background study

Nothing is related to the school curriculum

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Personal experience is lacking

Ch 3. Background Study

Do not include learning methods of the future

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Ch 3. Background Study

Do not include learning methods of the future

What do we mean by future methods???

Ch 3. Background Study

What do we mean by future methods???

Lets look at the changing phase in education…

Ref: Nkilkenny.files.wordpress.com/2006/o8/generational_learning

Ch 3. Background Study

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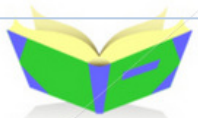

1950s → **Rote Memorization**

generation

→ **Extensive study**

→ **Books and Manuals**

→ **Lecture and Workshops**

Ref: Nkilkenny.files.wordpress.com/2006/o8/generational_learning

Ch 3. Background Study

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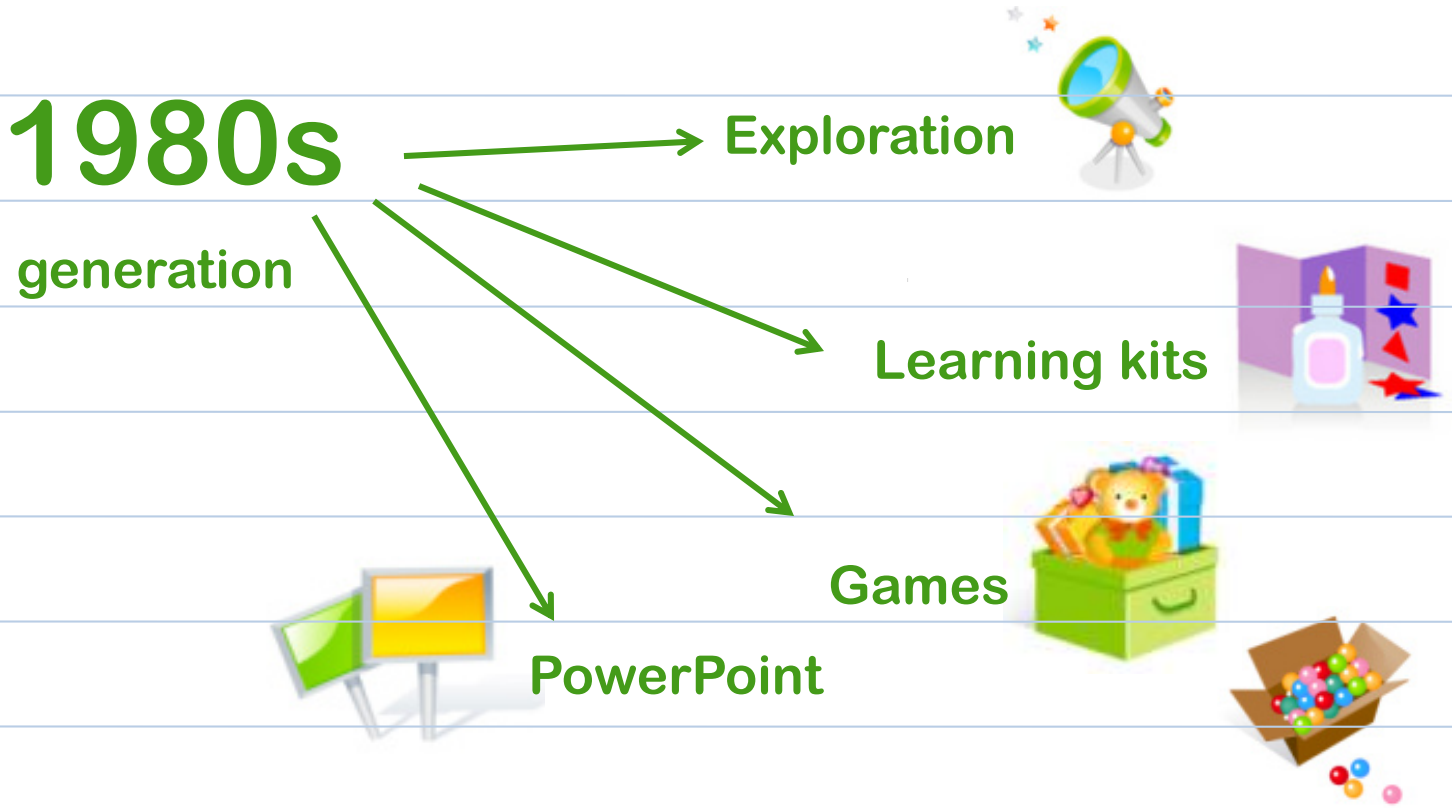

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Ch 3. Background Study

Lets look at the changing phase in education…

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Ch 3. Background Study

Lets look at the changing phase in education…

So, Include futuristic methods in the design solution

2000 till now….

E-learning

Software, CDs, Videos

Mobile, I-pods

Stand alones

Wikis, Web,

Blogs, Podcasts

Ref: Nkilkenny.files.wordpress.com/2006/o8/generational_learning

Ch 3. Background Study

Do not include learning methods of the future

Existing Technologies :

Nothing is related to the school curriculum

Can it be related to school curriculum???

Not designed as per Indian context

Personal experience is lacking

Ch 3. Background Study

Existing Technologies :

Nothing is related to the school curriculum

Can it be related to school curriculum???

HOW ?

Ch 3. Background Study

Existing Technologies :

Nothing is related to the school curriculum

Can it be related to school curriculum???

HOW ? → **Understand the content**

Ch 4. Content

Ch 4. Content

The curricular textbooks of NCERT of class 7th std were taken as the ‘reference’ content for the project.

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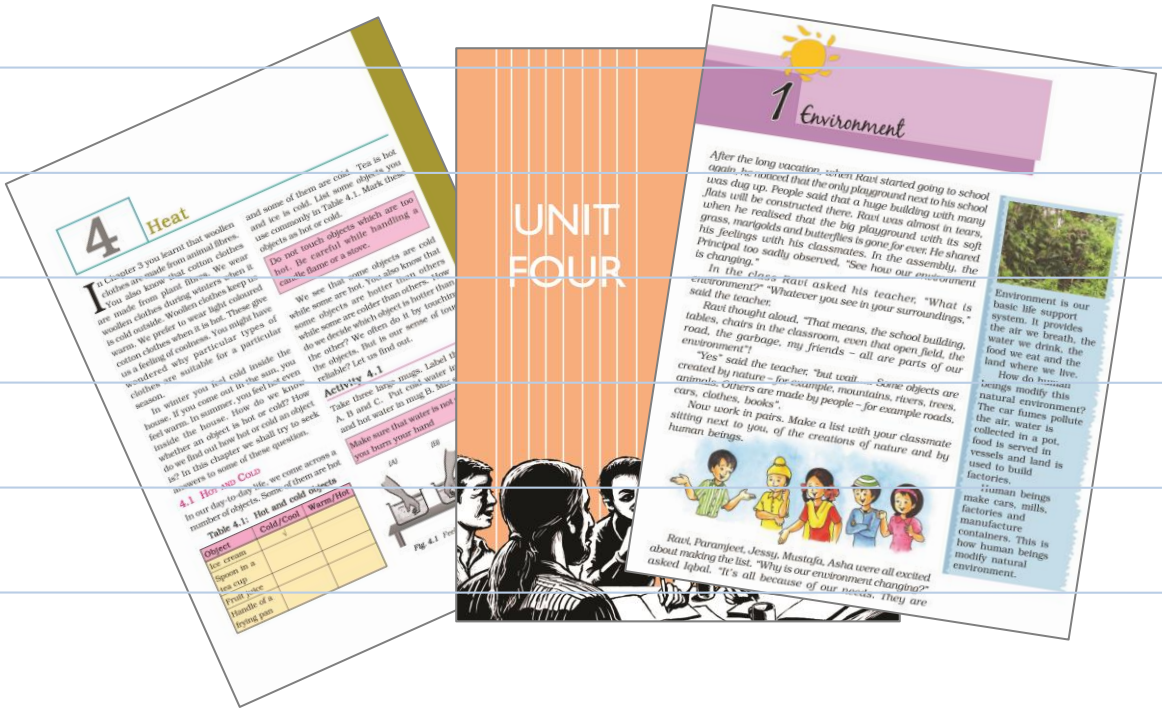
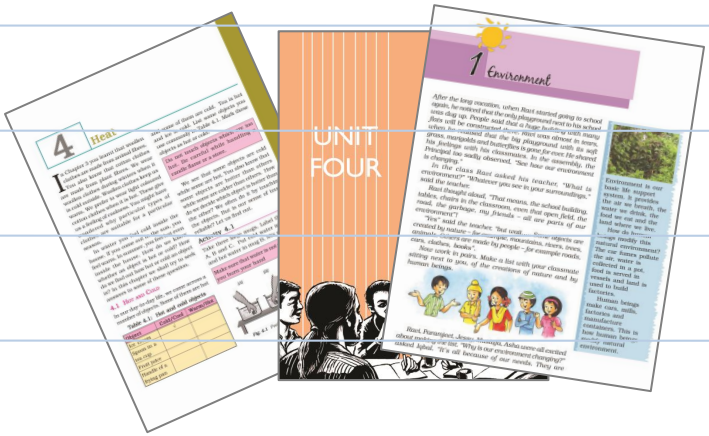


Ch 4. Content

NCERT - (National Council of Educational Research and Training)

- very well organised



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NCERT - (National Council of Educational Research and Training)

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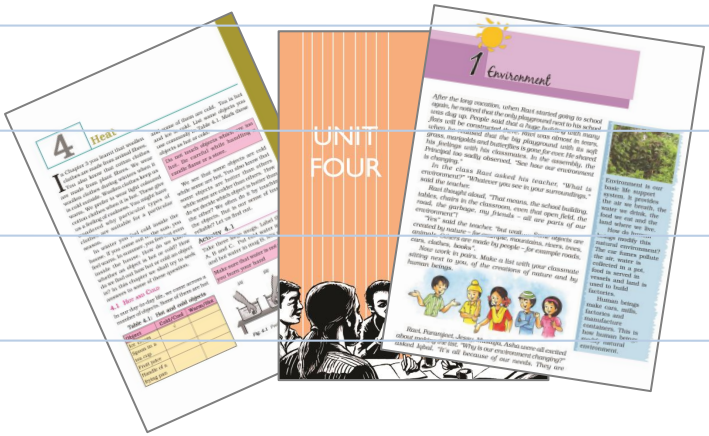

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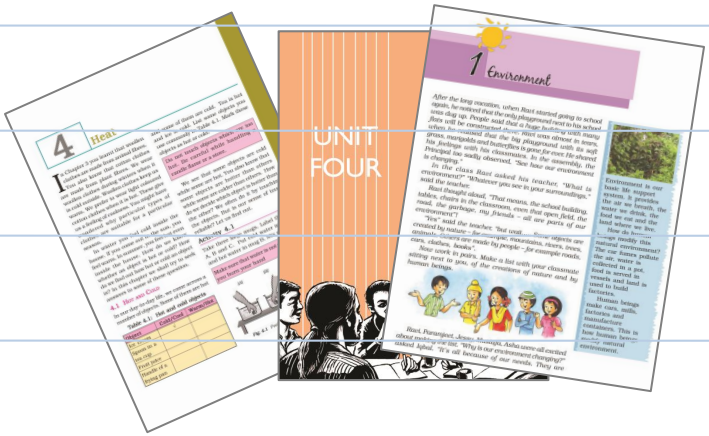

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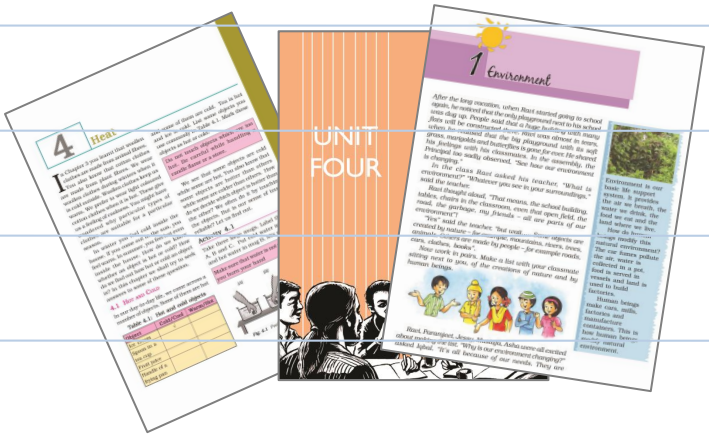
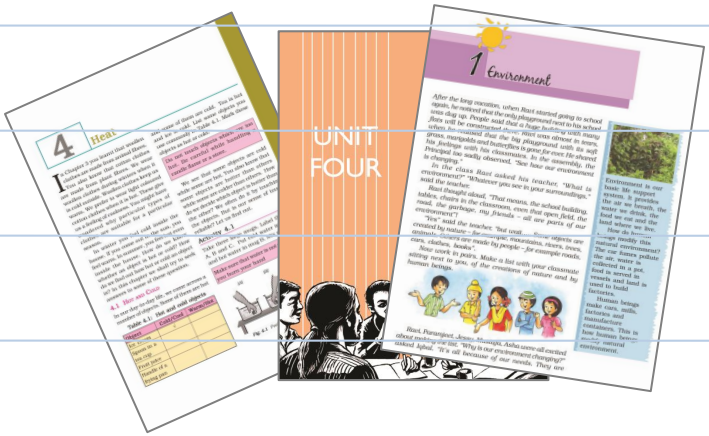
- **task based**



Ch 4. Content

NCERT - (National Council of Educational Research and Training)

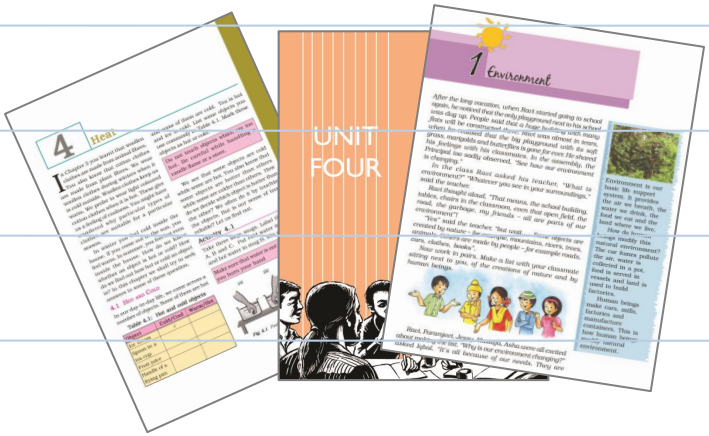
- very well organised
- a national-level curriculum
- structured approach
- task based
- **coming up with new philosophies**



Ch 4. Content

Problems with the content :

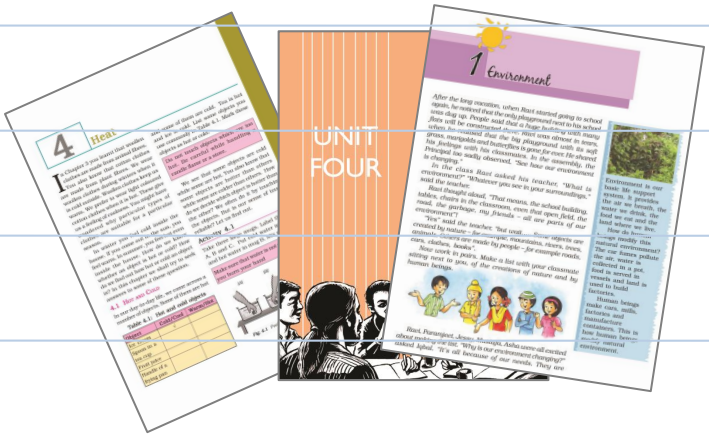
- Lack relevancy



Ch 4. Content

Problems with the content :

- Lack relevancy
- not open to subjective interpretation



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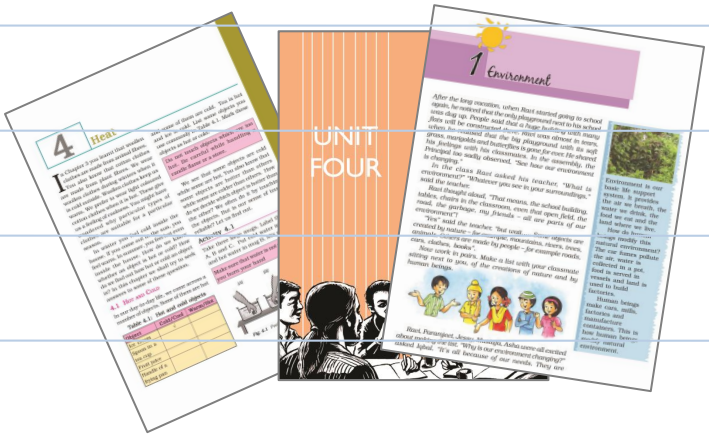

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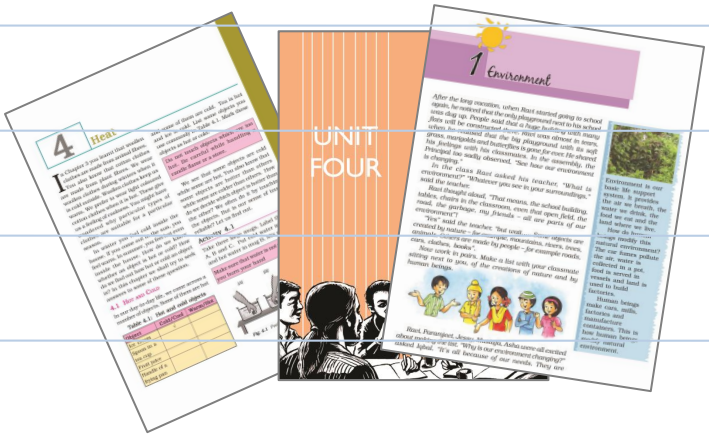
Problems with the content :

- Lack relevancy
- not open to subjective interpretation
- miss out on regional contents
- less scope for exploration



Ch 5. User

User Environment and Understanding User

User Age group – 11 yr- 16 yr

(Location) Kendriya Vidyalaya, IIT Powai campus

Ch 5. User

User Environment and Understanding User

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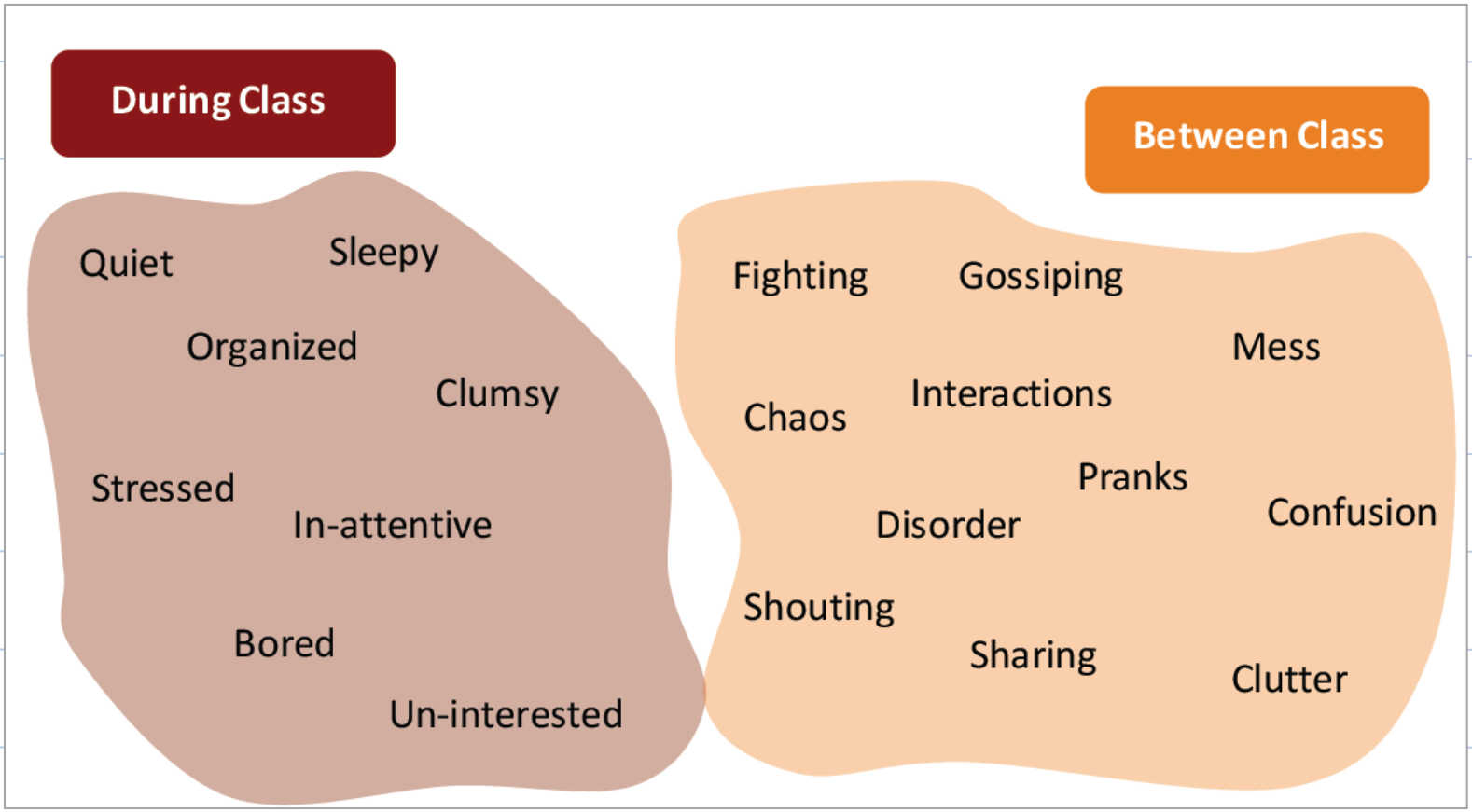
Ch 5. User

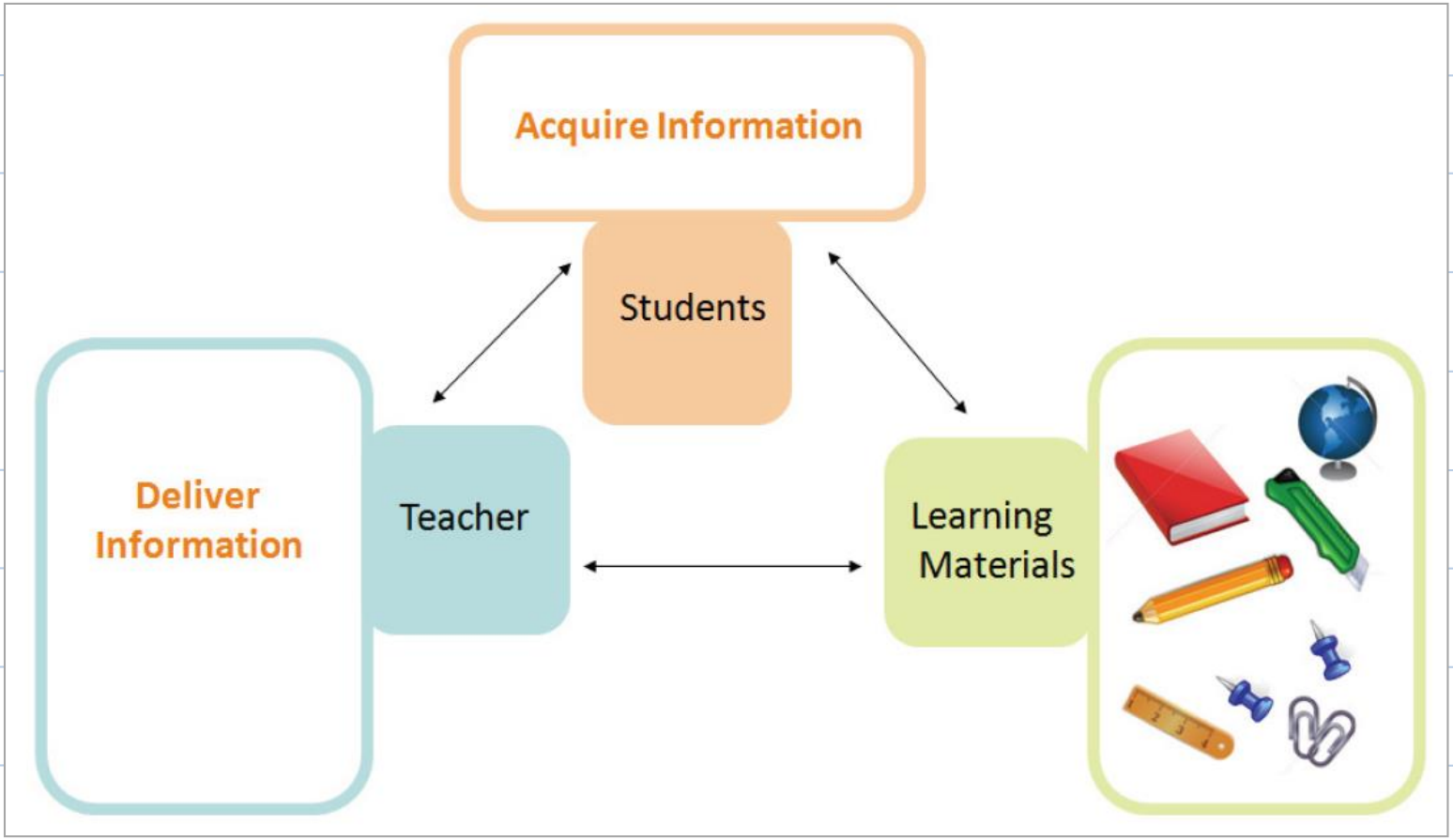
Ch 5. User

Classroom Environment



Ch 5. User

Classroom Environment



Ch 5. User

Gist of User studies : Student perspective

- Want to be online in the various platform
- Are aware of the new technologies
- Want to execute their ideas and show their creativity

Ch 5. User

Gist of User studies : School perspective

- Limited budgets and resources
- Are looking at technology with open minds
- Willing to put initial investment
- Want to improve the quality of their education

Ch 6. Analysis

Ch 6. Analysis

Problems Identification

- Cannot Relate curriculum to real life
- Lack Relevancy in the content
- Cannot understand the concepts when absent
- Misunderstand and misinterpret concepts
- Are bored of long lectures
- Cannot compare understanding

Ch 6. Analysis

Needs Mapping

Ch 6. Analysis

Student goals :

- To explore different fields
- To identify with the real world
- To learn collaboratively
- Find the content relevant
- Easy to grasp ideas
- Minimise misunderstanding or misconceptions

Ch 6. Analysis

Teacher goals :

- Understand the capabilities of the student
- Maintain expertise in the subject he teaches
- Guide learner as much as possible

Ch 6. Analysis

Opportunities :

- Relevant Content generation
- Involve learner in content generation
- Enable the content to update
- Let learner re-organise, explore and play with content
- Add excitement , fun and invoke competition

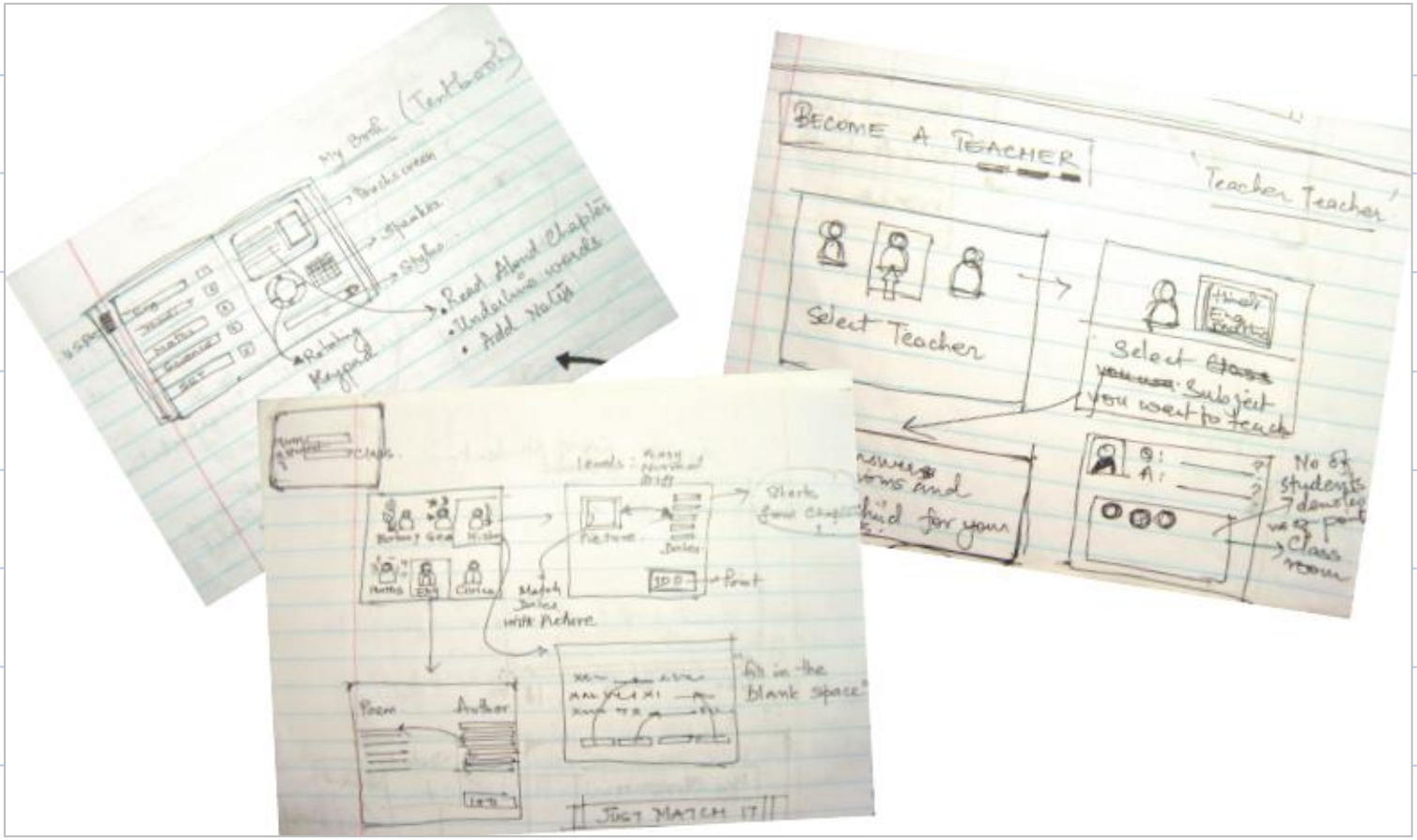
Ch 7. Initial Concepts

Brainstorming :

Ref: http://www.moodleforteachers.com/file.php/1/images/

Ch 7. Initial Concepts

Initial Doodling :



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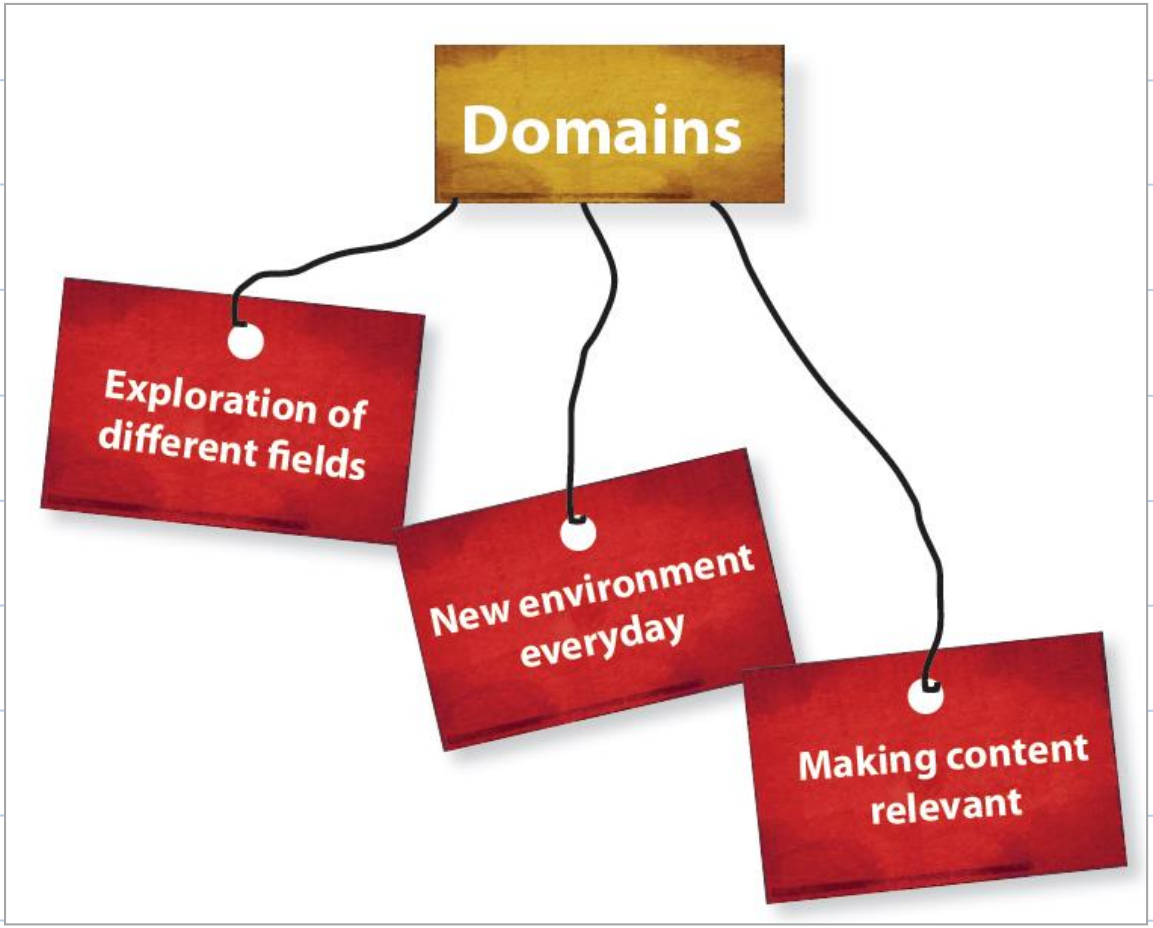

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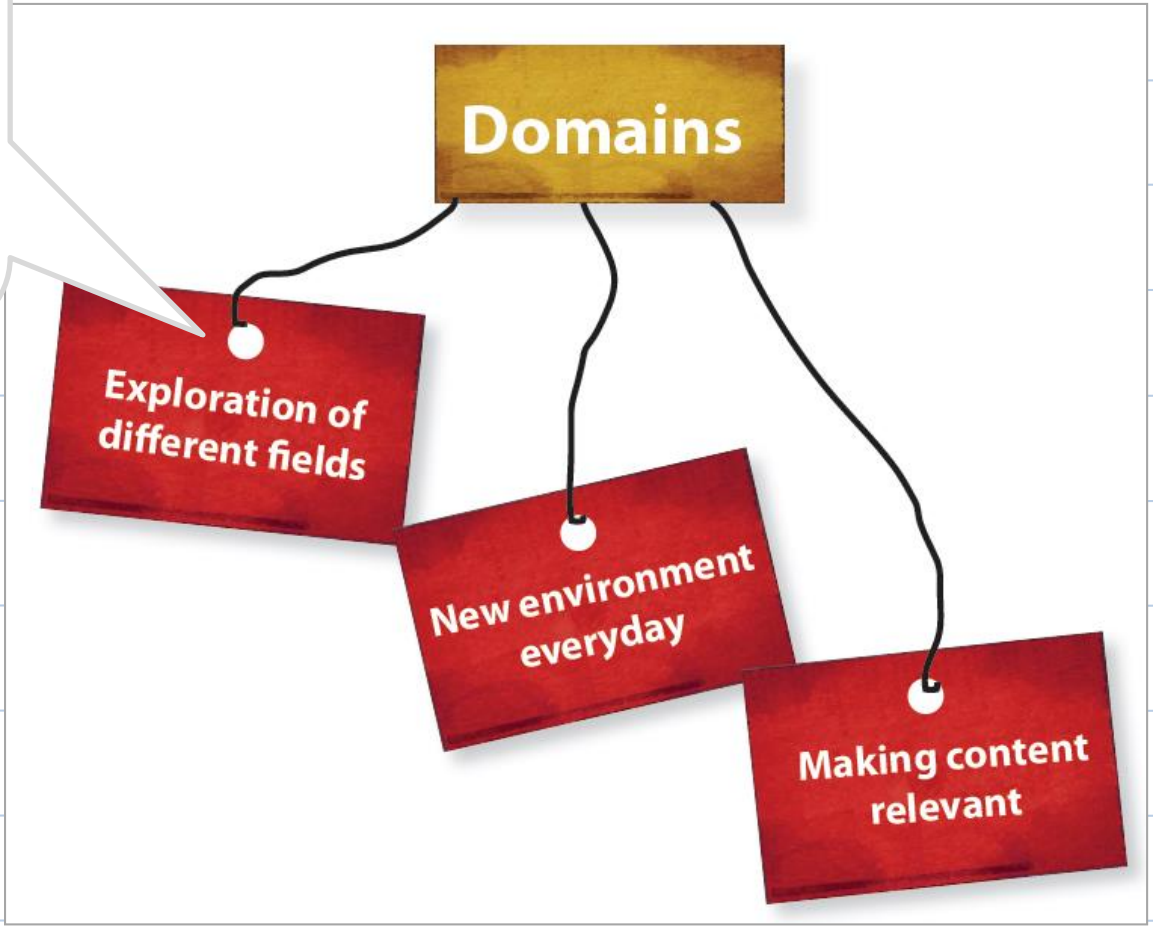

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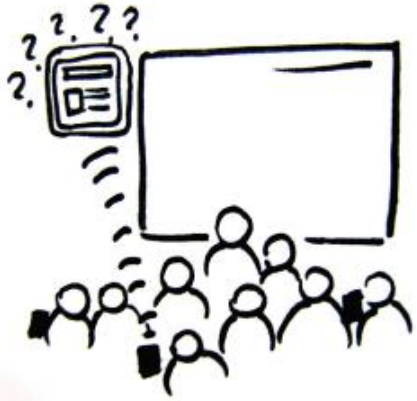
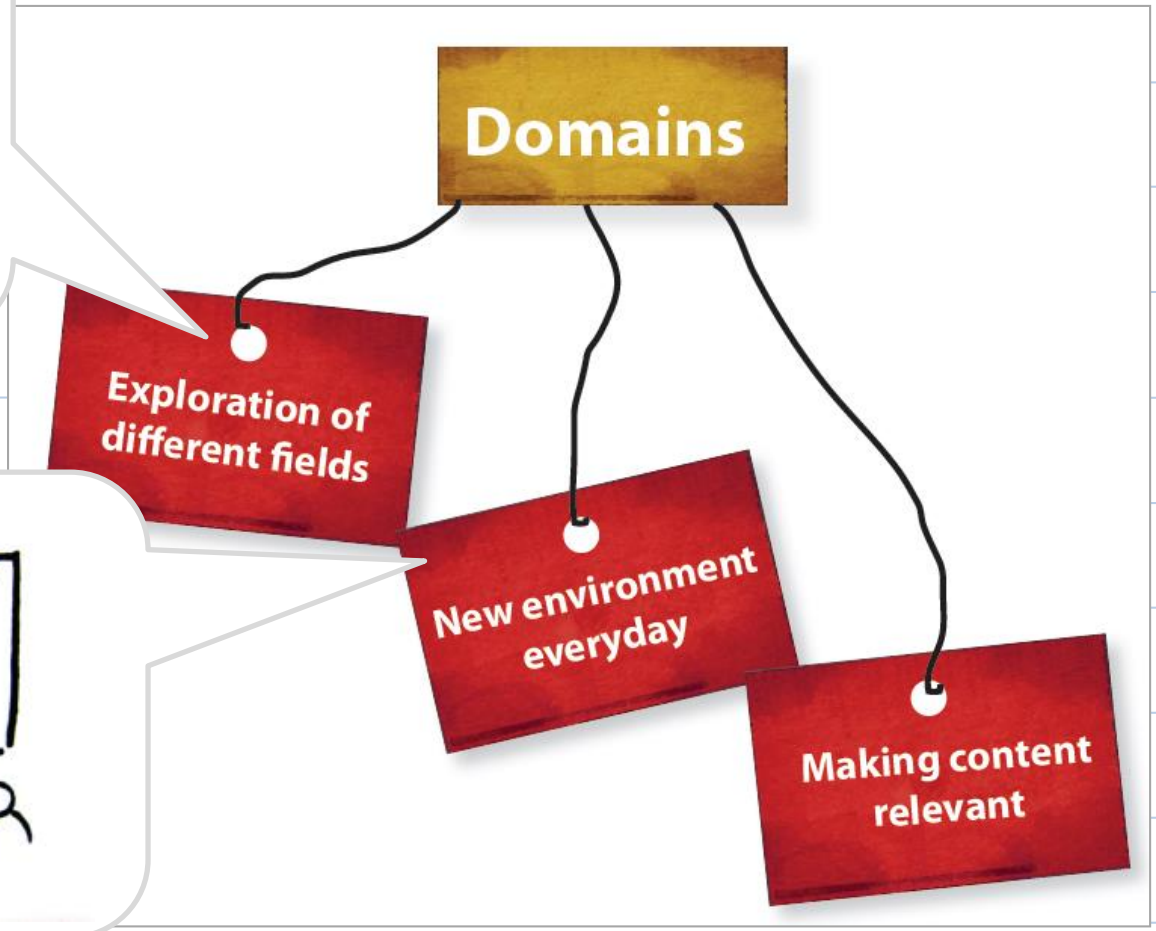


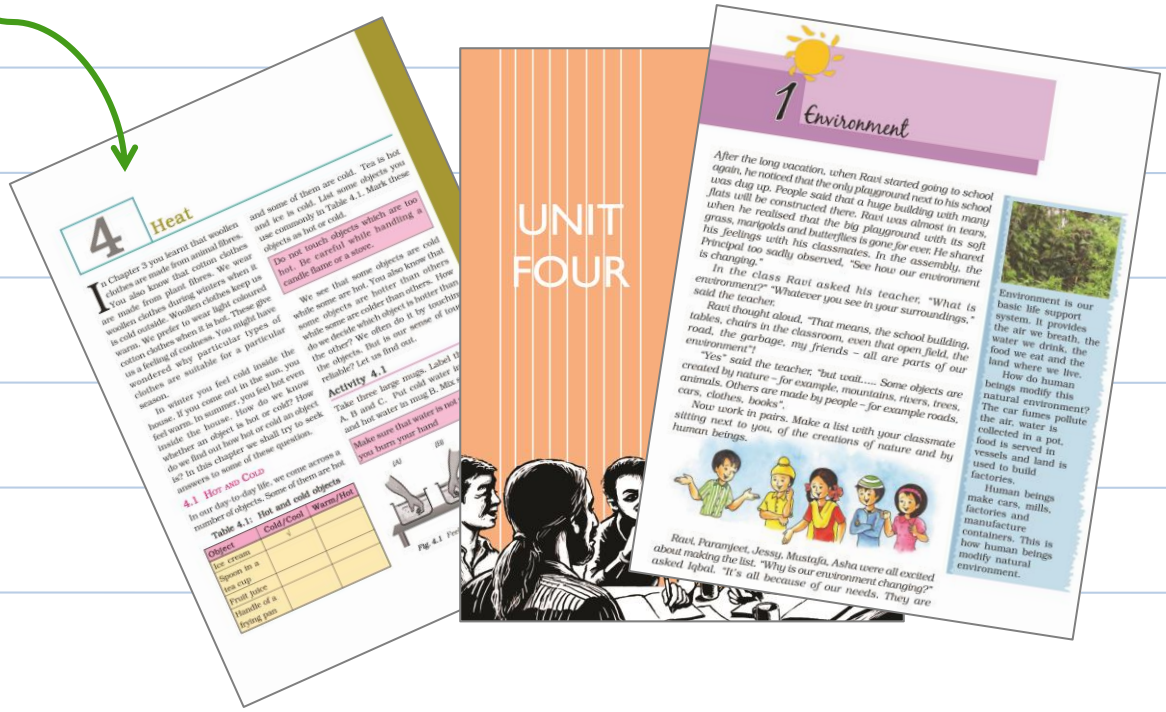


Ch 8. Final Concept

“ Content Relevancy ”

Ch 8. Final Concept

“ Content Relevancy ”



Ch 8. Final Concept

“ Content Relevancy ”

Time based

making it current,

which is happening now

Ch 8. Final Concept

“ Content Relevancy ”

Time based

making it current,

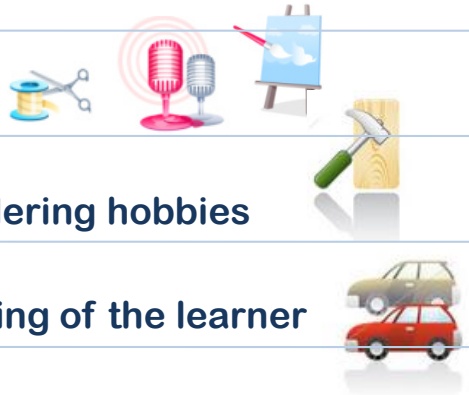
which is happening now

Space based making the content

location specific of the learner

Ch 8. Final Concept

“ Content Relevancy ”



Considering hobbies

and liking of the learner

Interest based

Time based

making it current,

which is happening now

Space based making the content

location specific of the learner

Ch 8. Final Concept

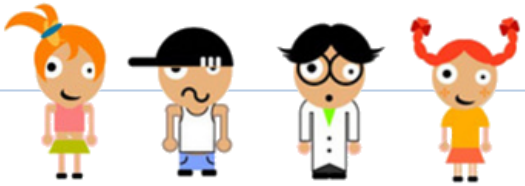
Product Profile :

- Product is a Website called ‘My Textbook’

Ch 8. Final Concept

Product Profile :

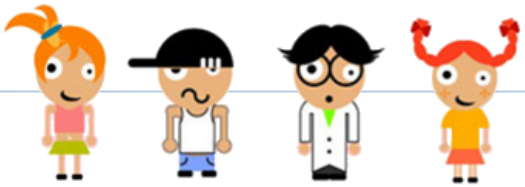
- Product is a Website called ‘My Textbook’
- **Main user - Students**



Ch 8. Final Concept

Product Profile :

- Product is a Website called ‘My Textbook’
- **Main user - Students | Secondary users - Teachers**



Ch 8. Final Concept

Product Profile :

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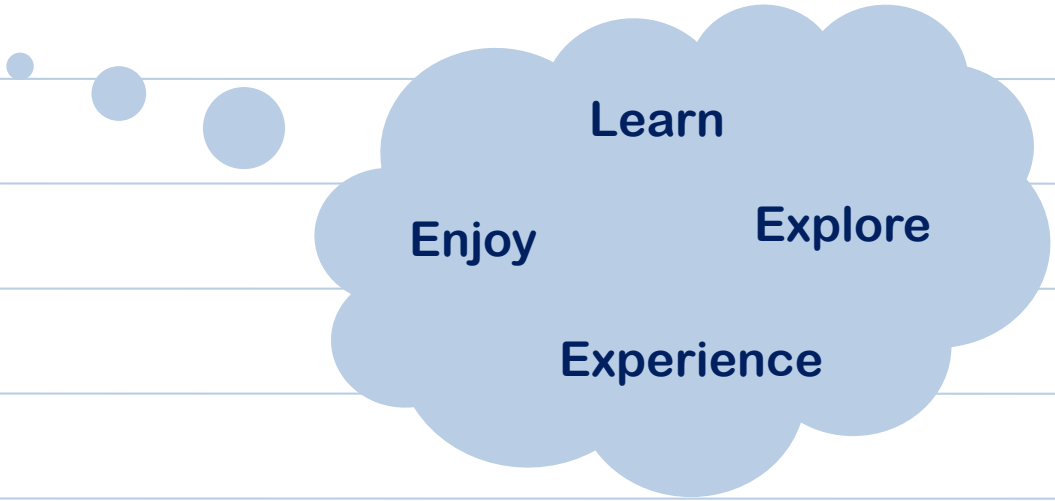
- **Complexity of the website is expected to be moderate**

Ch 8. Final Concept

Product Profile :

- Product is a Website called ‘My Textbook’
- Main user - Students | Secondary users - Teachers
- Complexity of the website is expected to be moderate
- **Goal - Oriented**



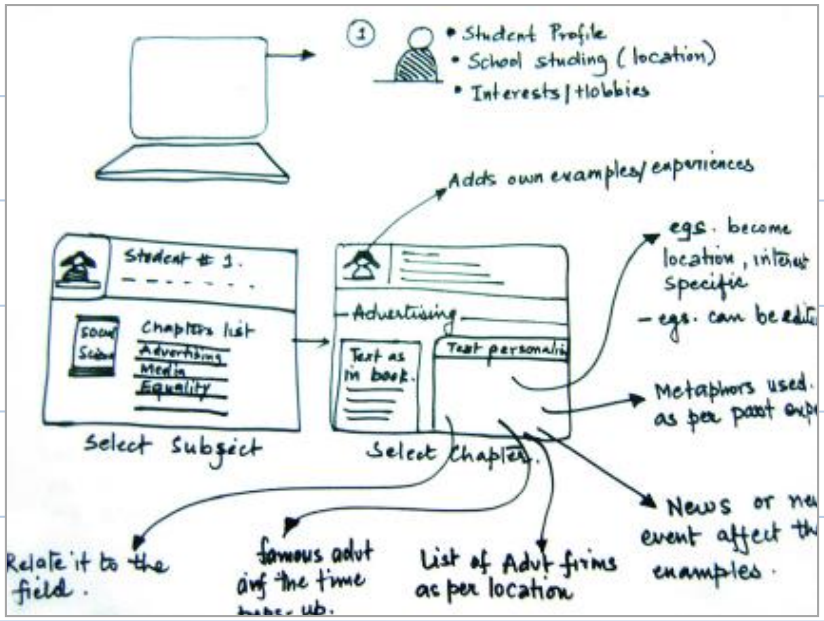
Ch 8. Final Concept

Product Profile :

- Product is a Website called ‘My Textbook’
- Main user - Students | Secondary users - Teachers
- Complexity of the website is expected to be moderate
- Goal - Oriented
- **Provides ‘Options’ other than the textbook**

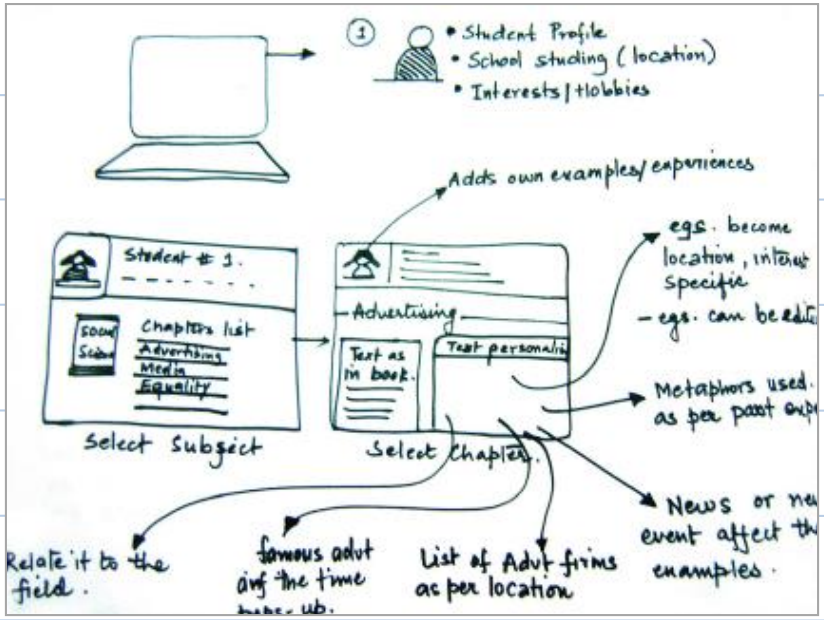
Ch 8. Final Concept

Interface Detailing :

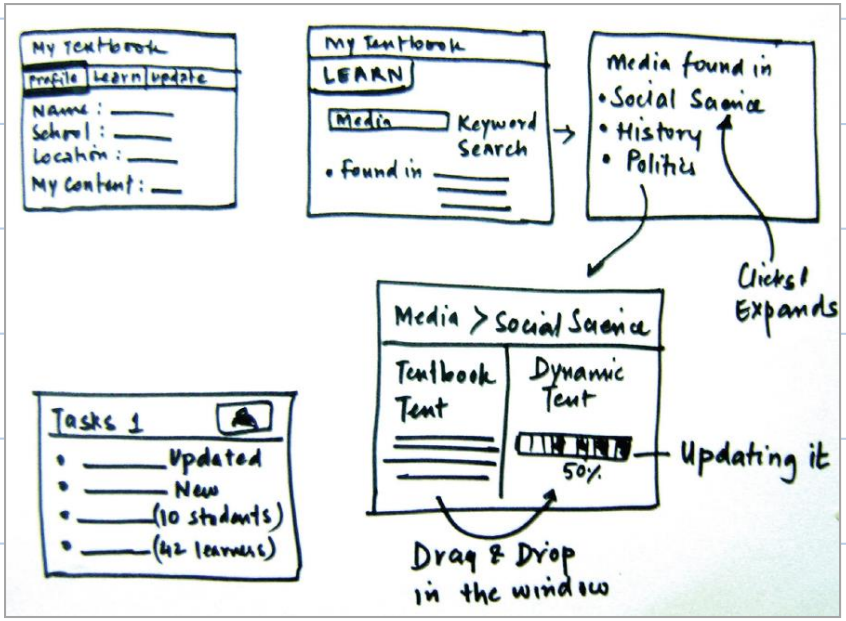


Ch 8. Final Concept

Interface Detailing :



Interface Wireframe :



Ch 8. Final Concept

Final Interface

Lets understand ‘MY TEXTBOOK’ through a scenario….

learning is now so much fun with....

my Textbook

New users make
your profile for free !!

Make new profile

Existing users sign in :

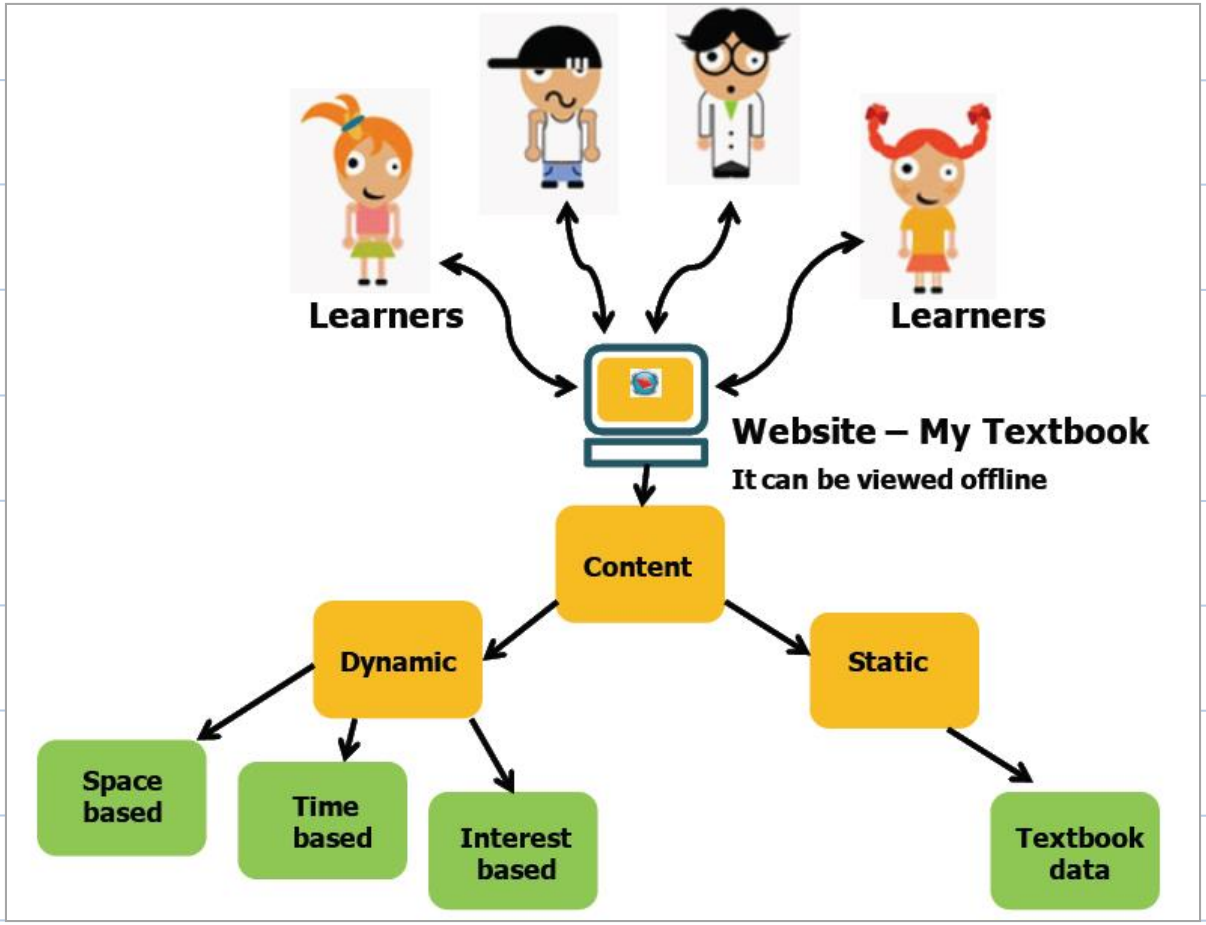
USERNAME

PASSWORD

Sign in

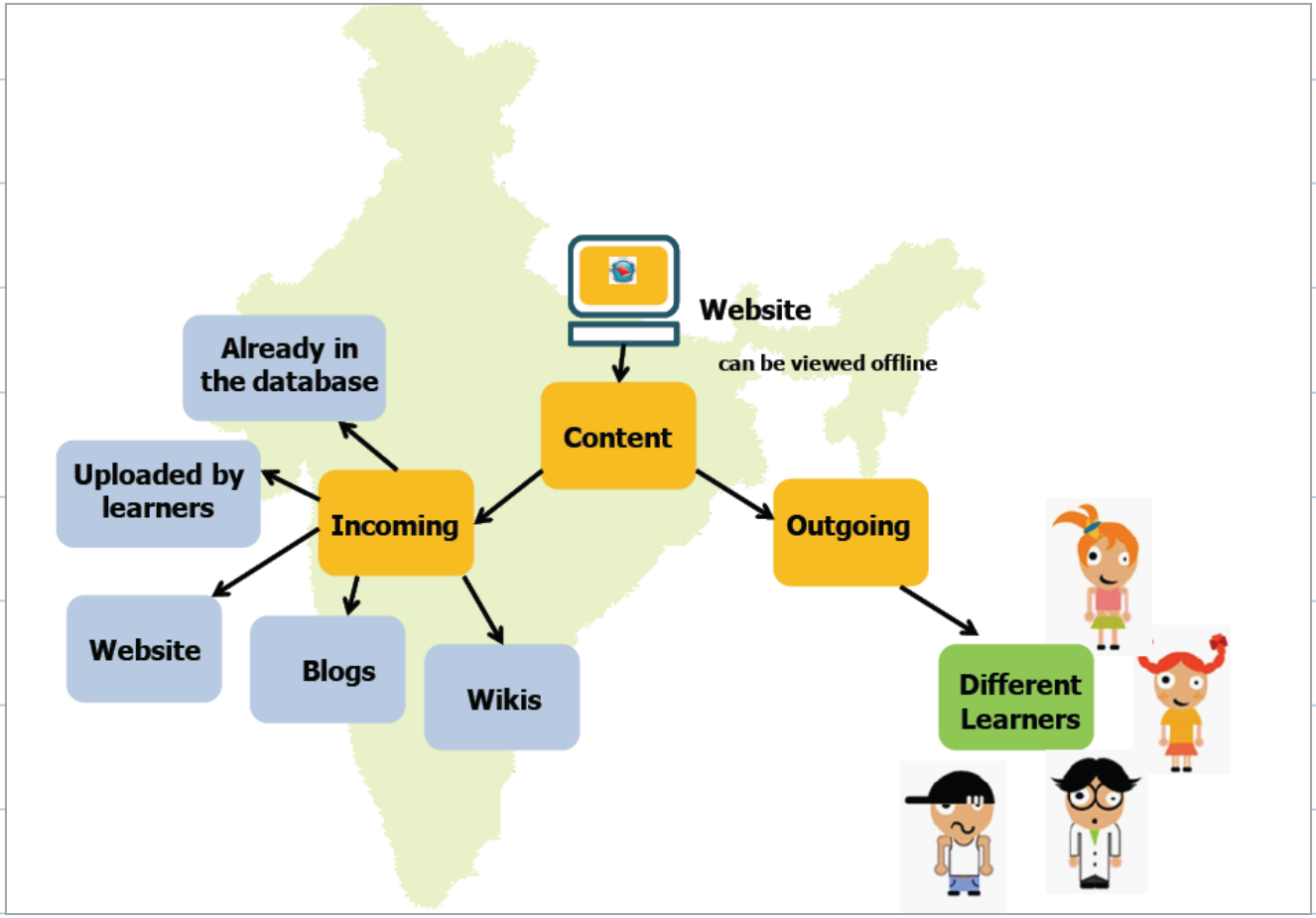
Ch 8. Final Concept

Concept Map



Ch 8. Final Concept

Content Flow



Ch 8. Final Concept

Some points about : My Textbook.com

- To make sure that the tasks uploaded are valid and genuine, the teacher profile is paid/registered

- Content uploaded by student is free but the content uploaded by them can be scrutinized before it is shown in students search results

Acknowledgement

- Ms.Punam Medh (Instructional Designer)
- Kendriya Vidyala,IIT Powai
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Thank You.

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