

It's Broke.

So let's fix it.

Tom March

Educational Designs for Learning, Systems and Software



The Joy of Learning

Recall a fulfilling experience of learning.



Learning



Goals & Motivation



Goals &
Motivation

Tools &
Resources



Goals &
Motivation

Context
& People

Tools &
Resources



Goals &
Motivation

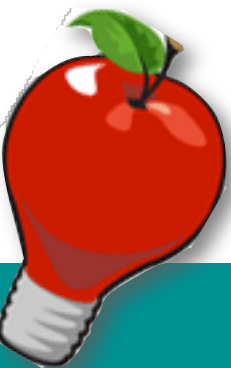
Context
& People

Self-Managed
Process

Tools &
Resources



Scaling Learning



Scaling Learning

The 20th Century Solution





Standardised Parts



Standardised Parts



**Uniform Materials &
Task Specific Machine**

Standardised Parts

Moving
Assembly
line &
Efficiencies



Uniform Materials &
Task Specific Machine

Standardised Parts

Moving
Assembly
line &
Efficiencies



Oversight
& Quality
Control

Uniform Materials &
Task Specific Machine

Standardised Parts

Moving
Assembly
line &
Efficiencies



Oversight
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Standardised Parts

**Moving
Assembly
line &
Efficiencies**



**Oversight
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**Uniform Materials &
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Goals &
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Goals &
Motivation

Context
& People

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Process

Tools &
Resources



Standardised Curriculum



Standardised Curriculum



Available Technologies



Standardised Curriculum



Schools,
Classrooms,
Students

Available Technologies



Standardised Curriculum



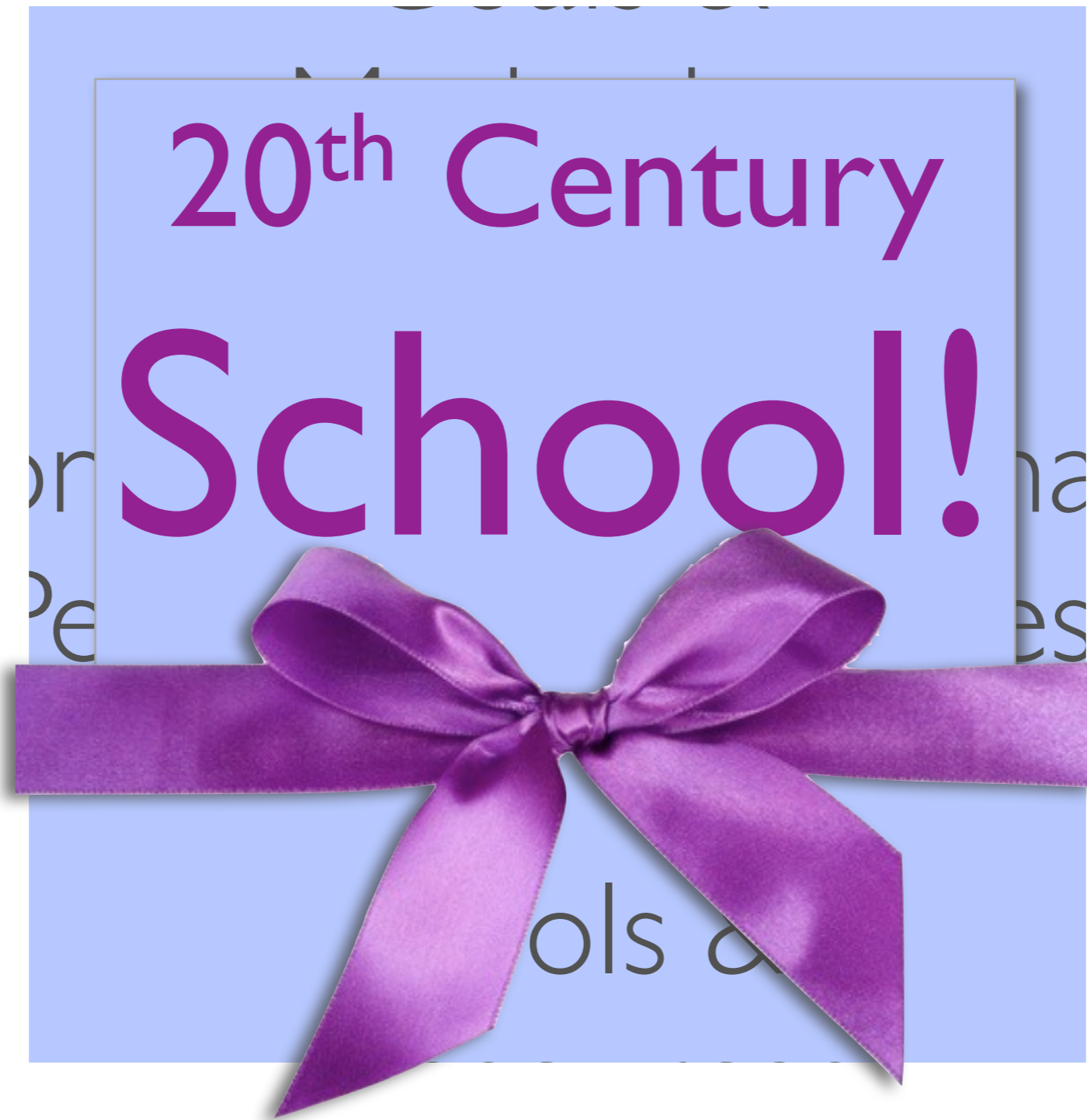
Schools,
Classrooms,
Students

Teacher-
managed,
Timetables &
Assessments

Available Technologies



Standardised Curriculum



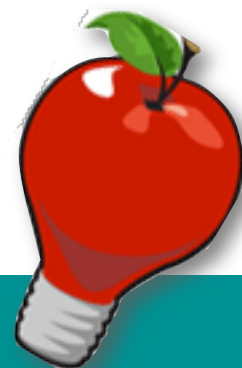
Schools,
Classrooms,
Students

Teacher-
managed,
Timetables &
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Available Technologies

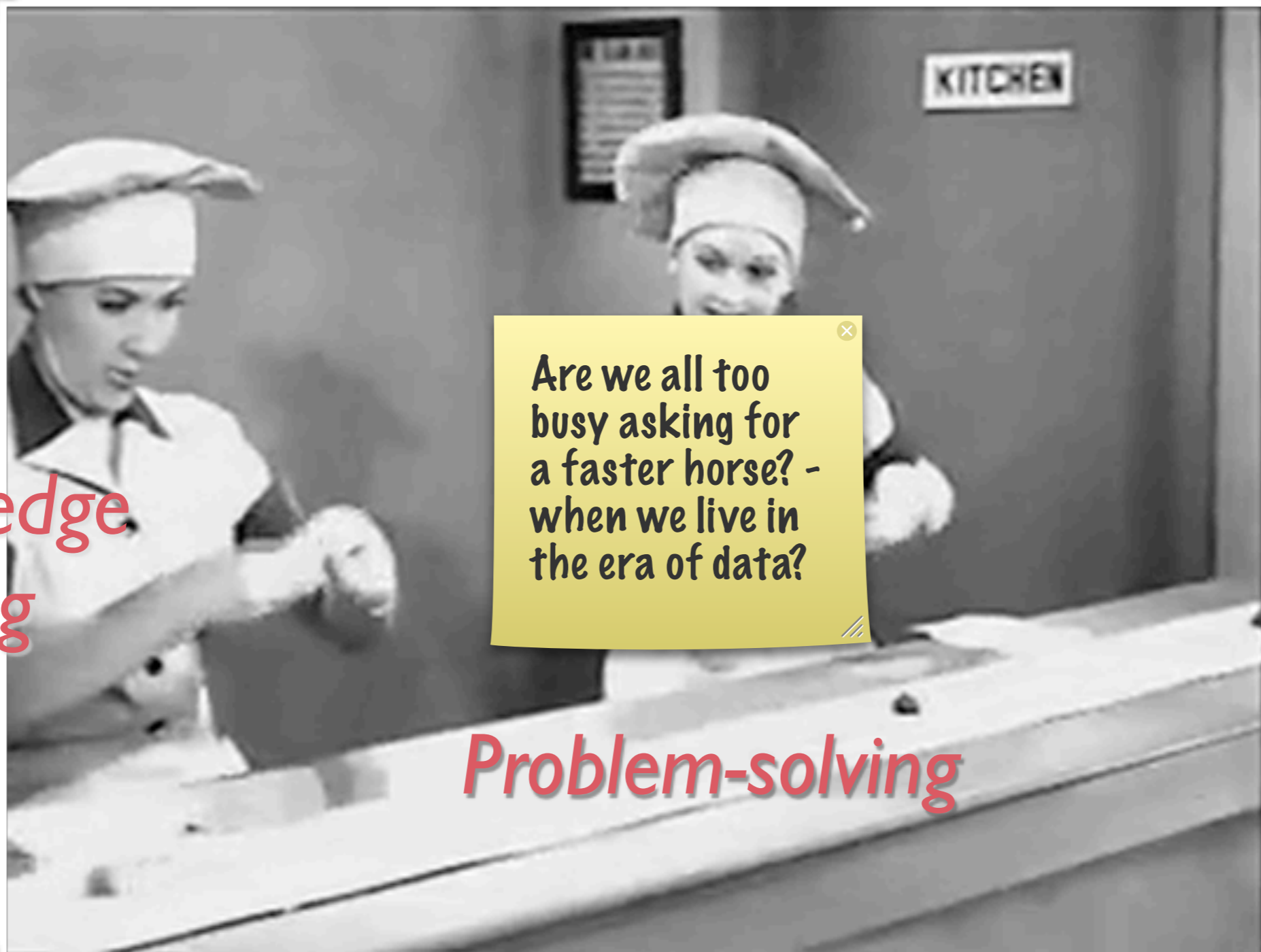


Uttering the F-Word...



Differentiation

*Innovation MySchool
Accountability*



*Knowledge
Building*

Problem-solving

Australian Curriculum NAPLAN 21st Century Skills



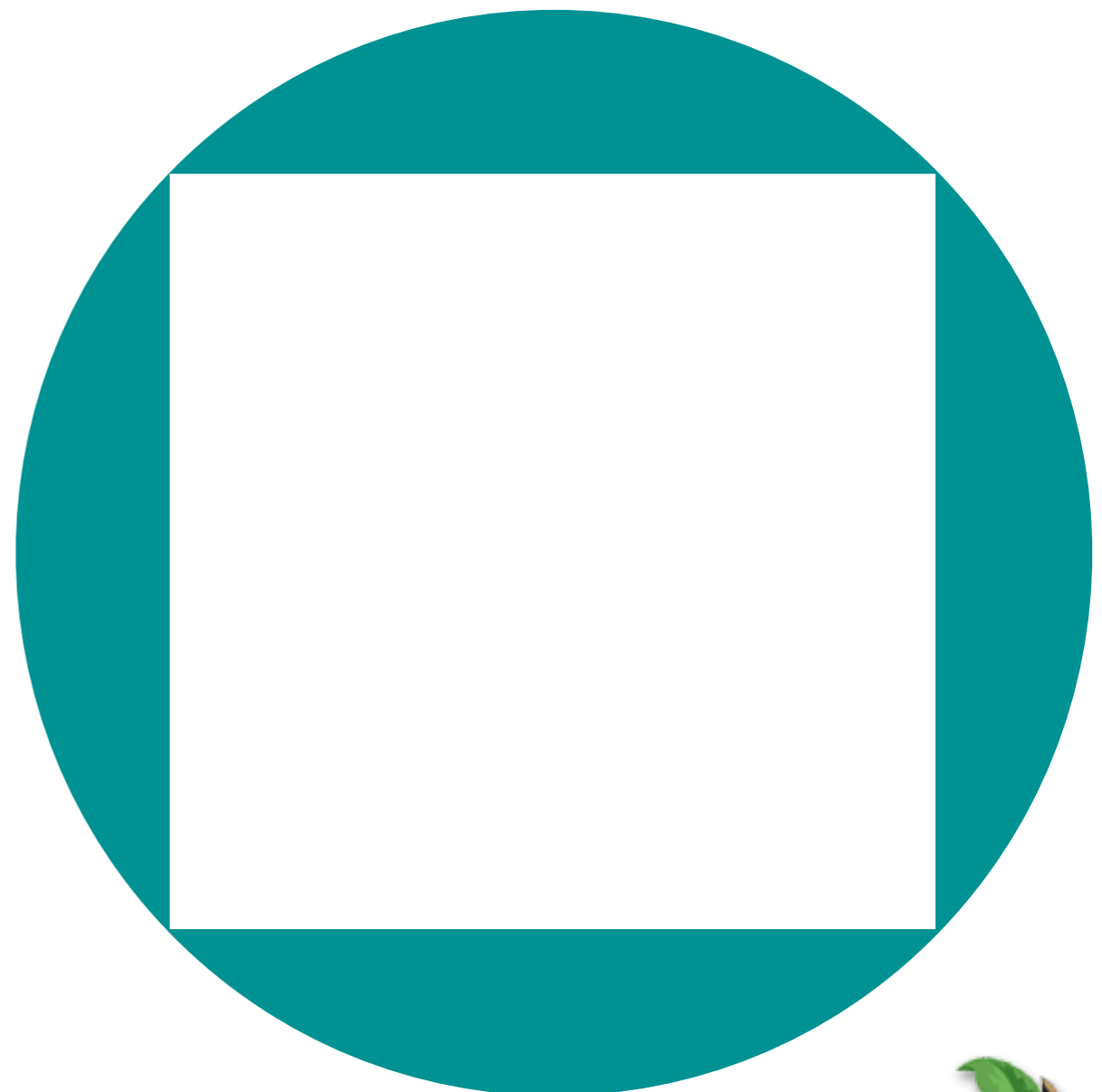
What's the missing bit?

Learning

School

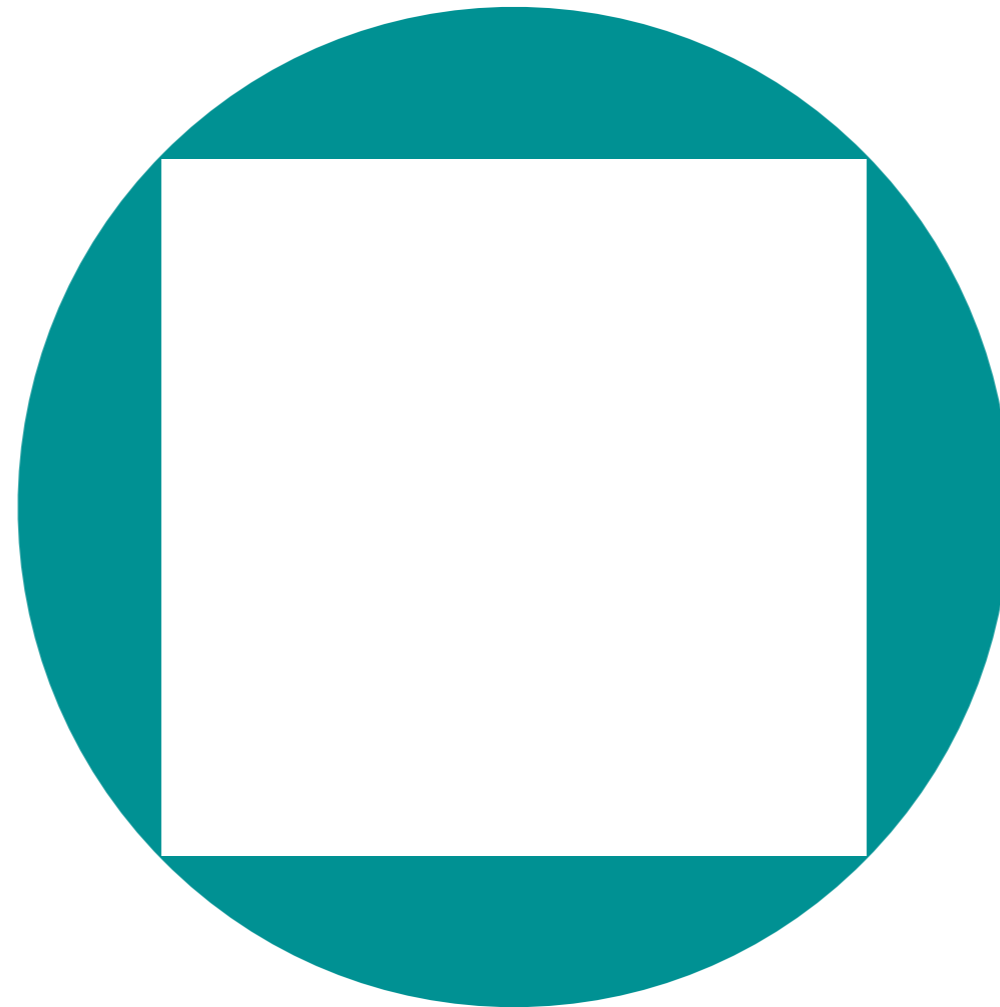


What's the missing bit?



My goals & motivations

The
people &
places that
help me
learn best.



My unique
learning
processes.

My tools and resources.



My goals & motivations

The people & places that help **me** learn best.



My unique learning processes.

My tools and resources.



“Duh” Truth

“School” \neq “Learning”

“School” = “virtual learning”



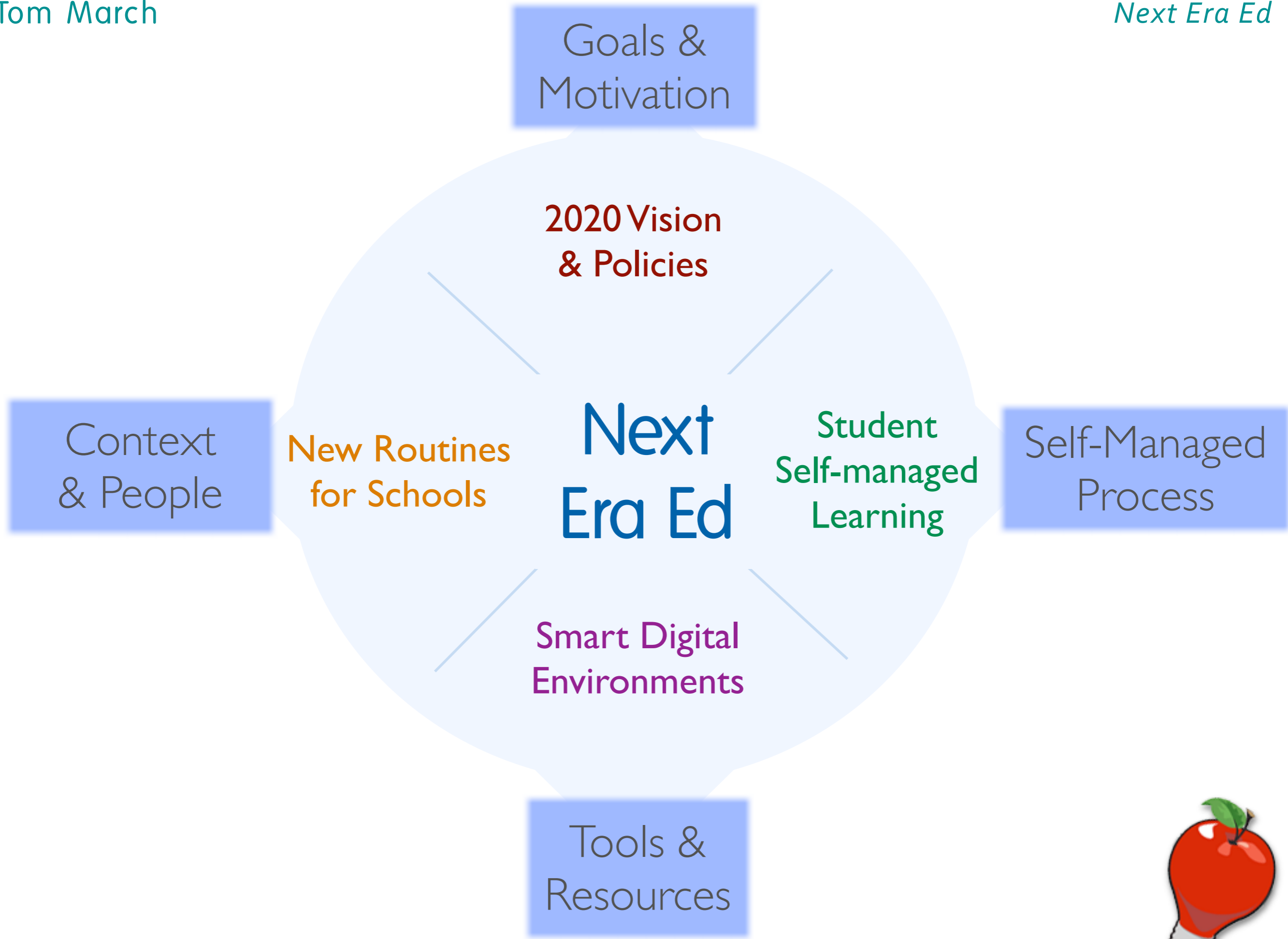
Next Era Ed



Learning







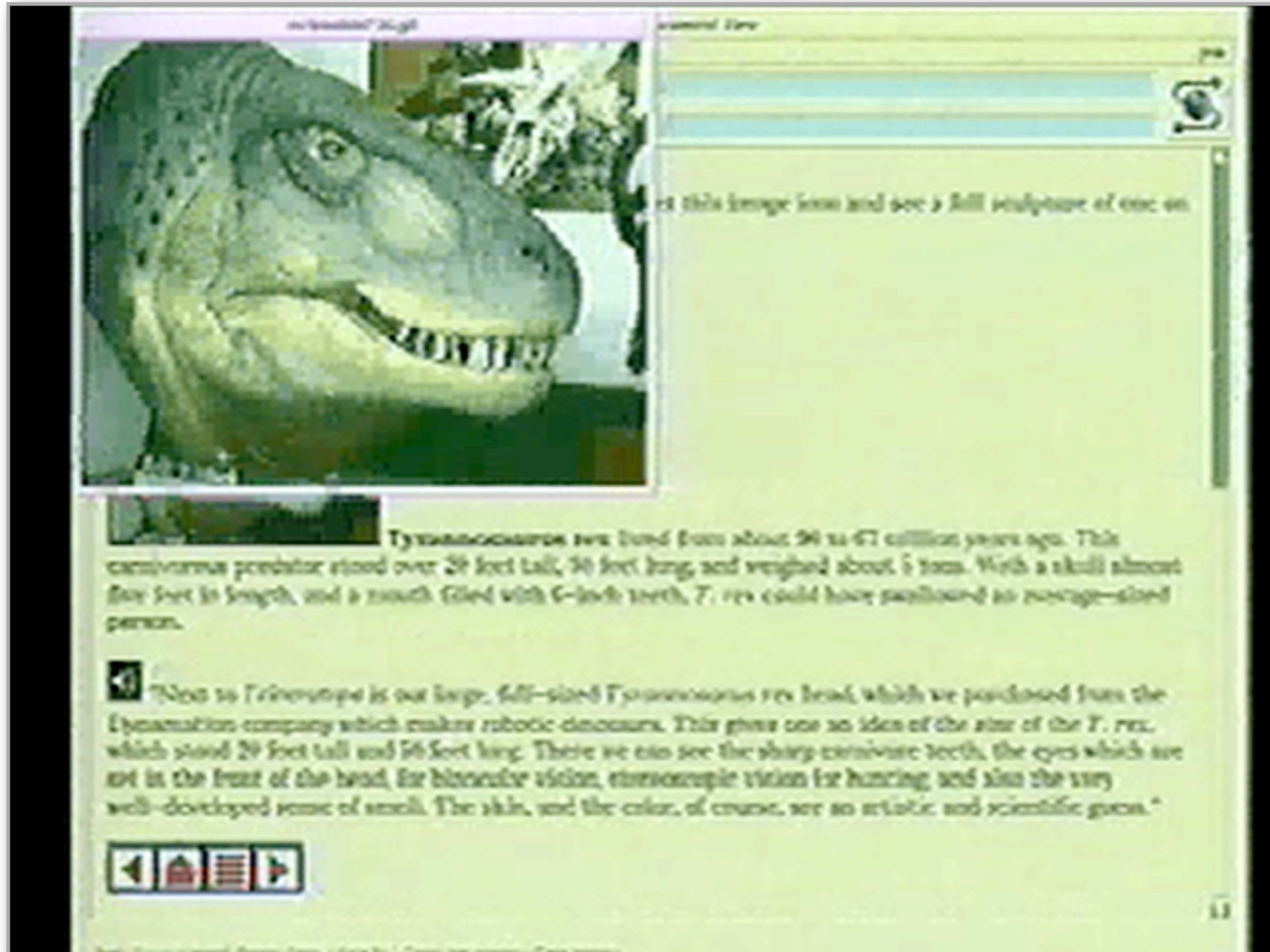
Interlude

A Short History of Digital Technology



VisionShift: 1994

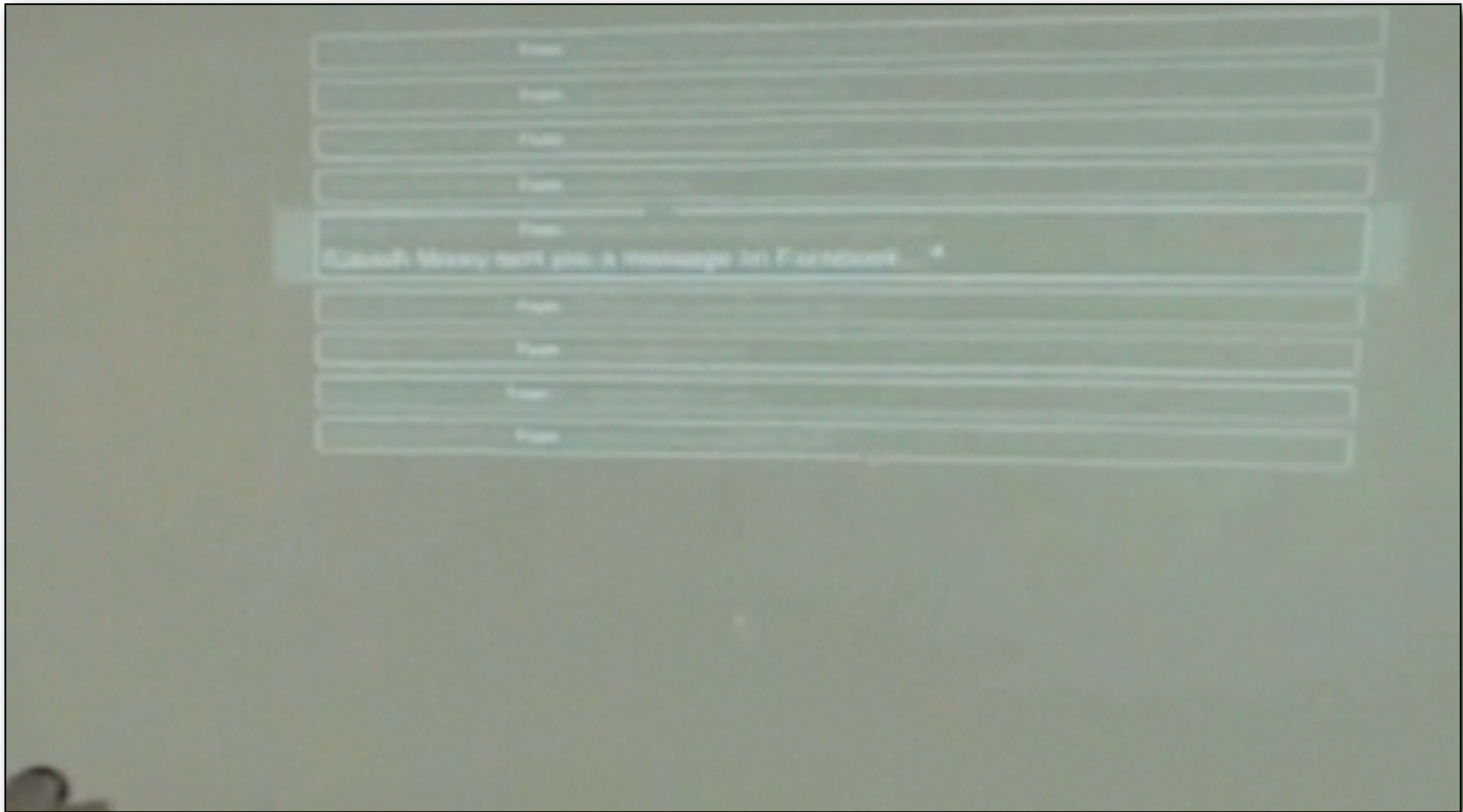
Next Era Ed



The screenshot shows a web browser window with a title bar that reads "www.ozline.com". The main content area displays a large, detailed image of a Tyrannosaurus Rex head in profile, showing its teeth and eye. Below the image is a paragraph of text: "Tyrannosaurus rex lived from about 66 to 67 million years ago. This carnivorous predator stood over 20 feet tall, 30 feet long, and weighed about 5 tons. With a skull almost five feet in length, and a mouth filled with 6-inch teeth, T. rex could have swallowed an average-sized person." Below this is a smaller image of a T-Rex head, followed by another paragraph: "Next to Triceratops is our large, full-sized Tyrannosaurus rex head, which we purchased from the Dynamation company which makes robotic dinosaurs. This gives one an idea of the size of the T. rex, which stood 20 feet tall and 30 feet long. There we can see the sharp carnivore teeth, the eyes which are set in the front of the head, for binocular vision, microscopic vision for hunting and also the very well-developed sense of smell. The skin, and the color, of course, are an artistic and scientific guess." At the bottom of the page, there are navigation icons for back, home, search, and forward, and a page number "13" in the bottom right corner.

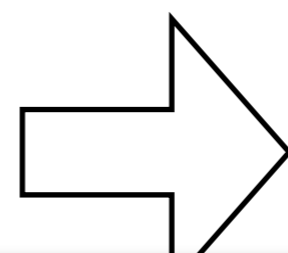
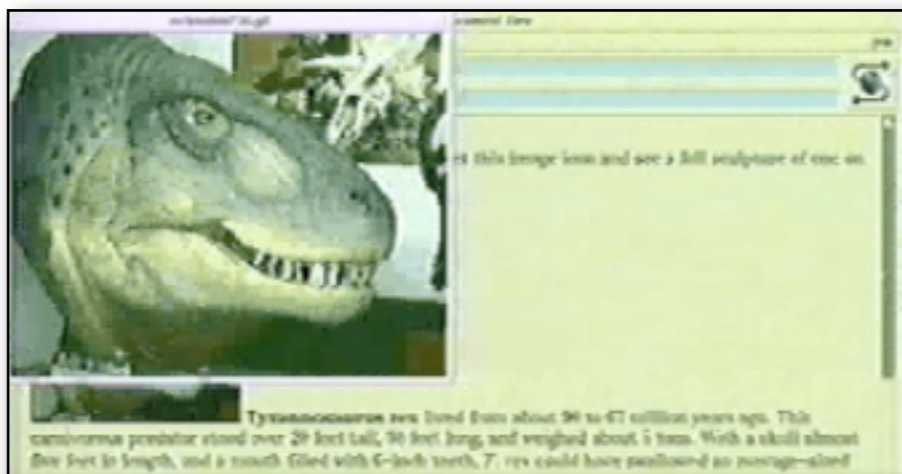


"All Fit to One's Size"

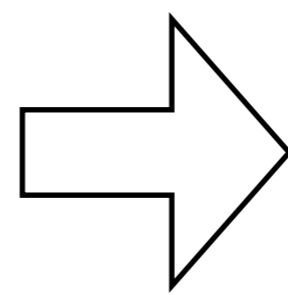


If this

Becomes



in 15 Years...



1995 - 2010



Computers
Software
Internet



iPod & phone Bans
Poor Bandwidth
Blocked sites

*IT in schools
from Oasis to island of impoverishment*

in 15 years



What is our job?

Propping Up
a 20th Century Model
or
Promoting Learning?



Three Current Examples



Mosaic

Next Era Ed

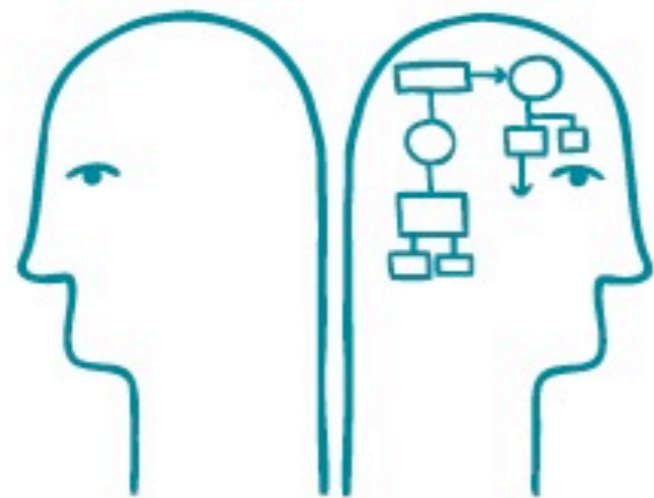
The screenshot shows a web browser window titled "Mosaico Digital". The browser's address bar and toolbar are visible at the top. The main content area features a user profile for "Rafael Rodrigues" on the left, with a message: "Clique sobre uma das grandes categorias acima para visualizar a lista de suas competências." In the center, there are four large colored buttons labeled "ser" (yellow), "conhecer" (blue), "conviver" (yellow), and "fazer" (yellow). Below these buttons is a large grid of smaller, semi-transparent colored squares. On the right side, a yellow tooltip box contains a list of four items, each with a checkbox:

- Learning to live within
- Learning to do
- Learning to know
- Learning to be



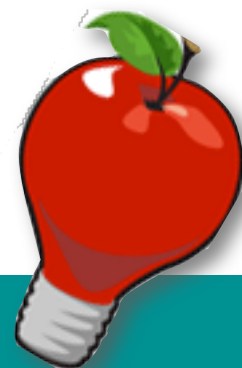


Burst[®]: Reading Early Literacy Intervention



To teach exactly what every student needs each day, you'd need an insomniac genius sidekick.

Burst:Reading stays up all night to help you differentiate instruction and teach exactly what students need, precisely when they need it.



NAPLAN - Writing-Total Writing Score 5/3/2010																					
Student	Student	View	Score	Aud	Text	Ideas	Char & Set	Vocab	Cohesion	Paragraph	Sent Struct	Punct	Spelling								
First	Last				Struct																
Nicholas	Tesla	View Student Detail	46.0000	Adv	4 Adv	5 Adv	4 Adv	5 Adv	4 Adv	2 Pro	6 Adv	5 Adv	5								
Alice	Tanberg	View Student Detail	40.0000	Adv	3 Pro	4 Adv	4 Adv	5 Adv	3 Pro	2 Pro	5 Adv	4 Adv	5								
Alan	Armfield	View Student Detail	39.0000	Adv	4 Adv	4 Adv	4 Adv	4 Adv	3 Pro	2 Pro	5 Adv	3 Pro	5								
Louise	Aberts	View Student Detail	36.0000	Adv	3 Pro	4 Adv	4 Adv	5 Adv	3 Pro	1 Bas	4 Pro	3 Pro	4								
Nicole	Kidman	View Student Detail	35.0000	Pro	3 Pro	4 Adv	4 Adv	3 Pro	3 Pro	1 Bas	4 Pro	4 Adv	5								
Anthony	LaPaglia	View Student Detail	35.0000	Pro	3 Pro	4 Adv	4 Adv	4 Adv	3 Pro	1 Bas	4 Pro	3 Pro	4								
Paul	Hogan	View Student Detail	34.0000	Pro	3 Pro	4 Adv	3 Pro	4 Adv	3 Pro	1 Bas	4 Pro	4 Adv	4								
Albert	Pemberton	View Student Detail	34.0000	Pro	3 Pro	3 Pro	3 Pro	3 Pro	3 Pro	1 Bas	4 Pro	4 Adv	5								
Frederick	Smyth	View Student Detail	32.0000	Pro	3 Pro	3 Pro	3 Pro	3 Pro	3 Pro	1 Bas	4 Pro	3 Pro	5								
Bruce	Beresford	View Student Detail	31.0000	Pro	3 Pro	4 Adv	3 Pro	4 Adv	2 Bas	1 Bas	3 Pro	3 Pro	4								
Harry	Joy	View Student Detail	31.0000	Pro	3 Pro	3 Pro	3 Pro	4 Adv	2 Bas	1 Bas	4 Pro	3 Pro	4								
Linda	Kozlowski	View Student Detail	31.0000	Pro	3 Pro	3 Pro	3 Pro	4 Adv	2 Bas	1 Bas	3 Pro	3 Pro	5								
Naomi	Watts	View Student Detail	30.0000	Pro	3 Pro	3 Pro	3 Pro	3 Pro	3 Pro	1 Bas	4 Pro	2 Bas	5								
Harry	Stotie	View Student Detail	29.0000	Pro	3 Pro	3 Pro	3 Pro	3 Pro	3 Pro	1 Bas	3 Pro	2 Bas	4								
Simon	Baker	View Student Detail	28.0000	Pro	2 Bas	3 Pro	3 Pro	3 Pro	2 Bas	1 Bas	4 Pro	3 Pro	3								
Glenn	Clinton	View Student Detail	28.0000	Pro	2 Bas	2 Bas	4 Adv	3 Pro	1 Bel	2 Pro	4 Pro	3 Pro	3								
Rebecca	Rigg	View Student Detail	28.0000	Pro	2 Bas	3 Pro	3 Pro	3 Pro	2 Bas	1 Bas	4 Pro	3 Pro	3								
Catherine	Blanchett	View Student Detail	27.0000	Pro	3 Pro	3 Pro	3 Pro	3 Pro	2 Bas	1 Bas	3 Pro	2 Bas	3								
Albert	Clinton	View Student Detail	27.0000	Pro	3 Pro	2 Bas	2 Bas	3 Pro	3 Pro	2 Pro	3 Pro	3 Pro	3								
3 Antonia	Collette	View Student Detail	26.0000	Pro	3 Pro	3 Pro	2 Bas	3 Pro	2 Bas	1 Bas	3 Pro	3 Pro	3								
Olivia	Newton-John	View Student Detail	26.0000	Pro	2 Bas	3 Pro	2 Bas	2 Bas	2 Bas	1 Bas	4 Pro	3 Pro	4								
Philip	Quast	View Student Detail	26.0000	Pro	2 Bas	3 Pro	2 Bas	3 Pro	2 Bas	1 Bas	3 Pro	3 Pro	4								
Hugh	Jackman	View Student Detail	25.0000	Pro	2 Bas	3 Pro	2 Bas	2 Bas	1 Bel	3 Adv	3 Pro	2 Bas	3								
Sally	Pembroke	View Student Detail	25.0000	Pro	2 Bas	3 Pro	2 Bas	2 Bas	2 Bas	1 Bas	3 Pro	3 Pro	4								
Sam	Pembroke	View Student Detail	24.0000	Pro	1 Bel	3 Pro	2 Bas	2 Bas	2 Bas	1 Bas	3 Pro	3 Pro	4								
Frederick	Clinton	View Student Detail	23.0000	Pro	3 Pro	2 Bas	2 Bas	2 Bas	2 Bas	1 Bas	3 Pro	2 Bas	3								
David	Gulpillil	View Student Detail	23.0000	Pro	3 Pro	3 Pro	2 Bas	2 Bas	2 Bas	1 Bas	2 Bas	2 Bas	3								
Keith	Urban	View Student Detail	22.0000	Bas	2 Bas	3 Pro	2 Bas	2 Bas	2 Bas	0 Bel	3 Pro	2 Bas	3								
Samuel	Worthington	View Student Detail	22.0000	Bas	2 Bas	2 Bas	2 Bas	2 Bas	2 Bas	1 Bas	3 Pro	2 Bas	3								
Frederick	Armfield	View Student Detail	20.0000	Bas	2 Bas	2 Bas	2 Bas	2 Bas	2 Bas	1 Bas	2 Bas	2 Bas	3								
Kerry	Armstrong	View Student Detail	20.0000	Bas	2 Bas	2 Bas	2 Bas	2 Bas	2 Bas	0 Bel	2 Bas	3 Pro	3								



Web 3.0

Web Services

the Semantic Web

the Internet of things





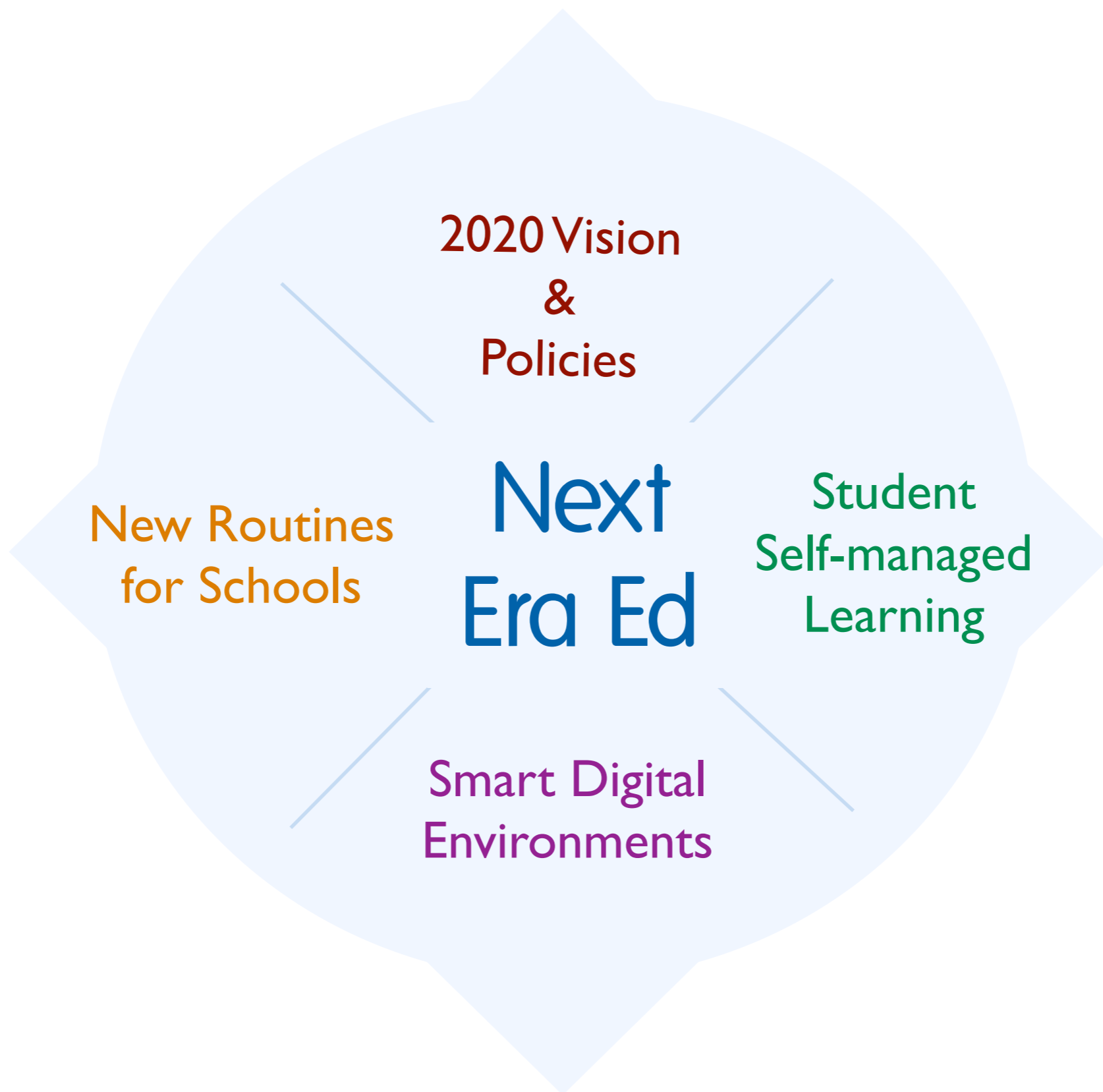
Organisational Change &
Technological Change

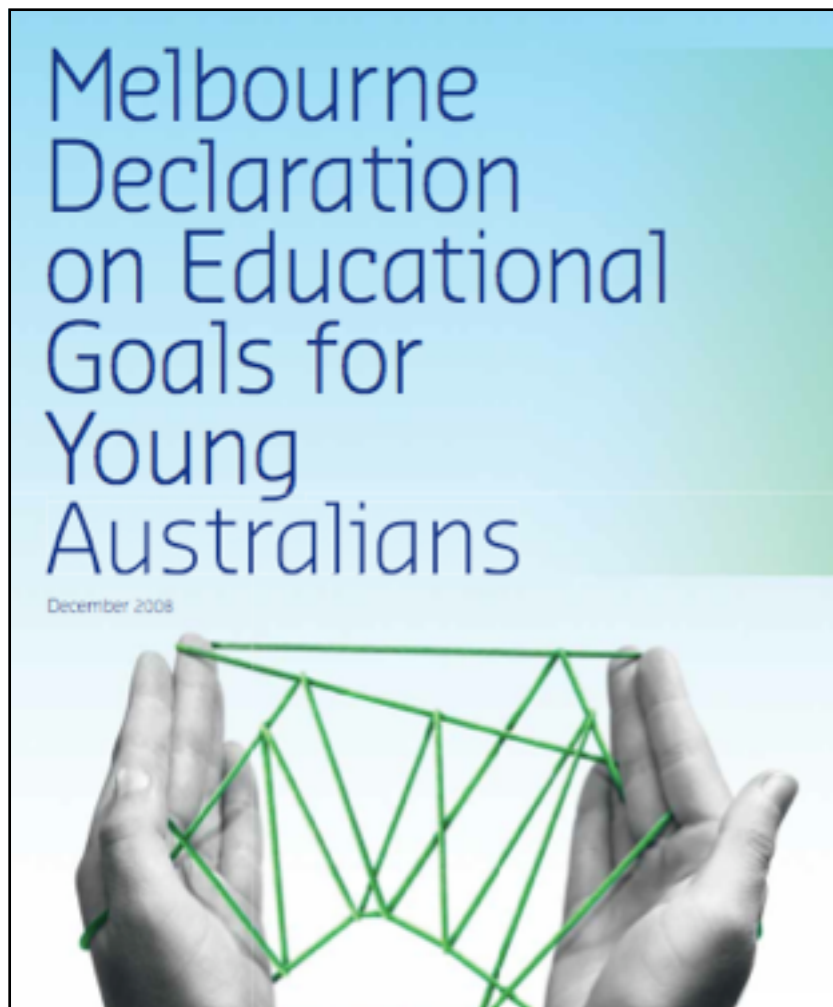




Organisational Change &
Technological Change







“Successful learners”

- **develop their capacity** to learn and play an **active role in their own learning**
- are **creative, innovative and resourceful**, and are able to **solve problems** in ways that **draw upon a range of learning areas** and disciplines
- are able to **plan activities independently**, collaborate, **work in teams** and **communicate ideas**
- are **motivated to reach their full potential**.

Some Countries do iT



Some Countries do IT

ICT in Upper Secondary Education

- 100% of the schools have LMS
- 100% of the schools have a website
- 87% of the teachers use the internet when preparing for lessons
- 70% of the teachers use ICT for communication with students at least every week
- 98% of the teachers use ICT in class



Some Countries do IT

ICT in Upper Secondary Education

- 100% of the schools have LMS
- 100% of the
- 87% of the
for lessons
- 70% of the
with student
- 98% of the

Danish pupils use web in exams

By Judy Hobson
BBC News

In Denmark, the government has taken the bold step of allowing pupils full access to the internet during their final school year exams.

A total of 14 colleges in Denmark are piloting the new system of exams and all schools in the country have been invited to join the scheme by 2011.

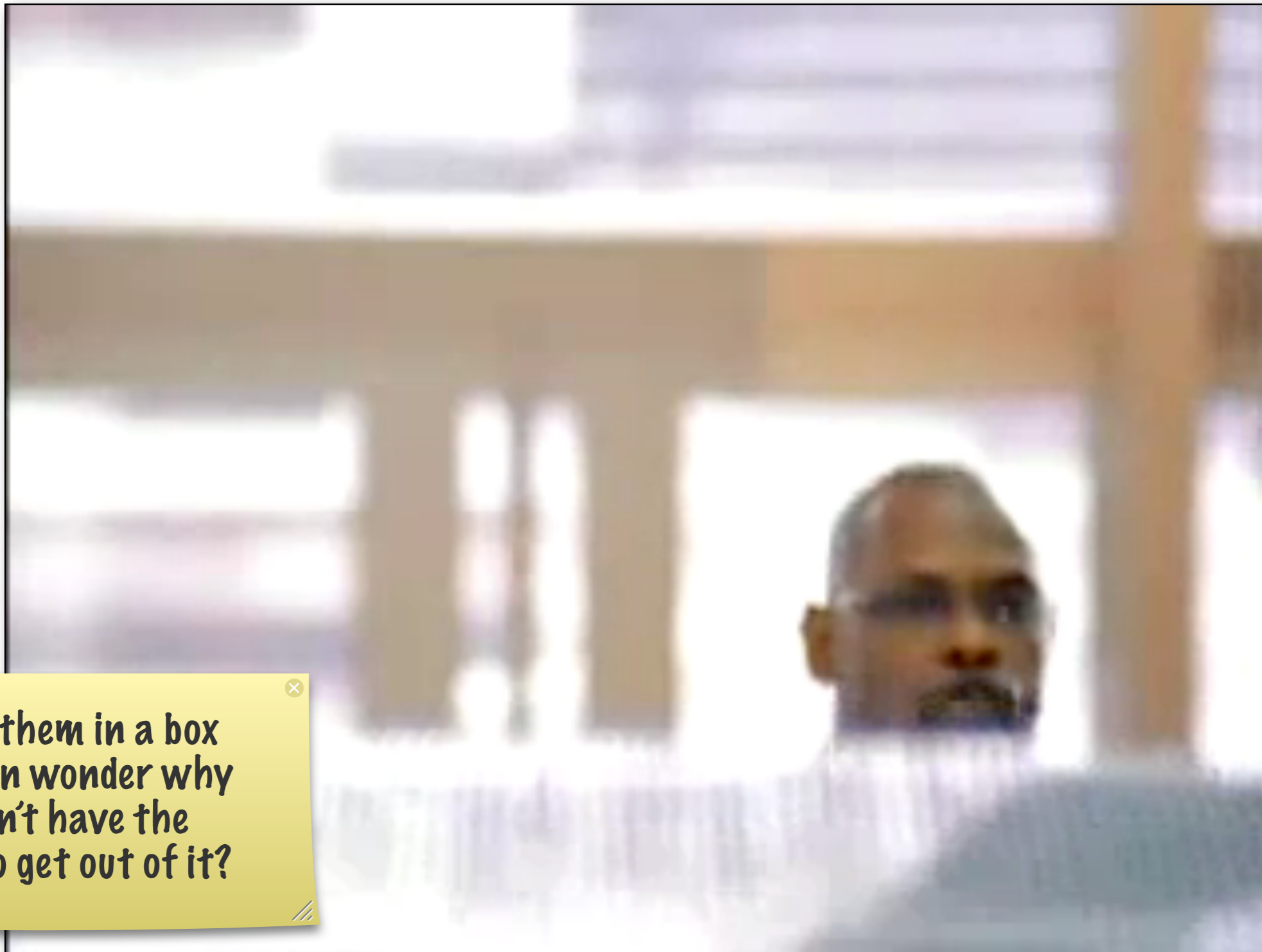


Pupils are not allowed to email each other or anyone else during exams



"School's" Real Product?

Next Era Ed



We put them in a box
and then wonder why
they don't have the
spirit to get out of it?





Goals & Motivation

Context
People

Management
Processes

2020 Vision
&
Policies

Next
Era Ed

Resources



Goals & Motivation

Context
People

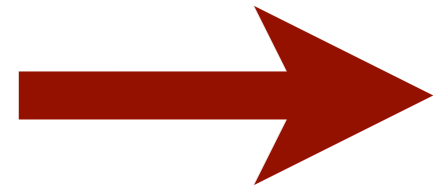
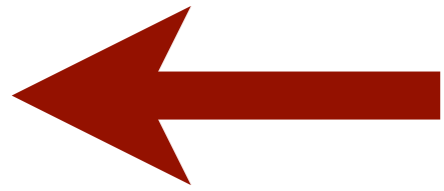
Self-Management
Processes

Tools & Resources



Goals &
Motivation

The Rest is
Up to Us!



Tools &
Resources



New Routines
for Schools

Next
Era Ed

Habit -based Pedagogies

-  ~~Chalk & Talk~~
-  ~~Copy/Paste Masterpieces~~
-  ~~Slacker's Delight~~

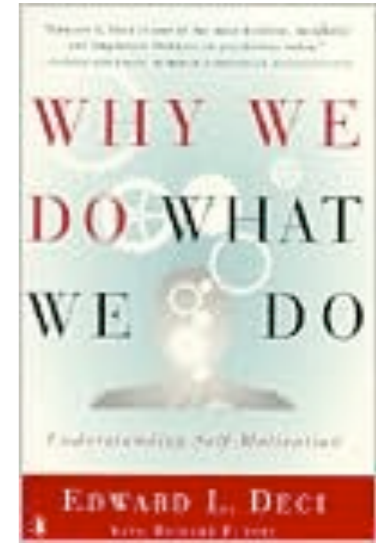


- Increased retention
 - Higher-order thinking
 - Future interest
 - Better mental health
-
- Critical Thinking
 - Habits of Mind
-
- Optimal Experience & Achievement
-
- Authentic Happiness



Intrinsic Motivation
from
Self-Determination Theory

Autonomy Competence Relatedness



- Critical Thinking
- Habits of Mind

- Optimal Experience & Achievement

- Authentic Happiness



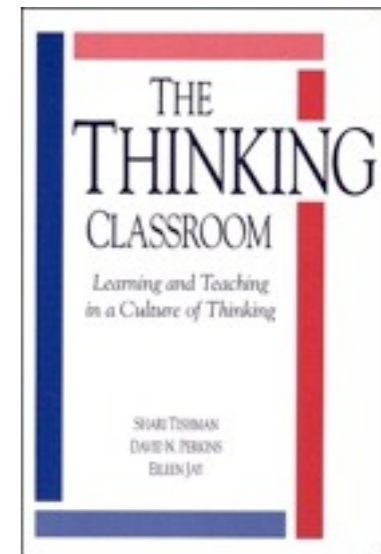
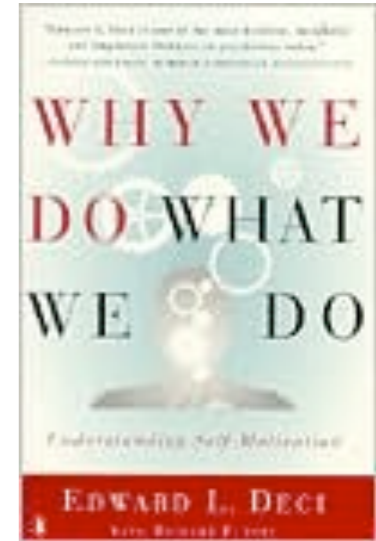
Autonomy Competence Relatedness

Inclination Sensitivity

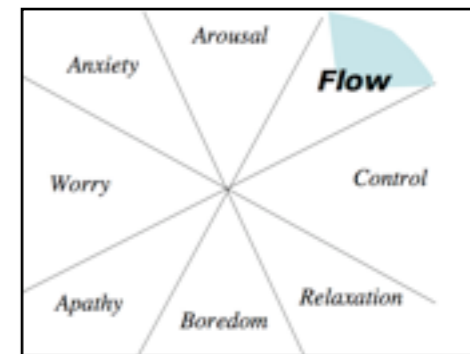
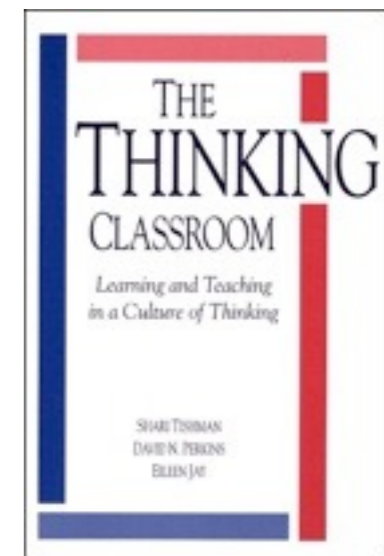
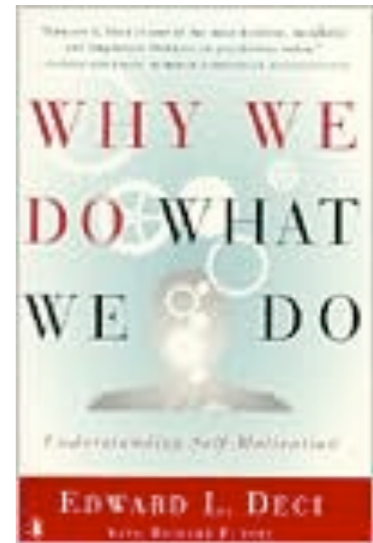
- Optimal Experience & Achievement
- Authentic Happiness

Intrinsic Motivation
from
Self-Determination Theory

Disposition &
enculturation



Autonomy
Competence
Relatedness



Inclination
Sensitivity

Flow & Grit

- Authentic Happiness



Intrinsic Motivation
from
Self-Determination Theory

Disposition &
enculturation

Flow Theory
& "Grit" studies

Autonomy Competence Relatedness

Inclination Sensitivity

Flow & Grit

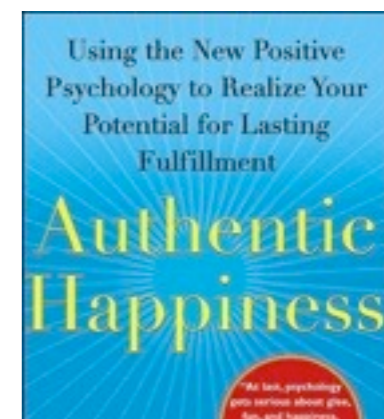
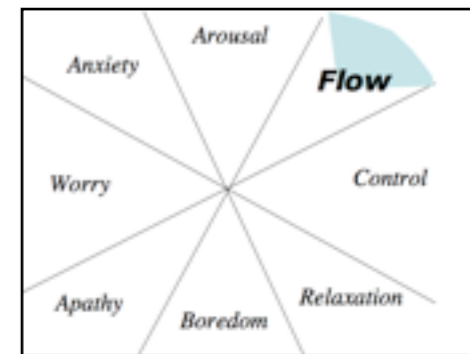
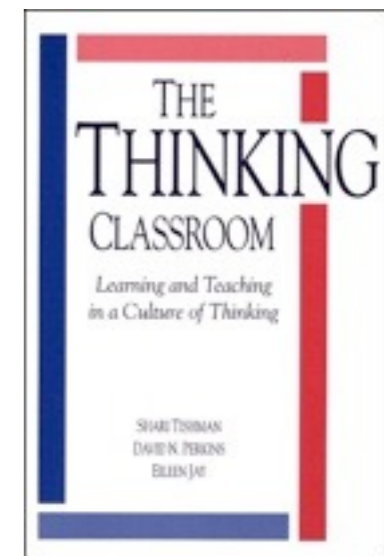
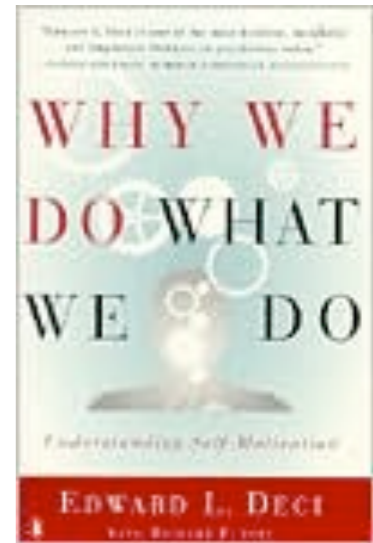
+ Care & Service

Intrinsic Motivation
from
Self-Determination Theory

Disposition &
enculturation

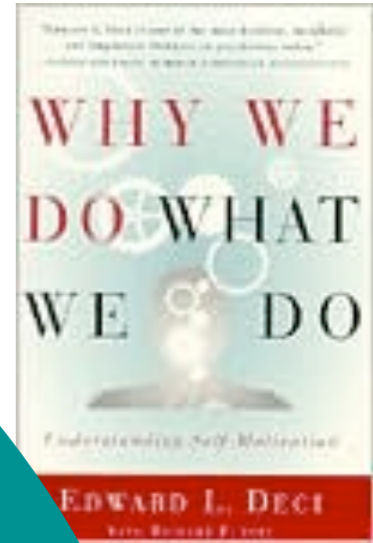
Flow Theory
& "Grit" studies

Positive Psychology



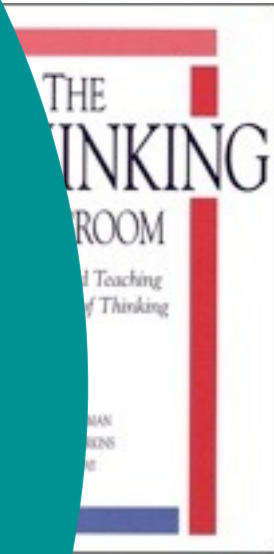
Autism

Intrinsic Motivation
from
Self-Determination Theory

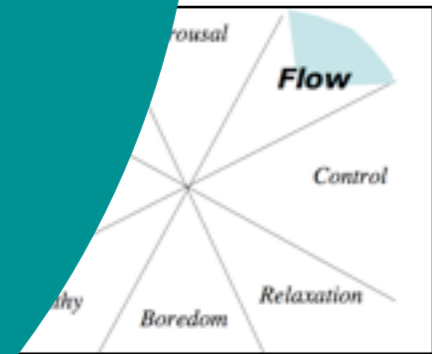


Dispositional
enculturation

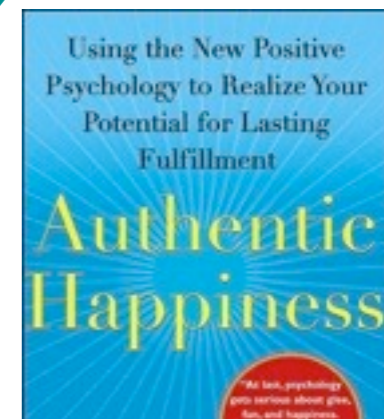
School



Flow Theory
& "Grit" studies



Positive Psychology



Curriculum

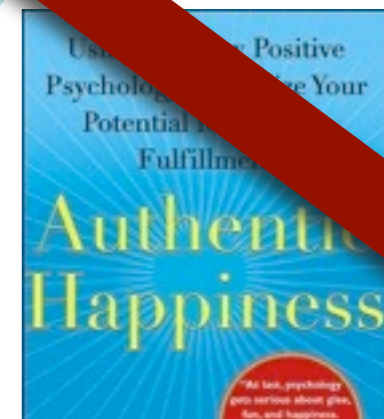
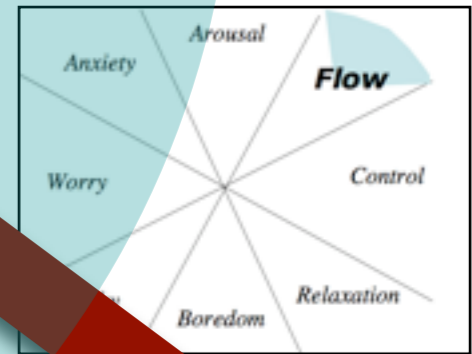
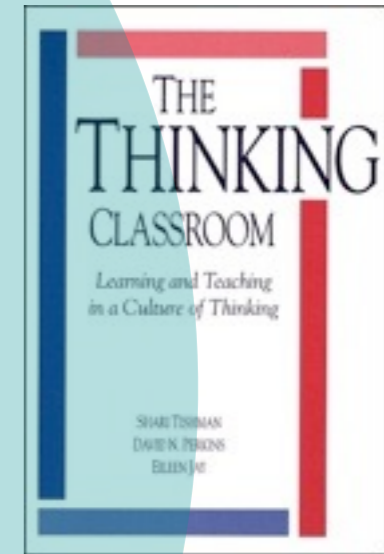
Intrinsic Motivation
Self-Determination Theory

Disposition &
enculturation

Flow Theory
& "Grit" studies

Positive Psychology

Autonomy
Competence
Relatedness
Innovation
School
Flow & Grit
+ Care &
Service



Self-initiated Learners
ready for the Digital Era



Flow & Grit

Authentic
Happiness

Content Expertise
Habits of Mind

ICT & Creative
Productions

Autonomy
Competence
Relatedness

Disposition:
Inclination
Sensitivity

The "Edge-ucators Way"





See - Think - Wonder

What significant thing did you see?

What did it make you think about?

What does this make you wonder?

ClassPortals



IHS Child Slave Labor :: Home

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- News
- Shopping
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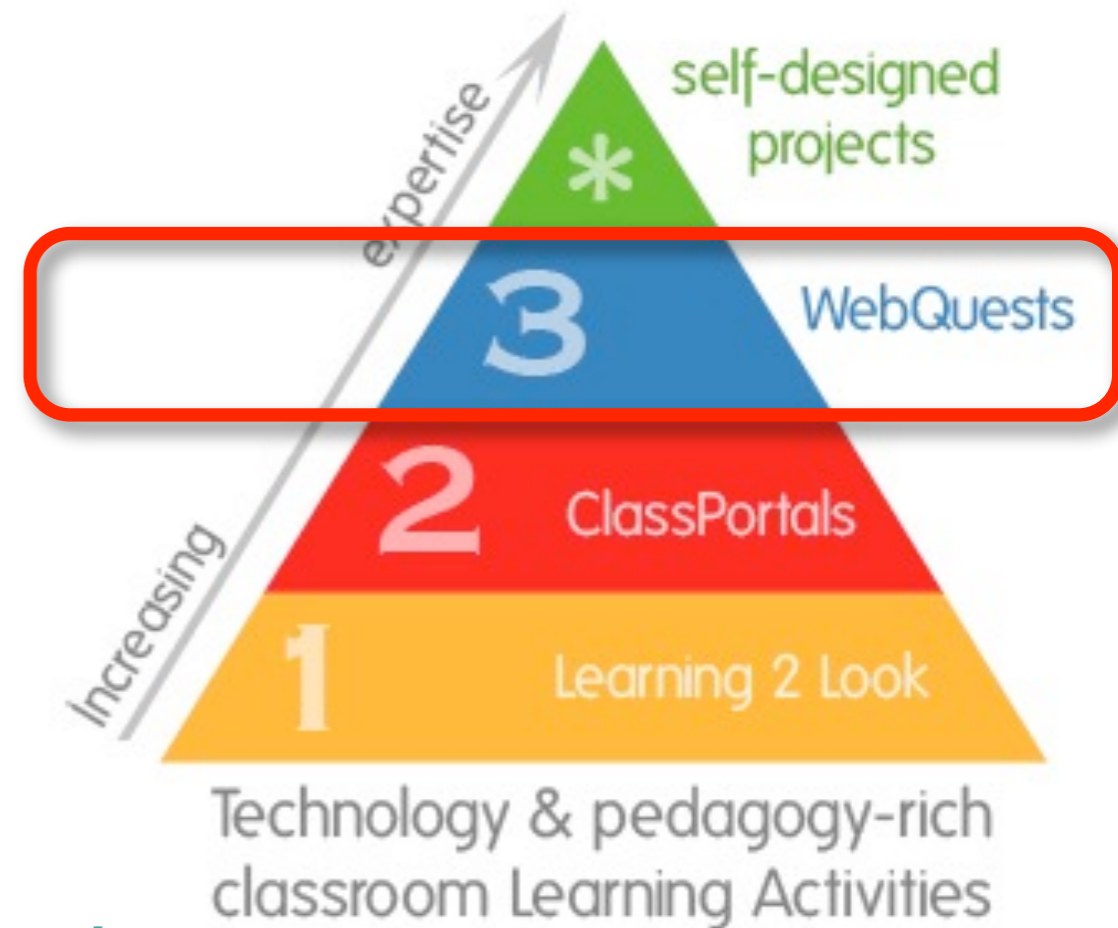


Bright ideas for education

Tom March

WebQuests

- Open-ended Inquiry
- Real, Rich and Relevant topic
- Intentional Learning
- Real World Contribution & Feedback



A Strategy to Scaffold Deep Learning

ozline.com / TomMarch.com



The Harsh Reality?

- “We did WebQuests...”
- “Now we Tweet...”
- What has changed for students? **Assembly line?**

16.5%
(I rounded up ;-)

“For the most part, students’ educational use of the Internet occurs outside of the school day, outside of the school building, outside the direction of their teachers”

(August 14, 2002)



Bright ideas for education

Tom March

WebQuests 2.0 (let's try again?)

- “Information Rich” and “Question poor”
- WebQuests: never a “page,” but a “process”
- WebQuests can scaffold a new model for schools
- The technology has changed, have schools?

Goals &
Motivation

Context
People

Self-Management
Processes

Tools &
Resources

**Culture - the New
"Instruction"**



Goals &
Motivation

Context
& People

New Routines
for Schools

Next
Era Ed

Tools &
Resources

**Culture - the New
"Instruction"**

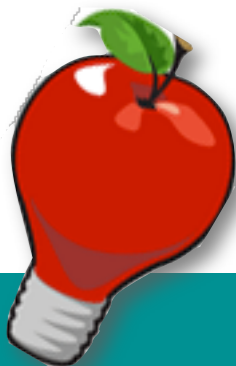


Next
Era Ed

Student
Self-managed
Learning

Student-managed Process?

- ~~Teachers design & deliver “Instruction”~~
- ~~Students complete (or not) task~~
- ~~Teacher evaluates & scores~~
- ~~Work goes to Fridge or Bin~~
- ~~Next!~~



CEQ • ALL

Choice • Effort • Quality • Attitude • Labour of Love

Seek-All

Framework for Student-managed Learning



CEQ•ALL Self Assessment Guide

	"Playing School"	"Engaging the model"	"Tasting Initiative & Joy"	"Self-initiated lifelong learning"
Choice	Little energy went into choosing what to do. It was more like a "roll of the dice" or "following orders" than making a choice.	Some thought went into choosing what to do, but more personal reflection might have suggested other good alternatives worth considering.	Energy was invested in considering options before choosing what to do. The choice excited interest and prior learning.	The choice of what to do naturally flowed from previous experiences and long-standing interests.
Effort	Little effort went into the activity. This was more a "going through the motions" or a "get through it" experience.	Some effort was put into the activity, but it might have been inconsistent and occasionally lacking focus or care.	Effort was definitely put into the task. Time, attention and reasonable care describe the activity.	The effort invested in the activity shows full engagement in trying to master new learning. Focused attention and ongoing care defined the endeavour.
Quality	"Quick and dirty" is probably a better description than "quality." The task probably isn't even completed.	The quality of the work may be below what could be expected, although aspects do show mastery of new learning.	The level of quality demonstrates achievement at or above expectations for someone at this level of learning.	The quality of the work goes beyond what would normally be expected. Attention to detail, creativity and personal interpretations are evident.
Attitude	Carelessness, apathy, low confidence, compliance or negativity might describe the attitude.	Willingness, cooperation, emerging confidence or only occasional inconsistency might characterise the attitude.	Optimism, engagement, confidence and consistency are regular attitudes.	Positive self-confidence and appreciation for others who have contributed are evident. "Flow" might have been occasionally experienced.
Labor of Love	Labor? Love?	There may have been moments when learning was an engaging experience.	The positive experience suggests similar endeavours might be enthusiastically pursued in the future.	Such engaged and self-initiated learning describes someone who sees the activity as a joy to pursue and a rewarding pastime.

Goals &
Motivation

Context
& People

Self-Management
Processes

Tools &
Resources



Goals &
Motivation

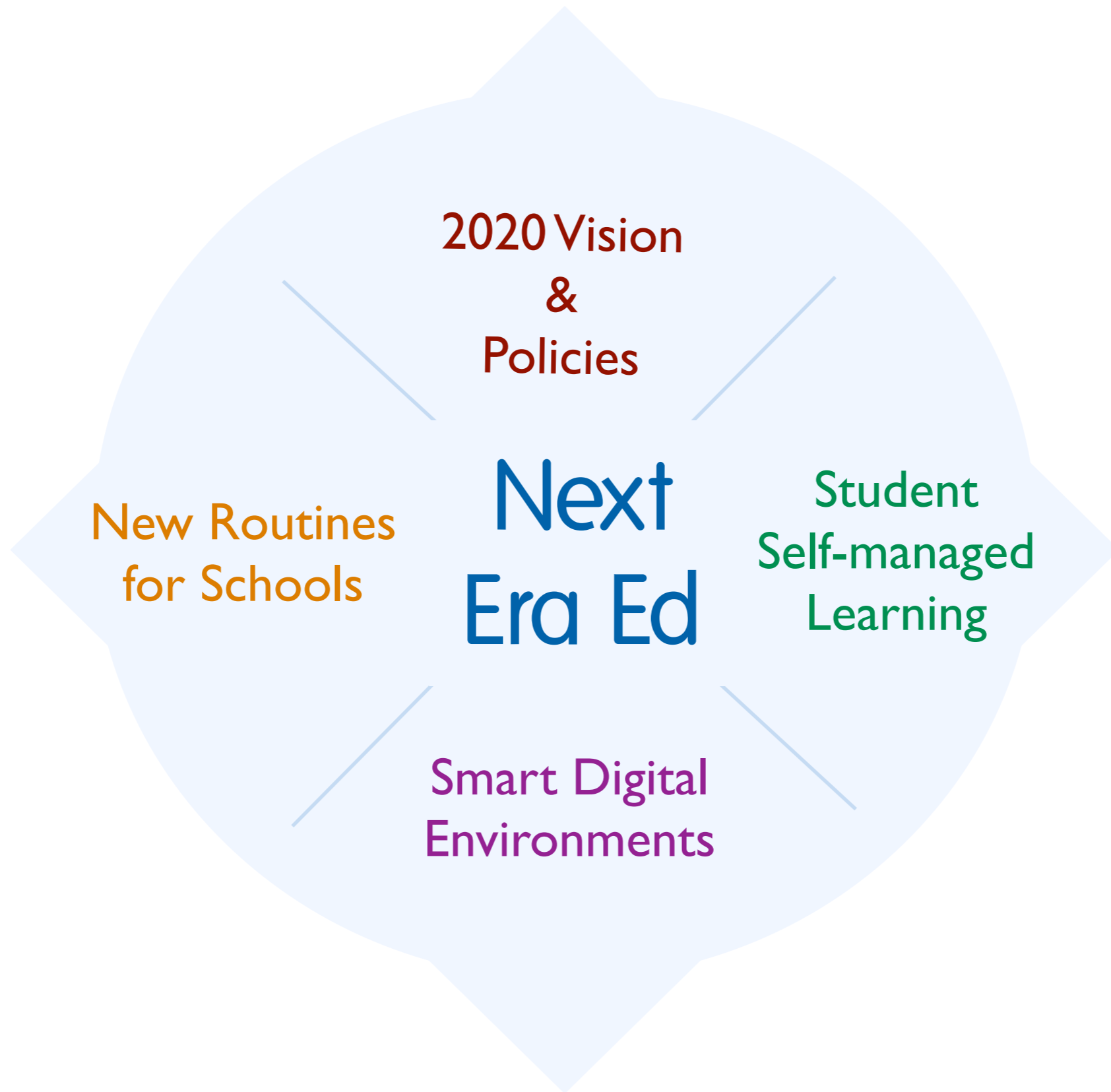
Self-Managed
Process

Tools &
Resources

Next
Era Ed

Student
Self-managed
Learning





Learning



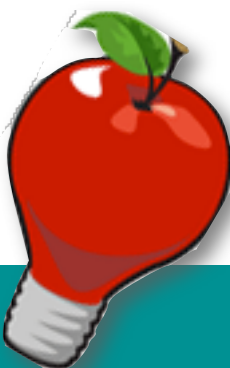
The Joy of Learning

A shared human experience

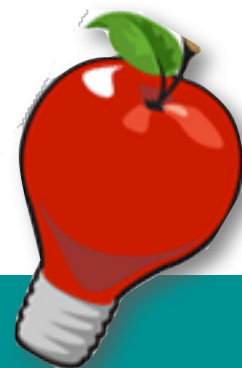


The Future of Learning

An intentional human construct

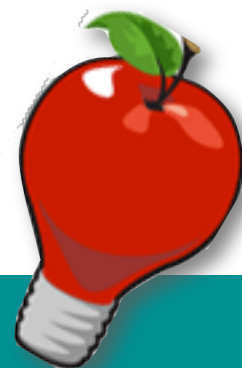


A Test on Focus



Peering into the future...

Next Era Ed





Bright ideas for education

Tom March

Thanks

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