

edustandaard

Kennisnet

K12 exam app

Standardised, detailed curriculum
as Linked Open Data

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Why this presentation...?

- An example from NL on the use of curriculum standards in personalised learning
- Recognition ? – inspiration – discussion - ideas



We owe much to ...

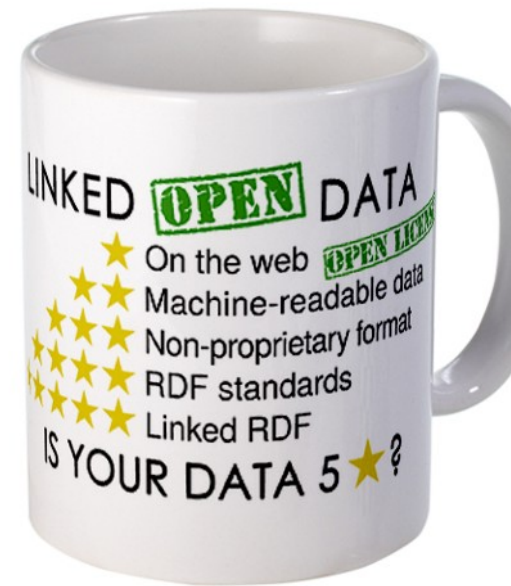


Stuart Sutton & Diny Golder

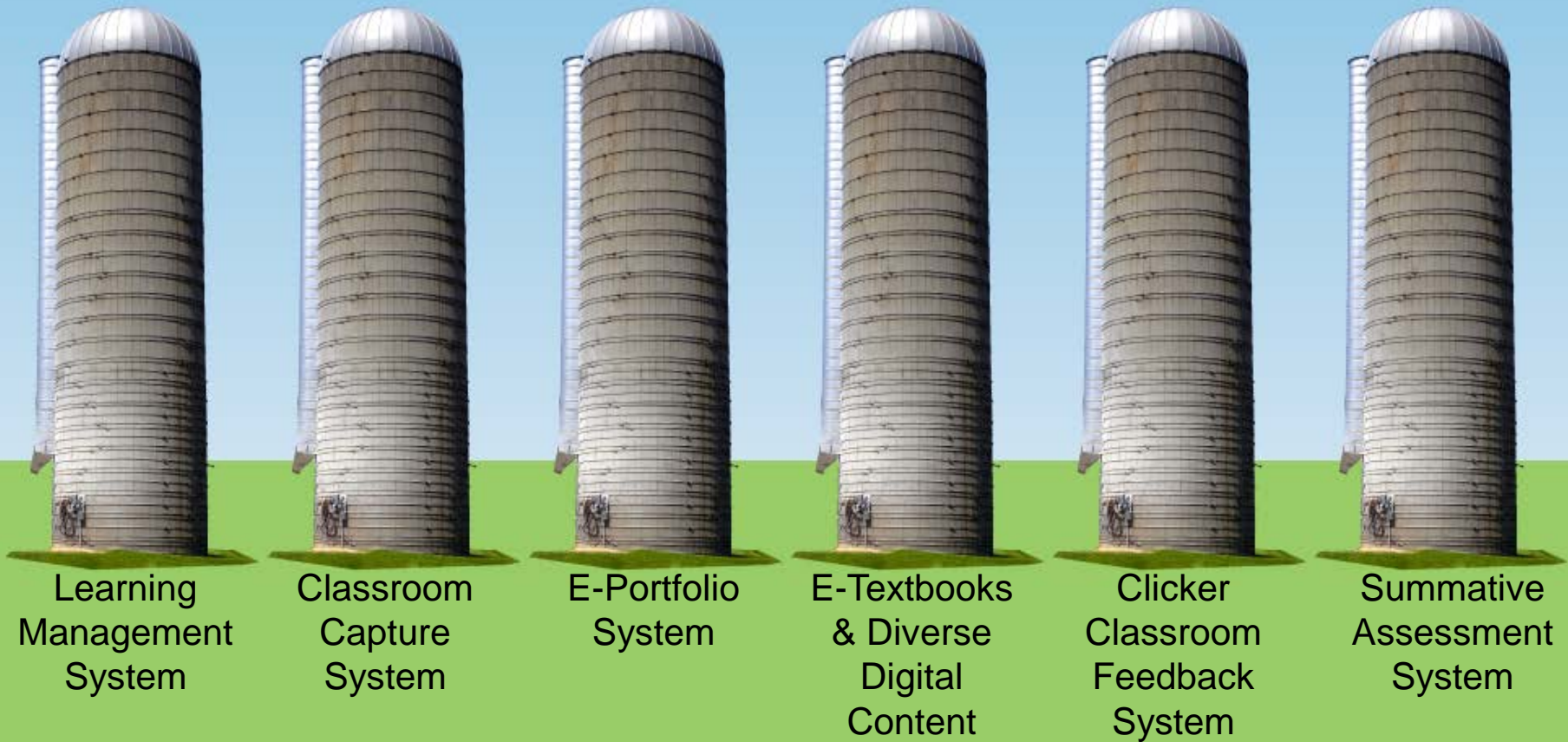


This presentation is about:

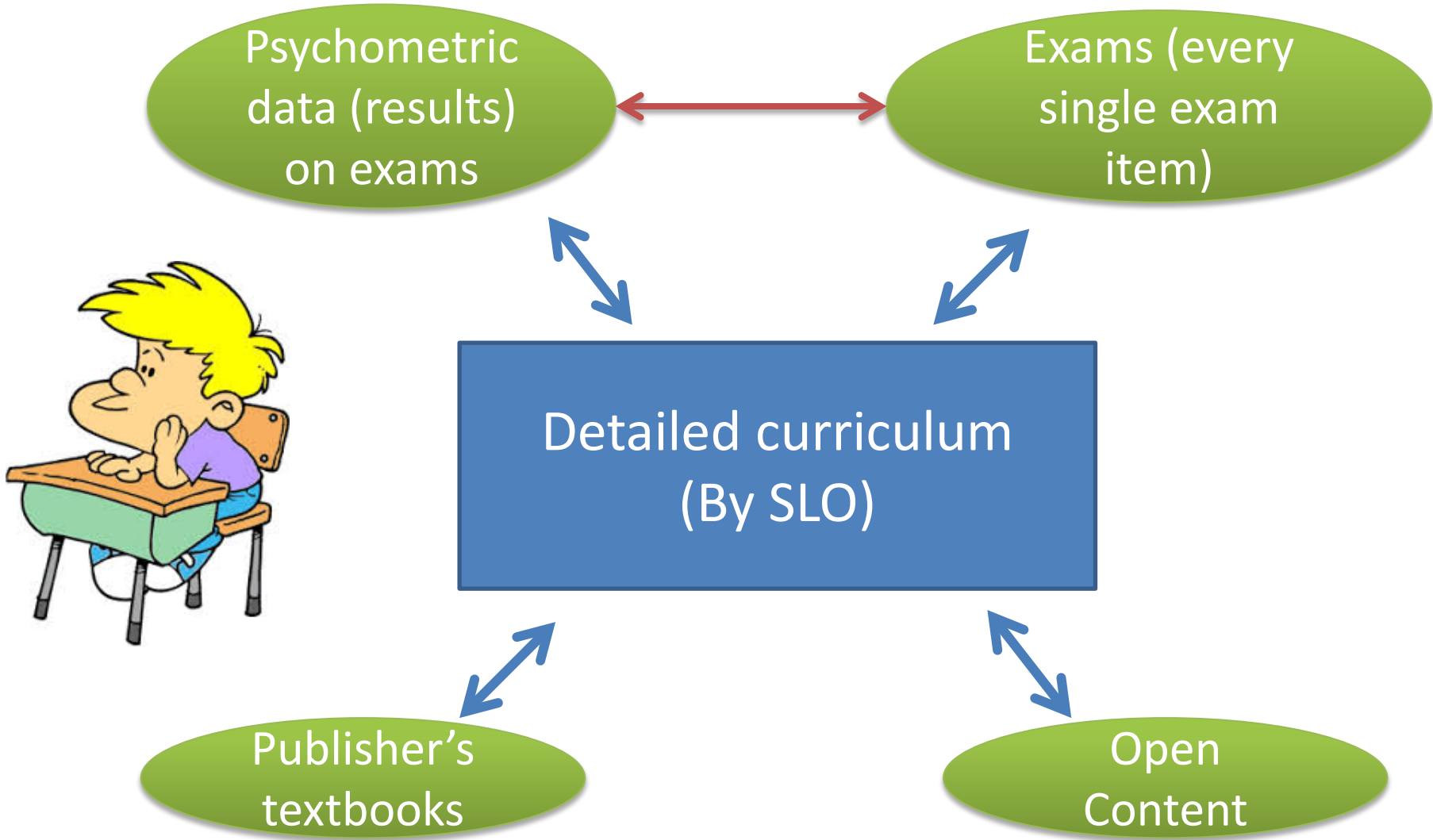
- Detailed curriculum (primary / secondary):
4 (5) levels deep
- Expressed via Linked Open Data
- A.k.a. 'curriculum in the cloud'
- Connecting 'information domains' like the publishers text books, exam questions & (open) learning objects



Lack of Cross-Application Architecture = Silos



We connected 4 domains



Online *exam app* for secondary schools (age: 17)



What is the app about

A student can:

- Make an old exam item/task (f.e. 2012)
- Compare his score with the national exam scores (+ his class)
- Make the connection with the 'textbooks' used
- Get extra (open) learning materials



A teacher:

- Gets information on how his student's (class) perform on the curriculum; analysis !!
- Can adapt his teaching to the individual student

Vakkern Krachten der aarde	Score		Vergelijken ?		
	Max	Behaald	Klas	Alle Leerlingen	Landelijk examens
+ Endogene krachten (5 vragen)					
- Exogene krachten (6 vragen) Vakinhoud					
Exogene processen	12	5,6		3,5	4,5
Resultaten per leerling -					
Leerling 27 van Demoklas Aardrijkskunde, De Geo (C&M)	8	3			
Leerling 20 van Demoklas Aardrijkskunde, De Geo (C&M)	8	4			
Leerling 21 van Demoklas Aardrijkskunde, De Geo	10	3			

Ingredient 1: achievement standards

- Detailed curriculum, 4 levels deep
 - Math & languages extra 1 level standardised
- Standardised in The Netherlands
- Compare with 'Common Core State Standards'

Ingredient 2: text books of the publishers

- Still essential in Dutch classroom; dominant market position
- Table of contents: paragraph

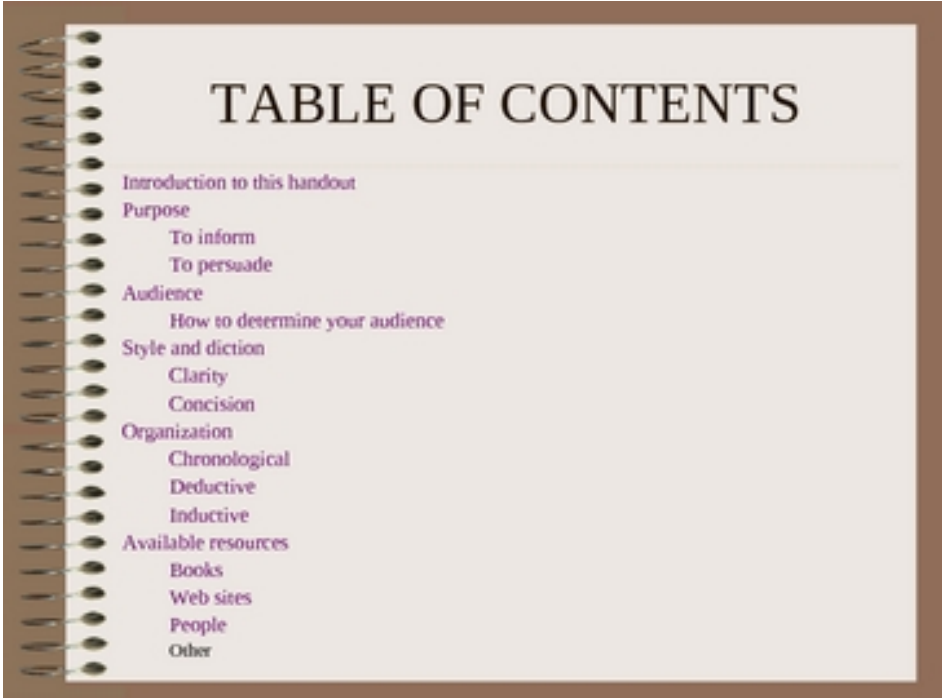


TABLE OF CONTENTS

- Introduction to this handout
- Purpose
 - To inform
 - To persuade
- Audience
 - How to determine your audience
- Style and diction
 - Clarity
 - Concision
- Organization
 - Chronological
 - Deductive
 - Inductive
- Available resources
 - Books
 - Web sites
 - People
 - Other

Ingredient 3: exam questions ('items')

- F.e. Physics, Math or Biology
- Each exam typically consist 40 questions ('items')
- We analysed all 2010-2014 exams

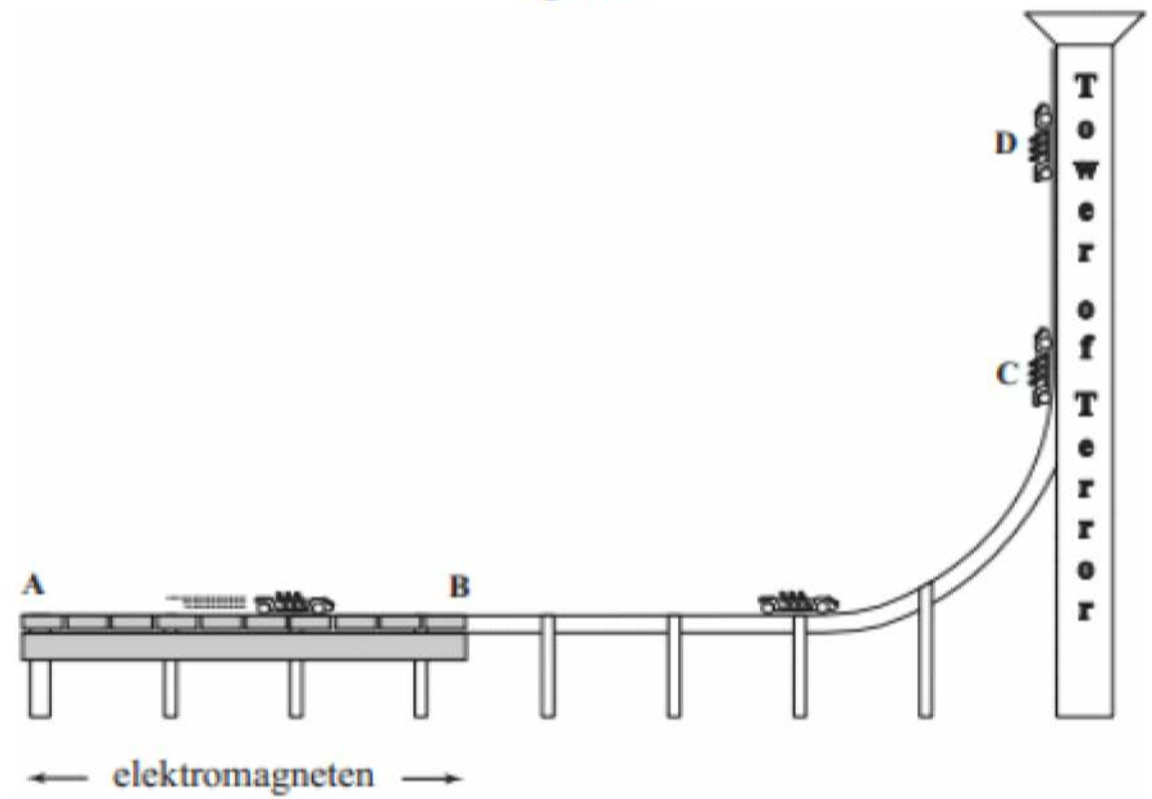


vraag ▼ antwoord ▷ geef uitleg ▷

Opmerking: in deze opgave verwaarlozen we steeds de wrijving.

In het attractiepark Dreamworld in Australië staat de Tower of Terror. Zie figuur 1.

Figuur 1



De massa van de
Bepaal de (horiz
en $t = 7,0$ s op d

Op het stuk AD wordt een kogel met behulp van elektromagneten vastgehouden. Na het

Ingredient 4: psychometric data of the exams (structured data)

Of each exam question (item) we know exactly:

- 30.000 students doing exams
- average score 2,2
 - Male 2.05 - Female 2.25
 - Profile (beta, alpha, etc)
 - Statistical data (sigma, etc)
 -





Ingredient 5: digital learning resources

- F.e.:





Next steps:

Other educational semantics

- Administrative domain
- Examples:
 - student information from primary to secondary schools
 - Student identity / school identity
 - identification – authentication – authorisation of student (privacy!!)
 - Registration of new students

Example: a school in different contexts

Inspection
(surveillance)

funding

accountability



Buying learning
material

Building
maintenance