



LEARNING SOLUTIONS

## *De rol van ICT en e-Learning*

Harm Weistra

**NIOOC 2002** *"ICT onderwijs van e-motion naar e-mission"*

6e Nationaal Informatica Onderwijs Congres



# Agenda

- **Waar staan we**

- [e-Learning](#)
- [Verwachtingen \(algemeen\)](#)
- [Onderwijs \(voorbeeld\)](#)

- **Mogelijke verklaring**

- [Tragiek van de techniek](#)

- **Hoe verder**

- [Van emotie naar e-missie](#)



# e-Learning

e-Learning

=

Verzamelnaam voor  
leersituaties waarbij  
gebruik wordt  
gemaakt van  
internet-technologie

e-Learning

=

Verzamelnaam voor  
leersituaties waarbij  
gebruik wordt  
gemaakt van  
ICT



# Beloften e-learning

- **Flexibeler**
- **Efficiënter**
- **Goedkoper**
- **Persoonlijker**



# Flexibeler

## ■ Flexibiliseren naar:

- Tijd
- Locatie
- Tempo
  
- Any time
- Any place
- Any pace



# Efficiënter

- **Technologie zou zorgen voor:**

- Hogere opbrengsten
- Zelfde middelen
- Zelfde tijd



## ■ Personaliseren naar:

- Leerstijl
- Interesse
- Deficiëntie
- Leerresultaat (adaptief)
  
- Just-for-me i.p.v. just-in-case



# Goedkoper

## ■ Reduceren van:

- Reis- & verblijfskosten
- Personeelskosten (docenten / ondersteuning)
- Centrale voorzieningen (gebouwen)





## ■ Onderzoek VS:

- 50% e-learners haalt eindstreep niet (asynchroon)
- Slechts 50% afvallers komt tweede keer terug

## ■ Onderzoek UK:

- 70% e-learners haalt eindstreep niet

## ■ Mogelijke oorzaken:

- Missen sociale controle groep
- Gebrek aan discipline



## ■ Herbezinning:

- Meer aandacht voor groepsactiviteiten
- Meer aandacht voor rol docent/begeleider
- Blended learning
  - Klassikaal
  - Synchron e-learning



# Beloften e-learning

- **Flexibeler**
- **Efficiënter**
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# Dilemma 1

- **Maak ik e-learning flexibel**
  - Gaat ten koste van mijn efficiëntie (doelmatigheid)
- **Maak ik e-learning efficiënt**
  - Dan ben ik minder flexibel



# Beloften e-learning

- Flexibeler
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## ■ Kosten van (laten) maken van leermateriaal hoog

- 250 – 320 ontwikkeluren / uur leerstof (Smartforce)
- 40 uur (page turner) – 750 uur (int. simulatie) (Brandon Hall)
- 25.000 – 35.000 Euro / uur leerstof (tarief: 100 Euro / uur)

## ■ Rekensom:

- Opleiding van een week
- Klassikaal:  $5 * 6 = 30$  uur
- WBT: 80% van 30 uur = 24 uur
- Kosten: 600.000 – 840.000 Euro



## ■ Terugverdienen door schaalgrootte

- Omvang doelgroep
- Frequentie gebruik



# Beloften e-learning

- Flexibeler
- Efficiënter
- Goedkoper
- Persoonlijker





## Dilemma 2

- **Maak ik e-learning goedkoper**
  - Dan schaalgrootte en risico van minder persoonlijk
- **Maak ik e-learning persoonlijk**
  - Dan risico dat duur wordt (maatwerk / specifieke doelgroepen)



## Conclusie: twee dilemma's

- **Flexibel:** afhakers
- **Verminderen afhakers:** minder flexibel
  
- **Personaliseren:** kleine doelgroepen
- **Kleine doelgroepen:** hoge kosten
- **Terugverdienen kosten:** grote groepen
- **Grote groepen:** minder persoonlijk



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Distance Education

# Buffalo Drops Online M.B.A. Program

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The State University of New York at Buffalo's School of Management pulled the plug on its 18-month-old Web-based M.B.A. program last week. The business school joins a growing list of institutions that have concluded that online programs aren't worth the expense and hassle.

Only 35 students signed up for the two pilot courses offered in the fall of 2001. Buffalo had hoped to expand its course offerings and enroll 1,000 students by January of this year. However, administrators decided not to market the program aggressively when it became clear that they didn't have the money to sustain it.

"Each course has to have an instructor, a graduate assistant, technical people to be there in case the connection breaks down, as well as someone to design the course," said Howard G. Foster, associate dean for academic programs at the business school. "We've found these courses to be

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Distance Education

Wednesday, February 20, 2002

**SUNY-Buffalo Drops Online M.B.A. Program**

By [KATHERINE S. MANGAN](#)

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expand its course offerings and enroll 1,000 students by January of this year. However, administrators decided not to market the program aggressively when it became clear that they didn't have the money to sustain it.

Constraining course strangle research

[V.S. Naipaul](#) tells would-be Indian writers to stay away

"Each course has to have an instructor, a graduate assistant, technical people to be there in case the connection breaks down, as well as someone to design the course," said Howard G. Foster, associate dean for academic programs at the business school. "We've found these courses to be very labor-intensive."

program, which involving that online courses were as effective as classroom-based instruction, or worrying that teaching the courses would take too much time. Professors who teach online often report that getting up to speed on the technology can be frustrating and time-consuming, and that students expect them to be available around the clock.

Like several other business schools whose efforts to expand online have been derailed, Buffalo was

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Many faculty members resisted teaching in the program, either doubting that online courses were as effective as classroom-based instruction, or worrying that teaching the courses would take too much time. Professors who teach online often report that getting up to speed on the technology can be frustrating and time-consuming, and that students expect them to be available around the clock.

\$200,000 it had promised, Mr. Foster said. No one at the institute was immediately available for comment.

Mr. Foster said he hasn't given up on the idea that the program might be resurrected, but he said it wouldn't be easy.

"I'm convinced there's a market out there," he said. "The challenge is covering the costs, deploying the faculty, and getting these courses developed."

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Like several other business schools whose efforts to expand online have been derailed, Buffalo was burned by an outside partner that failed to live up to its promises. (See [an article from The Chronicle](#), October 5, 2001.)

The Albany-based Institute for Entrepreneurship, which ran into financial and management problems, gave the school only about \$65,000 of the \$200,000 it had promised, Mr. Foster said. No one at the institute was immediately available for comment.

drops online M.B.A. program

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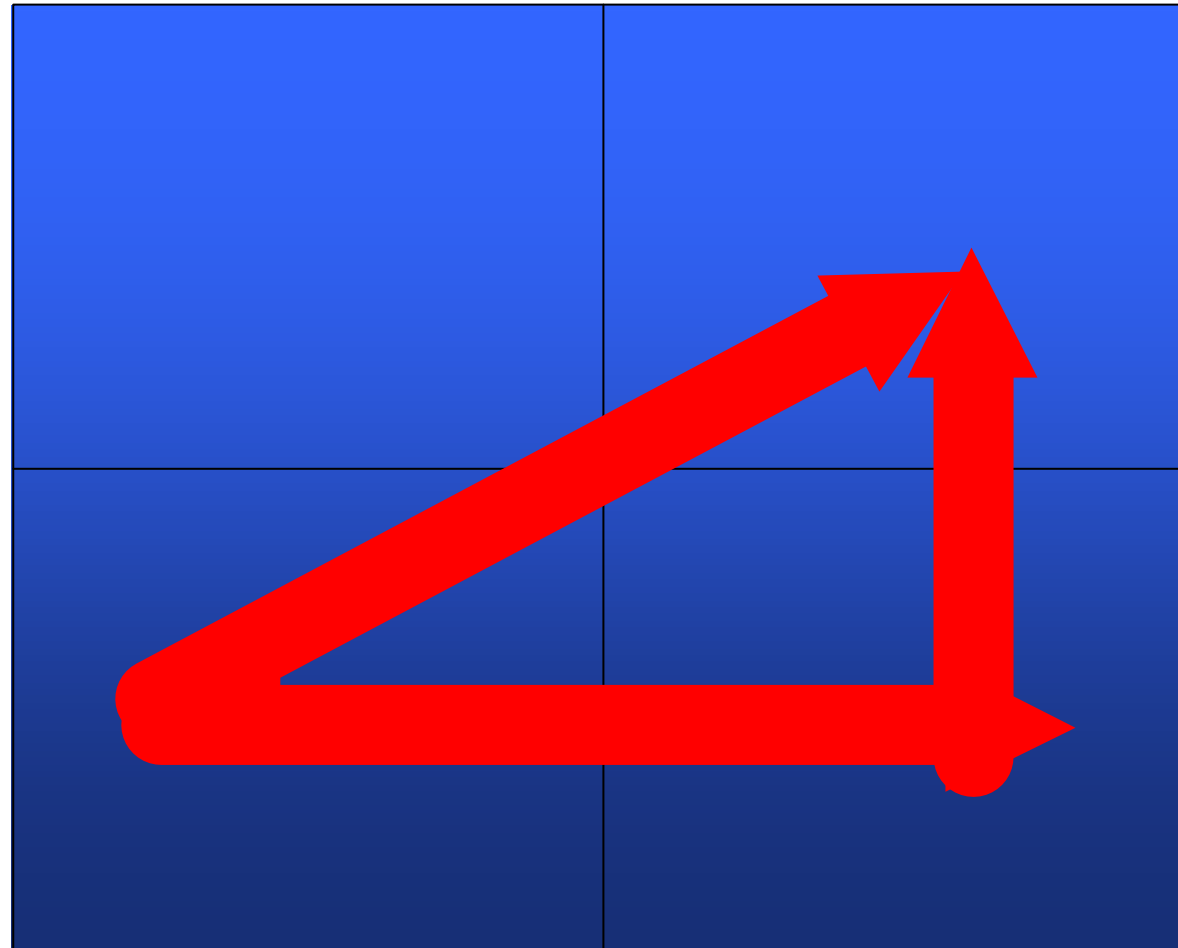
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# Tragiek van de techniek

Nieuw  
mentaal  
model

Bestaand  
mentaal  
model



Bestaande  
technologie

Nieuwe  
technologie



# Groeiproces

transformatie

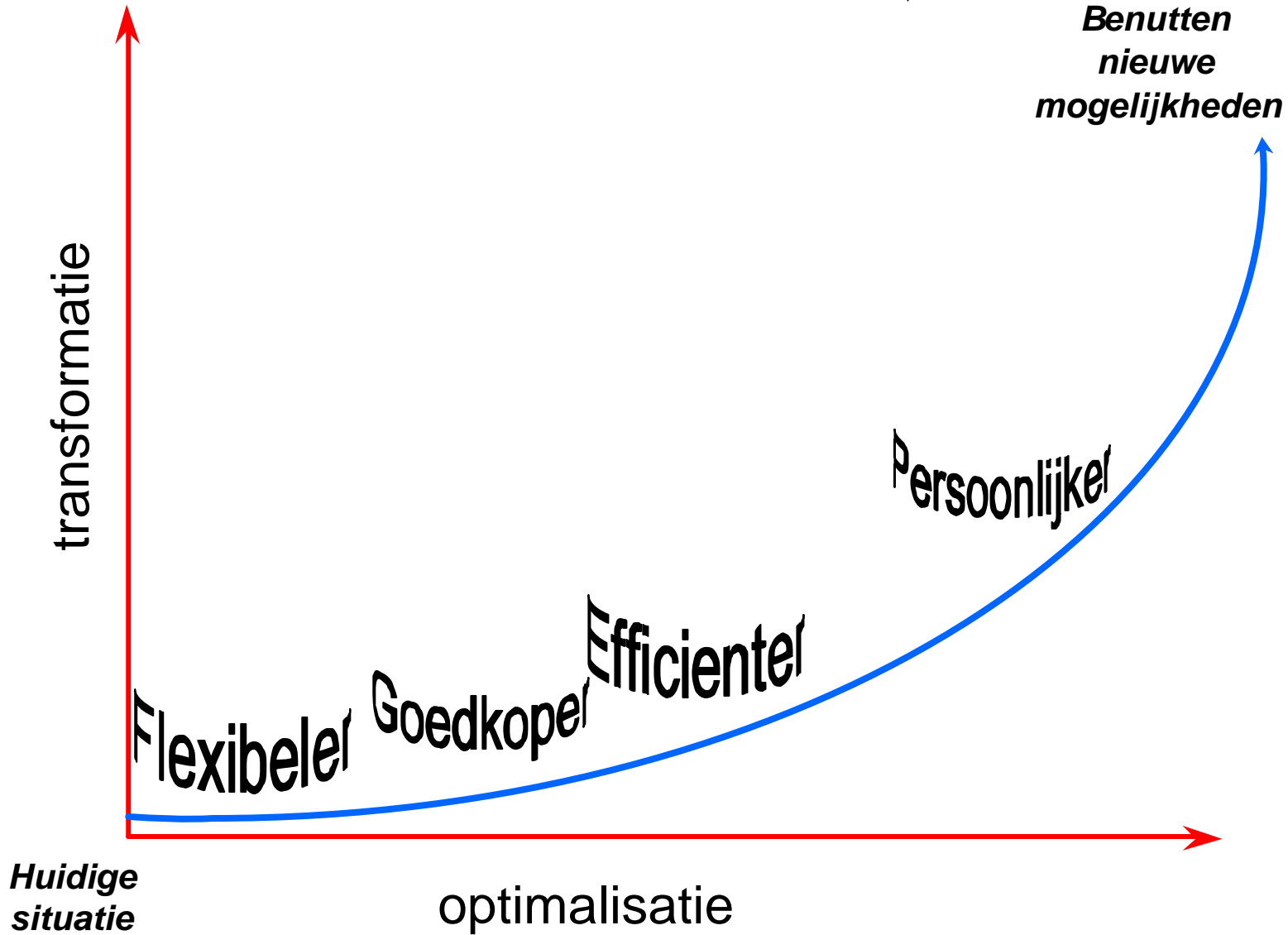
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nieuwe  
mogelijkheden*

*Huidige  
situatie*

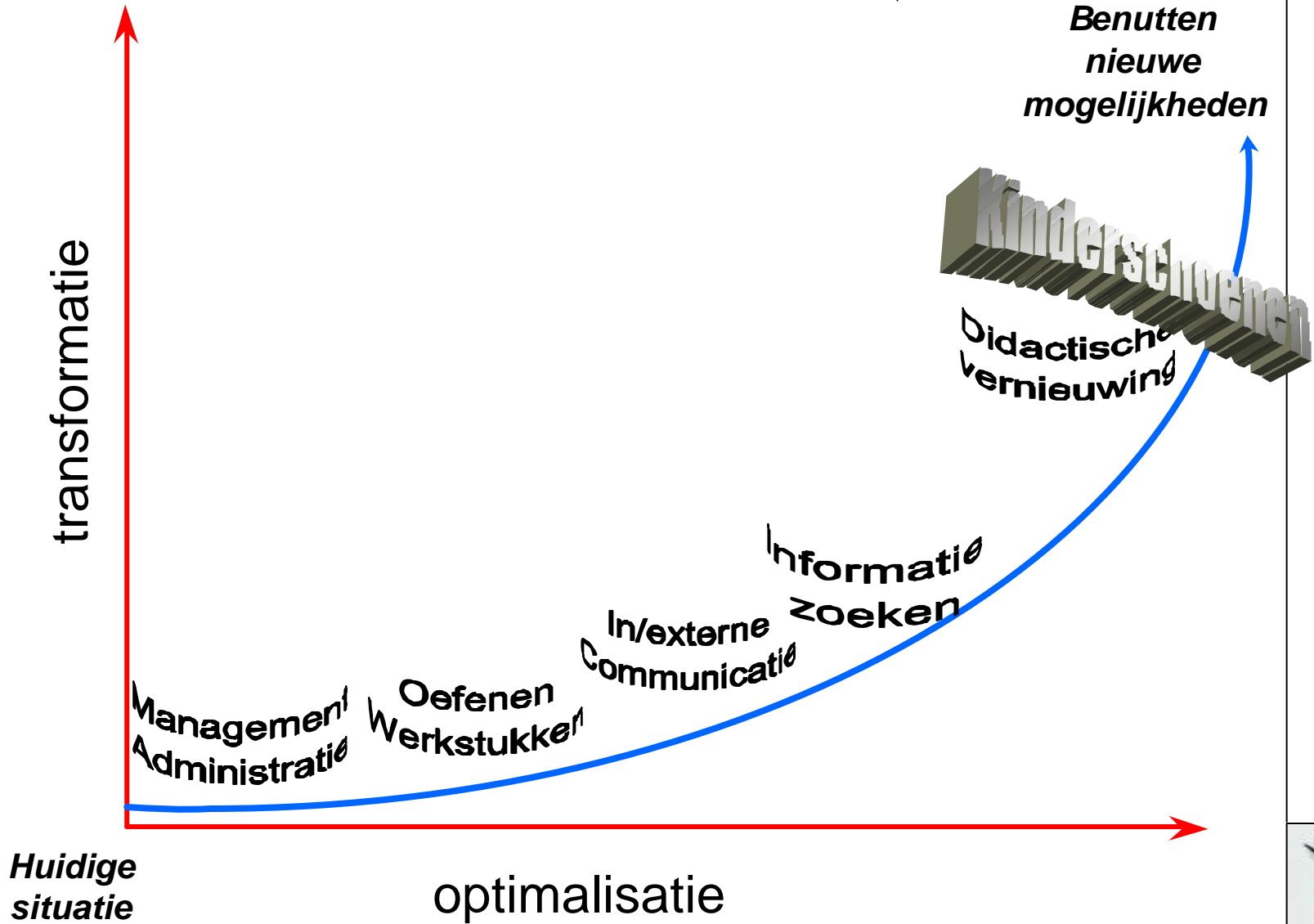
optimalisatie



# Bedrijfsleven



# Onderwijs: ICT Monitor 2000-01



*"ICT onderwijs van emotie naar e-missie"*

**Emotie** → **e-Missie**

Gemoedsgesteldheid

Speciale opdracht



# Tragiek van de techniek

Nieuw  
mentaal  
model

e-Missie

Bestaand  
mentaal  
model

Bestaande  
technologie

Nieuwe  
technologie



# Onderwijs: wat dan wel?

*Benutten  
nieuwe  
mogelijkheden*

**e-Missie**

transformatie

*Huidige  
situatie*

optimalisatie



## ■ Van opleiden naar leren

- Van event naar process
- Van geplande gebeurtenissen naar een continu proces
- Aansluiten bij (directe) performance-/kennisbehoefte
- Integratie van:
  - Performance Support
  - Kennismanagement
  - e-Learning

## ■ Van afgeronde cursussen naar 'leerobjecten'

- Van cursusontwikkelaar naar kennisregisseur
  - Rol voor inhoudsdeskundigen (SME)
  - Template-gebaseerde ontwikkelmethodiek





# Missie onderwijs?

## Bestaand mentaal model:

### ■ Onderwijs =

- Geïstitutionaliseerd proces dat gericht is op het realiseren van bepaalde, van te voren vastgestelde leerdoelen voor een omschreven doelgroep (WRR)

## Nieuw mentaal model

### ■ Onderwijs =

- Educatieve infrastructuur voor levenslang leren (WRR)

## Grenzeloos leren (OC&W)

- Leren = doorlopend proces
- Leerrechten:
  - Vouchers
  - Persoonlijke ontwikkelrekening (POR)



## Bestaand mentaal model:

- Opleiden / trainen
- Kennis
- Instructie
- Cursussen
- Groepen (cursisten/medewerkers)
- Tot bepaalde leeftijd
- Doceren / trainen
- Standaard programma's
- Buiten context
- Gesloten, binnen instituut / bedrijf

## Nieuw mentaal model

- Leren
- Competenties (EVC)
- Constructie
- Leerobjecten
- Individuen
- Levenslang
- Begeleiden
- Flexibele leerroutes
- Binnen context
- Open, over grenzen heen



# Voorspelling 1

Edison (1922): The motion picture will revolutionize education. In a few years it will supplant largely if not entirely the use of textbooks.



## Voorspelling 2

Papert (1984): There won't be schools in the future. The computer will blow up the school.



1. **Nut nieuwe technologie meestal anders dan aanvankelijk gedacht**
  1. Te optimistisch
  2. Andere toepassing
    1. IT: bezuiniging of verandering?
2. **Toepassing verdringt techniek**
  1. Computervaardigheden
    1. Doel of middel
    2. Hermans: learn to use -> use to learn (Onderwijs Online)
3. **Nieuw mentaal model kost tijd**
  1. Van optimalisatie naar transformatie
    1. Proces kan worden versneld

