A Dutch Numeracy approach: Succes! Rekenen

ALM 2017

Wim Matthijsse

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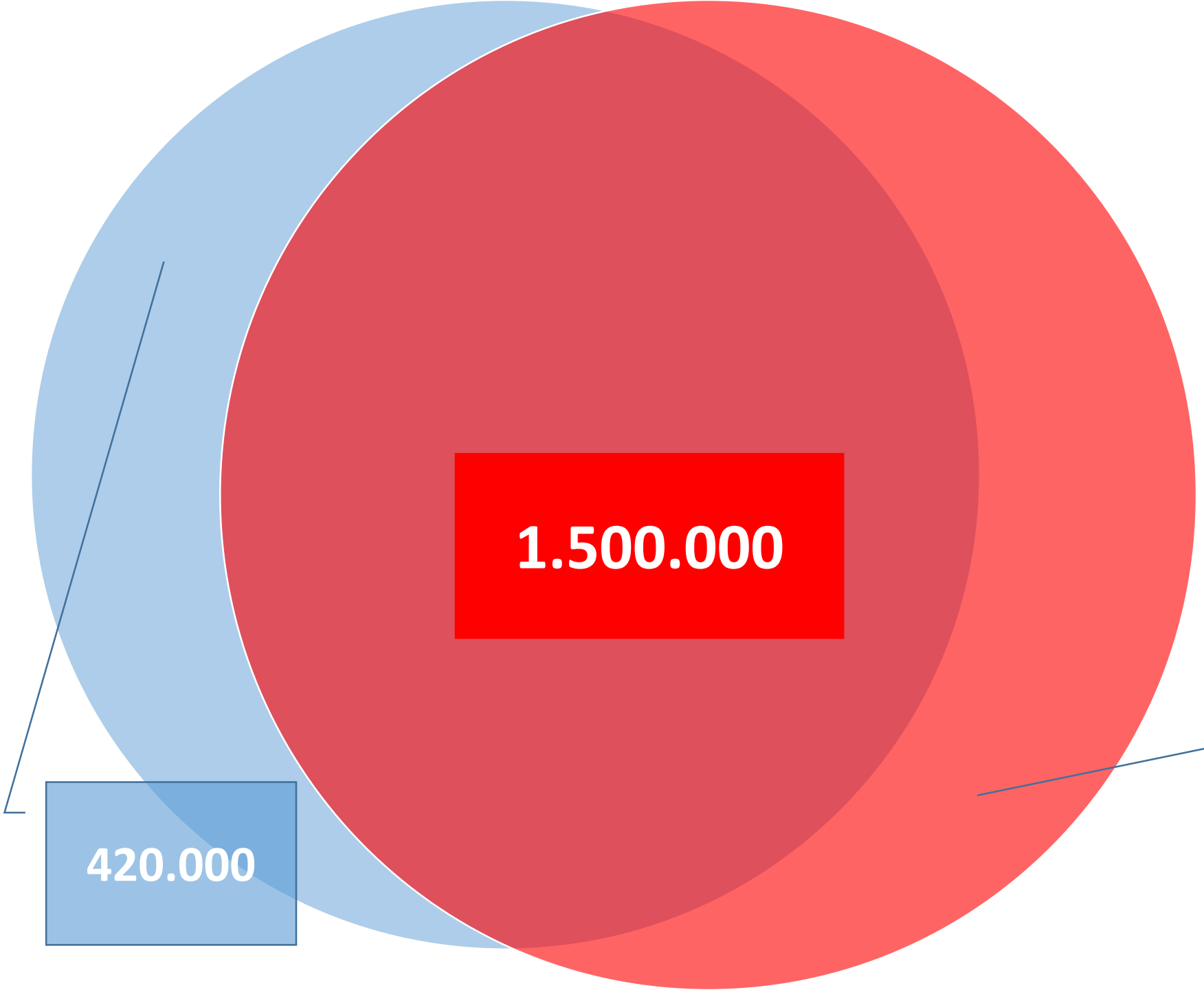
Program

- Brief introduction
- Numeracy: Actvity and reflection
- Characteristics of Succes! Rekenen
- Results of the pilot

Brief introduction:

the Dutch Context

2,1 million



Low on Literacy

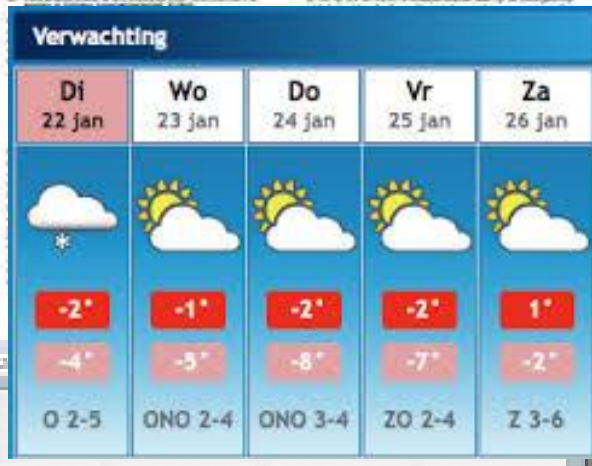
Low on Numercay

16+

STICHTING LEZEN & SCHRIJVEN

200 m
4 min 24 s
18:44

VAXIGRIP 2011/2012


Verwachting
Di 22 jan
Wo 23 jan
Do 24 jan
Vr 25 jan
Za 26 jan
-2° -4° O 2-5
-1° -5° ONO 2-4
-2° -8° ONO 3-4
-2° -7° ZO 2-4
1° -2° Z 3-6

9292 service onderweg

STANLEY
3m

12
1
2
3
4
5
6
7
8
9
10
11
QUARTZ

Overheerlijke be
Ingrediënten
Bereiding:
Bak de boterkoek op 180 graden 25 minuten
Bon!

16:28

Context of the Pilot

- National Dutch literacy-programme “Taal voor het Leven” (Language for Life)
- Wide cooperation of diverse organizations at local and regional level
- Focus on non-formal learning (connected with formal learning)
- Trained Volunteers
- Teaching materials for free

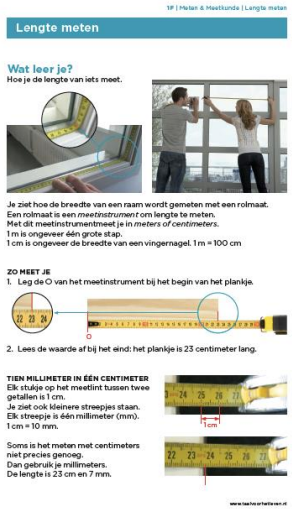
Numeracy

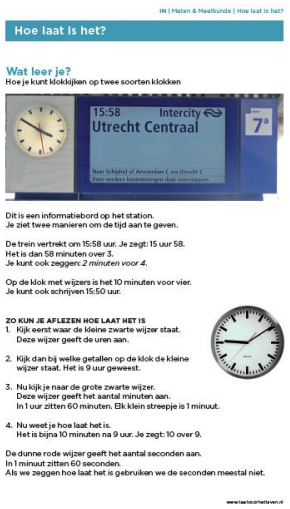
Succes! Numeracy

Pilot set of materials

Thematic Booklets

Three levels

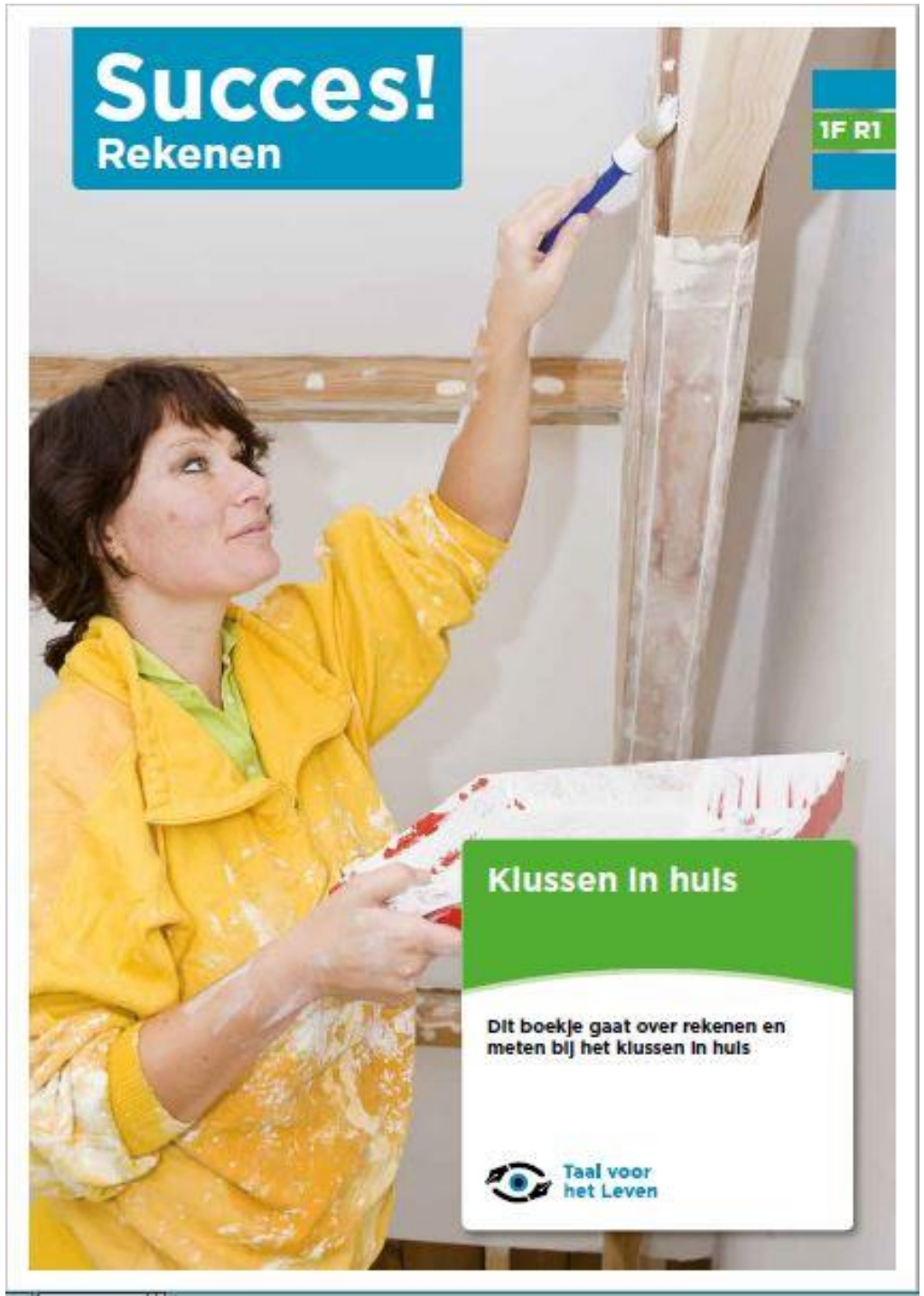




Supporting materials

STICHTING LEZEN & SCHRIJVEN

Activity


Succes!
Rekenen
1F R1
Klussen in huis
Dit boekje gaat over rekenen en meten bij het klussen in huis
Taal voor het Leven

Preceding activities

Look around in this room.
Estimate the lenght, widht and height.
Discuss your way of working.

LORGA GROEN € 2,00 per tegel

afmetingen	50 x 50 cm
structuur	grove lus
vloerhoogte / dikte (ca.)	4,5 mm
materiaal	100% Polypropyleen (PP)

Task

- In small groups

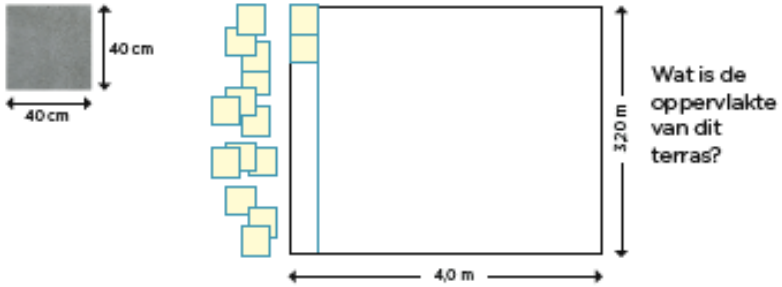
- Do problems 1 through 5 in your handout
- Use/read the instructions on page 12

- Discuss if and how this approach fits your local situation

Wat Is oppervlakte?

Wat leer je?

Je leert hoe je oppervlakte kan uitrekenen.



ZO BEPAAL JE DE OPPERVLAKTE VAN HET TERRAS

1. Je kiest eerst een handige *meeteenheid*.
   Bijvoorbeeld de tegel van 40 cm bij 40 cm die op het terras komt.

2. Met deze tegels bedek je dan het terras:
   - Je legt het helemaal vol met tegels.
   - Of: je tekent een paar rijen met tegels en berekent dan hoeveel tegels er op passen.

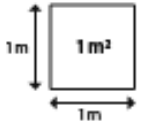
3. Op dit terras passen 8 rijen van 10 tegels.
   De *oppervlakte* van het terras is dus 80 tegels van 40 bij 40 cm.

ANDERE TEGELS GEBRUIKEN

Je kunt ook een andere meeteenheid kiezen. Bijvoorbeeld andere tegels:

- Een tegel van 80 cm lang en 80 cm breed. De oppervlakte is dan 20 tegels. Dat is *minder* dan 80 tegels.
- Een tegel van 20 cm lang en 20 cm breed. De oppervlakte is dan 320 tegels. Dat is *meer* dan 80 tegels.
- Een tegel van 50 cm lang en 50 cm breed. De oppervlakte is dan minder dan 80 tegels, maar komt niet precies uit op een heel aantal tegels.

STANDAARD MEETEENHEDEN GEBRUIKEN



Vaak kies je een standaard meeteenheid.
Bijvoorbeeld een *vierkante meter*.
Dat is een 'tegel' van 1 meter lang en 1 meter breed.
De oppervlakte van deze tegel is 1 vierkante meter, je schrijft 1 m².

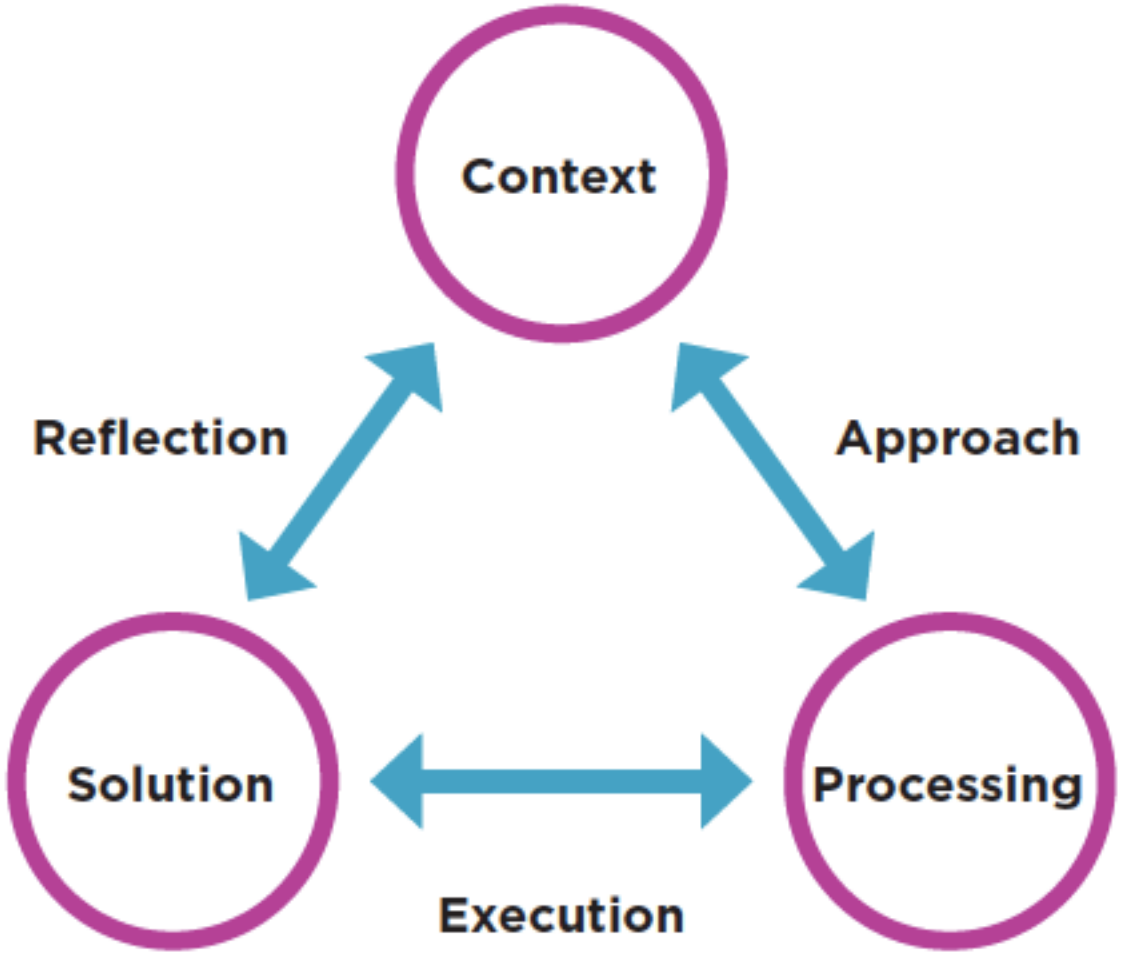
- Extra support for specfic math topics
- On a card
- Backside has suggestions for volunteer

Characteristics of the approach

What do you recognize and value?

1. Focus on numeracy

2. Three-step problem solving

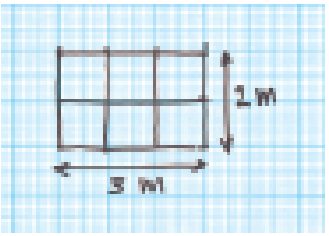


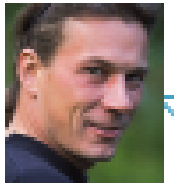
3. Own solutions

ASSIGNMENT 3 | Calculating the number of tiles: How they do it

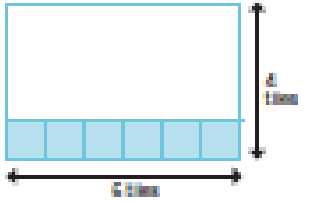
Ayla, Bert and Hasan tell what they do when they want to know how many carpet tiles they need.
Read their stories...

Ayla:
I draw the room on squared paper.
I pretend that one square is 50 cm long and 50 cm wide.
That is the same size as one tile.
Now I can count how many tiles are needed.

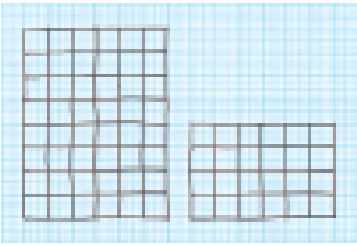




Bert:
I place the tiles along the edge.
Two tiles together are 1 metre long.
So six tiles in a row would be 3 metres long.
4 rows on top of each other.
That would be 4 x 6 = 24 tiles.



Hasan:
The small room is half the size of the large room. So you need half as many tiles. For the large room, you need 48 carpet tiles.
For the small room, you need 24.



Is your method included here?
What did you do in the same way? What did you do differently?
Discuss this with each other.

4. Models

Het schaalmodel is gemaakt op schaal 1 : 20
Bereken hoeveel centimeter het model is.
Gebruik hiervoor een schaallijn, of een rekenschema,
of een verhoudingstabel.

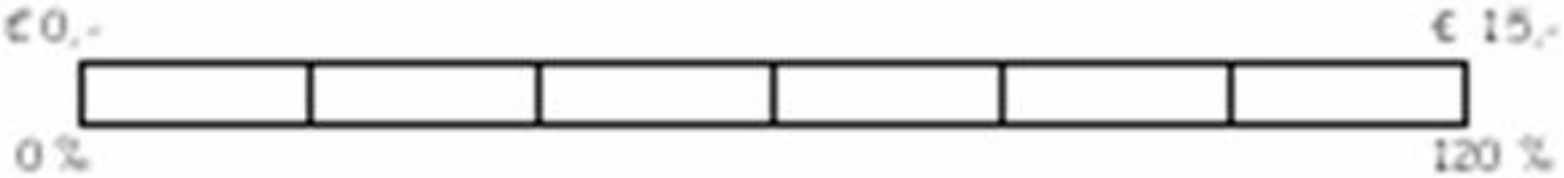
Rekenschema

4,50 m = 450 cm

450 cm :20 → 22,5 cm

verhoudingstabel

	:20		x 450
Tekening	1	...	...
Werkelijkheid	20	1	450
	:20		x 450



5. Talking about numeracy

Pilot & results

Participants

39 trained volunteers & professionals

88% (very) satisfied about numeracy training

104 students, 64% NT1

Ratio working with individual student vs working with a small group: 55 – 45%

Language level

56% does agree with entry level A2 (speak)

59% does agree with entry level 1F (reading & instruction)

The pillars (characteristics of approach)

“connecting to student’s own solutions” most popular

“ working with different models” less popular

Overall impression on Succes! Numeracy

83% (very) positive overall impression.

Most important explanations:

- Students are enthusiastic
- Material looks attractive
- Practical / Focused on Practice

Numeracy skills

23% of the volunteers & professionals thinks that numeracy skills improve strongly through Succes! Numeracy

27% thinks that numeracy skills improve somewhat

The other respondents are not able to make an estimation

Conclusions & recommendations

Not easy to point clear Improvement points

Maybe the language levels are too high (speak, reading & instruction)

Coaching and Numeracy teaching

Thank you for your attention

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