



# PAZAPA: identifying and supporting at-risk students

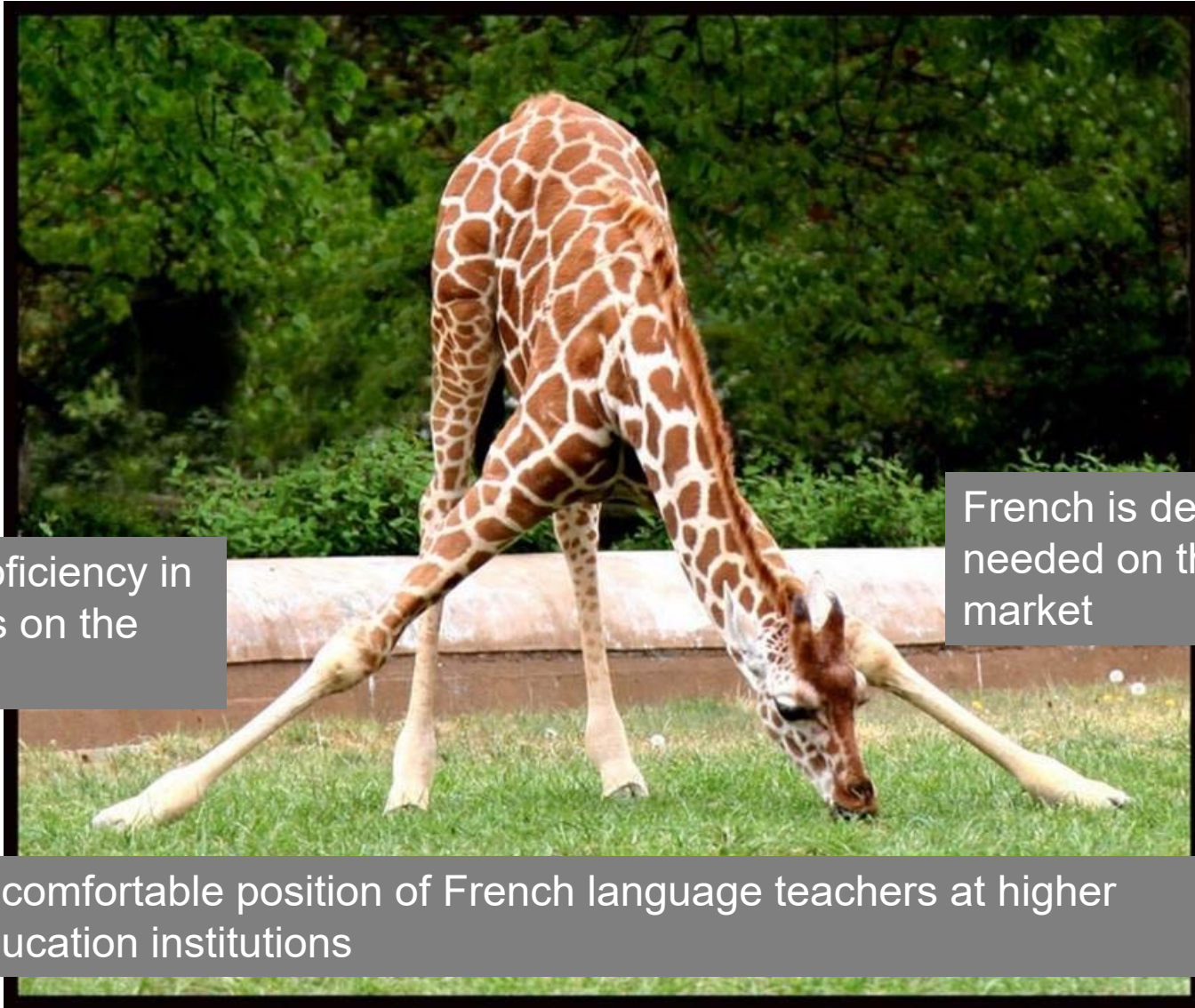
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French proficiency in Flanders is on the decline

French is definitely needed on the labour market

uncomfortable position of French language teachers at higher education institutions

# Research question

How to

*identify  
& support at-risk students (for French)*

by

*providing relevant feedback at the right moment?*

Rather than providing students with the message 'we missed you last week; please catch up the next days' [...], intervention can now focus on concrete learning behaviors: working on the tendency to procrastinate, searching for alternative learning materials that may be of more challenging nature. In other words: the learning feedback will change from product feedback to feedback provided at the process level, the most effective type of feedback.

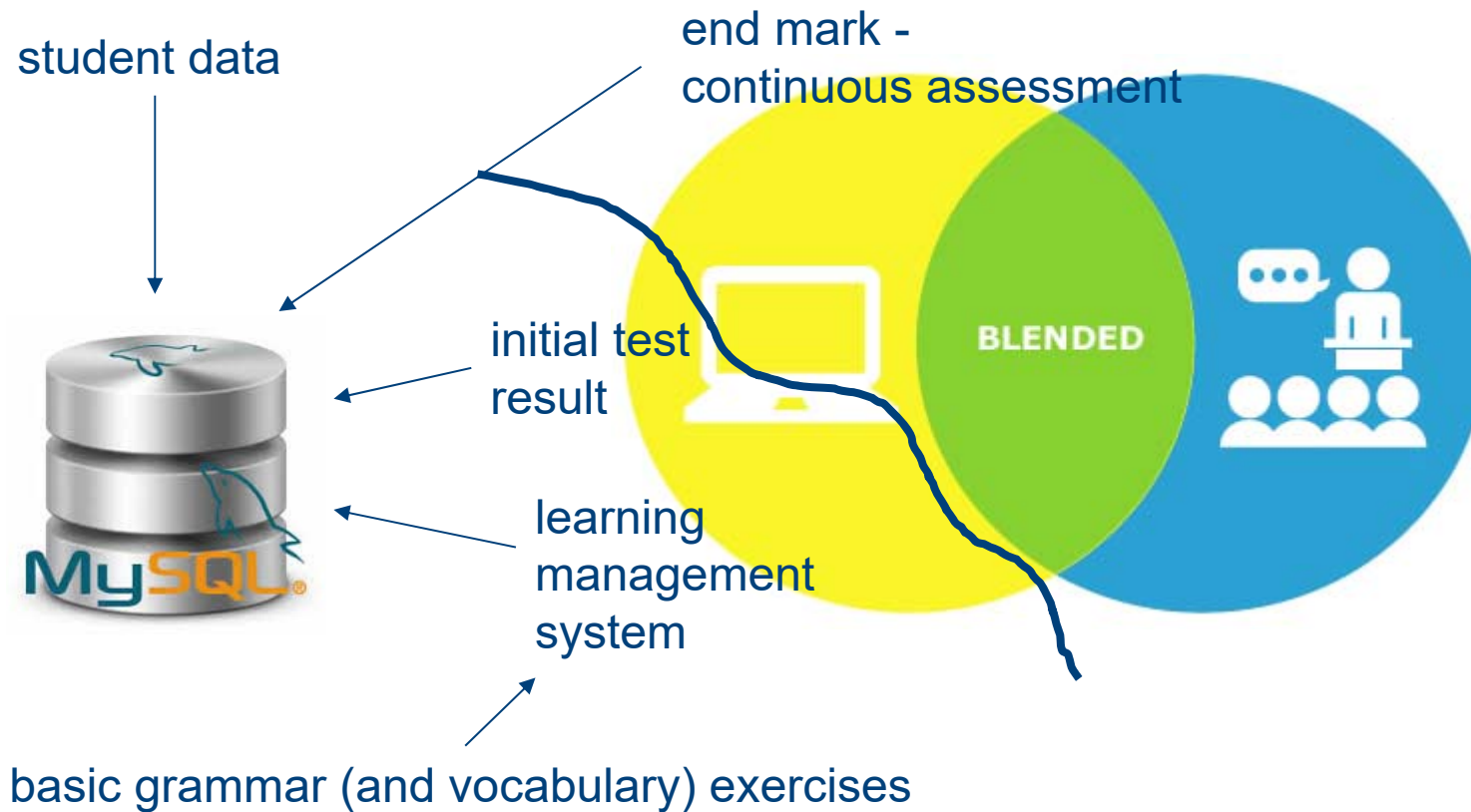
Tempelaar, Rienties and Nguyen (2017). Towards Actionable Learning Analytics Using Dispositions

# Subject of the study

- 367 students  
1st year of fac. of Law (2015-2016)  
university of Leuven (KU Leuven)
  
- selected from dataset of 3909 students (2015-2017)

# Teaching approach: blended learning

language for specific purposes course



# Student data

- previous studies
- end mark for previous studies
- number of hours for French and Mathematics
- mother tongue
  
- self-evaluation (0-10)

# Initial test

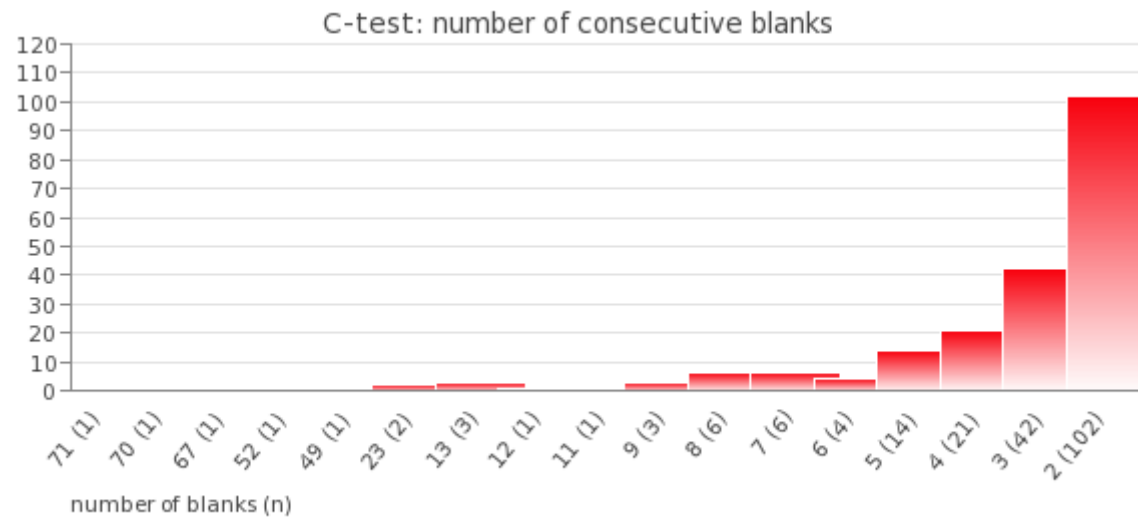
- C-test

Le livre de langue française en Belgique représente un marché de 208 millions d'euros. C'est de **ux** fois plus que **e** marché d**u** disque. Le Belge aime **-t-il** lire? L**e** bouquin dem**eu**re sur **la** troisième marche du podium de **ses** principales dép**ense**s, derrière **la** télévision et **les** jour**naux** et périod**iques**. Toutefois, le relatif déclin des achats de livres par rapport à l'ensemble des biens culturels est en légère augmentation.

- 100 items
- often used as placement test

# Initial test

- Did the students take the test seriously? YES





# Initial test

- Predictive value of test scores? YES
  - Correlation test score – exam score:
    - $R = .55$  ( $p < 0,001$ )
  - Regression analysis
    - $R^2 = 0.50\%$

variables	$\beta$	p
End result secondary school	.292	<0.001
Test score	.265	<0.001
Secondary school type	.252	<0.001
...		

# Initial test

- Division into groups (n = 367)

	exam < 10	exam >= 10	% success	
test <= 40	32	4	11.1%	} I: 102
test <= 50	44	22	33.3%	
test <= 60	45	67	59.8%	II: 112
test <= 70	16	80	83.3%	} III: 153
test > 70	5	52	91.2%	

# LMS: exercises

- 20 grammatical topics, free order
- common “fill in the blanks” exercises
- 1 exercise = 2 attempts
  - first attempt => correction + fact sheet
  - second attempt => focus on mistakes  
correction + fact sheet
- goal: 7/10 for 17/20 topics > reward > final mark

# Exercices

- feedback\_1: correction + fact sheet (after both attempts)

## L'emploi de la négation - correction de l'exercice

Votre score est suffisant (80%). Regardez toutefois attentivement les phrases où vous avez commis une erreur.

### 2. Place de la négation dans la phrase

#### 1. La négation porte sur le verbe conjugué

NE	pronom réfléchi pronom personnel en - y	verbe conjugué	<b>pas plus rien jamais</b>	(part. passé)
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*Elle ne s'en souvient pas.  
Vous ne les y trouverez probablement plus.*

NE	pronom réfléchi pronom personnel en - y	verbe conjugué	(part. passé)	<b>personne nulle part aucun(e)</b>
----	---	----------------	---------------	---

*Il ne trouve ce livre nulle part.  
Je n'en ai parlé à personne.*

#### 2. La négation porte sur l'infinitif

<b>ne pas ne plus ne rien ne jamais</b>	pronom personnel en - y	infinitif
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*Je préfère ne pas partir seul.  
Il m'a promis de ne rien en dire à maman.*

<b>ne</b>	pronom personnel en - y	infinitif	<b>personne aucun (de)</b>
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*Essaie de n'en laisser aucune.  
J'espère n'avoir choqué personne.*

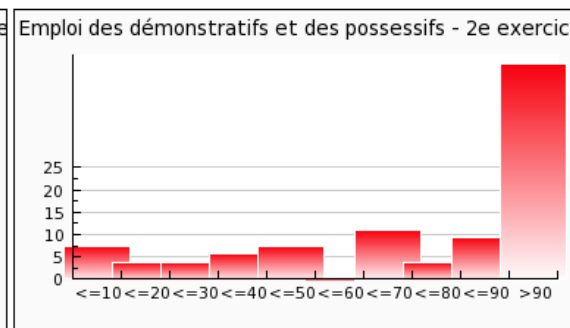
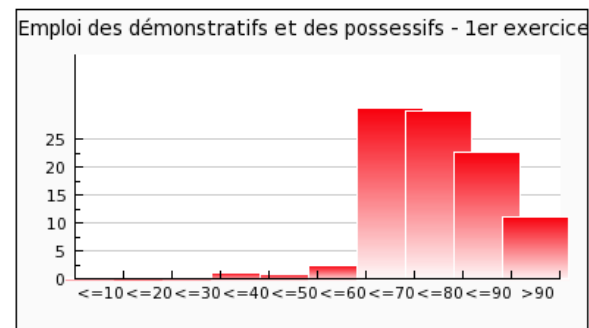
Ce que vous avez répondu:

- Les syndicats **n'** ont décidé de **pas** [ne pas] poursuivre les négociations et de faire grève.

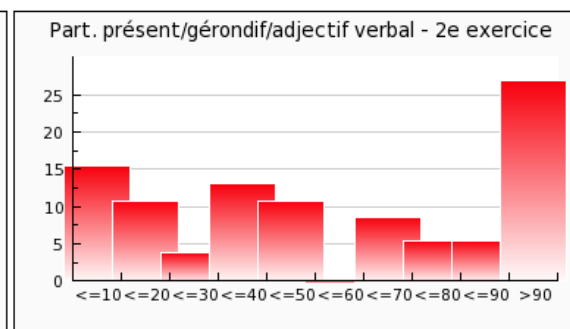
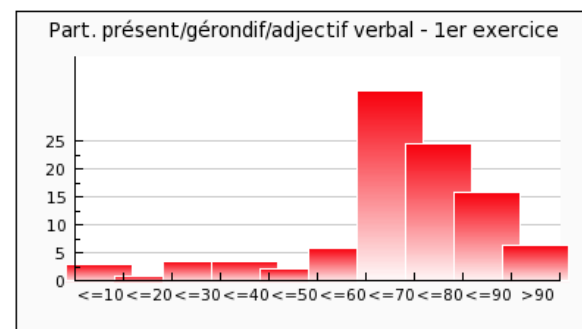
# Exercices

- feedback\_2: score compared to score of their peers

## L'emploi des démonstratifs et des possessifs



## Part. présent/gérondif/adjectif verbal



# Exercices

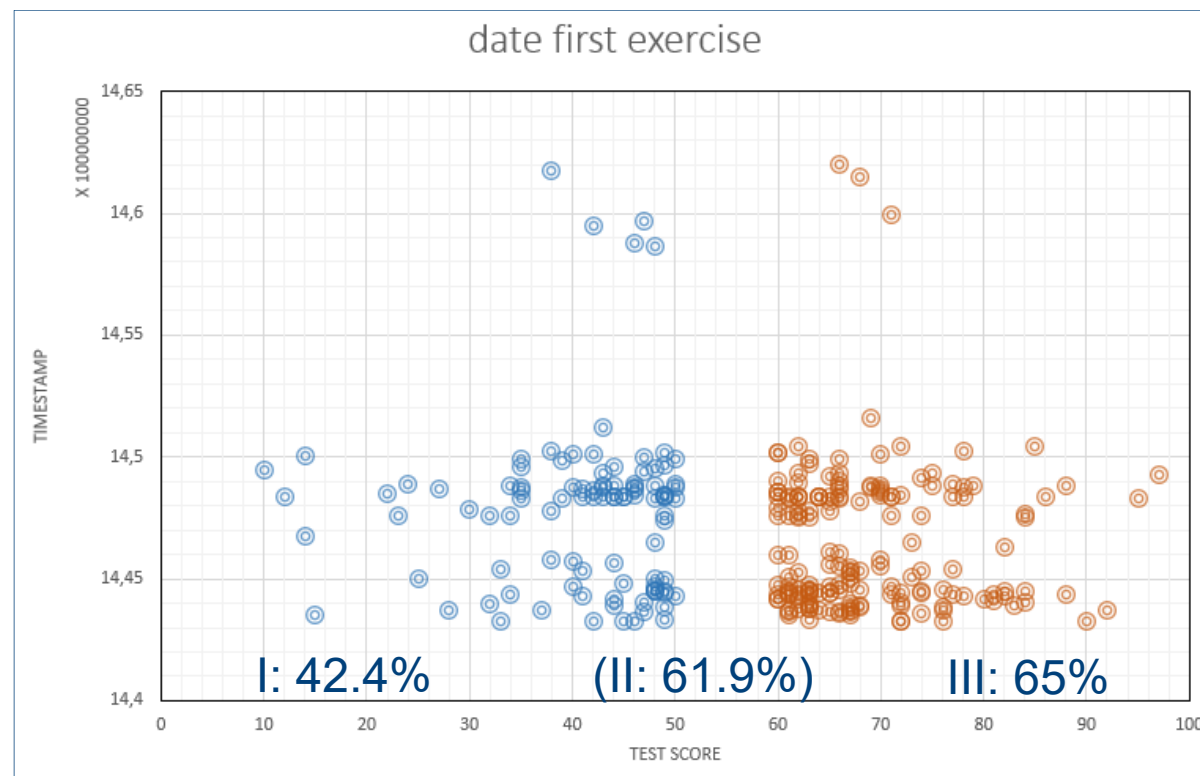
- feedback\_3: dashboard



# Exercises

- Do weaker students start their exercises later? YES

wake-up call →  
start ac. year →



# Exercises

- Do exercises help students get better marks?

YES, probably...

	<b><math>\geq 17/20</math> ex. <math>\geq 7</math></b>	<b><math>&lt; 17/20</math> ex. <math>\geq 7</math></b>
pass	198	27
fail	102	40

Chi2 = 15.251; df = 1; p = 0.0001



# Exercises

- Are the exercises too difficult? NO

	% first attempt(s)	% last attempt	average attempts/topics
I	35.2%	75.3%	2.6
II	38.8%	76.4%	2.7
III	43.9%	76.2%	2.1

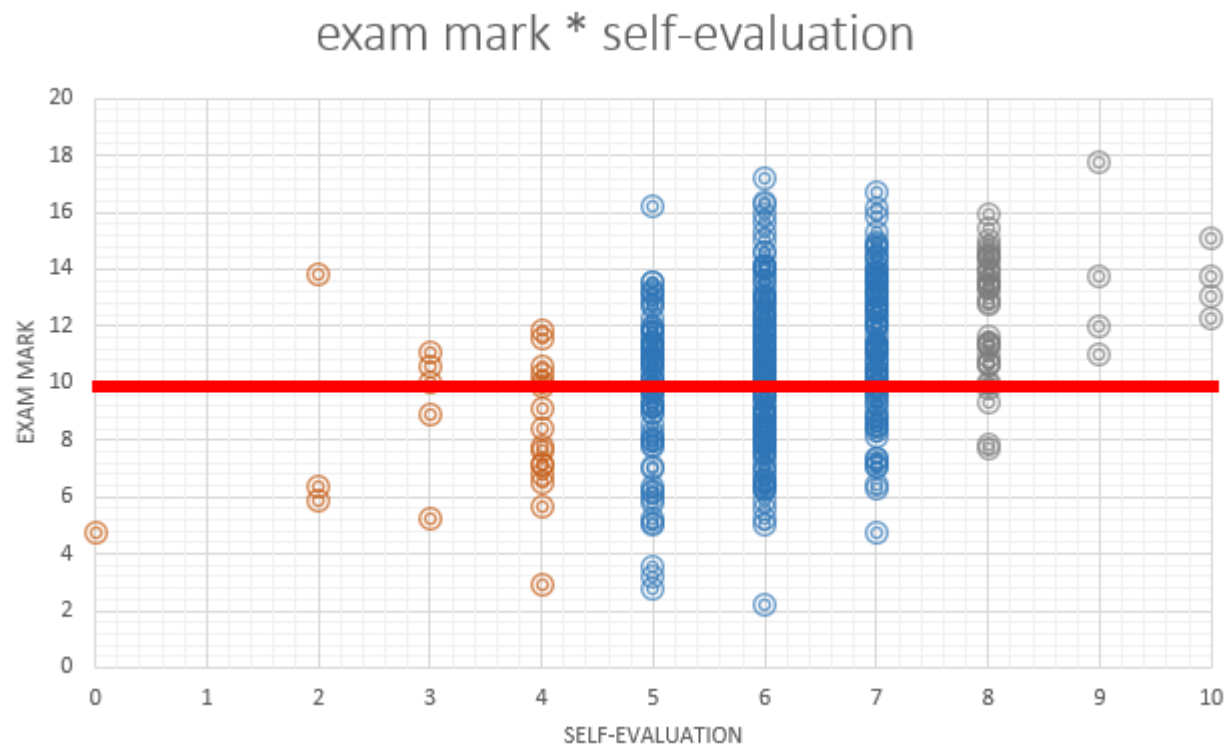
# Exercises

- Are some exercises more difficult than others? YES

item	first exercise		second exercise	
	$\bar{x} =$	n =	$\bar{x} =$	n =
L'expression du temps	47.76	49	65.71	39
L'expression du lieu	46.79	56	57.08	46
Le genre	46.34	41	59.76	38
L'emploi de l'article	46.03	121	57.29	103
L'emploi de tout	42.94	51	57.77	44
Adjectif vs adverbe	42.56	90	50	78
Accord sujet-verbe	41.52	92	45.45	69
La conjugaison des verbes	39.26	128	41.81	98
Les temps du passé	39.08	87	44.85	68
L'emploi des démonstratifs et des possessifs	38.67	105	33.28	78
La comparaison	36.03	184	36.57	148
Le pronom personnel	33.99	143	32.48	107
Le pronom relatif	31.68	185	28.32	139
L'emploi de la négation	31.51	205	32.65	148
L'emploi du subjonctif	27.16	74	28.53	59
Part. présent/gérondif/adjectif verbal	25.91	115	26.77	80
La phrase hypothétique	22.21	95	22.33	75
La phrase passive	22.08	106	29.88	82
La forme verbale dans le discours indirect	21.71	76	21.05	59
L'interrogation (la question)	20.71	155	29.13	121

# Exam mark

- exam mark \* self-evaluation



# Research question

How to

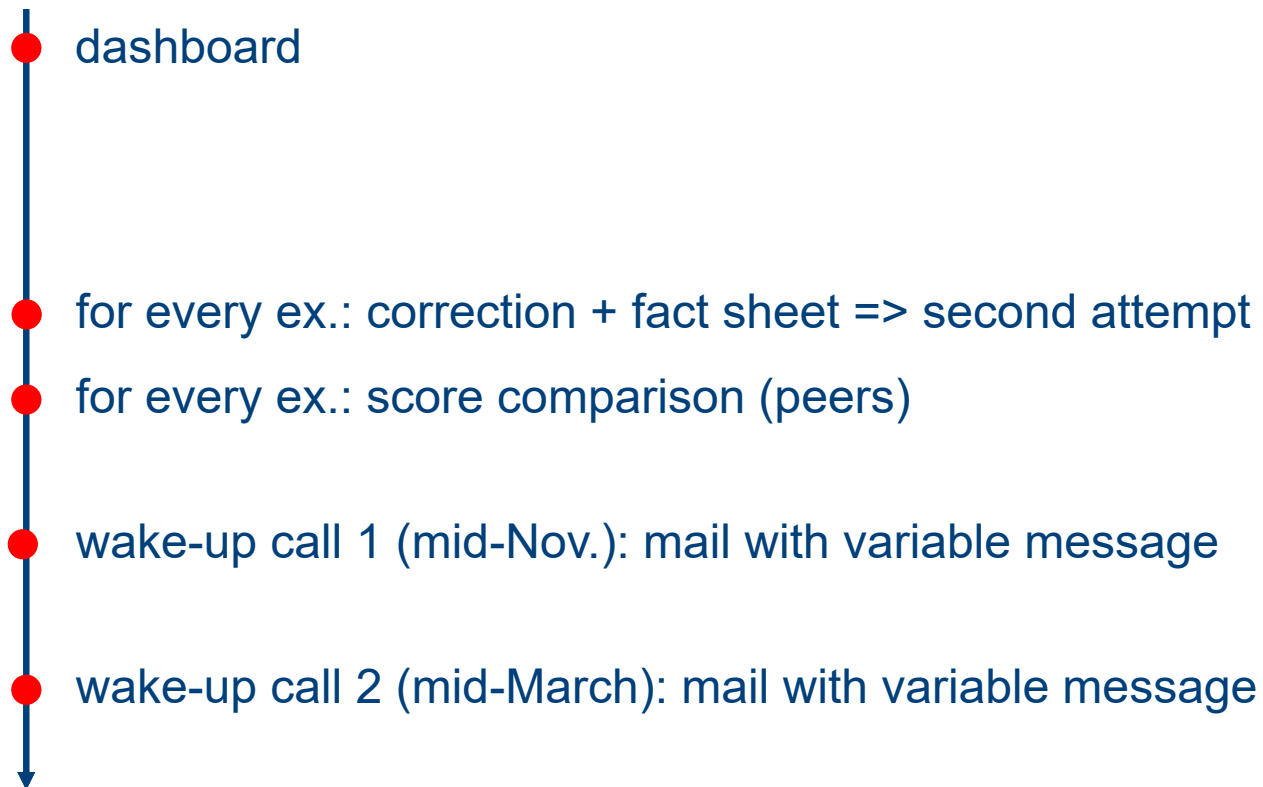
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by

*providing relevant feedback at the right moment?*

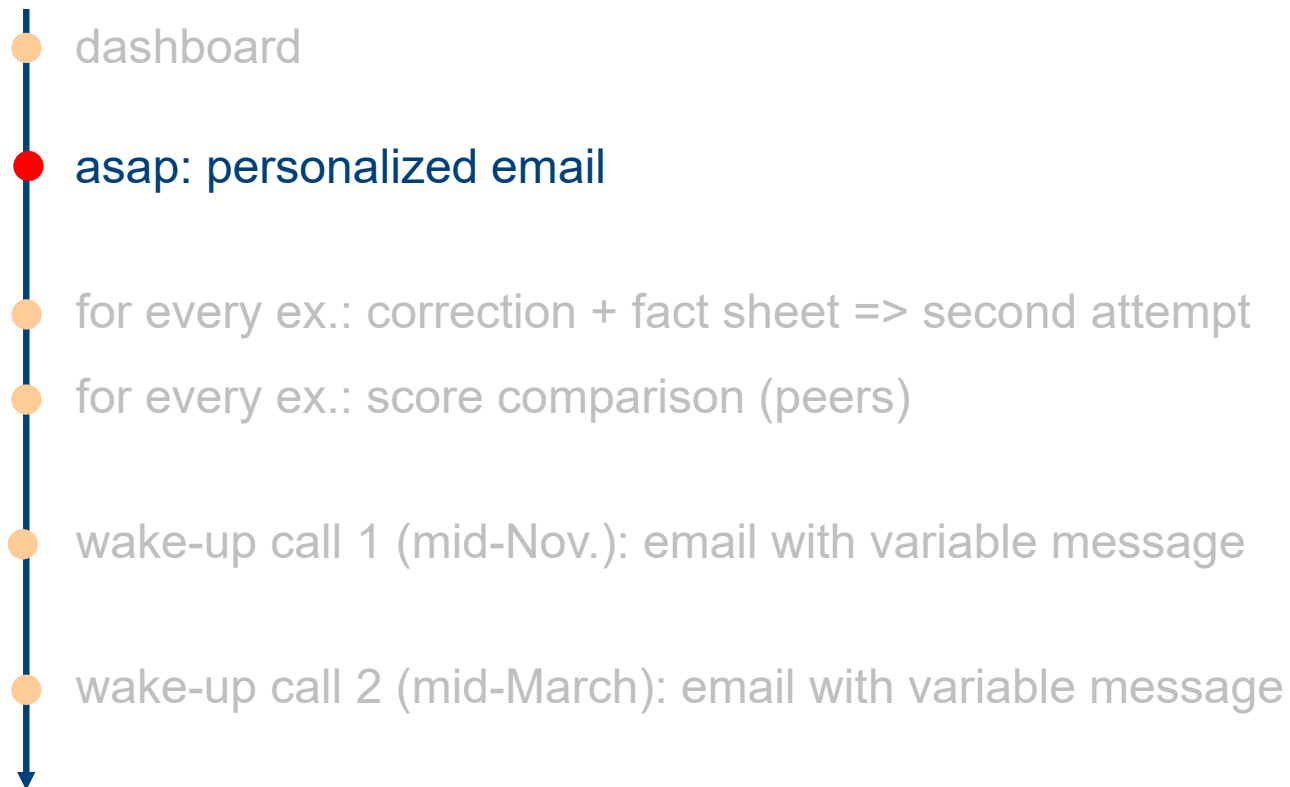
# Feedback BEFORE analyses

- Mixed product and process feedback



# Feedback AFTER analyses

- Process feedback



# Feedback AFTER analyses

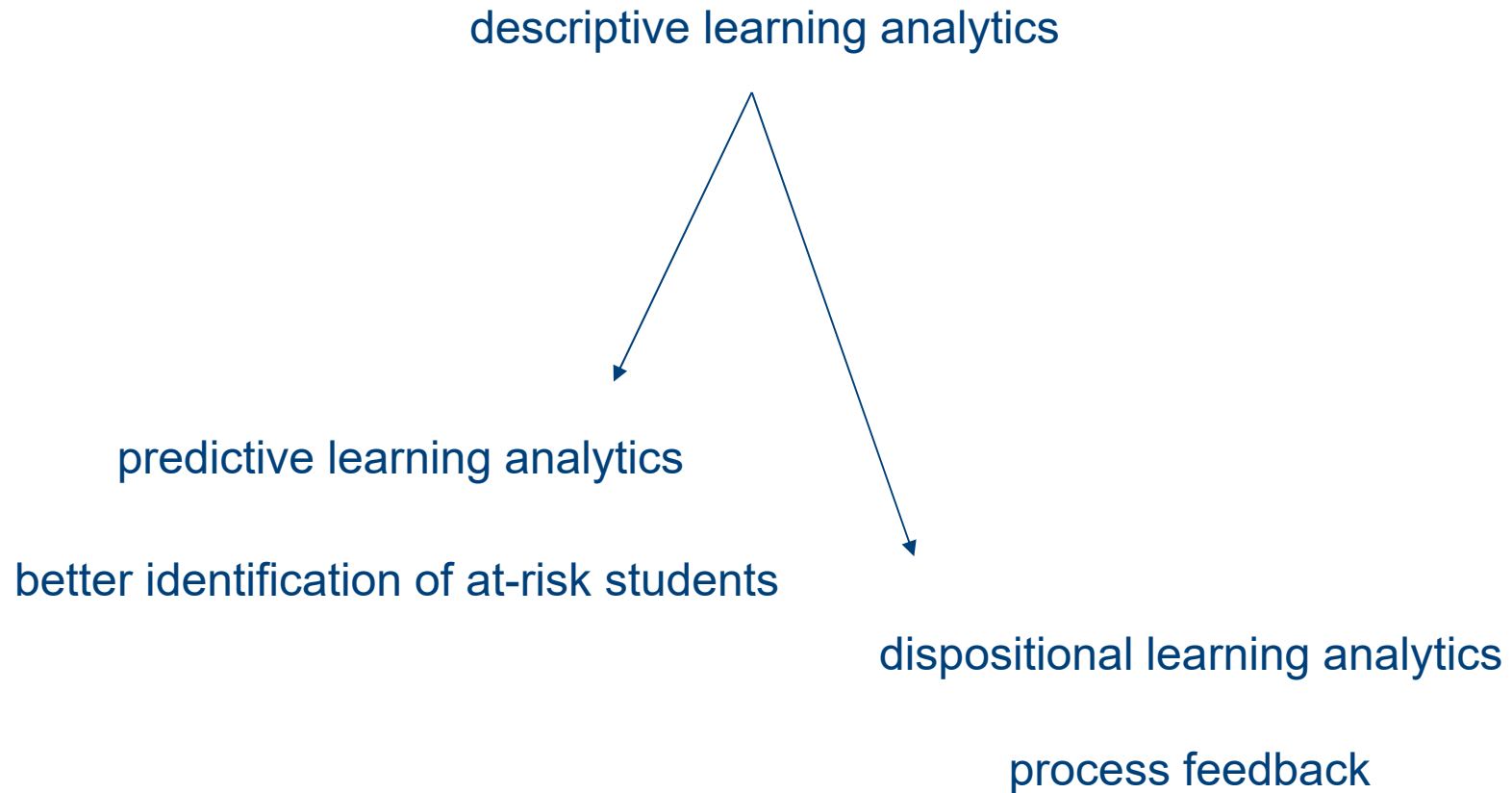
- email to students with
  - test score  $\leq 50$  (if test taken seriously)
  - self-evaluation  $< 5$
- content:
  - start asap with the exercises
  - making exercises increases your chances of success
  - start with exercises on [items]
  - be aware that you will need at least 3 attempts  $\Rightarrow 7/10$
  - later on: do not forget to focus on [items]

# Feedback AFTER analyses

- email to students with
  - test score  $\leq 50$  (if test taken seriously)
  - self-evaluation  $> 6$
- content:
  - *you may have overestimated yourself*
  - start asap with the exercises
  - making exercises increases your chances of success
  - start with exercises on [items]
  - be aware that you will need at least 3 attempts  $\Rightarrow 7/10$
  - later on: do not forget to focus on [items]



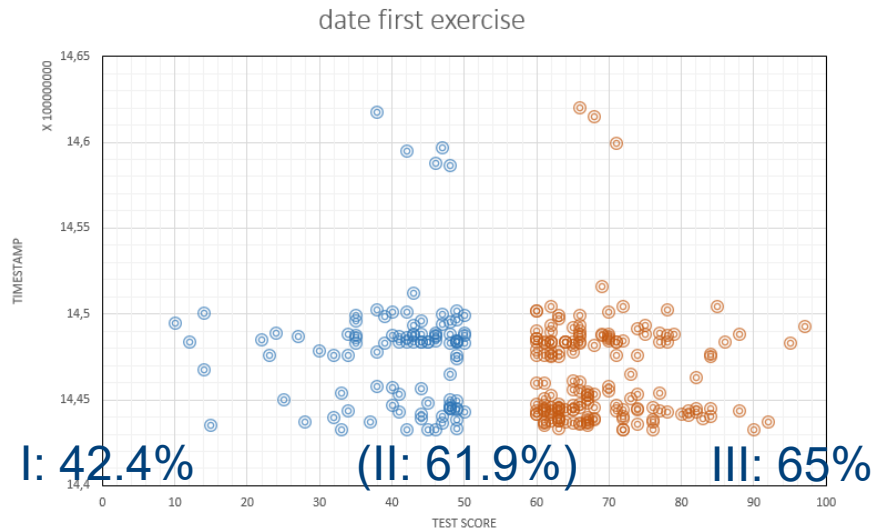
# Conclusion



# Future work

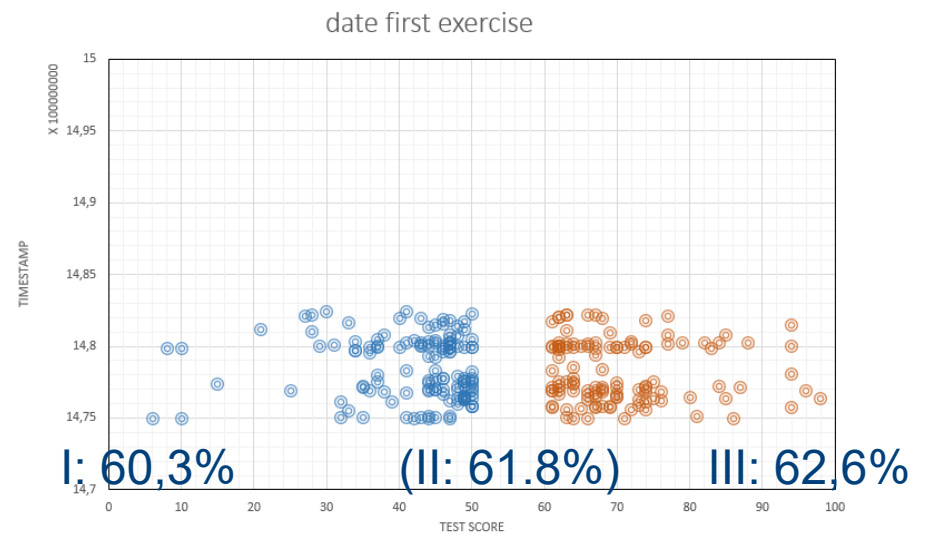
- More motivated group division?
- Findings supported by evidence from other groups?
- Impact of early (process) feedback?
  
- Analysis of answers?

# Impact of early (feedback) process?



2015-2016


2016-2017



# Impact of early (feedback) process?

YES

BUT... (data from the day before the wake-up call)

2015-16		number of 	2016-17	
20	5.6%	0	1.4%	5
216	60.2%	< 5	74.2%	270
59	16.4%	5-9	11.8%	43
42	11.7%	10-16	8.2%	30
22	6.1%	>= 17	4.4%	16

need for constant monitoring...

Thank you for your attention!

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