

# Implementation of a Pupil Monitoring System on Curaçao to enhance learning outcomes

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# Programme Presentation

- Introduction Cito & ETE
- Context of the project
- Content of the project
- Results & Conclusions
- Further development
- Questions audience





# Introduction cooperation Cito & ETE

- **Cito** cooperates with national and international clients in development of instruments and procedures for educational measurement.
- **ETE**, Expertise centre for Tests and Exams, develops instruments for formative and summative measurements on Curaçao.
- **ETE & Cito** developed a (formative) Pupil Monitoring System for primary education on Curaçao with a specific method of reporting.

# Context of the project (1/2)

- Wish of educational working field to monitor progress against learning objectives delineated from intended curriculum
- System for *Mathematics* grade 3 to 7
  - Started in 2010
  - Fully operational since 2017/2018
- System for Dutch & Papiamentu grade 4 & 6
  - Started in 2017
  - Pilot with pretests in 2020



# Context of the project (2/2)

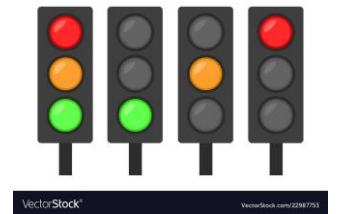


## ➤ Major goal:

- (formative) reporting growth over time, using scores
- reporting on student's achievement on detailed learning objectives
- 'traffic light' reporting indicates whether pupils have achieved a certain attainment target, related to learning objective.

## ➤ Second goal:

- Reporting growth, in graphics, using item response modeling,
- Foreseen gradually if system is implemented with more data available



# Content of the project (1/2)

- Each test contains about 90 items
  - Grade 3-4-5: once a year
  - Grade 6-7: twice a year
- Each learning objective represented by about 10 items
- Total battery 900 pretested & calibrated items
- Achievement objective(s) if about:
  - ●  $\geq 70\%$  correctly answered (= good)
  - ● 50-70% correctly answered (= sufficient)
  - ●  $< 50\%$  correctly answered (= insufficient)

# Example 1: results by administration moment

	A	B	ACAH	AI	AJAKALANAMACAFAGAFASATAUAWAWAWAZBEBEBCBCEBFBGBH	BI	BJBKBLBMBMBQBFGBFB				
1		Example results	M6 1: skills	M6 2: handy counting (C1) / mental counting	M6 3: estimating counting	M6 4: counting with scratch paper (C2)	M6 6: length, circumference and speed	M6 7,8,9: acreage, volume and balance	M6 11,12: time, money	M6 18,10: tabel & graphics, geometry	M6 14,15,16,17: proportions, fractions, percentages & decimal numb
2	Student		E6 1: skills	E6 2: handy counting (C1) / mental counting	E6 3: estimating counting	E6 4: counting with scratch paper (C2)	E6 6: length, circumference and speed	E6 7,8,9: acreage, volume and balance	E6 11,12: time, money	E6 18,10: tabel & graphics, geometry	E6 14,15,16,17: proportions, fractions, percentages & decimal numb
3	7A Student 1		✓	✗	✓	✗	✓	✓	✓	✗	✗
4	7A Student 2		✓	✓	✗	✓	✓	✓	✓	✗	✗
5	7A Student 3		✓	✓	✓	✗	✓	✓	✓	✗	✗
6	7A Student 4		✓	✓	✓	✓	✓	✓	✓	✗	✗
7	7A Student 5		✓	✓	✓	✓	✓	✓	✓	✗	✗
8	7A Student 6		✓	✗	✗	✓	✓	✓	✓	✗	✗
9	7A Student 7		✓	✓	✓	✓	✓	✓	✓	✗	✗
10	7A Student 8		✓	✓	✓	✓	✓	✓	✓	✗	✗
11	7A Student 9		✗	✗	✗	✓	✓	✓	✓	✗	✗
12	7A Student 10		✗	✗	✗	✓	✓	✓	✓	✗	✗
13	7A Student 11		✓	✓	✗	✗	✓	✓	✓	✗	✗
14	7A Student 12		✓	✗	✓	✗	✓	✓	✓	✗	✗
15	7A Student 13		✓	✓	✓	✓	✓	✓	✓	✗	✗
16	7A Student 14		✓	✗	✓	✓	✓	✓	✓	✗	✗
17	7A Student 15		✓	✗	✓	✓	✓	✓	✓	✗	✗
18	7A Student 16		✓	✓	✓	✓	✓	✓	✓	✗	✗
19	7A Student 17		✓	✗	✗	✓	✓	✓	✓	✗	✗
20	7A Student 18		✗	✓	✗	✓	✓	✓	✓	✗	✗







# Results & Conclusions

- Developed in cooperation with schools
- Enthusiastically received: 'this is what we want'
- Promising in reducing the gap between intended and implemented curriculum

# Further development

- Validation required
- Investigate % correct for traffic light report
- Data analysis using Item Response Theory to report and quantify growth over time.
- Research on reduction of gap between intended and implemented curriculum

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We are Cito



**“We would like to share our expertise”**

# Questions audience?

# Thank you for your attention!

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Please contact us if you have  
any further questions!