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 <p>GOBIERNO DE ESPAÑA</p>	 <p>MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD</p>	 <p>FEDER Fondo Europeo de Desarrollo Regional UNIÓN EUROPEA "Una manera de hacer Europa"</p>
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APRENDIZAJE DE LA LECTURA
 Grupo de Investigación de la Universidad Málaga

UNIVERSIDAD DE MÁLAGA

Main Studies with a Multidimensional Longitudinal Design: variables and with precision indexes

Objective

- Transference between scientific knowledge and schools.
- Testing MLS approaches as part of a decision - making Rtl system built from within educational settings.

Transfer evidence-based proactive strategies by

- Collaboration between research teams & schools:
- to develop a system adjusted to the real conditions of schools &
- to guarantee a permanent updating of evidence based practice.

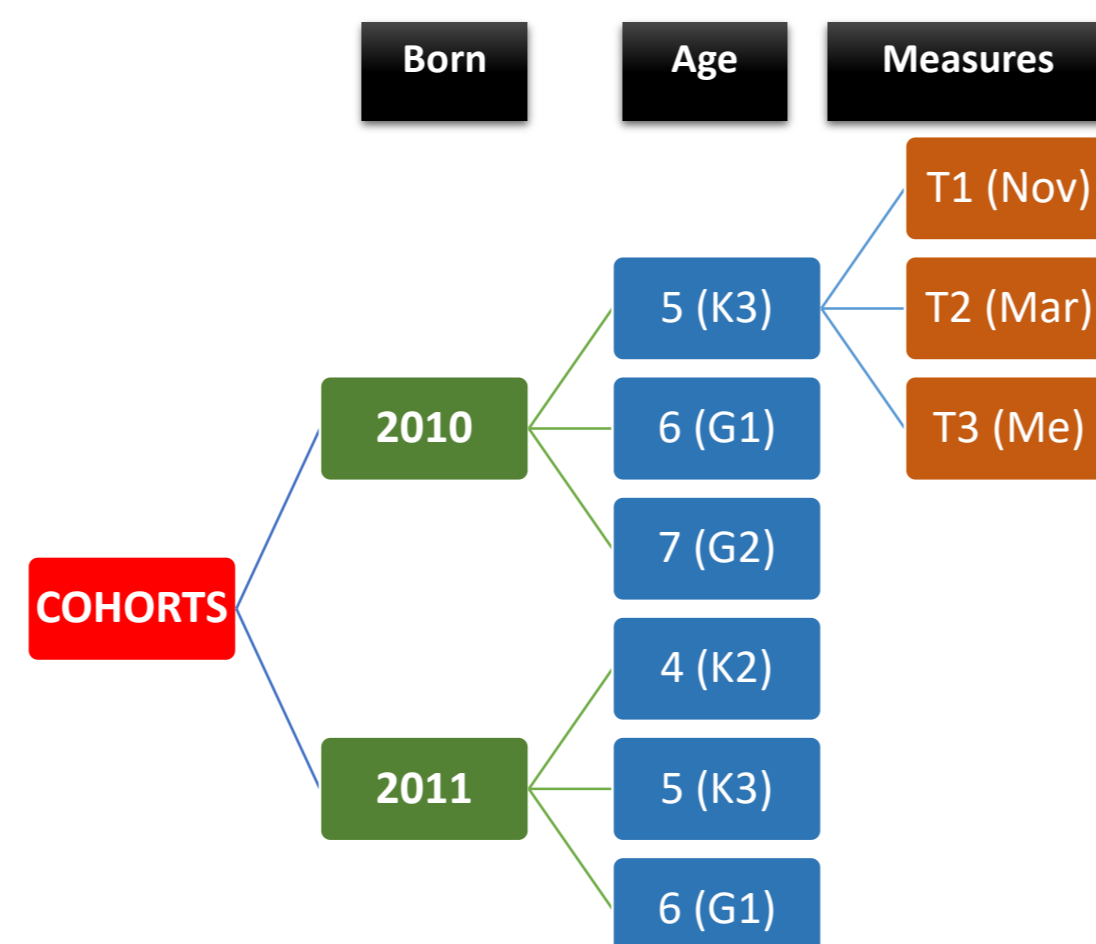


Sample description

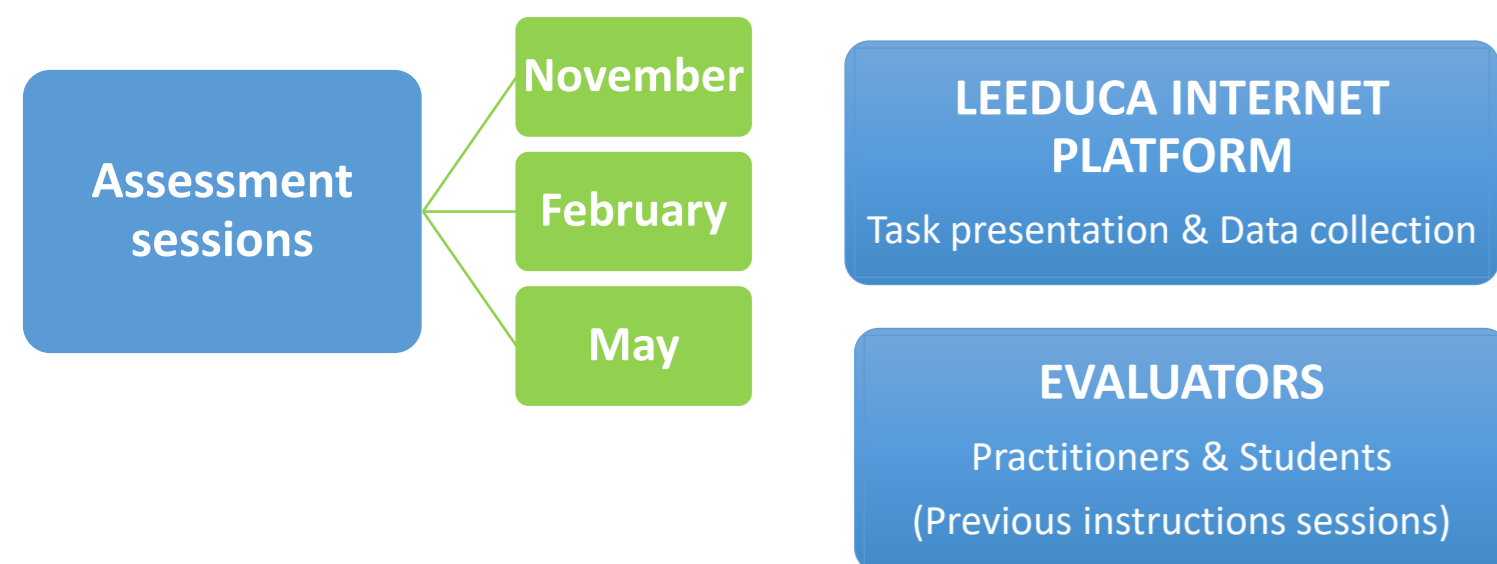
N: \approx 850 by Cohort

84 Schools

♂ ≈ 53,5 % ♀ ≈ 46,5%



General procedure



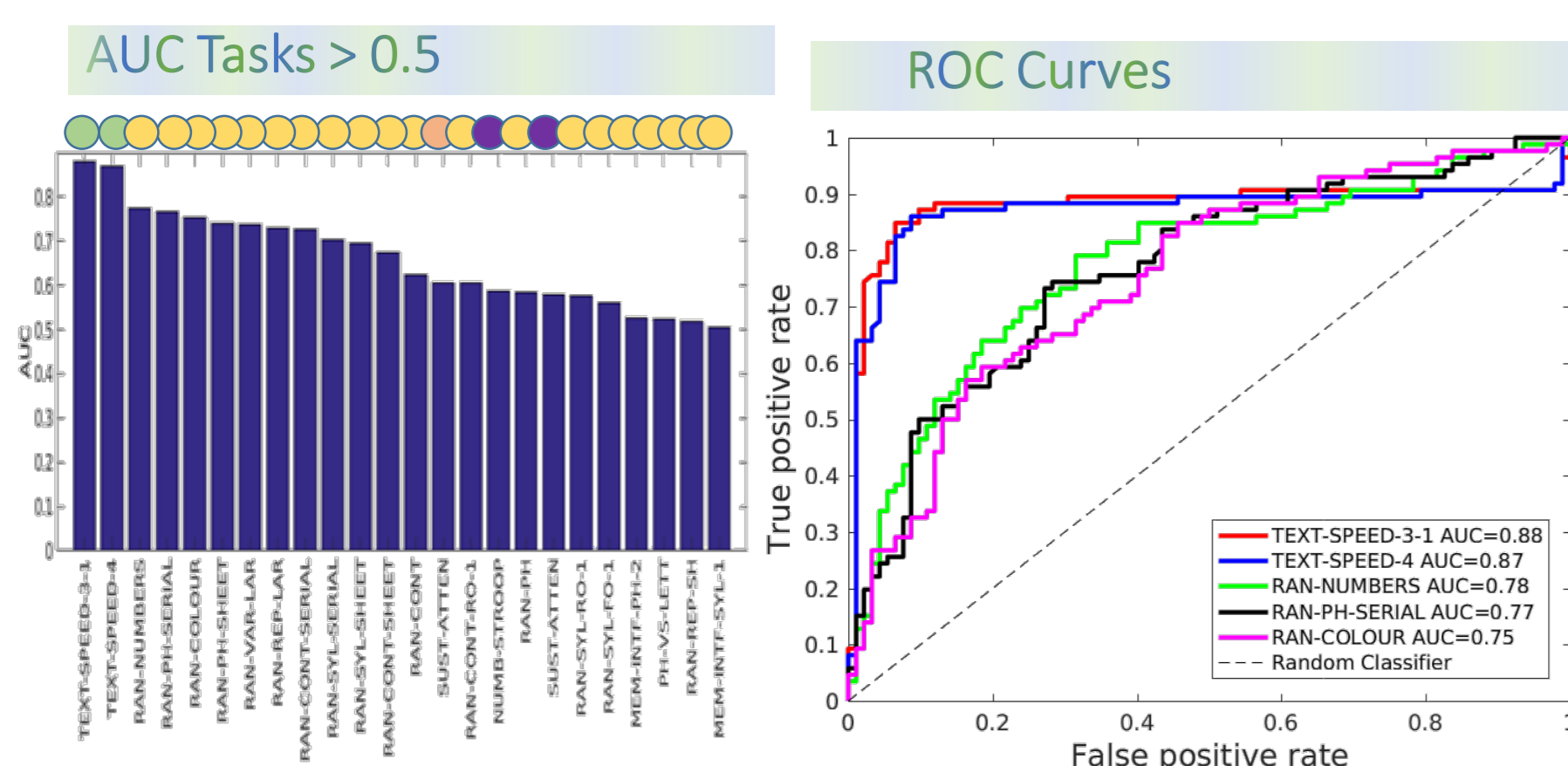
Labels

- Labels were computed with scores below the 30th percentile in Letter Knowledge, Syllable, Word and Pseudoword Reading, Orthographic Decision, Text Speed Reading and Text Comprehension measures.
- Measures were taken on the last two sessions of **Grade 1** (2011 Cohort – 4-6 y-o) or **Grade 2** (2010 Cohort – 5-7 y-o).

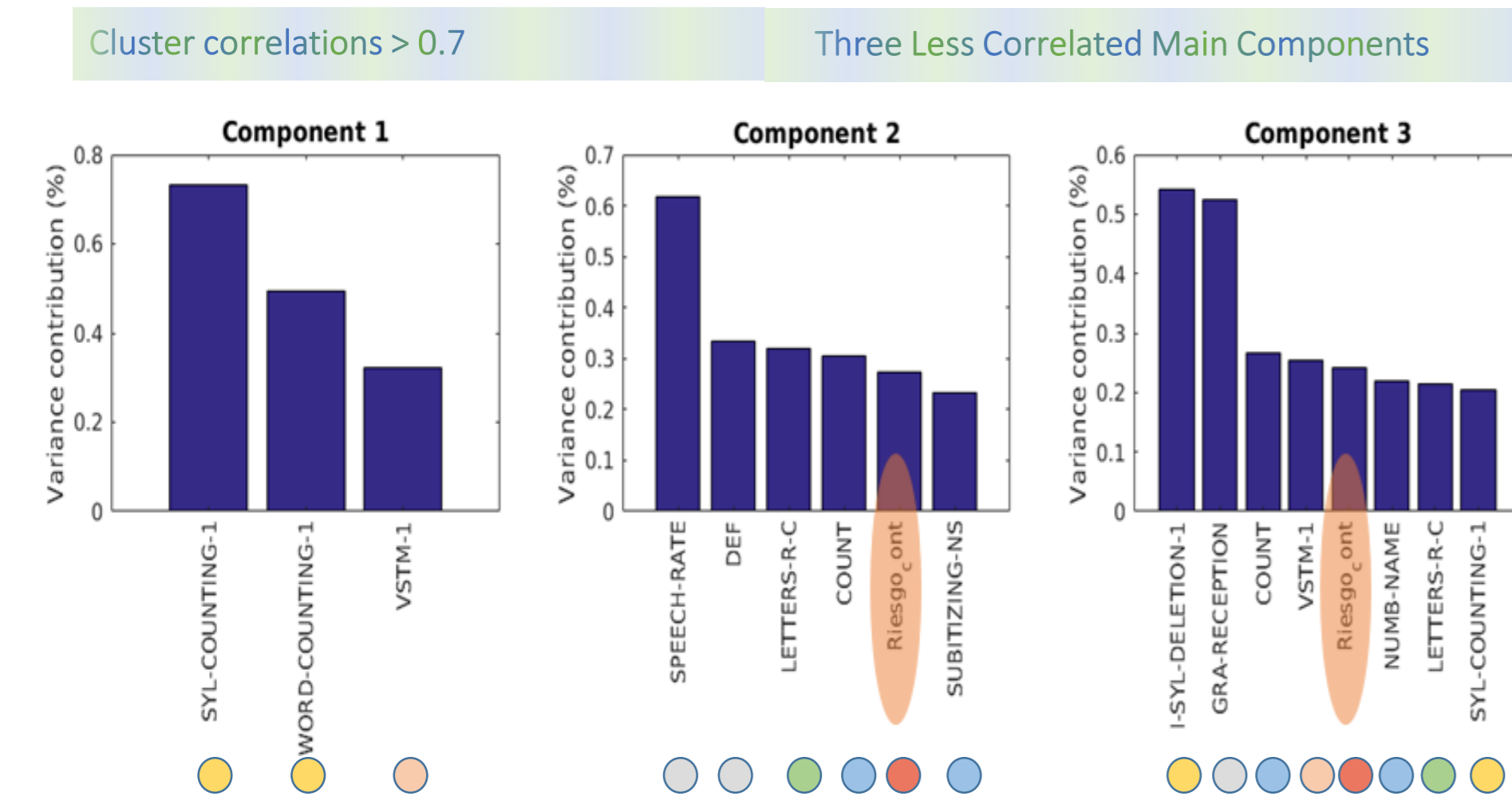
Analysis procedure: a first data driven approach

- Tasks with Area Under Curve $< 0,5$
- Building Cluster – 3 main Components
- Applying Support Vector Machine

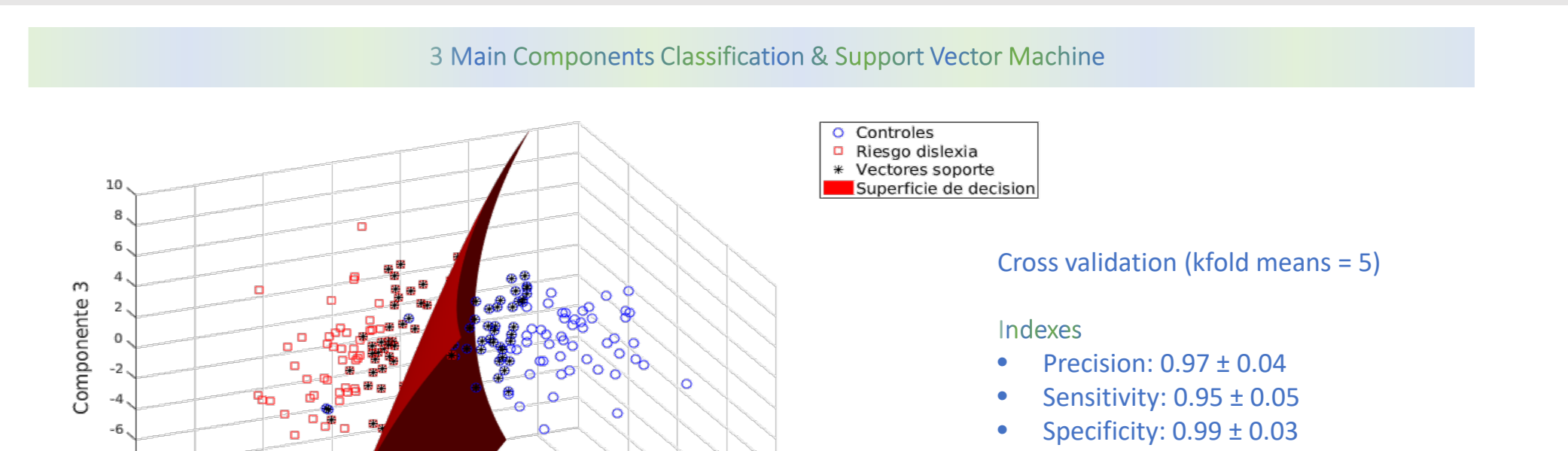
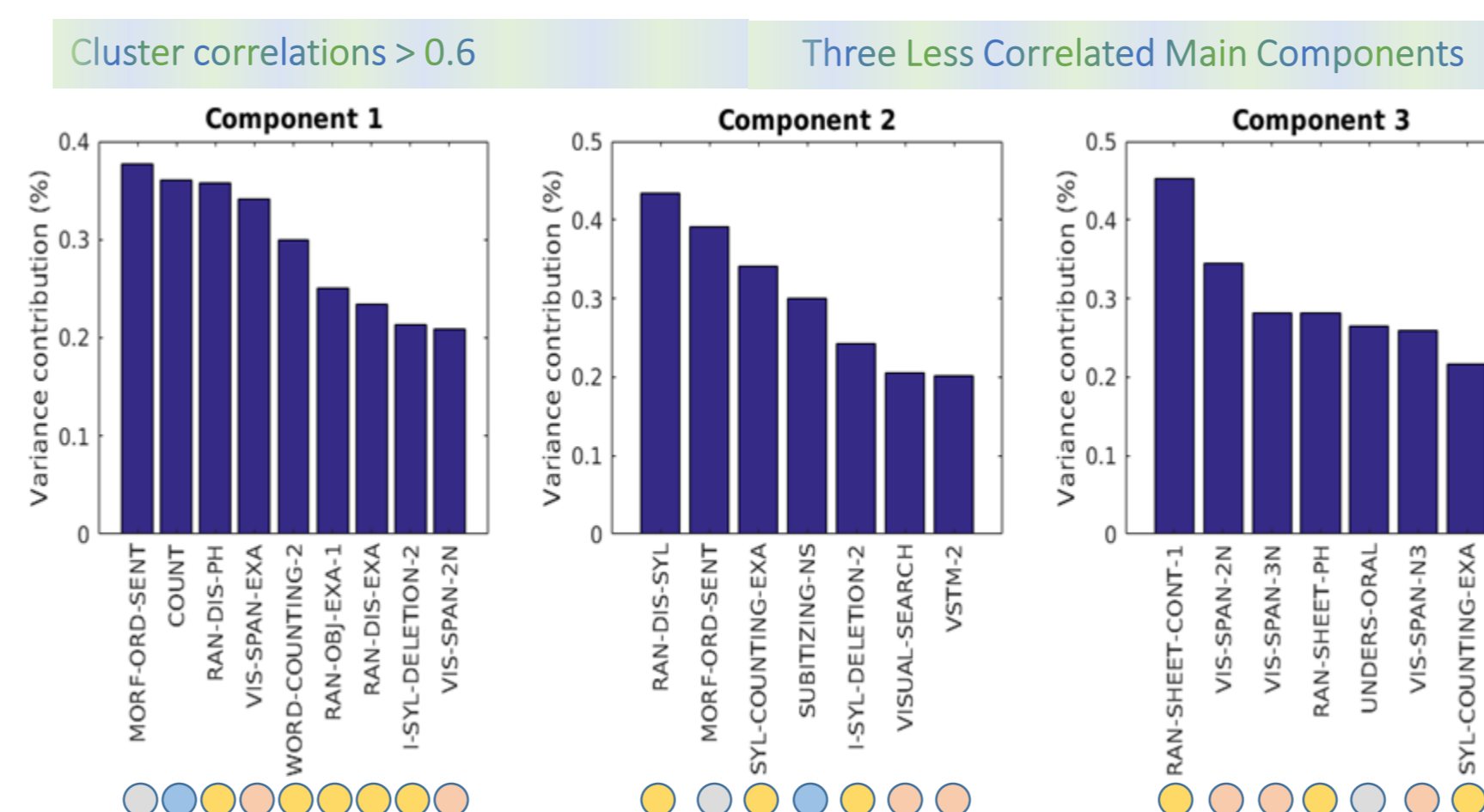
2010 Cohort – Global prediction



2011 Cohort – 4-y-o prediction



2011 Cohort – 5-y-o prediction



Prediction indexes of the Main Multidimensional Longitudinal Studies

[illegible]

Good balance between sensitivity facilitates prediction

This study is only a first approach to the data analysis and there are some new procedures that can be addressed:

- Building composite measures and review cluster correlations.
- Applying analysis procedures implemented by Puolakanaho et al. (2007) and Thompson et al (2015).
- Applying more theoretically driven analysis, like cross-lagged analysis
- Or Examining comorbidities between different conductal markers
- Our plan is to follow-up this two cohorts next year, so new labels could be established and new analyses carried out.

Both hypotheses have been confirmed

1. The early risk detection procedure has yielded predictive values similar to MLS.
2. Variables with significant statistical contribution to prediction have been similar to previous MLS, **but**
 - The family risk did not achieve high prediction values → ¿Questionnaire?
 - Labels versus diagnostic-Labels → our labels improve in Grade 2
 - Others: Ran tasks have shown a prominent role compared to phonological awareness, so a deeper review is needed.

Conclusions

- With all due caution and prudence, these first analyses and results could be considered a positive starting point.
- The implementation of our MLS approach as part of a decision-making RTI system has shown successful.
- A remarkable feature of this study is that it was achieved from within the school context.
- So, it is expected that in a short time we will be able to transfer our two-step assessment system:
 - A universal early risk detection procedure
 - A full assessment procedure for at risk-children