8ᵀᴴ INTERNATIONAL CONFERENCE ON SECOND LANGUAGE STUDIES (ICSLS-2022) JUNE, 10

Young learners' profiles with the MLAT-EC

Mª del Mar Suárez
Charles W. Stansfield

EUROKD
EUROPEAN KNOWLEDGE DEVELOPMENT Ltd.

www.EUROKD.com

AUTHOR'S PHOTOS

AUTHOR'S SHORT BIOGRAPHIES

Dr Mª del Mar Suárez is an associate professor and researcher at the Faculty of Education of the Universitat de Barcelona (Catalonia). As a GRAL member, I have taken part in several funded projects on SLA. My current teaching involves undergraduate courses in the Media Studies as well as in Early Years and Primary School Education degrees. I am the Editor-in-Chief of the academic journal Didacticae. Journal of Research in Specific Didactics, too. My main research interests are multimodal input, aptitude and formative assessment.

Dr Charles Stansfield is an authority on second language testing. During his 50-year career, he has been a secondary school teacher of Spanish, a tenured professor of Spanish and teacher trainer at the University of Colorado, a test program administrator at Educational Testing Service, director of the ERIC Clearinghouse on Languages and Linguistics, and director of the Division of Foreign Language Education and Testing at the Center for Applied Linguistics in Washington, DC. In 1994, he founded Second Language Testing, Inc., for which he served as CEO until its acquisition by Berlitz Languages. Since 2014, he has devoted himself to managing LLTF. Dr. Stansfield has developed and published proficiency tests in English as a second language and in 15 other languages. He is the author or editor of over a dozen books and research monographs and 60 research articles published in professional journals. He has been a member of the editorial boards of *Language Testing, the Modern Language Journal, TESOL Quarterly*, and the *Journal of Second Language Writing*.
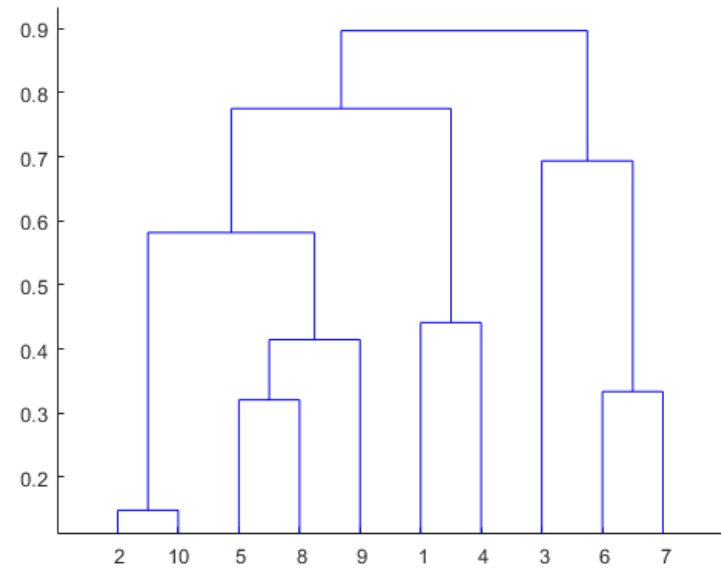
INTRODUCTION

Cluster analysis
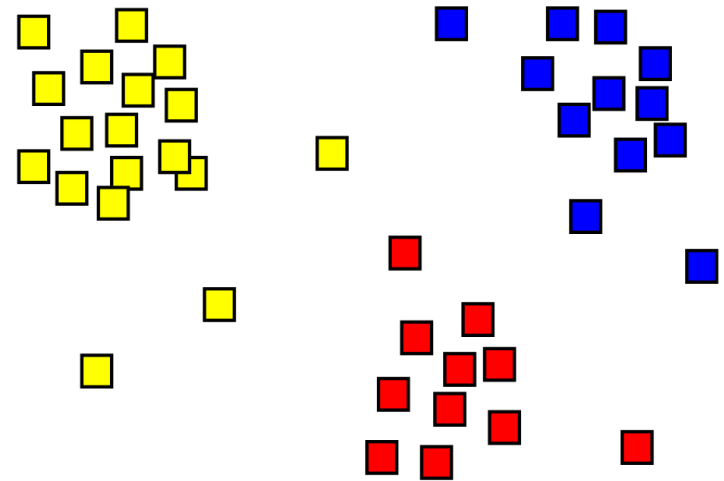
INTRODUCTION

Hierarchical cluster → Dendrogram

INTRODUCTION

Non-Hierarchical cluster

K- means:

1. Identify k clusters to assess how distinct our clusters are
2. Using the cluster centers identified before
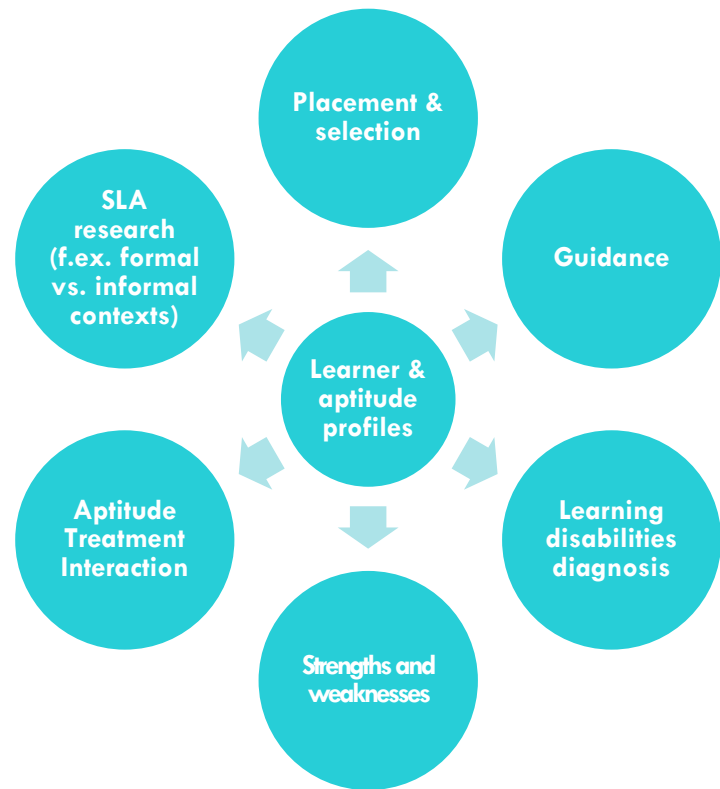3. F-values → how well the dimension discriminates

INTRODUCTION

Aims of cluster analysis in SLA:

1. Identify natural clusters within a mixture

2. Construct a useful conceptual scheme to classify individuals

3. Identify homogeneous subgroups → patterns useful for prediction

INTRODUCTION: WHAT FOR?

- Placement & selection
- Guidance
- Learning disabilities diagnosis
- Strengths and weaknesses
- Aptitude Treatment Interaction
- SLA research (f.ex. formal vs. informal contexts)
- Learner & aptitude profiles

LITERATURE REVIEW

Aptitude profiles vs learner profiles

LITERATURE REVIEW

Proficiency as criterion variable

- Motivation profiles (Dörnyei et al., 2006)
- Vocabulary learner strategies profiles (Kojic-Sabo & Lightbown, 1999)

Proficiency included in the cluster analysis

- LAA in learner profiles → Metalinguistic awareness in L1 & L2 and L2 proficiency over time (Ranta, 2002)

- Learner differences in strategy use, will to learn and achievement over time (Yamamori et al., 2003)

- Learner cognitive profiles including MLAT-4 Words in Sentences, age and criterion test score (Skehan, 1986)

LITERATURE REVIEW: LANGUAGE APTITUDE COMPONENTS (Carroll, 1981)

Phonemic coding ability

- the ability to identify and memorize new sounds or strings of sounds

Grammatical sensitivity

- the ability to understand how words function grammatically in sentences

Inductive language learning ability

- the ability to infer grammatical rules from language samples

Rote learning ability for FL materials

- the ability to learn a large number of semantic-symbol and/or sound-symbol associations in a short period of time

LITERATURE REVIEW: CONSTRUCTS

Parts	MLAT-EC (grades 3 to 7)	MLAT (adults)	Construct
1	Paraules ocultes (Hidden Words)	Spelling Clues	- vocabulary - sound-symbol association
2	Paraules que es corresponen (Words in Sentences)	Words in Sentences	- grammatical sensitivity
3	Paraules que rimen (Rhyming words)	-	- hear and make distinctions between speech sounds
4	Aprenguem números (Number Learning)	Number Learning	- rote memory - aural comprehension

LITERATURE REVIEW: APTITUDE, PROFICIENCY AND AGE

Proficiency
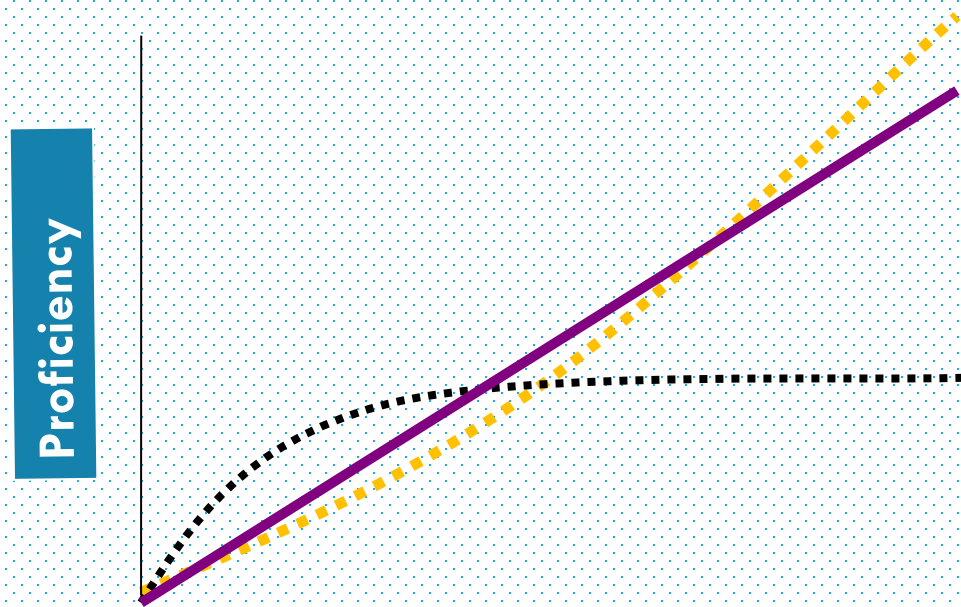
Aptitude component

— LAA

····· PhCA

····· Mem

LITERATURE REVIEW: ADULT LEARNER PROFILES

High achievers

- Strong on LAA (Ranta, 2002)
- Strong on both LAA and memory OR strong on either LAA (*syntactically oriented students*) or memory (*lexically-oriented students*) (Skehan,1986, 1998, 2002)
- Auditory abilities more relevant in younger students (Skehan, 1986)

Low achievers

- Average or weak on LAA (Ranta, 2002)
- Very poor memory except associative memory, average language ability (Skehan, 1986)
- Intelligent but with poor language ability (Skehan, 1986)
- High linguistic ability and memory but average IQ (Skehan, 1986)

1. Concrete operational thinking stage vs formal operational thinking (Piaget)

2. First stages of literacy development

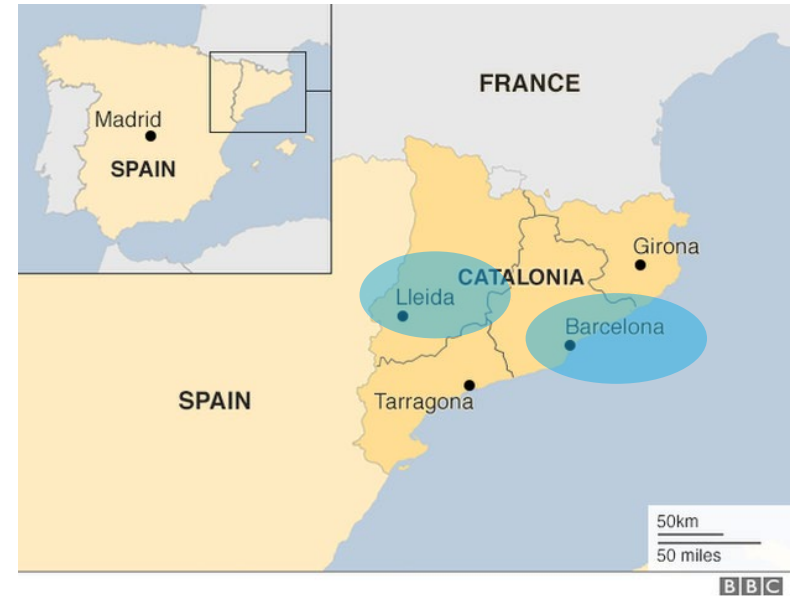# THE STUDY: HOW ABOUT YOUNG LEARNERS?

RESEARCH QUESTIONS

1. What learner profiles do younger high and low achievers have?

2. What aptitude components is determinant for younger learners, as measured by the MLAT-EC?

METHODOLOGY/ PROTOCOL: PARTICIPANTS

▸ Context: 6 schools in Catalonia

▸ Participants: bilingual Catalan-Spanish

▸ English as a FL formal instruction

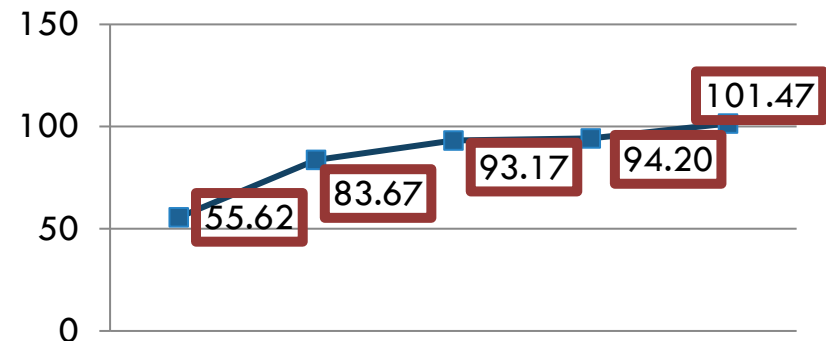| Grade	3	4	5	6	7	All
Mean age	8.8	9.9	10.9	11.7	12.9	
N MLAT-EC	55	62	30	60	62	269

METHODOLOGY/PROTOCOL: INSTRUMENTS

▶MLAT-EC Part scores

▶ Proficiency measures: cloze passage measure (different versions for different grades) → integrative measure
▶All of them reliable and valid across grades

	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Part 1	.75	.81	.83	.87	.89
Hidden words	easy	very easy			
Part 2	.32	.50	.65	.67	.74
Matching words	difficult	mid-difficult	easy		easy
Part 3	.55	.72	.78	.83	.83
Rhyming words	easy		very easy		
Part 4	.62	.82	.88	.85	.91
Number learning	easy	very easy			

MLAT-EC x/122

55.62 83.67 93.17 94.20 101.47

METHODOLOGY/ PROTOCOL: INSTRUMENTS

RESULTS: GRADE 3

Decoding skills | Grammar sensitivity | Sound recognition | Rote memory | FL cloze

Cluster 1 N=23   Cluster 2 N= 29
Cluster 3 N=35   Cluster 4 N=11
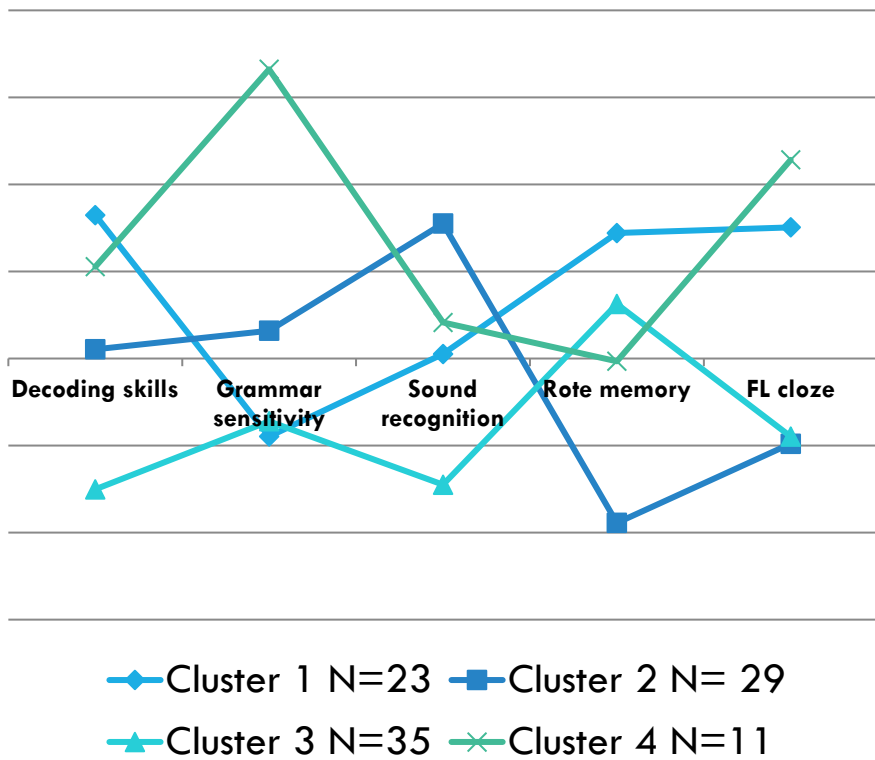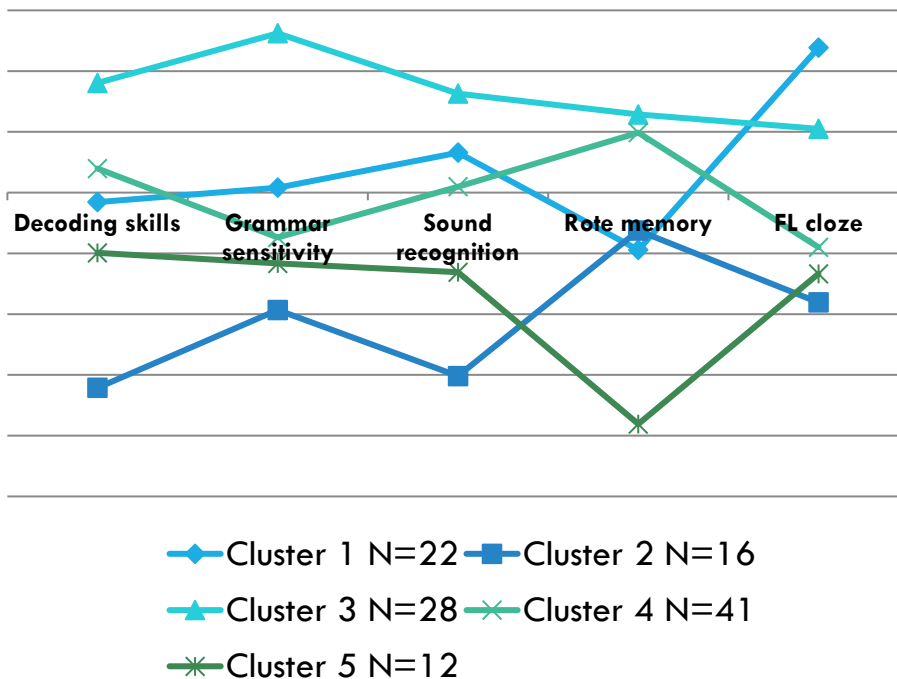
-High decoding skills and average/high sound recognition ability
-EITHER high grammatical sensitivity OR high memory + decoding skills for high achievement
- Sound recognition alone, no effect

RESULTS: GRADE 4

Decoding skills   Grammar sensitivity   Sound recognition   Rote memory   FL cloze

Cluster 1 N=22   Cluster 2 N=16
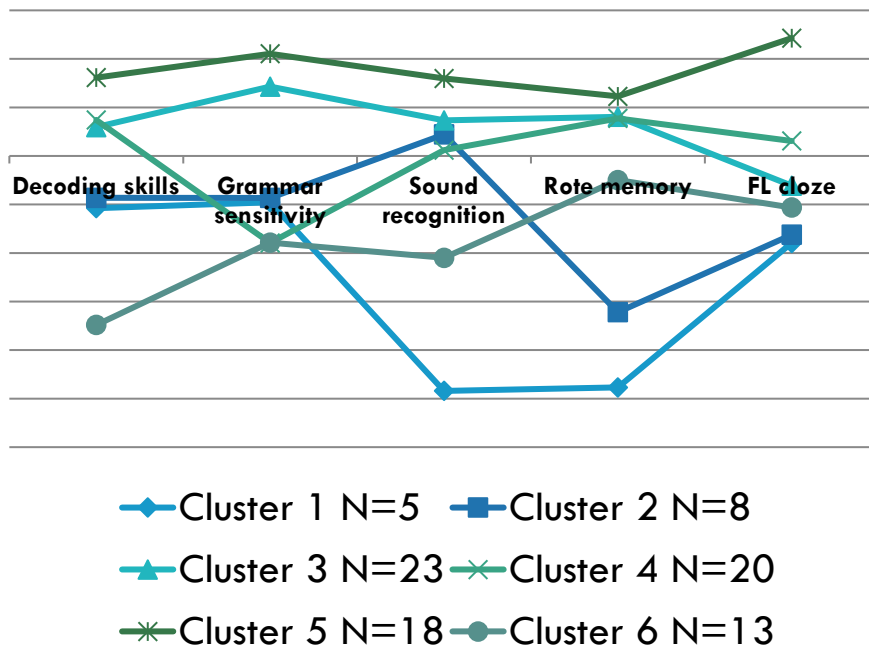Cluster 3 N=28   Cluster 4 N=41
Cluster 5 N=12

- <u>Decoding skills</u> needed for average and high achievement

- <u>Grammatical sensitivity</u> relevant in high overall aptitude profile and in high achievement

- High and average <u>memory</u> for average/ high performance

RESULTS: GRADE 5

Decoding skills · Grammar sensitivity · Sound recognition · Rote memory · FL cloze

Cluster 1 N=5 · Cluster 2 N=8
Cluster 3 N=23 · Cluster 4 N=20
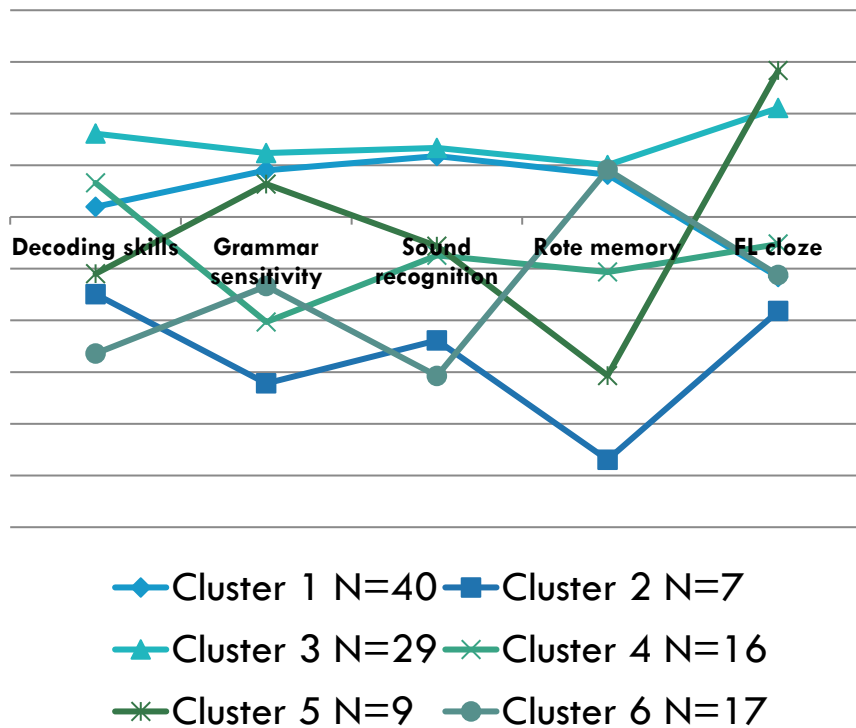Cluster 5 N=18 · Cluster 6 N=13

- 2 high achiever profiles with high overall aptitude and with high grammar sensitivity

- Grammar – oriented vs. Memory oriented learner

- Low achievers have poor decoding skills, poor sound recognition and average / poor memory

RESULTS: GRADE 6

Chart axis labels: Decoding skills, Grammar sensitivity, Sound recognition, Rote memory, FL cloze

Legend:
- Cluster 1 N=40
- Cluster 2 N=7
- Cluster 3 N=29
- Cluster 4 N=16
- Cluster 5 N=9
- Cluster 6 N=17

-2 high achiever profiles: with high aptitude, or with high grammar sensitivity in spite of lower memory

- Memory oriented learners who are average in the rest are average achievers

- Low/average achievers have average or poor memory and are poor in the other abilities

RESULTS: GRADE 7

Cluster 1 N=31 Cluster 2 N=16
Cluster 3 N=65 Cluster 4 N=7
Cluster 5 N=8
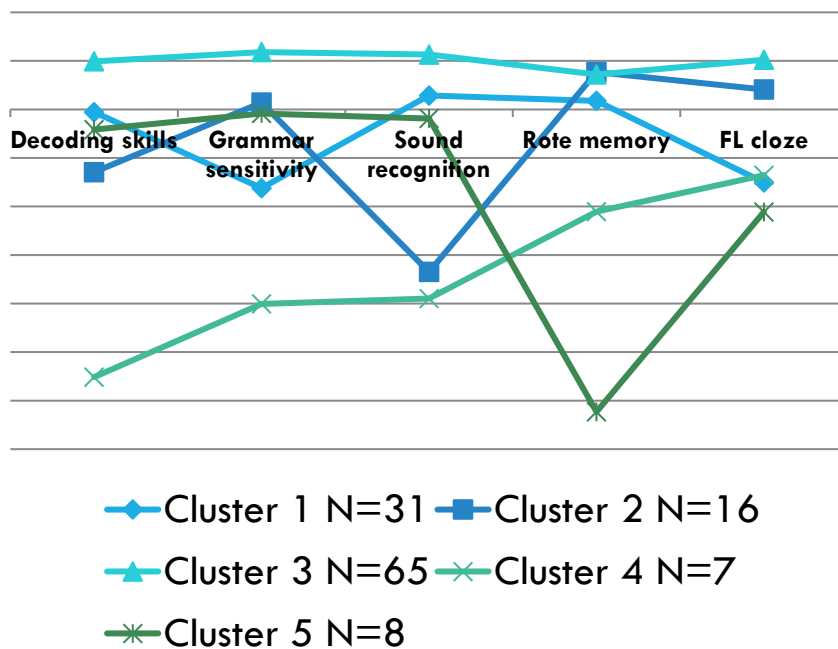
-2 high achiever profiles: with high aptitude or with both high grammar sensitivity and high memory but low sound recognition

-Low memory, low achiever

-Average sound recognition and spelling not crucial to have average achievement

RESULTS: ANOVA F-VALUES

Grade	3	4	5	6	7
Part 1 (decoding skills)	**21.067** (2nd)	43.031 (2nd)	39.852 (3rd)	21.468 (4th)	46.721 (3rd)
Part 2	17.641	27.589	**45.896**	25.613	39.749
Part 3	18.898	34.819	32.327	48.318	85.473
Part 4 (memory)	**21.361**	**54.467**	**43.925**	**52.375**	**99.537**

DISCUSSION RQ1

High achievers vs low achievers profiles

- no linear high-aptitude profiles in the lower grades
- prominence of decoding skills in Grades 3 & 4 for high achievement
- high-aptitude even profiles
- either high grammar sensitivity or memory-oriented for both average and high achievement at higher levels, not in grades 3 & 4
- low overall aptitude in low achievers, but not in Grade 3

DISCUSSION RQ2

Dimensions to differentiate clusters

Decoding skills for younger learners

Memory vs analytic abilities (still early stages of development in relation to FL learning?)

IMPLICATIONS

- The role of sound recognition and memory at lower levels (over decoding skills?)

- Memory as differentiating dimension except in grade 5, followed by decoding skills at lower grades: Sparks et al's LCDH in L1 and FL, but in all alphabets?

- Aptitude test working differently across ages despite tapping into the same abilities

SUGGESTIONS FOR FURTHER RESEARCH

- Use of different proficiency measures tapping different abilities

- Aptitude profiles using proficiency as a criterion variable

Thank you!
Gràcies!

#Make_Impact_Achieve_Impact

www.EUROKD.com