

CAF in the Oral Production of L1 French Young Learners of EFL in a Minimal Exposure Context

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Aim of the Study

- Explore the longitudinal development of the EFL oral production of instructed French L1 young learners at the early stages of L2 emergence, in a minimal exposure context.
- Gauge the evolution of complexity, accuracy and fluency (CAF) and potential trade-offs /interactions between these dimensions over the course of two years in a picture-based narrative task

CAF - Definition

"Complexity refers to size, elaborateness, richness, and diversity of the L2 performance. Accuracy is a measure for the target-like and error-free use of language. Fluency refers to the smooth, easy and eloquent production of speech with limited numbers of pauses, hesitations and reformulations" (Michel, 2017).

Longitudinal Development of CAF in Oral English L2

- Evidence for variation over time on all three dimensions but mixed findings with regard to the type of trends:
 - linear change for grammatical complexity, accuracy, and fluency but non-linear for lexical variety (Vercellotti, 2017)
 - U-shaped trend for accuracy, more linear for fluency, non-linear for syntactic complexity (Ferrari, 2012)

Longitudinal Development of CAF in Oral English L2

- Mixed evidence for trade-offs at group-level:
 - temporary trade-off between growth in complexity and reduction in accuracy (Ferrari, 2012)
 - higher lexical variety positively correlates with higher fluency, accuracy and grammatical complexity (Vercellotti, 2017)

Within-individual level no longitudinal trade off effects → positive and highly significant correlations among all three dimensions (Vercellotti, 2017)

Longitudinal Development of CAF in Young English L2 Learners

Bret (2014): CAF development with primary school Catalan L1 learners aged 9-10 over 2 years (i.e. four data collection times)

- Change trajectories:

- Linear improvement for syntactic complexity and fluency
- Trend for accuracy varies with task: gradual decrease from T0 to T3 in the interview task, stable in the narrative task

- Trade-off effects:

- Strong negative correlation between syntactic complexity and accuracy
- Medium negative correlation between fluency and accuracy
- Insufficient evidence for the narrative task

Research Questions

RQ1 What are the developmental trajectories for CAF in young learner EFL oral production over a 2-year span?

RQ2 Is there an interaction between the CAF dimensions at group and individual learner level?

Our Study

- 8 French L1 children (6 girls and 2 boys) aged 10-11 at the onset of the study
- Instructed in minimal exposure conditions in the same urban school

Biodata

	Age at the onset	Age at the end	Hrs of English at the onset	Hrs of Eng. Outside the class	Hrs of English at the end	Foreign language at home
Emmy	10	12	46	0	318	none
Katia	10	12	46	0	250	none
Lenny	11	13	46	0	318	none
Merlin	10	12	46	0	318	none
Ranya	11	13	46	30	348	Arabic
Selma	10	12	46	0	318	none
Valentine	11	13	46	0	318	A little bit of English
Zoé	11	13	46	0	318	A teeny weeny bit of English

Our Study

- Recordings of oral production over a 2-year span, every 3 or 4 months in 2017 and 2018
- Alternate tasks: oral interview and picture-based narrative (*The Dog Story*, BAF Project)
- 5 data collection times for the narrative: T0 (March 2017); T1 (June 2017); T2 (October 2017); T3 (March 2018); T4 (June 2018)



CAF Measures (Bret, 2014)

L2 Performance Dimension	Measure
<p data-bbox="316 808 745 876">Complexity</p>	<p data-bbox="981 451 1495 496">Syntactic complexity:</p> <ul data-bbox="981 508 1818 953" style="list-style-type: none"><li data-bbox="981 508 1595 554">•total number of units (TNU) A unit = a context-dependent meaningful utterance, grammatical or ungrammatical, which conveys one piece of information or idea (Bret, 2014)<li data-bbox="981 851 1615 896">•% of coordinated units (CU)<li data-bbox="981 908 1634 953">•% of subordinated units (SU) <p data-bbox="981 965 1452 1011">Lexical complexity:</p> <p data-bbox="981 1022 1765 1125">% of Ns, Vs and Adjs out of the total number of English words</p>

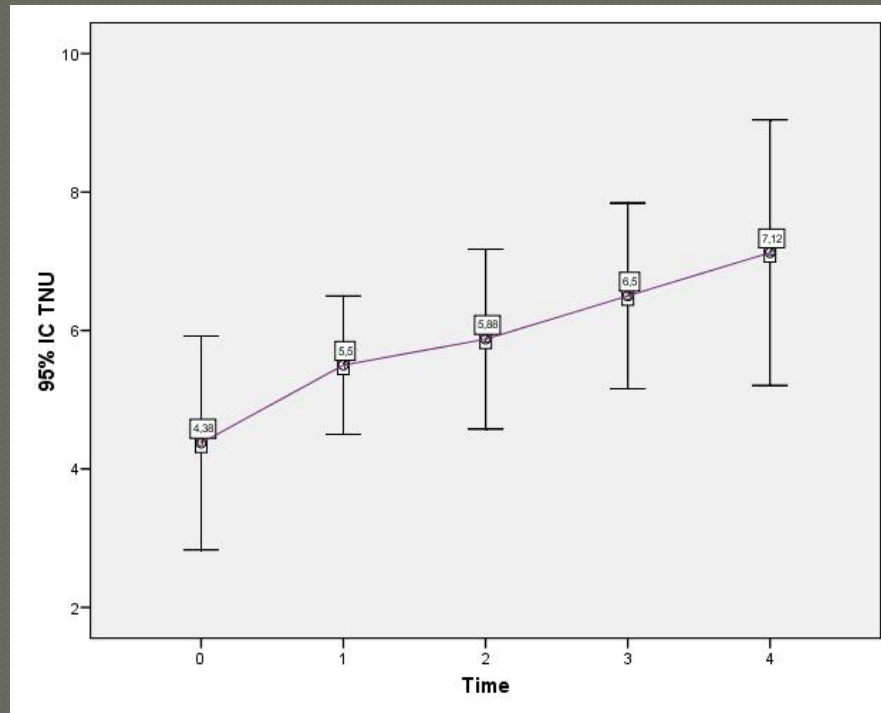
CAF Measures

L2 Performance Dimension	Measure
Accuracy	Global: EFU % of error free units (EFU) out of the TNU - no morphological, syntactical, lexical errors Specific: SOC % correct suppliance of verb inflections in obligatory contexts.

CAF Measures

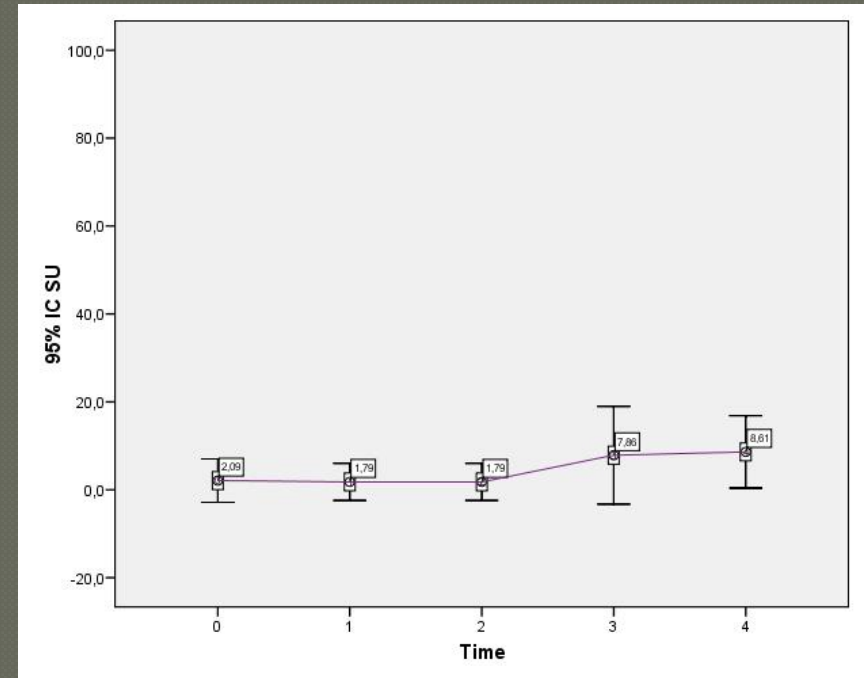
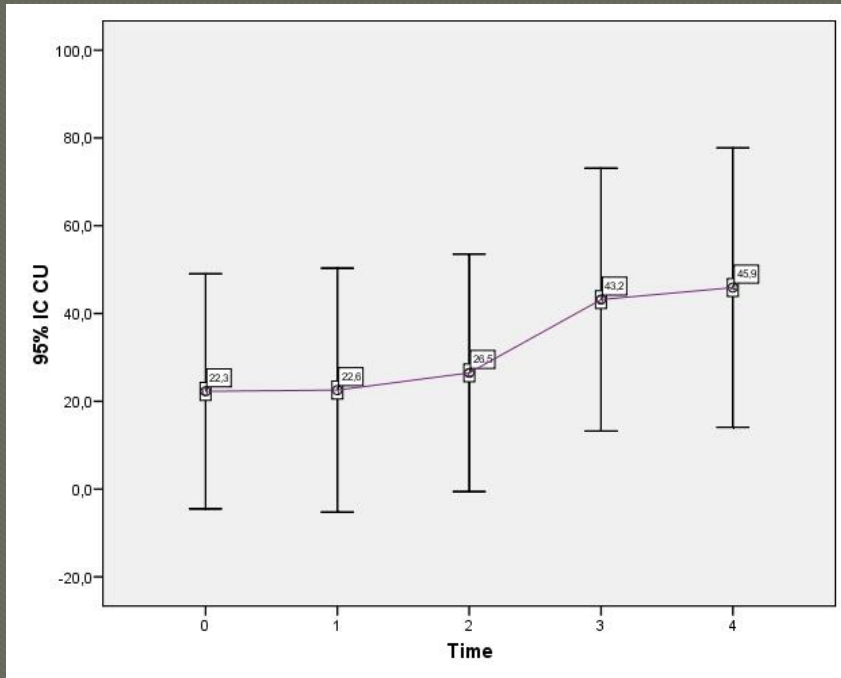
L2 Performance Dimension	Measure
Fluency	% English words (EW) % L1 words (L1W) Speed fluency: Words/minute (Wm) Breakdown fluency: %pause time out of speech time (Pause)

Results: Syntactic Complexity (TNU)



	M	SD	p	d
TNU0	4.38	1.84	.020	1.32
TNU4	7.13	2.29		

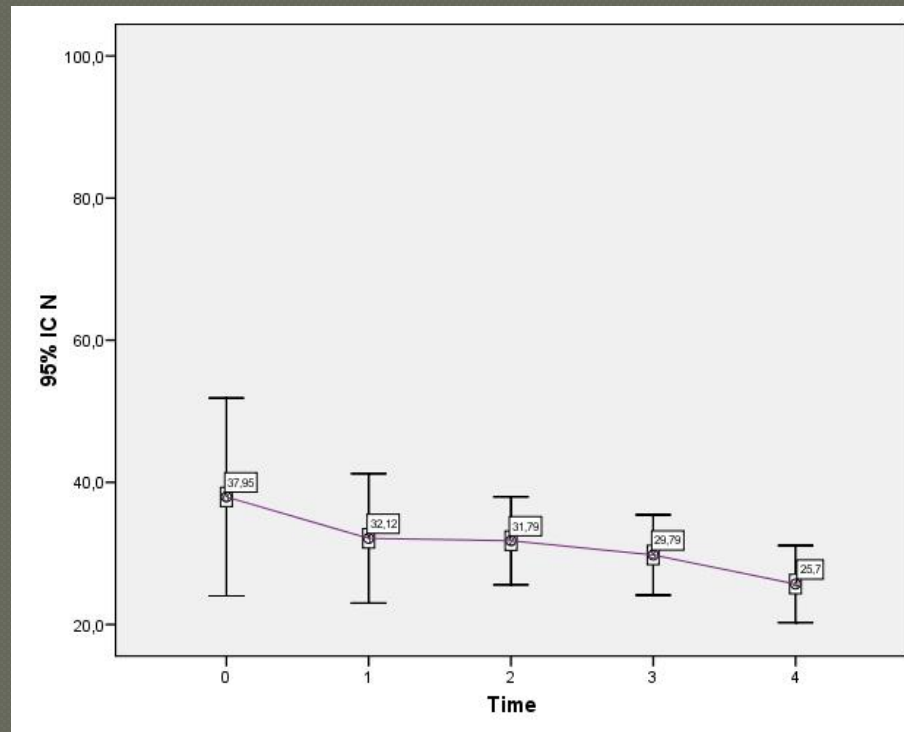
Results: Syntactic Complexity (CU & SU)



	M	SD	p	d
CU0	22.26	32.03	.080*	0.67
CU4	45.91	38.07		

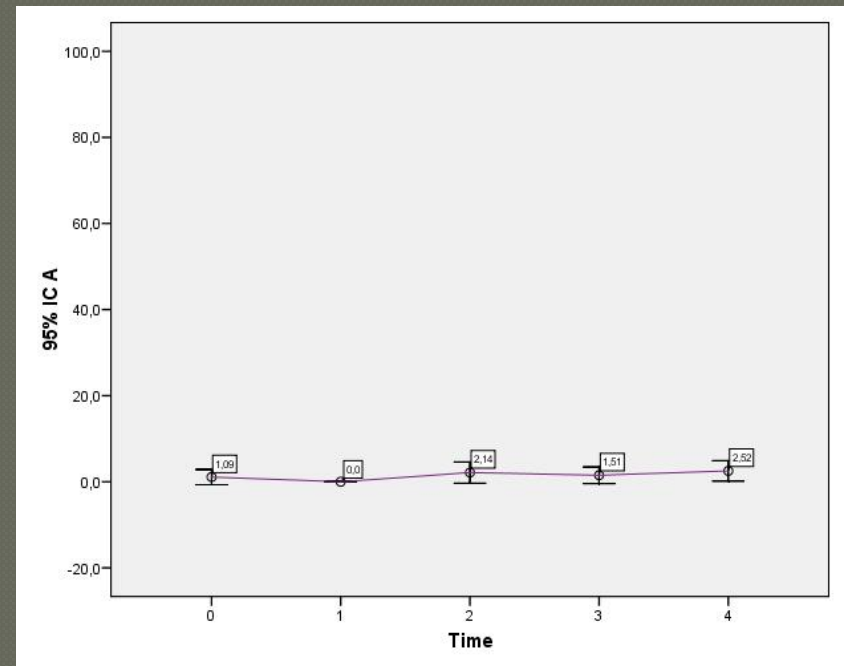
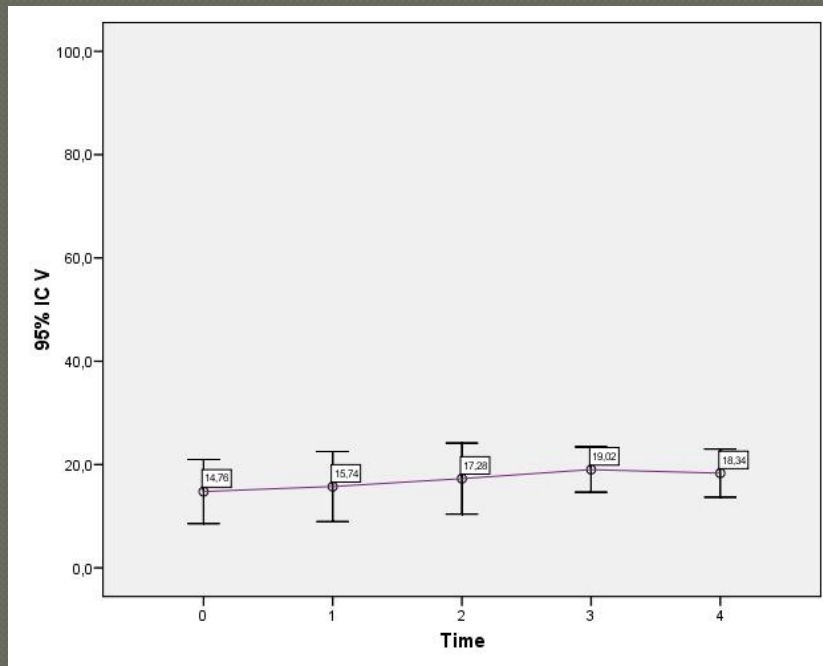
	M	SD	p	d
SU0	2.08	5.90	.068*	0.80
SU4	8.61	9.84		

Results: Lexical Complexity (N)

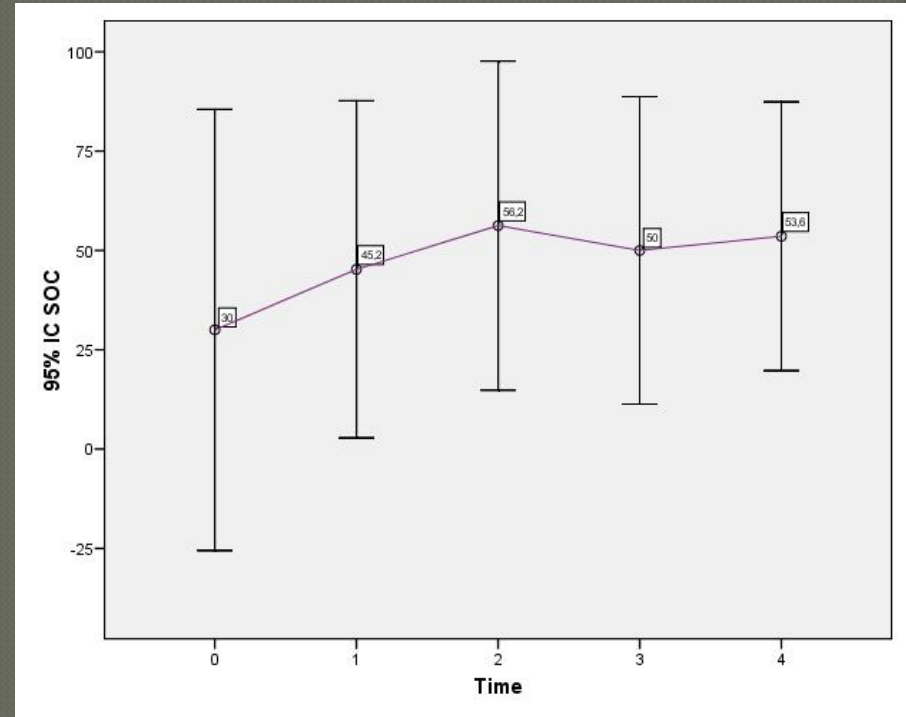
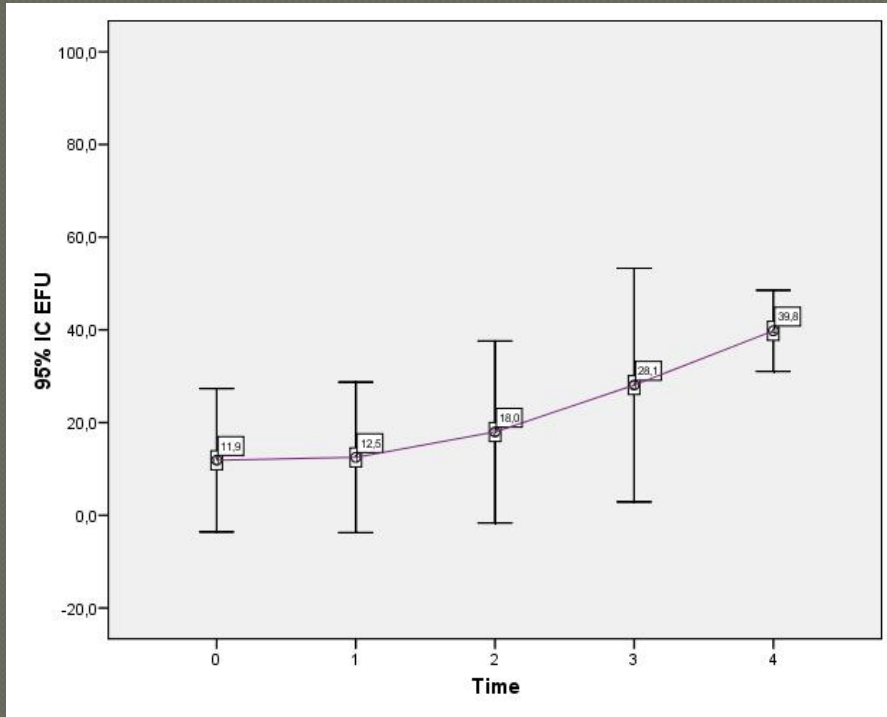


	M	SD	p	d
N0	37.95	16.64	.036	.97
N4	25.70	6.48		

Results: Lexical Complexity (V, A)

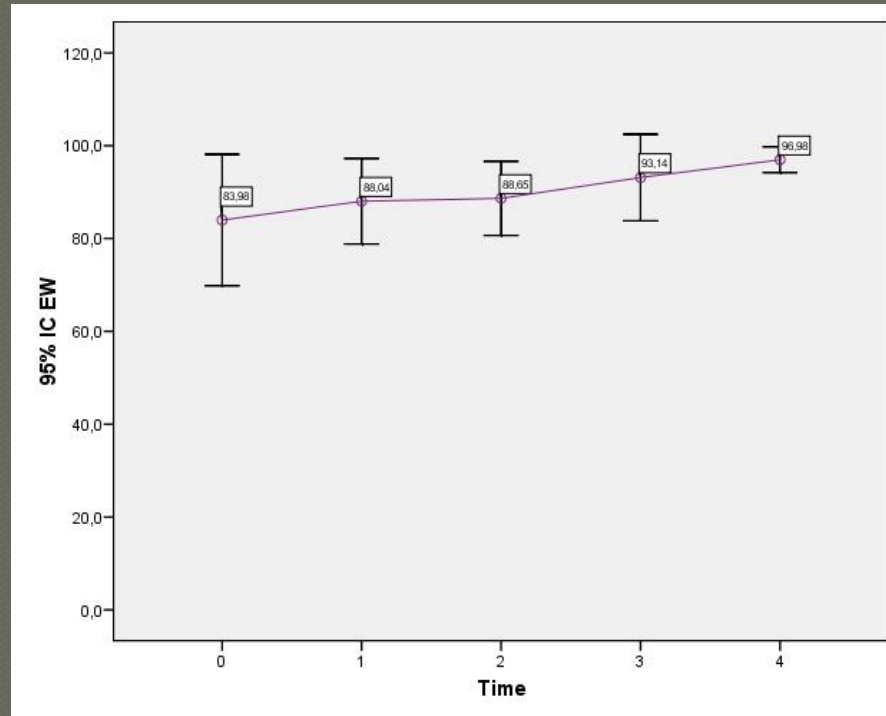


Results: Accuracy (EFU & SOC)



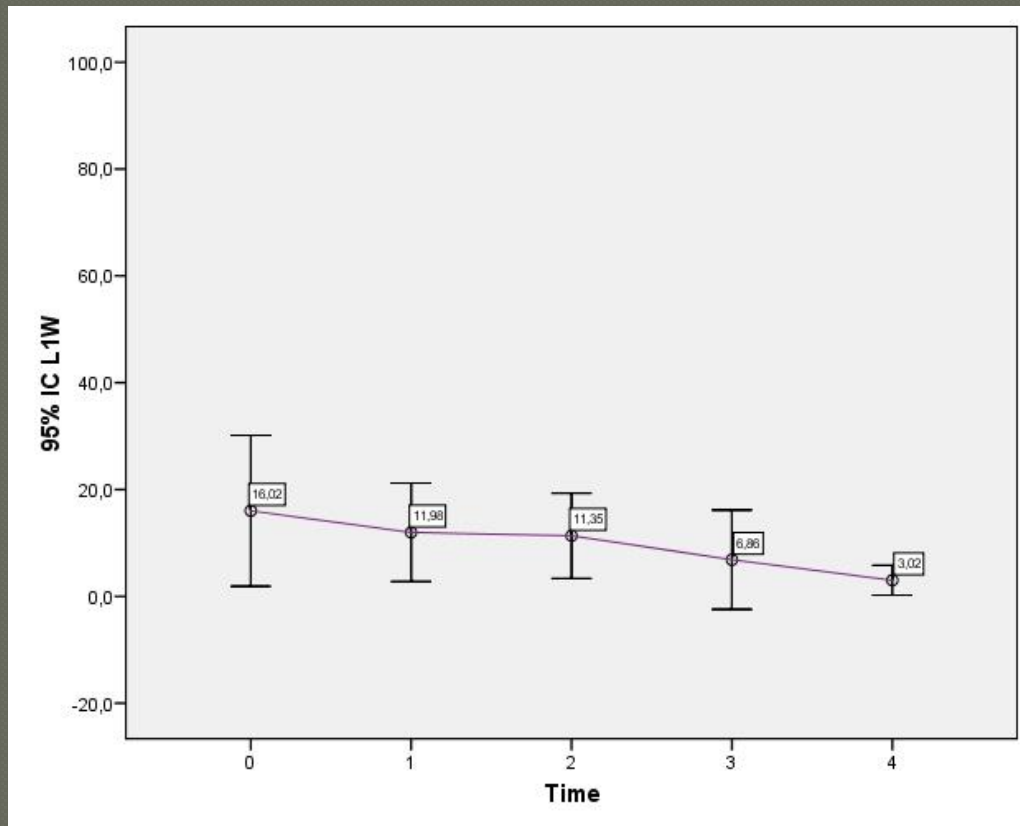
	M	SD	p	d
EFU0	11.87	18.50	.028	1.86
EFU4	39.80	10.48		

Results: Fluency (EW)

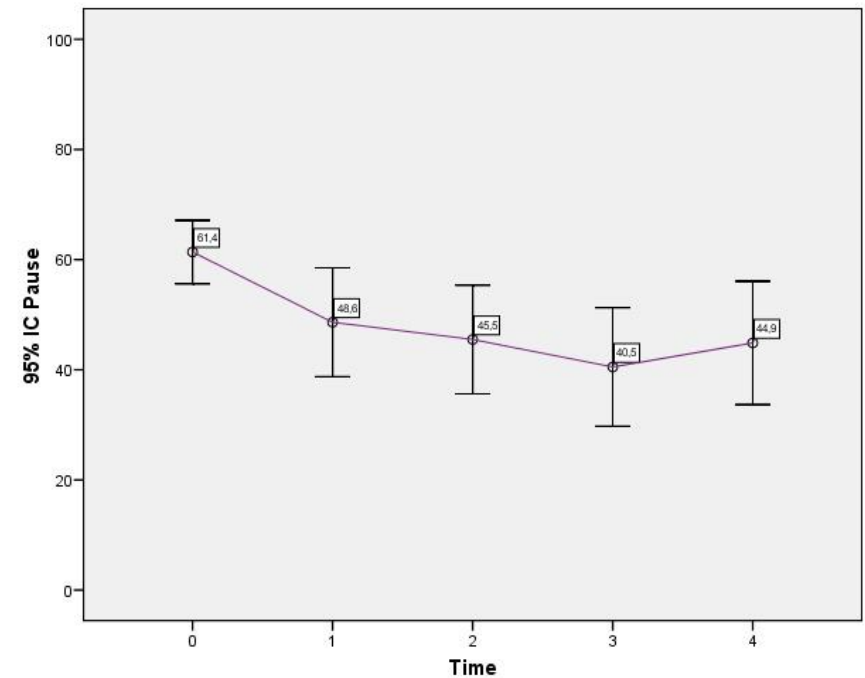
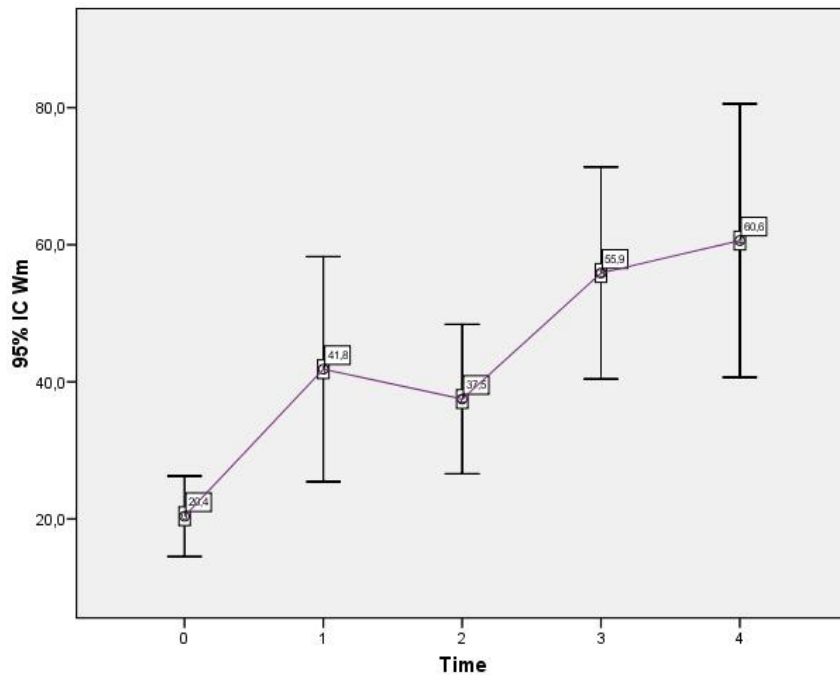


	M	SD	p	d
EW0	83.97	16.91	.043	1.07
EW4	96.97	3.34		

Results: Fluency (L1 W)



Results: Fluency (Speed & Breakdown)



	M	SD	p	d
Wm0	20.40	7.02	.012	1.45
Wm1	41.85	19.63		
Wm2	37.50	13.04	.069*	1.15
Wm3	55.87	18.48		
Wm4	60.61	23.87	.012	2.28

	M	SD	p	d
Pause0	61.38	6.89	.043	1.32
Pause1	48.63	11.83		
Pause4	44.88	13.39	.021	1.55

Results: CAF Interaction

- Interaction explored by means of Spearman correlations on TNU and CU (Complexity), EFU (Accuracy), W/m and Pause (Fluency)
- No statistically robust trade-offs (i.e. negative correlations), neither at group level nor within-individual
- Significant positive correlations mostly at within-individual level
→ at the early stages of English L2, different CAF dimensions seem to build on each other instead of entering in a competitive relation

Results: CAF Interaction

● C&A:

- **positive** (moderate) correlation between syntactic complexity and EFU, which becomes particularly significant in the case of child Katia

@Date: 02-MAR-2017
@Time Duration: 05:01

*KAT: Heu there are heu brothers and sister heum [...] heu heu and the table.
*KAT: One mothers [...] heu but dog [segment pas compris]
*KAT: [...]
*KAT: heu heu dog eat the picnic. The kitchen heu heu the kitchen no eats.
@End

@Date: 21-June-2018
@Time Duration: 00:28

*KAT: heu there are two childrens •
*KAT: with her dog •
*KAT: heu they leave •
*KAT: they are heum in the park •
*KAT: heu this is good •
*KAT: heu childrens not look her picnic •
*KAT: because the dog everything to eat •
*@ End.

- For lexical complexity, **negative** correlation between EFU and N → not a real trade-off as N rates drop on account of competition from other speech parts

Results: CAF Interaction

- A&F:

- **positive** (moderate) correlation between EFU&W/m → parallel increase in A & speed F
- **negative** (moderate) correlation between EFU & Pause → an increase in EFU occurs in parallel with a drop in pauses ≠ trade-off
- A lot of within-individual idiosyncrasy (group trends found only in 3/8 children)

Results: CAF Interaction

○ C&F:

- syntactic complexity increases with W/m (this trend becomes statistically significant with 5/8 children) and correlates negatively with pause (\neq trade-off)

@Date: 02-MAR-2017

@Time Duration: 02:10

*RAN: hum children and heu mom children in a in a kitchen. Heu c'est tout.

Children and mom heu see you see heu look is are looking the map.

Children go the park. heu heu children eats cooking but dog is eating it's eating heu picnic

*RAN: Heum children heum children heum kids, heum have heu have don't heve don't heum picnic

*RAN: et c'est tout.

@Date: 02-JUN-2018

@Time Duration: 01:23

*RAN: heum in the home in the house there is there are heum a little a li a little dog white and black •

*RAN: and heu children and heu and heum their heum mother in the kitchen •

*RAN: heum the girl cuts butter and the boy heum and the boy I don't know •

*RAN: heum heu the mother the mother and the children look the map the city •

*RAN: and heu dog jumped in the bag •

*RAN: heum the children heum are in the in the street the city •

*RAN: the children heum have picnic •

*RAN: the[re] are in the park •

*RAN: there are a cow in the park the tree the bird and heu •

*RAN: and heu and heu and heu dogs dogs children •

*RAN: the children heu scared because heum a dog in the bag •

*RAN: and eat every everything everything in the bag •

*RAN: heu c'est tout •

- A lot of intra-group and within-individual variation for the correlation between lexical complexity and fluency

Research Questions

RQ1 What are the developmental trajectories for CAF in young learner EFL oral production over a 2-year span?

RQ2 Is there an interaction between the CAF dimensions at group and individual learner level?

Discussion

- Very weak trade off effects due to small sample?
- Should we really consider fluency, and accuracy-complexity to be on the same level? Aren't accuracy and complexity functions of fluency?
- Things should clear up overtime – longitudinal corpus.

References

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Thank you!