Language Control in Lexical Retrieval during L2 German Oral Production

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SLA – Specific Context: Instructed Language Learning

Second Language teaching/learning
➡ Communicative Approach
➡ Task-based learning (Skehan, 1998)

Multi-competence concept (Cook 2010)
"the knowledge of more than one language in the same mind"
L2 learner → also a L2 user?   is not a "deficient monolingual"!

Instructed language learning: normative approach

ERROR : measure language proficiency
➡ **deficient** (norme of the target language) rather than **different**
➡ but also **necessary, normal** in process of language acquisition (cf. Corder 1978 !!)

➡ **Dynamic view of language use**
cognitive flexibility and creativity of the learner as a "L2 user"

Theoretical Background

Dynamic view of language use (de Bot, Lowie, Verspoor 2007;

➢ **Cognitive flexibility** (Nespoulous & Virbel 2004 ; Kormos 2006)

➢ **Dynamic System** framework applied to SLA research

  (de Bot, Lowie, Verspoor 2007; Larson-Freeman & Cameron 2008 ; Segalowitz 2010)

- **Variability** : the result of systems' flexibility and adaptablilty to the environment

- **Individual learner variables** (Dörnyei 2009 ; Dörnyei & Kormos 2000 ; Dewaele & Li Wei, 2014)

    ➠ Cognitive factor "**Creativity**" (Kormos 2011)

- **CAF** (Skehan 1998 ; Skehan & Foster 1999 ; R. Ellis 2009 ; Housen et al., 2012)

Our study :

When facing **production difficulties** (lexical retrieval):

➠ Dynamic interplay between the languages involved (L1/L2/L3)

➠ Control mechanisms used by the learner

➠ Impact of creativity on use of production strategies

= **adaptive and creative process** (Kormos 2006 ; 2011)

Corpus

- 20 French university students
- «global language proficiency » level B2
- Between 5 et 8 years of instructed learning L2 German at high school (Ø = 7ans)
- Age: 23-35 years (Ø = 27,6)
- 30 sets of 2 line drawings: make explicit the differences between the 2 drawings.
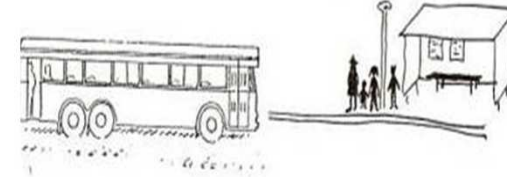
➡ **Quantitative analysis:**
   Accuracy via error analysis
   Fluency via pauses, filled pauses, repetitions, retractions

➡ **Qualitative analysis**: creative potential of the learner in lexical retrieval
➡ **Exploratory study**: the impact of creativity and control

Production: a process distinct from recognition, identification, selection, or comparison

Description of L2 learner's output in a task performance

CAF

    (Skehan 1998 ; Skehan & Foster 1999 ; R. Ellis 2009 ; Housen et al., 2012)

-- **Complexity**: type/token ; lexical richeness   → **take risk**

-- **Accuracy**: error rates in term of 'linguistic deficit'   → **avoid errors**

-- **Fluency** : language use in real time

Qualitative study :

➡ Cognitive dynamics and flexibility in lexical retrieval
➡ Creative potential of the learner

Classify production strategies: **creative/non creative strategies**

Hypothesis :
-- Creative learner: rely more on L2 based strategies than on L1 strategies (code-switching)
-- Using creative strategies (risk taking) helps to improve the language proficiency

Lexical retrieval: Creative Potential of the Learner/L2 user

Anaphoric Strategies

avoid risk / non creative

pauses, laughter..

er snief, snief ; er macht gr, gr

es raint ; eine bone ; eine os

etwas, das weiβ ist ; diese **Etwas**

tooth-brosse ; Zähnebrosse

Rotlipp

ein Teil unseres Skelett

Kälterland ; er jägert ; frohig

1) Omission

2) Avoidance

3) Onomatopoeia

4) Code-switching

5) All purpose words

6) Blend

7) Loan word creation

8) Circumlocation

9) Lexical Innovation

take risk / creative

Cataphoric Strategies

The impact of creativity and control on oral production: an exploratory study

Learner creativity, cognitive flexibility and problem-solving mechanisms

- ➢ lexical innovation in L2
- ➢ L1/L3 code-switching
- ➢ control activities observed through
  - ◆ self-repair
  - ◆ on-line meta-comments (in L1 and in L2)
- ➢ error analysis

Creative language learner ?

Creativity : a person's ability to come up with a large number of novel and statistically rare solutions on a given task (Albert & Kormos 2011)

Variable: lexical innovation
- ➟ The **less creative group** (between 0 and 3 words)
- ➟ The **creative group**   (between 5 and 8 words)

Research questions

Hypothesis:

➡ Lexical innovation is a strong criteria for creativity in SLA

➡ When facing difficulties, **creative learners** will

 ◆ use more L2 based cataphoric strategies

 ◆ avoid L1 (code-switch)   (Instructed learning - using the L1 : not creative!!)

 ◆ use on-line L1/L2 meta-comments

 ◆ use more self-repair

Does they commit many errors (attention drawn to complexity or to accuracy?)
What are they doing to maintain fluency?

Results: Accuracy
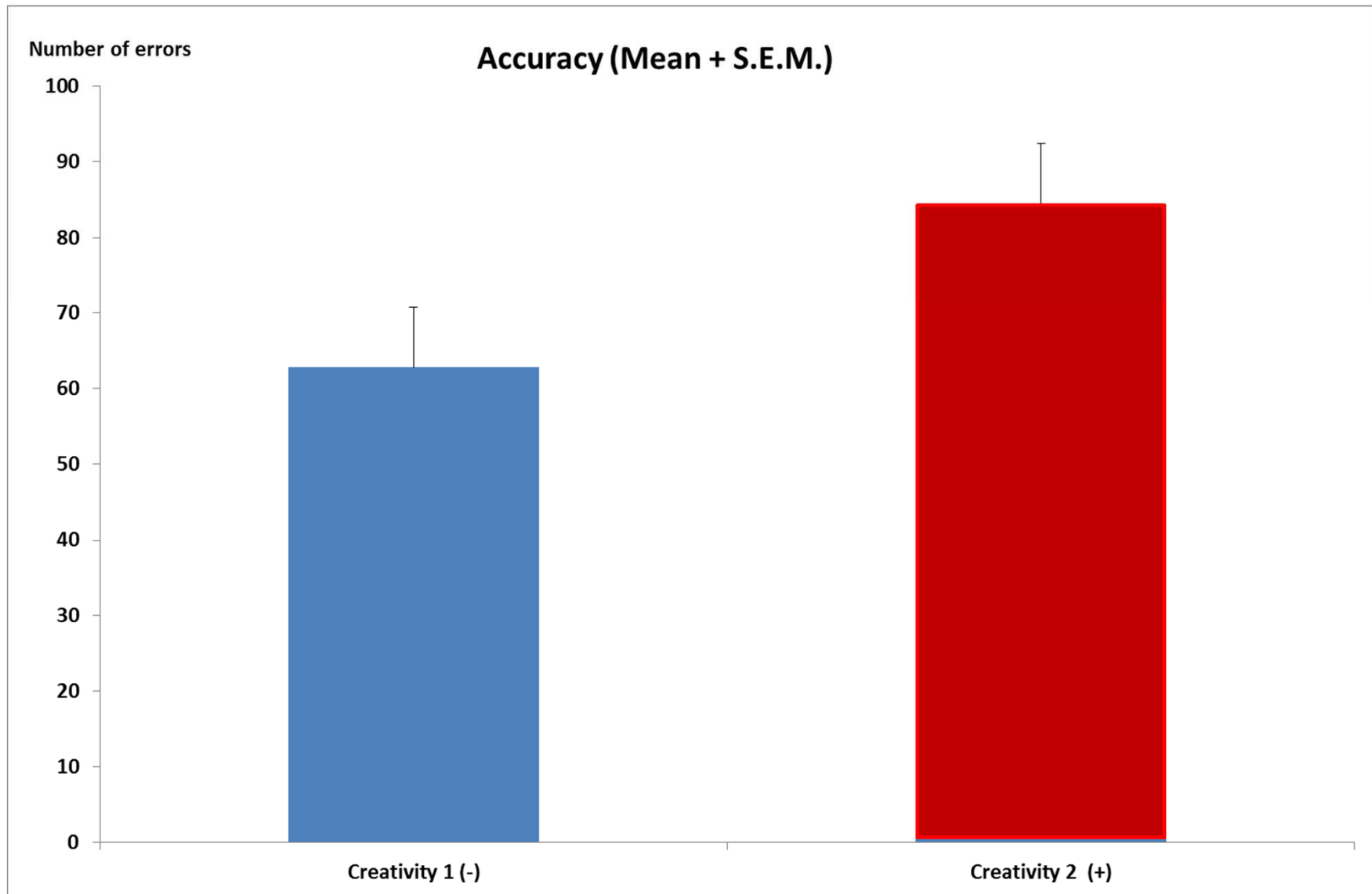
Let's have a closer look at the dynamic interplay between the languages involved

Example of cognitive flexibility in word finding processes and the role of monitoring

From codeswitch to the correct L2 expression and the use of meta-comments

<MC PG ja das weiß ich auf englisch> <**CS E/F tooth brosse**> <PR> und auf deutsch das ist
eine <REP eine> <PR> <P> < P> Zahn <REP Zahn-> <PR> <P> <P> <**LI Zahn-etwas**> also
er will **seine Zähne waschen** (....) <ERR-SEM> (....)
 Brüste <ERR-SEM> <MC-LF non> <RL brü-> <RL brü- etwas> <P> <P> <RL brü- brü->
<RL brüst-> <RL brutz-> <CE > (....) <RL bürst-> **Bürste** <REP Bürste>
eine **Zahnbürste <**MC-LG ja> <REP eine Zahnbürste> und er bürstet <ERR-SEM> seine
Zähne <RL putz-> er **putzt seine Zähne.**

From CS english (L3) to an all purpose word „the something"

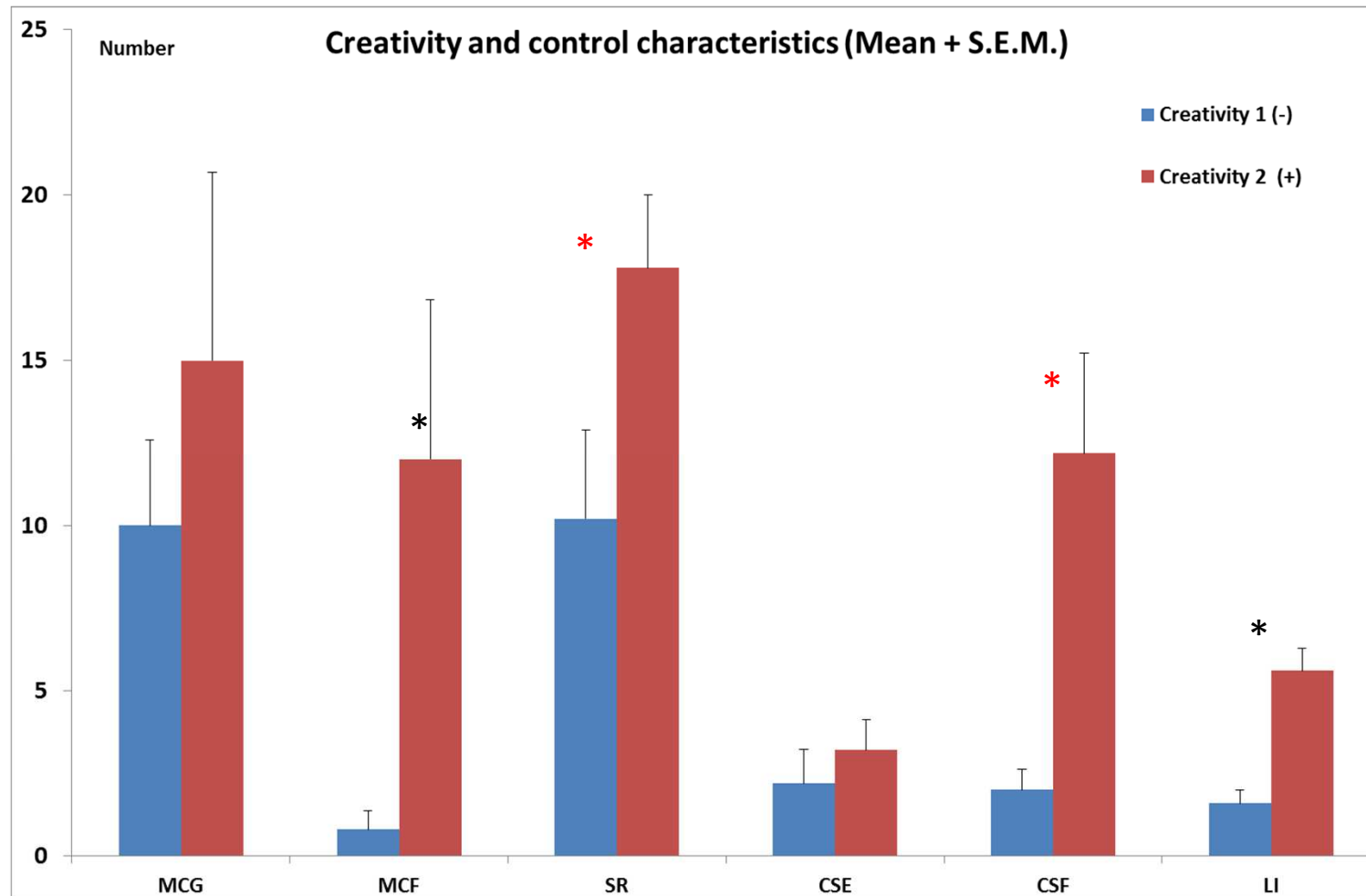<**CS-E bone**> <**MC-LG nein**> <**MG-LF c'est en anglais**> <R> **Etwas das ist weiß** <ERR-SYN> und
 <PR äh><REP und> <PR äh> und <PR hm> <PR hm> <PR hm> etwas das weiß ist <SR SYN>
 und das die Hunde <PR äh> essen gern <ERR-SYN> hier hat er <REP hat er> **das Etwas**
 gefunden.

➡ **Specific performance phenomena (not competence !!)**

Some characteristics of a "creative learner"

LI = lexical innovation
CE = code switch
SR = self repair
MC = metacomments

Different kinds of metacomments

➠**Meta-comments: the learners' proficiency (MCP)**

- **L1 F:** je ne sais pas / je ne sais plus comment on dit
- **L2 G:** ich weiβ nicht auf Deutsch

➠**Meta-comments: linguistic knowledge of L2 (MCL)**

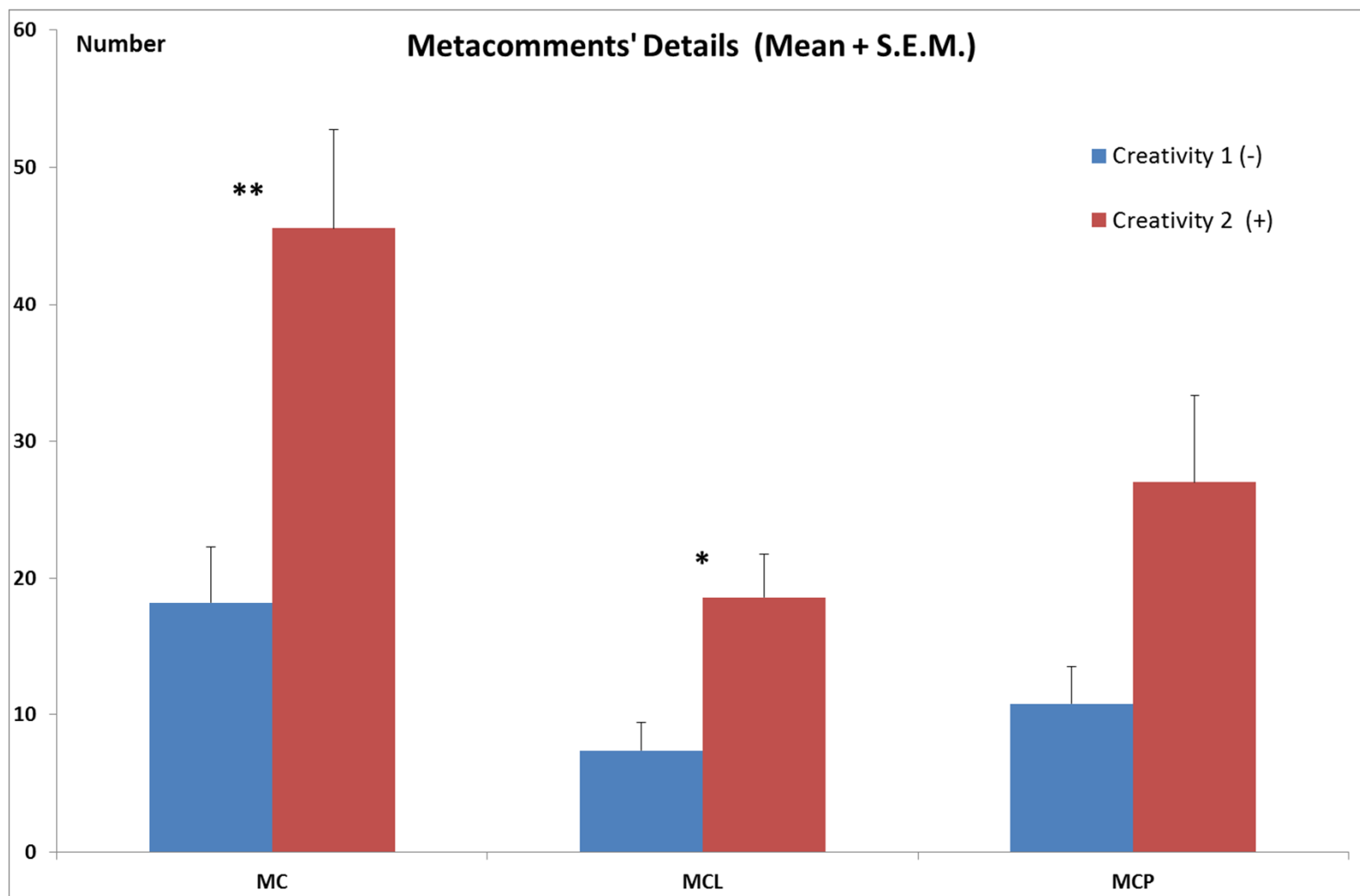- **L1 F:** non, c'est faux, c'est pas ça / non, c'est en anglais /
  <essen, c'est quoi le participe passé?> gegessen <AC> <R> er hat gegessen.
  <CS-E wash> <MC-LF **non**> waschen <P> gewascht

- **L2 G:**
  das sagt man nicht; <MC-LG können wir sagen *rouge a lèvre* wie man Parfum sagt?>
  er ist auf dem <MC-LG es ist kein Sessel> <REP auf dem> Bank gesetzt

The use of metacomments

MC : all metacomments
MCL: norm of the targuet language
MCP: personnal proficiency

Metacomments' Details (Mean + S.E.M.)

Results

Creative learner - cognitive flexibility and control in oral production performance

⬧ **Accuracy (error)**
➡ produce more **errors** to maintain fluency (flexibility, imagination, risk taking)

⬧ **L1 (code-switch**) Instructed learning: using the L1 - not creative!!
➡ like "real" bilinguals, this "L2 users" use significantly more L1 code switch

⬧ use **L1/L2 meta-comments** (control mechanisms)
➡ the creative group use significantly more meta-comments (L1 /L2)
➡ they use significantly more comments about their knowledge (the norm of the L2)

⬧ use of **self-repair** (control mechanisms)
➡ the creative group is able to correct themselves significantly more

⬧ use cataphoric, creative strategies in lexical retrieval

➡ ➡ creative L2 learner/user : higher productivity ! (see also Kormos 2011!)
➡ ➡ learner creativity : important variable in the analysis of L2 speech production

Creativity in SLA

Albert & Kormos (2011):

➡ The effects of learner creativity on the performance of oral narrative tasks

- Narrative task

- Standardized creativity test - 3 Criteria of creative fluency:

> Flexibility - the ability to produce a wide variety of ideas
>
> Originality - the ability to produce unusual ideas
>
> Elaboration - the ability to develop or embellish ideas and to produce many details

Results : Creative learner

> * greater fluency: provide a **larger number of solutions**
>
> * flexibility : reflects the ability to produce a **wide variety of ideas**

➡ **The most important effect of creativity manifests itself in productivity**

➡ The use of creative strategies cannot be observed via proficiency tests

- No significant relationship among creativity and accuracy – complexity – lexical variety

- L2 speech production : originality, the quality of creative ideas matters

Perspectives

➡ Our study : analyse the 10 other participants

➡ More research: learner's cognitive creativity

➡ A closer look at the meta-comments and self-repair

➡ Include a creativity test in the next study

Implications for Instructed Learning

➡ How promote creativity, flexibility, risk taking and the use of cataphoric strategies?

➡ **Code switch results** :
   devote a reflection on the use of L1 in instructed learning (assessment ≠ practice)

➡ **Multi-competence perspective** : use only the second language in the classroom denies
   the very existence of the first language in their minds (Cook, 1999)

Language teaching: producing a successful L2 user, not an imitation native speaker

Thank you
Danke
Merci

Bibliographie

Dewaele & Wei (2014), Intra- and inter-individual variation in self-reported code-switching
patterns of adult multilinguals. Preprint version of the paper that appeared in *International Journal of Multilingualism, January 2014,*published online on http://dx.doi.org/10.1080/14790718.2013.878347

Skehan 1998 ;
Skehan & Foster 1999 ;
R. Ellis 2009 ;
 Housen et al., 2012)
Kormos 2006 ;
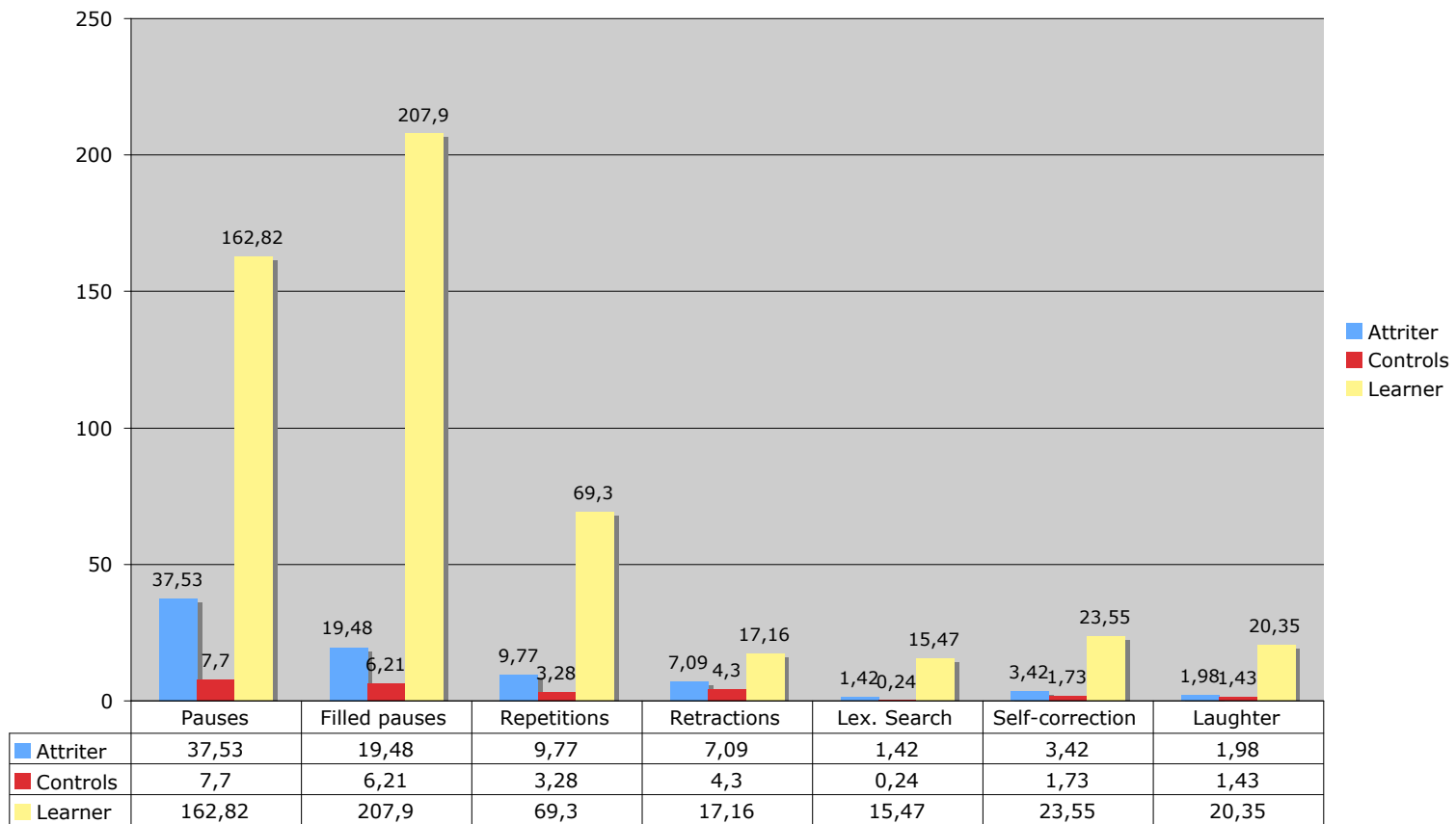Albert & Kormos 2011
Segalowitz 2011
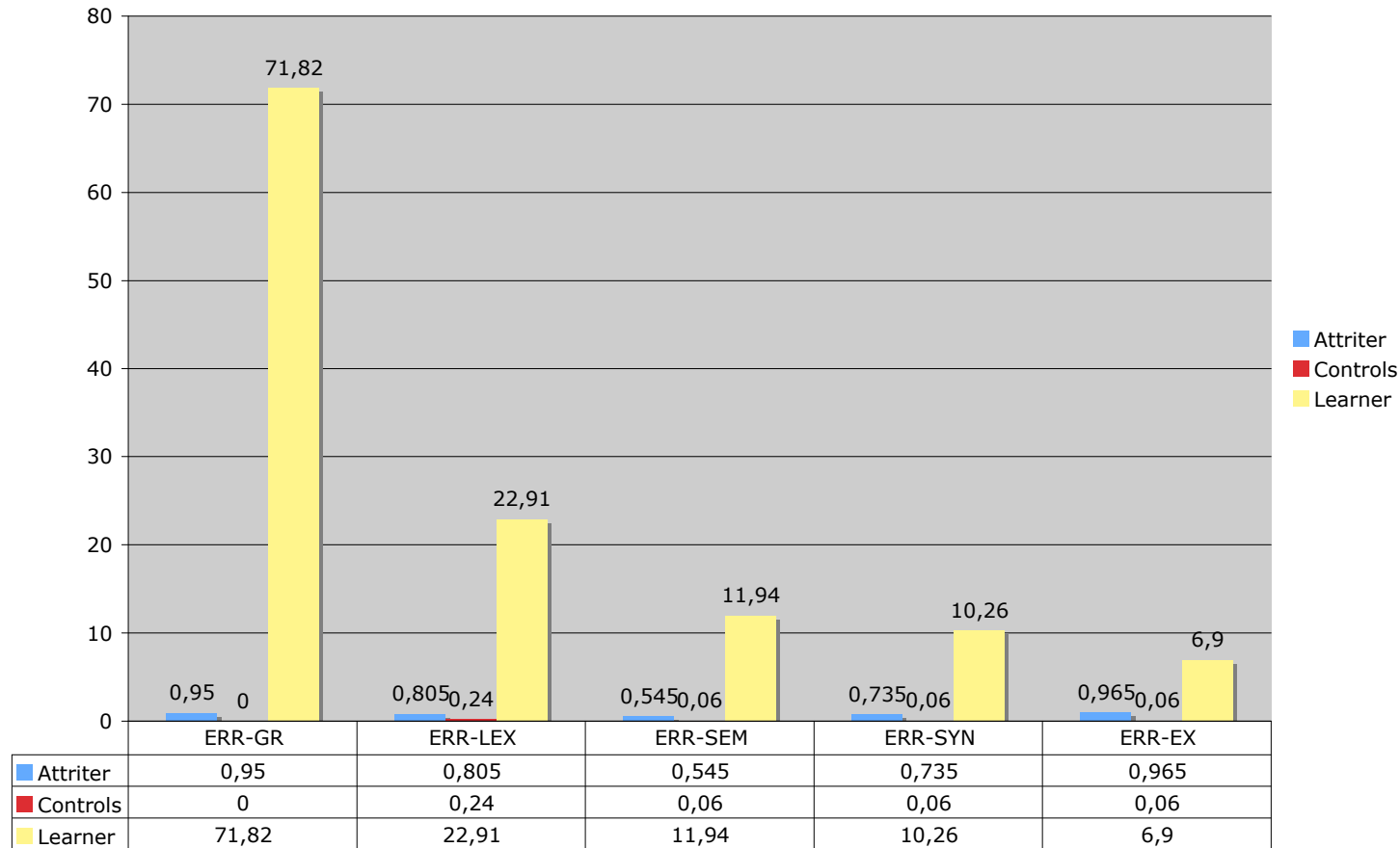
stratégies adaptatives

1) *e*r *hat ein* <REP *ein* > <PR> **<RETR>** */ sein* < REP *sein* >
   Arm scheint <PR> <PR> *kaputt* ➡ **Omission**

2) pauses – pauses „remplies" (**äh, bloblob**, etc.) – rire ➡ **Evitement**

3) *er **snief, snief** ; er macht **gr, gr***
   *er will der **<chuit>** (Elch) (...) töten* ➡ **Onomatopée**

4) ***ein fusil** ; **die echelle** ; **eine os** ; **eine bone** ; **eine nose** ; **es raint*** ➡ **Code-switching**

5) (élan)   *er will der* **<CS-F *truc*>** *töten*
   (os)   ***etwas,*** *das weiβ ist ;* **diese Etwas** ➡ **All purpose words**
   (parapluie) *das ist* **eine Dinge** *wenn es raint*   **mots "passe partout"**
   (fusil)   *eine* **Sache,** *die Bang macht*

6) ***tooth-brosse ; Zähnebrosse ; Public-Stuhl*** ➡ **Blend**

7) (rouge à lèvre) ***Rotlipp*** ➡ **Calque**

8) (os)   *er sucht einen* <PR > ja **einen Teil unseres Skelett**
   (élan)   **der Freund des Weihnachtsmannes**
               der Vater von Bambi ➡ **Périphrase**

9) ***Kälterland ; er jägert ; er ist sehr frohig***
   *er ist so **schlumpi** schlumpi* ➡ **Création de mots**

	Pauses	Filled pauses	Repetitions	Retractions	Lex. Search	Self-correction	Laughter
Attriter	37,53	19,48	9,77	7,09	1,42	3,42	1,98
Controls	7,7	6,21	3,28	4,3	0,24	1,73	1,43
Learner	162,82	207,9	69,3	17,16	15,47	23,55	20,35

Dysfluency is evidenced by a huge number of filled and silent pauses, repetitions in learners but also, to a lesser degree, in attriters

Criteria : accuracy

Erreurs (par 1000 mots)

	ERR-GR	ERR-LEX	ERR-SEM	ERR-SYN	ERR-EX
Attriter	0,95	0,805	0,545	0,735	0,965
Controls	0	0,24	0,06	0,06	0,06
Learner	71,82	22,91	11,94	10,26	6,9

Learners produce many errors mainly with respect to grammatical morphology (case, gender, plural, verb agreement, etc.).

Le potentiel stratégique et adaptatif

	Total meta-comments	Meta-comments GER	Meta-comments FR	Meta-comments L-GER	Meta-comments L-FR	Codeswitching	Word creation
Attriter	2,48					1,985	0,03
Controls	0,12					0,06	0
Learner	53,66	21,03	10,76	13,46	8,41	16,48	6,05
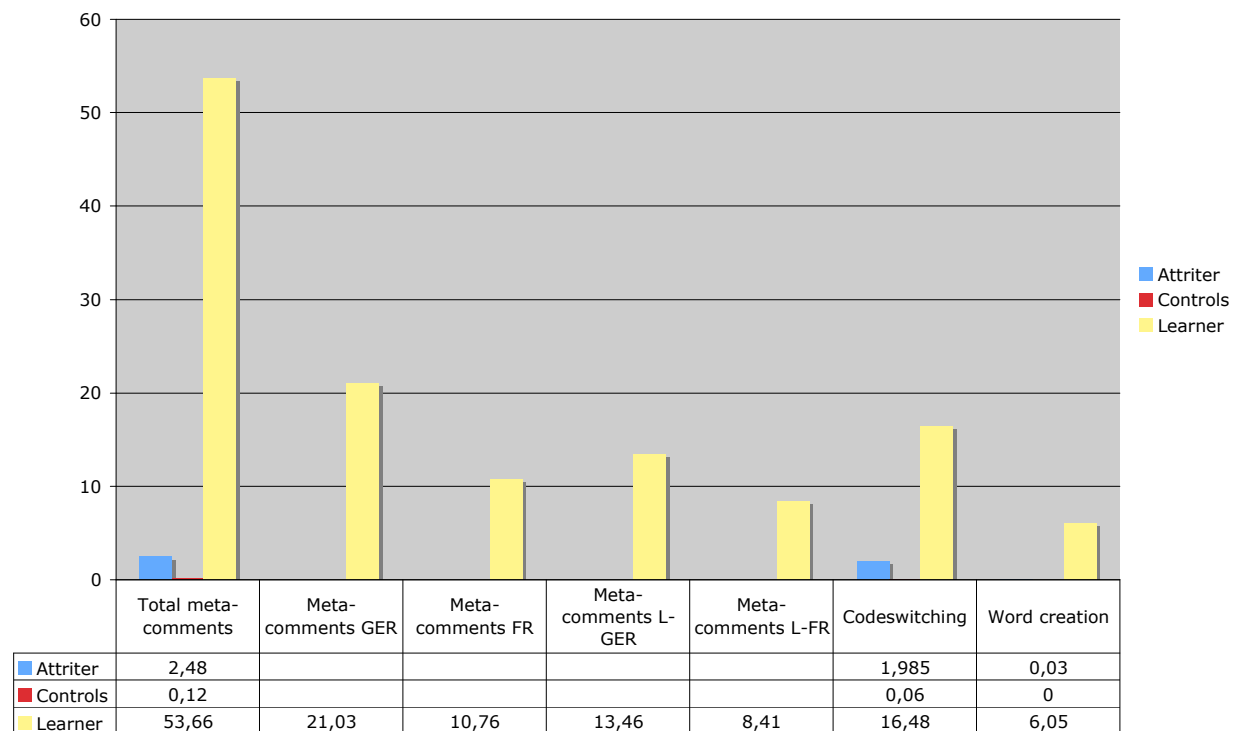
Difficulties especially word-finding difficulties give rise to a variety of comments in L1 and L2, code-switching to L1 and other languages and word-creations

Classroom implication

Result : switch in L1 and L2/3 ! - implication for teaching !

- **The language teaching classroom.** The multi-competence perspective does not see any virtue in **making the students use only the second language in the classroom** since **this denies the very existence of the first language in their minds**.

It advocates principled use of the second language when classroom goals can be achieved more efficiently by its use (Cook, 1999).

- **Goals of language teaching.** Multi-competence takes the goal of language teaching as producing a **successful L2 user**, **not an imitation native speaker**.

- ?? Mettre ou pas ??The multi-competence idea has important implications for language teaching, which has often seen its task as making students as like native speakers as possible. Multi-competence is now utilized in books on SLA and language teaching such as Cook (2008), Ortega (2009) and Scott (2009). Cf Segalowitz ! 2010 :

Activités de Monitoring

➡ **Meta-commentaires** (MC) **: niveau de connaissances du sujet**

● **L1 F:** *je ne sais pas*; *je ne sais plus comment on dit*

● **L2 G:** *ich weiβ nicht auf Deutsch ; mir fehlt die Wörter*

➡ **Meta-commentaire : connaissances linguistiques L2** (MC-L)

● **L1 F**:*non, c'est faux, c'est pas ça;*

   non, c'est en anglais;
   <"essen" c'est quoi le participe passé?> gegessen <AC> <R> er hat gegessen.
   *<CS-E wash><**MC-LF non**>waschen <AC> <P> gewascht*

● **L2 G**

   das sagt man nicht ; <MC-LD können wir sagen " rouge a lèvre" wie man Parfum sagt?>
   *er ist <PR> auf dem **<MC-LD es ist kein Sessel>** <REP auf dem> Bank gesetzt*
   *er ist in Gedanken… <**MC-LD** aber das wollt ich nicht sagen>.*
   *er ist gedanklich <ERR-LEX> <**MC-LD nein**>*

Control mechanisms involved in lexical retrieval

Mettre en commentaire dans le slide 14

- Control in on-line processing conscious use of linguistic and cognitive strategies

- **L2 learner and L2 user : emergent bilinguals ;)**

- **Control activities** observed through **self-repair and on-line meta-**comments in both languages, + code swith :

- MC can illustrate on-line MC control "no, that's english…)

- . Our hypothesis is that, when facing difficulties, creative learners will use more on-line L1/L2 meta-comments, more L2 based strategies (e.g., lexical innovation) than code-switching and they will probably produce more errors to maintain creative fluency by using flexibility, imagination and risk taking.

Apprenants vs. Attriters
Conclusion : données quantitatives

➡ Nécessité de regarder les aspects qualitatifs

▼ mécanismes de résolution de problème
▼ manque de mot- déficit lexical
▼ mécanismes de contrôle (conscients)

- Quelles stratégies linguistiques et cognitives ?

- Rôle de l'attention ? Ciblée sur quels faits ?

- Rôle de la L1 – relations entre L1 L2 et L3… ?

Aspects qualitatifs
Activités de monitoring

Les "méta-commentaires"

er zeigt die **Zunge** */ he sticks out his tongue / il tire la* **langue** :

MC-D *ich weiß nicht mehr wie das heißt* ‹PR› **MC-LD** *das ist nicht die Sprache* **MC-D** *ja ich kenn das *Unterschieden*

Os : (…) ‹CS-E *bone*›‹**MC-LD** *nein*›‹**MC-LF** *c'est en anglais*›

➠ La flexibilité cognitive :
stratégies adaptatives de production

premiers constats

Malgré un niveau général intermédiaire en langue (niveau B1-C1), la plupart des apprenants rencontrent de grandes difficultés dans cette tâche qui exige la production d'un vocabulaire spécifique :

➢ manque de vocabulaire et de fluidité générale

➢ forte compétition entre les langues

➢ surcharge cognitive (attention focalisée sur la forme ; approche normative !)

⇒ hypothèse : plus les apprenants sont avancés, moins ils focalisent sur les faits de grammaire et plus ils utilisent des stratégies adaptatives créatives dans le domaine lexical

➡**Lexique mental - vision dynamique**   ????

    Organisation et accès ?

- mieux comprendre les processus d'encodage
- quelle relation entre les langues L1- L2- L3… au moment de l'activation /sélection du lexique ? inhibition
- comment la sélection est-elle contrôlée ?

➡ **Les processus de résolution de problèmes / monitoring – les mécanismes de contrôle**

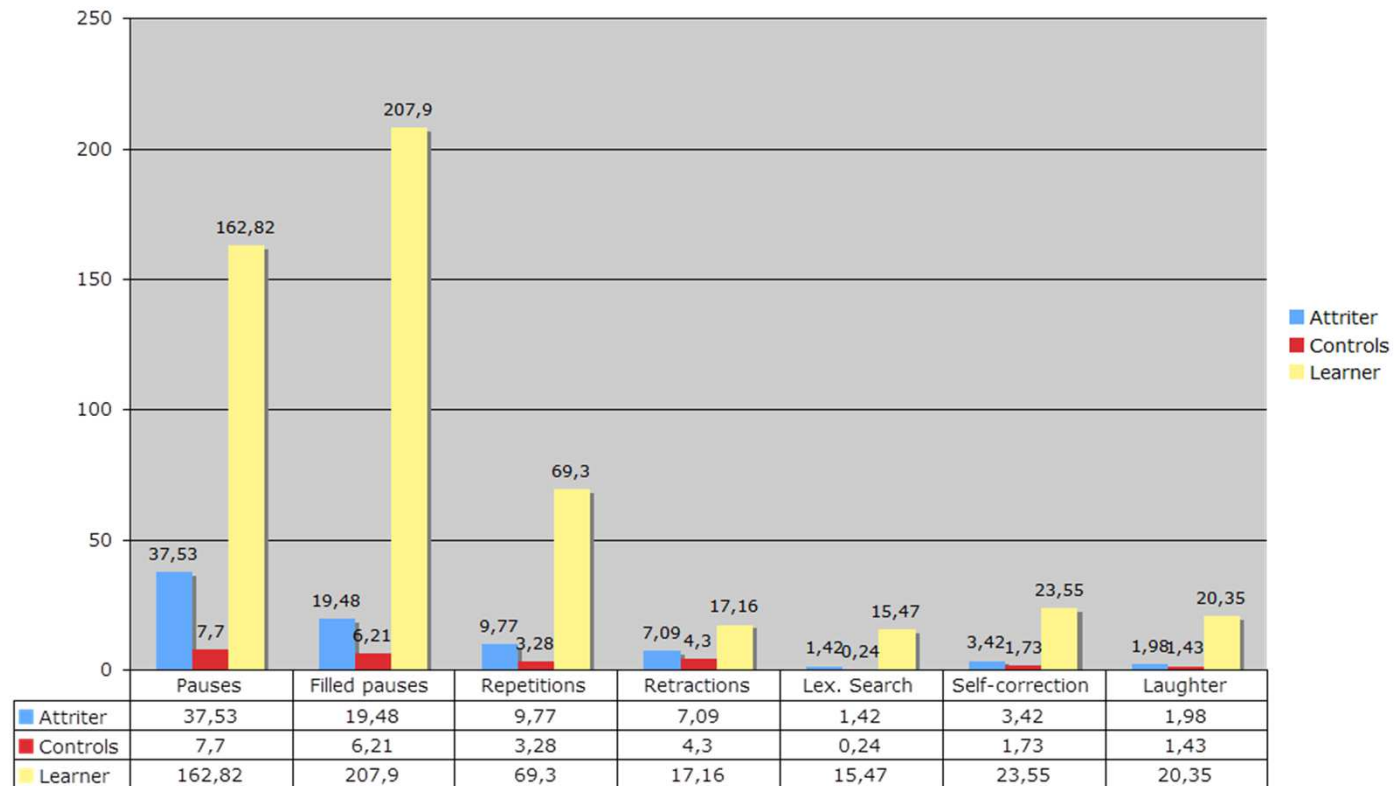   Utilisation consciente de stratégies linguistiques et cognitives

- quelles stratégies linguistiques et cognitives ?
- mieux comprendre les **méta-commentaires** :
  - dans quelle langue ?
  - sur quels faits de langue l'attention est-elle focalisée ?
  - où dans le discours oral ? avant/après le problème ?

➡ **Les phénomènes de fluence**

    Analyse des (différentes) pauses, hésitations, etc.

- quels faits de langue concernés ?
- à quel endroit dans le discours oral ?

Fluency

	Pauses	Filled pauses	Repetitions	Retractions	Lex. Search	Self-correction	Laughter
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Dysfluency is evidenced by a huge number of filled and silent pauses, repetitions in learners but also, to a lesser degree, in attriters = similar behavor

TÂCHE DE PRODUCTION

dénomination / description de 29 sets d'images :
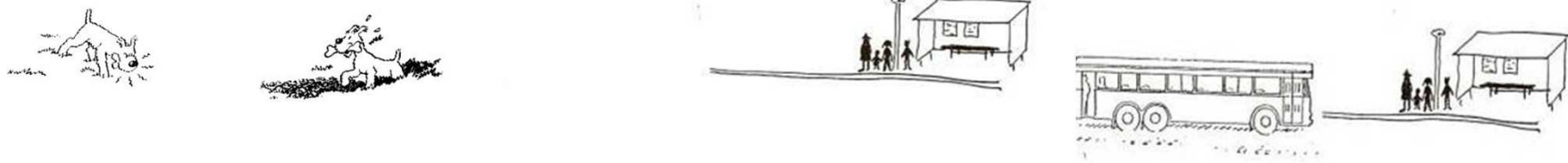
. des questions spécifiques ➠ production d'une structure cible
. production linguistique guidée
. pas de restriction de temps

PARTICIPANTS

20 apprenants L1 français L2 allemand (niveaux B1.2 - C1)
entre 5 et 8 ans d'enseignement d'allemand au secondaire (Ø = 7ans)
âge: 23-35 ans (Ø = 27,6)
futurs professeurs des écoles avec option allemand L2

VARIABLES (ANALYSES)

erreurs
fluence
potentiel stratégique et adaptatif

main questions

How can we promote the developement of complexity, accuracy and fluency in oral L2 production ?

What is the learner doing when facing a problem (in oral production)?

How is he handling with the difficulties?

What is he doing to maintain fluency ?

What is the learner **controlling ?** – **attention** focused on what ?

 (Accuracy? Form? Meaning? ….)

➡ **some problem-solving mechanisms in L2 oral production**

➡ **specific performance phenomena (and not competence !!)**

e.g. exemple from codeswitching to the correct L2 expression and the use of meta-comments in L2

How could we determine a „creative learner"??

What means „creativity" in SLA ?

Research questions and hypothesis

Production difficulties (wtitten/oral) and how does the learner handle with

➡ Problem-solving mechanisms in L2 oral production

➡ specific performance phenomena (and not competence !!) exemple from codeswitching to the correct L2 expression and the use of meta-comments in L2

Control is observed via : metacomments / selfrepair / attention ciblée sur quels faits de langue ?

Cognitive flexiblity / adaptation ….

What is **creativity** ? - >

Hypothesis : word creation / lexical innovation = very creative

Using lthe L1 is not creative or

Language needs to be seen as dynamic – makes not a lot of sense to distinguish competence and performance (Larsen-Freeman & Cameron (2008) in this specific context

<04AC1_L2> <23:26> chercher le son !!)

-> from CS english (L3) to an all purpose word „the something"

<CS-E **bone**> <MC-LG **nein**> <MG-LF **c'est en anglais**> <R> **Etwas das ist weiß**
<ERR-SYN> und <PR äh><REP und> <PR äh> und <PR hm> <PR hm> <PR hm>
etwas das weiß ist <AC SYN> und das die Hunde <PR äh> essen gern <ERR-SYN>
hier hat er <REP hat er> **das Etwas** gefunden.

<23FR2_L2> <32:19>
<**PR**> <**MC-D** ja das weiß ich auf englisch> <**CS-E** tooth bros> <PR> und auf deutsch das ist eine <REP eine> <PR> <**P**> < P> Zahn <REP Zahn-> <PR> <P> <P> <FM-N **Zahnetwas**> also er will seine Zähne waschen <ERR-EX> <P> <P> <P> <P> <P> <RL bro- bro-> <RL brü- brü-> <PR> Brüste <ERR-SEM> <MC-LF no> Brüste <ERR-SEM> <CE fast> <RL brü-> <RL brü- etwas> <P> <P> <RL brü- brü-> <RL brüst-> <RL brutz-> <CE du hast alle Buchstaben in dem Wort musst sie nur ein bisschen umdrehen> <RL bürst-> Bürste <REP Bürste> eine Zahnbürste <**MC-LD** ja> <REP eine Zahnbürste> und er bürstet <ERR-EX seine Zähne> <CE ja oder auch … wenn man sauber macht….> <RL **putz**-> er putzt seine Zähne

P = pause
PR = pause remplie
R= rire
RL = recherche lexicale
REP = répétition
RETR = rétraction
AC = autocorrection
CS-F / CS-E : codeswitch
MC-F = métacommentaire
MC-LF
MC-D
MC-LD

ERR-GR
ERR-SEM
ERR-SYN
ERR-EX
ERR-LEX
ERR-LEX PHO : einen **H**arm
FM-N
FM-V
FM-ADJ

Control

cadre général :

Adaptive control hypothesis   (Green & Abutalebi 2013)
Speech comprehension and production : are governed by control processes
They adapt themselves to the recurrent demands
 Explore the nature and the dynamics in bilingual speech production : individuals increase cognitive control in order to achieve a desired goal
= bilinguals : better cognitive control : see their ability to switch !! (Aparicio & Lavaur 2013 ; Kroll & Bialystok 2013)

Bilinguals are more efficient in comparison with monolinguals in tasks involving cognitive control (Aparicio 2014)
-Language switching relies on inhibition and is widely influenced by language proficiency
But : tasks are differents
Our context : not reaction times etc …
Our study :