EXPOSURE, LANGUAGE APTITUDE AND PROFICIENCY AS MEDIATORS OF VOCABULARY ACQUISITION THROUGH CAPTIONED VIDEO VIEWING

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Literature review: Theoretical framework

- Two main theories:
  - **Dual Coding Theory** (Paivio, 1986; 2007)
  - **Multimedia Learning Theory** (Mayer, 2009)

Simultaneous presentation of images and text eases processing of input

- Linked to different modalities of input

Literature review: Multimodal input

- Unimodal input (text or sound)
- Bimodal input (text and sound)
  - Positive effects in relation to language processing
    (Bird & Williams, 2002; Webb & Chang, 2012; Grañena et al., 2015)
- **Multimodal input** (text, sound and images)
  - Beneficial for:
    - **Listening comprehension**
      (Guillory, 1998; Markham et al, 2001; Etemadi, 2012; Montero Pérez et al., 2013)
    - **Vocabulary acquisition**
      (Rice et al., 1990; Koolstra & Bentjees, 1999; Kuppens, 2010; Rodgers, 2013; Montero Pérez et al., 2014)

Literature review: Vocabulary

- Most research focusing on vocabulary in the past years dealt with:
  - Seeing the effects of **subtitles** or **captions**
    (Bianchi & Ciabattoni, 2008; Frumuselu et al., 2015)
  - **University learners** ranging from beginners to advanced
    (Borrás & Lafayette, 1994; Sydorenko, 2010; Zarei & Rashvand, 2011; Rodgers, 2013)
  - **Small amounts** of multimodal input
    (Baltova, 1999; Winke et al., 2010, 2013)
  - Exploring the connection with other language abilities:
    - **Learners' proficiency** (Muñoz, 2016; Peters et al. 2016)
    - **Individual differences** (Gilabert et al., 2016)
    - **Speech segmentation** (Field, 2003)

Literature review: Multimodal Input + Vocabulary + Aptitude

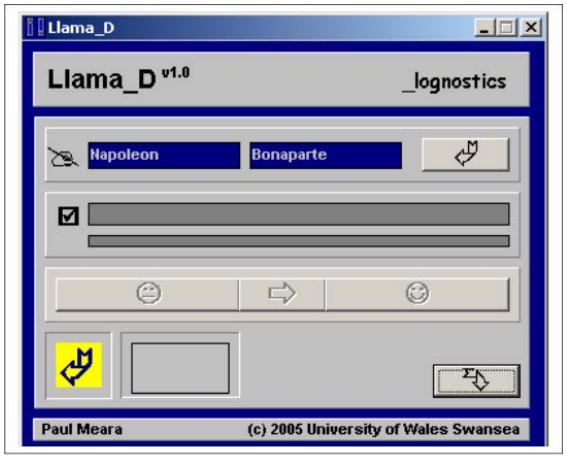
- Scarce research into sustained exposure to multimodal input + TV series class use
- (Rather) scarce research into vocabulary learning and aptitude
- Virtually no research into vocabulary learning through subtitles and language aptitude

Literature review: Aptitude and Vocabulary

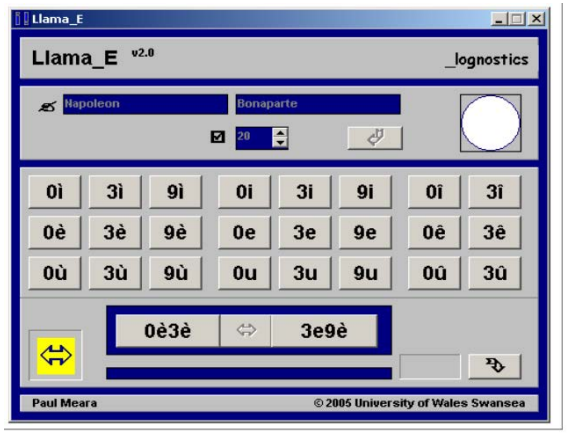
- **Aptitude** is **multicomponential** (MLAT, LLAMA).
- Little research on how each subtest (i.e. aptitude component tapped by the test) influences language learning rate.
- Regarding vocabulary (lexical variety), using MLAT-EC/ES: inconsistent results (Rosa & Muñoz, 2013; Muñoz, 2014; Suárez, 2014)
- Regarding vocabulary (lexis, collocations), using LLAMA:
  - Greater gains for higher aptitude (LLAMA B – vocabulary learning) in a lexical test of formulaic sequences (Serrano & Llanes, 2012)
  - Positive significant correlations in highly advanced adult L2 learners (Grañena & Long, 2013)
  - Negative correlations: word-monitoring task tapping automatic use of L2 knowledge (Grañena, 2012 – except LLAMA D – sound recognition)

Literature review: LLAMA

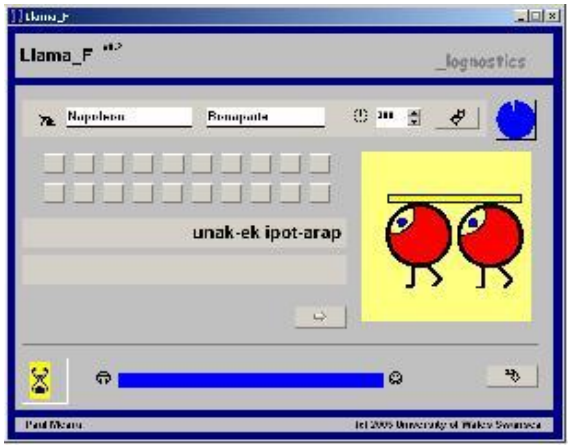
B: Vocabulary learning



D: Phonetic memory



E: Sound-symbol correspondence

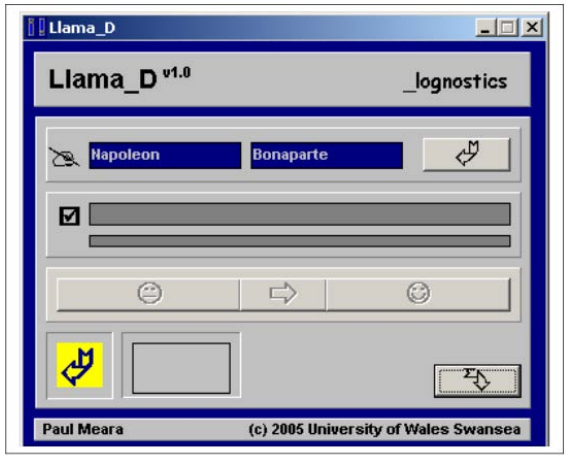


F: Grammatical inference

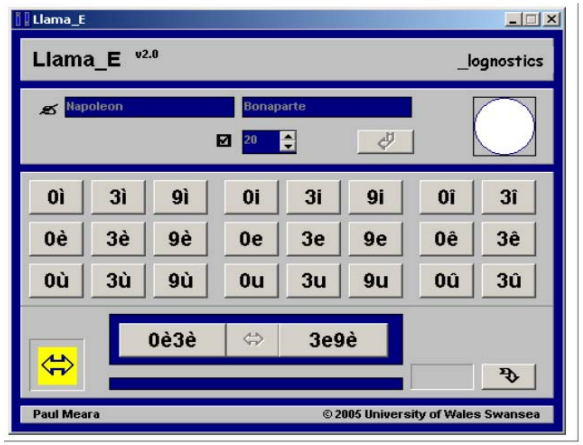
Literature review: LLAMA

- According to Grañena (2013), LLAMA measures two kinds of language learning aptitude:
  1. Explicit learning aptitude (B, E, F): rote learning
  2. Implicit learning aptitude (D): implicit induction, memorization

B: Vocabulary learning (word + image)



D: Phonetic memory (no subtitles)



E: Sound-symbol correspondence (subtitles in L2)

Research questions

1. Does sustained exposure to subtitled TV series lead to **vocabulary learning**?

2. Does **aptitude** have an effect on vocabulary learning from subtitled TV series?

3. Do **proficiency** level and **vocabulary size** have an effect on vocabulary learning from subtitled TV series?

Methodology

- **Participants:**
  - 57 EFL learners attending Grade 10 in a public school in Catalonia
  - 31 students in the Intervention Group and 26 in the Control Group
  - 15 / 16 years old
  - Catalan / Spanish bilinguals
  - Pre-Intermediate level (B1 according to CEFR)
  - 1,100 hours of EFL instruction

Methodology

INTERVENTION GROUP (N=31)

1. **PRE-TEST**
(40 TWs and 24 TEs, form and meaning recall)

2. **8 VIEWING SESSIONS**

2.1. **PRE-TASK**

2.2. **EPISODE** (x8)

2.3. **IMMEDIATE VOCABULARY POST-TASK**
(5 TWs and 3 TEs, form recall and meaning recognition)

2.4. **COMPREHENSION POST-TASK**
(T/F, MC, ordering)

3. **POST-TEST**
(40 TWs and 24 TEs, form and meaning recall)

CONTROL GROUP (N=26)

1. **PRE-TEST**
(40 TWs and 24 TEs, form and meaning recall)

2. **8 VIEWING SESSIONS**

2.1. **PRE-TASK**

~~2.2. **EPISODE** (x8)~~

2.3. **IMMEDIATE VOCABULARY POST-TASK**
(5 TWs and 3 TEs, form recall and meaning recognition)

~~2.4. **COMPREHENSION POST-TASK**~~
~~(T/F, MC, ordering)~~

3. **POST-TEST**
(40 TWs and 24 TEs, form and meaning recall)

Methodology

- **Instruments:**
  - *X_Lex / Y_Lex* (Meara & Miralpeix, 2006)
  - Listening part of the *Oxford Placement Test* (Allan, 2004)
  - LLAMA aptitude test (Meara, 2005)
  - *I Love Lucy* TV series: 8 episodes of 22 mins approx. = 3h
  - English audio + English subtitles (intervention)
  - 5 Target Words (TWs) and 3 Target Expressions (TEs) per episode
  - Total of 40 TWs and 24 TEs

Methodology

PRE- and POST-TEST

1. A continuación escucharás veinte palabras. Escríbelas en inglés y tradúcelas al castellano o catalán. Si de alguna palabra conoces más de un significado, escríbelo. Escucharás cada palabra un total de dos veces.

Palabras

	Inglés	Castellano - Catalán
1		
2		
3		
4		
5		

Methodology

PRE-TASK

"Lucy Visits Grauman's"

1. Fill in the blanks with the appropriate words; the first letter is already given for you. Use the definitions to help you.

A) My father tends to use a c_____ to open the door because it is always blocked.
B) If your partner s_____, it is really difficult to sleep with him / her! What a noise!
C) Please, give me a big h_____ of bread. I'm starving and I haven't eaten anything since yesterday.
D) I always like to t_____ i_____ the blankets before I go to bed.
E) The children were playing on the beach with their b_____ and spades.

Definitions

A) A straight iron bar, usually with a curved end, used for forcing open boxes and moving heavy objects.
B) To breathe noisily through your nose and mouth while you are asleep.
C) A large piece of something that has been cut or broken from a larger piece.
D) To make somebody feel comfortable in bed by pulling the covers up around them.
E) An open container with a handle, used for carrying or holding liquids, sand, etc.

Methodology

VOCABULARY and COMPREHENSION POST-TASKS

"Lucy Visits Grauman's"

1. Escucharás cinco palabras en inglés. Cada palabra se va a repetir dos veces. Di qué significan estas palabras (opción a, b, c…). Si no sabes qué quiere decir alguna palabra, elige la opción (f) 'No lo sé'.

1) _____

a) Pala
b) Palanca
c) Taberna
d) Guardián
e) Arrugar
f) No lo sé

2) _____

a) Traición
b) Implorar
c) Roncar
d) Resonar
e) Pasear
f) No lo sé

3) _____

a) Masivo
b) Oportunidad
c) Envase
d) Cubo
e) Bolsillo
f) No lo sé

4) _____

a) Enchufar
b) Arropar
c) Cubrir
d) Estallar
e) Extraño
f) No lo sé

5) _____

a) Negar
b) Gracioso
c) Placa
d) Trozo
e) Bebido
f) No lo sé

"Lucy Visits Grauman's"

1. Marca si estos enunciados son verdaderos (V) o falsos (F).

V / F Fred confunde a Marlon Brando con Marilyn Monroe.
V / F Lucy guarda una lata que fue aplastada por la rueda posterior derecha del coche de Cary Grant.
V / F Ethel tiene los pies igual de grandes que los famosos.
V / F Lucy pide a Ethel que la ayude a estirarse en el sofá.
V / F Lucy y Ethel quieren devolver las huellas de John Wayne al lugar de donde las sacaron.

2. Escoge la respuesta correcta (A, B o C).

¿Cuánto ha pagado Ethel por el bote de caviar?
A) 5$.
B) 10$.
C) 15$.

¿Por qué Lucy, Ethel y Fred no quieren irse de Hollywood aún?
A) Porque quieren que Ricky haga otra película.
B) Porque quieren hacer turismo.
C) Porque no les gusta el clima de Nueva York.

¿Cuántos días de más deciden quedarse en Hollywood?
A) 5 días.
B) 7 días.
C) 10 días.

¿De qué manera se repartirán las huellas de John Wayne entre Lucy y Ethel?
A) Un mes las tendrá Lucy y otro mes las tendrá Ethel.
B) Cada quince días se las irán turnando entre las dos.
C) Una semana las tendrá Lucy y otra semana las tendrá Ethel.

Según Lucy, Ethel es la presidenta del club de fans de un actor. ¿Cuál?
A) Bill Holden.
B) Gary Cooper.
C) John Wayne.

3. Ordena cronológicamente (de 1 a 8) estos hechos que pasan en el capítulo que acabas de ver. El '1' y el '5' te pueden servir de guía para ordenar los demás.

__5__ Lucy y Ethel consiguen que Fred y Ricky se duerman de una vez.
_____ Ricky consigue que Lucy pueda volver a andar con normalidad.
_____ Fred descubre a Lucy y Ethel de noche en el Grauman's Chinese Theatre.
_____ Lucy, Ethel y Fred deciden ir a visitar el Grauman's Chinese Theatre.
_____ Lucy tiene una caja llena de recuerdos de Hollywood.
_____ Fred reconoce que no entiende a Marlon Brando y a Ricky cuando hablan.
__1__ El episodio empieza con Ethel, Fred y Lucy organizando una fiesta para Ricky.
_____ Las huellas de John Wayne se rompen en mil pedazos.

Results RQ1 - Raw scores

		Pre-test (max. 40 TWs and 24 TEs)				Post-test (max. 40 TWs and 24 TEs)			
		Form words in L2	**Meaning words in L1**	**Form express. in L2**	**Meaning express. in L1**	**Form words in L2**	**Meaning words in L1**	**Form express. in L2**	**Meaning express. in L1**
Interv.	M	6.81	1.22	5.25	1.19	15.70	7.30	9.17	5.70
N 31	SD	3.881	2.028	4.032	1.749	7.840	6.226	5.578	4.411
Control	M	5.90	0.87	4.68	1.00	12.03	3.83	8.03	3.27
N 26	SD	4.190	1.708	4.134	1.592	7.476	3.495	5.549	3.600
All	M	6.37	1.05	4.97	1.10	13.87	5.57	8.60	4.48
N 57	SD	4.029	1.870	4.060	1.663	7.871	5.302	5.545	4.176

Pre-test: Similar scores for all the target variables when comparing both groups
Post-test: Important difference at the meaning level; intervention group obtained higher scores

Results RQ1

Paired-samples *t*-test (pre- vs. post-test)

p significant at the 0.05 level

Group	Form words in L2	Meaning words in L1	Form expressions in L2	Meaning expressions in L1
Intervention	.000	.000	.000	.000
	131% huge	498% huge	75% very large	379% huge
Control	.000	.000	.000	.000
	104% huge	340% huge	72% very large	227% huge

Mann-Whitney *U* test (intervention vs. control)

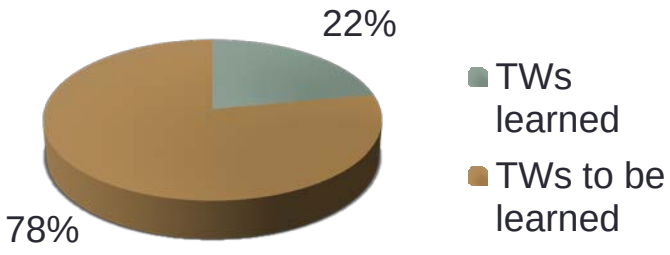
p significant at the 0.05 level

	Form words in L2	Meaning words in L1	Form expressions in L2	Meaning expressions in L1
Post-test	.081	.027	.419	.019
Gains	.131	.129	.829	.041

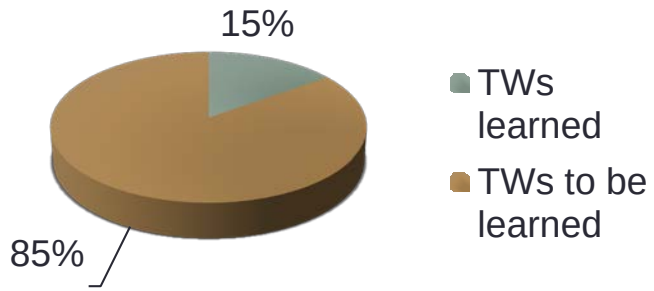
Results RQ1

Increase **not significant** in size for the **Intervention** group.

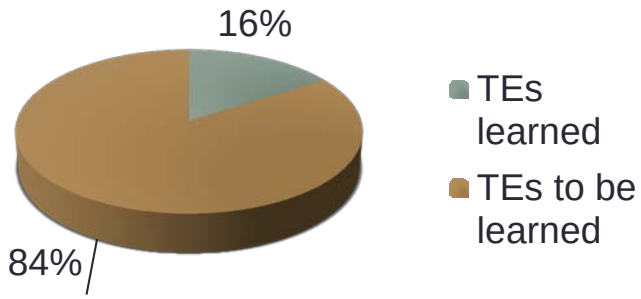
Words in L2



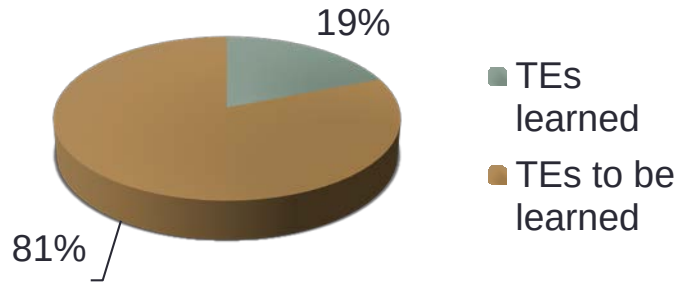
Words in L1



Expressions in L2



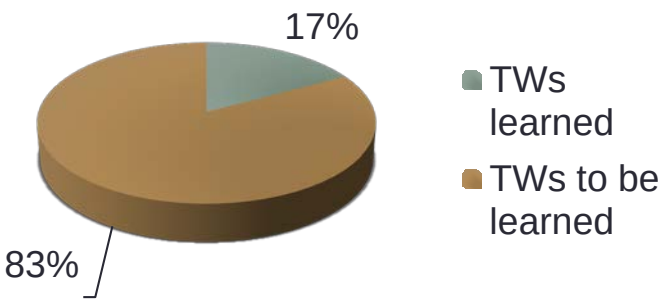
Expressions in L1



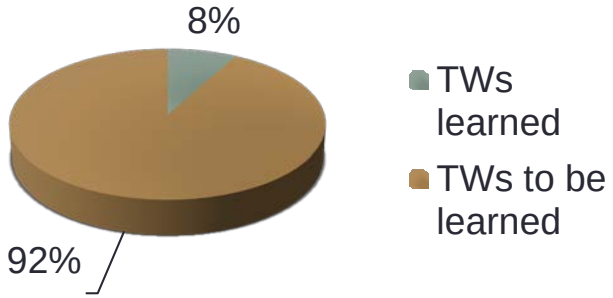
Results RQ1

Increase **not significant** in size for the **Control** group

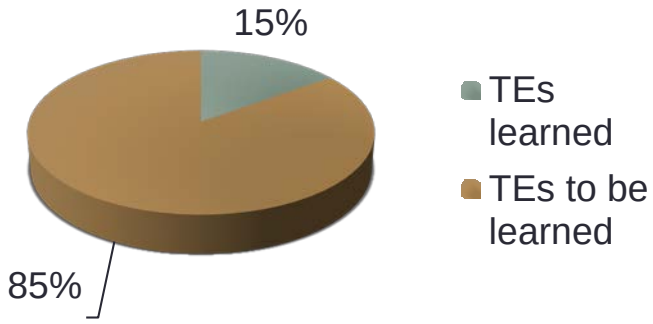
Words in L2



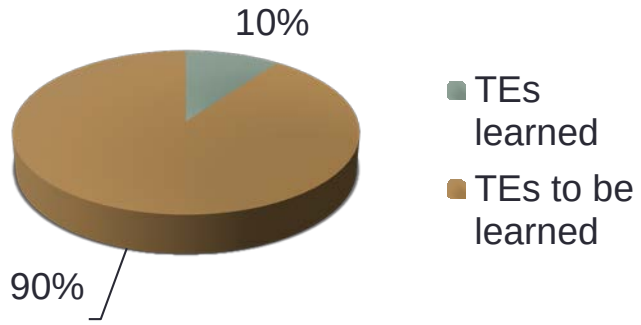
Words in L1



Expressions in L2



Expressions in L1



Discussion RQ1

Does sustained exposure to subtitled TV series lead to **vocabulary learning**?

- Yes, but so does exposure to TWs & TEs through the pre- and post-tasks only, with no multimodal exposure to them.
- Other learning mechanisms come into play: learning strategies, memorization, note-taking, focusing on TWs and TEs only.
- Deliberate / Intentional learning (Laufer, 2005, 2006; Nation, 2001; Schmitt, 2008; Webb & Kagimoto, 2011; Peters 2012)
- Form of expressions, not such a huge increase: too long chunks?
- There was potential for much more learning in both cases.

Results RQ2

Intervention Group

	LLAMA B	LLAMA D	LLAMA E	LLAMA F	LLAMA TOTAL
Gains TWs L2	-	-	-	-	-
Gains TWs L1	-	-	.384* .044	-	.415* .028
Gains TEs L2	-	-	.376* .048	-	-
Gains TEs L1	.407* .032	-	-	-	.458* .016

***p* 0.01 level
**p* 0.05 level

Results RQ2

Control Group

	LLAMA B	LLAMA D	LLAMA E	LLAMA F	LLAMA TOTAL
Gains TWs L2	-	-	.469* .018	-	.498* .011
Gains TWs L1	.458* .022	-	-	-	-
Gains TEs L2	.462* .020	-	-	-	-
Gains TEs L1	-	-	.421* .036	-	.540** .005

***p* 0.01 level
**p* 0.05 level

Results RQ2

Intervention - High (N 18) vs. Low (N 13) Aptitude

Only in **LLAMA B** (phonetic memory), *p*=.047 for translation of TWs into participants' L1.

Control High (N 13) vs. Low (N 13) Aptitude

	B	D	E	F	TOTAL
Words L2	-	-	.022	-	.005
Words L1	.051	-	-	-	-
Expressions L2	-	-	-	-	-
Expressions L1	-	-	-	-	.026

p significant at the 0.05 level

Discussion RQ2

Does **aptitude** have an effect on vocabulary learning from subtitled TV series?

- LLAMA B (Word + Image) does have an influence on the learning of meaning of words in the subtitles condition.

- **Aptitude** overall **doesn't seem to have an effect** on the supposed benefits of being exposed to subtitles in the **intervention group**.

- Different scenario for the **control group**, where aptitude (LLAMA total) affects learning of TWs form and TEs meaning and LLAMA B and LLAMA E seem to have some influence → Explicit learning aptitude

Results RQ3

Intervention Group

	X-Lex / Y-Lex	OPT Listening
Gains TWs L2	.560** .002	.403* .034
Gains TWs L1	.612** .001	.516** .005
Gains TEs L2	.506** .006	.397* .037
Gains TEs L1	.714** .000	.470* .012

***p* 0.01 level
**p* 0.05 level

Results RQ3

Control Group

	X-Lex / Y-Lex	OPT Listening
Gains TWs L2	.402* .047	.400* .048
Gains TWs L1	-	-
Gains TEs L2	-	-
Gains TEs L1	-	.523** .007

***p* 0.01 level
**p* 0.05 level

Results RQ3

Intervention High (N 17) vs. Low (N 14) - Proficiency + VS

	X_Lex / Y_Lex	*OPT* Listening
TWs L2	.015	.017
TWs L1	.008	.020
TEs L2	-	.019
TEs L1	.001	.027

p significant at the 0.05 level

Control High (N 13) vs. Low (N 13) - Proficiency + VS

	X_Lex / Y_Lex	*OPT* Listening
TWs L2	-	-
TWs L1	-	.029
TEs L2	-	-
TEs L1	-	.005

p significant at the 0.05 level

Discussion RQ3

Do **proficiency level** and **vocabulary size** have an effect on vocabulary learning from subtitled TV series?

- In the intervention condition, they clearly play a role in learning the form of new words and meaning of both new words and expressions, as opposed to aptitude. Higher proficiency relevant to learning form and meaning of TWs and meaning of TEs.

- In the control group, vocabulary size is only relevant to learning the form of new words in L2 while listening proficiency is also relevant to learning the meaning of expressions.

- Therefore, extra exposure -and proficiency- are relevant to learning of TWs (meaning + form) and TEs (meaning) but not so much to TEs (form).

- Number of occurrences? Cognitive load for multiword expressions?

Conclusion

- Intentional learning
- Learning strategies
- Proficiency
- Vocabulary size

- Cognitive aptitude(s)
- Extra exposure

Limitations and further research

- No comparison **subtitling / non-subtitling** conditions
- Only one term, what happens with longer time of exposure?
- **Training effects** towards session four of the intervention
- Meaningful input for both groups? (decontextualization)
- Lack of **motivation** in the control group, especially at this age

- In-depth study on **vocabulary learning**:

  * Type of words – Multi-word units
  * Word Features – Frequency, saliency, cognancy, part of speech
  * Retention effects – Delayed post-test

- Other **language skills**:

  * Comprehension
  * Speech segmentation
  * Spelling

THANK YOU!

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