THE LANGUAGE MAGICIAN

Norbert Schlüter & Josefine Klein

Leipzig University, Germany

Outline of presentation

1. Structure of TLM game: floors and skills

2. Research data for different purposes

3. Results - Investigating individual tasks

4. Results - Assessment data for teachers

5. Results - Performance data of learners

6. Statistical description – Level 2

7. Cloze test vs. Overall language performance

Floors and Skills

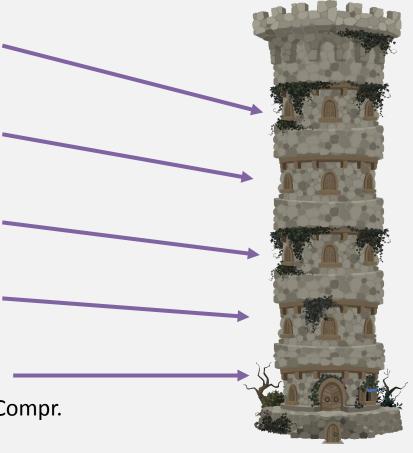FLOOR 5
Writing

FLOOR 4
Integrated Skills

FLOOR 3
Reading Compr.

FLOOR 2
Listening Compr.

FLOOR 1
Listening & Reading Compr.

Number of tasks per floor

Number of tasks	Floor I: LC & RC	Floor II: LC	Floor III: RC	Floor IV: HV&LV&SCHR	Floor V: SCHR
Word level	7	8	6	6	-
Sentence level	8	6	6	5	8
Text level	7	7	5	4	7
Total	22	21	17	15	15

Total number of tasks: 90

Research Data

- Research data in order to improve
  the quality of the tasks

  - Investigating responses to individual tasks

- Assessment data for teachers

  - Overview of performance data for groups of learners

- Evaluation data for researchers

  - Number of tasks processed by learners

  - Number of correctly answered tasks by learners

Investigating responses to individual tasks
Example: Test results for French (Level 1)

FRA - GBR	N	L1_Ex1_1	L1_Ex1_2	L1_Ex1_3
Overall average		2,22	2,90	2,77
Average on the basis of processed tasks		2,22	2,90	2,77
TN of learners processing task	**216**	216	216	216

N = Number of learners who were tested in French

The averages are calculated from the following entries:

3 = correct answer 1st attempt

2 = getting it right in 2nd attempt

1= getting it wrong 1st and 2nd attempt
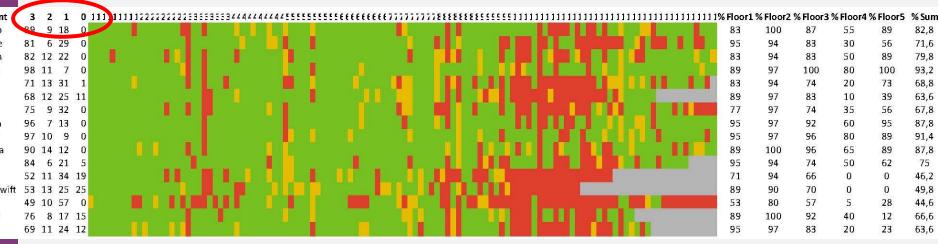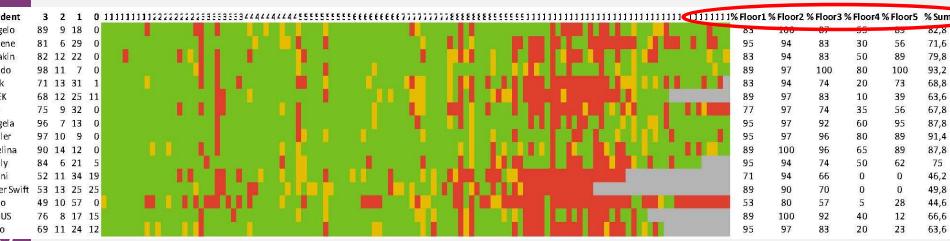
0 = task was not processed

Assessment data for teachers

Student	3	2	1	0	...	% Floor1	% Floor2	% Floor3	% Floor4	% Floor5	% Sum
Angelo	89	9	18	0		83	100	87	55	89	82,8
Helene	81	6	29	0		95	94	83	30	56	71,6
Anakin	82	12	22	0		83	94	83	50	89	79,8
Frodo	98	11	7	0		89	97	100	80	100	93,2
Jäck	71	13	31	1		83	94	74	20	73	68,8
CEK	68	12	25	11		89	97	83	10	39	63,6
ay	75	9	32	0		77	97	74	35	56	67,8
Angela	96	7	13	0		95	97	92	60	95	87,8
Miller	97	10	9	0		95	97	96	80	89	91,4
Agelina	90	14	12	0		89	100	96	65	89	87,8
Nelly	84	6	21	5		95	94	74	50	62	75
enni	52	11	34	19		71	94	66	0	0	46,2
eler Swift	53	13	25	25		89	90	70	0	0	49,8
Nico	49	10	57	0		53	80	57	5	28	44,6
IDUS	76	8	17	15		89	100	92	40	12	66,6
Cleo	69	11	24	12		95	97	83	20	23	63,6

3 = correct answer 1st attempt (green)

2 = getting it right in 2nd attempt (yellow)

1= getting it wrong 1st and 2nd attempt (red)

0 = task was not processed (grey)

Assessment data for teachers

Student	3	2	1	0		% Floor1	% Floor2	% Floor3	% Floor4	% Floor5	% Sum
Angelo	89	9	18	0		83	100	87	55	89	82,8
Helene	81	6	29	0		95	94	83	30	56	71,6
Anakin	82	12	22	0		83	94	83	50	89	79,8
Frodo	98	11	7	0		89	97	100	80	100	93,2
Jäck	71	13	31	1		83	94	74	20	73	68,8
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Nico	49	10	57	0		53	80	57	5	28	44,6
IDUS	76	8	17	15		89	100	92	40	12	66,6
Cleo	69	11	24	12		95	97	83	20	23	63,6

- Percentage of successfully answered tasks on each floor / for each skill

- Overall average of sucessfull answered task for each learner (3&2 = correct / 1 & 0 = wrong)

Evaluation data for researchers

- Time of the game is set to 35 minutes

- Objective: complete 90 tasks in given time frame

- Research results:

  - Number of completed tasks by learners

  - Number of successfully completed tasks
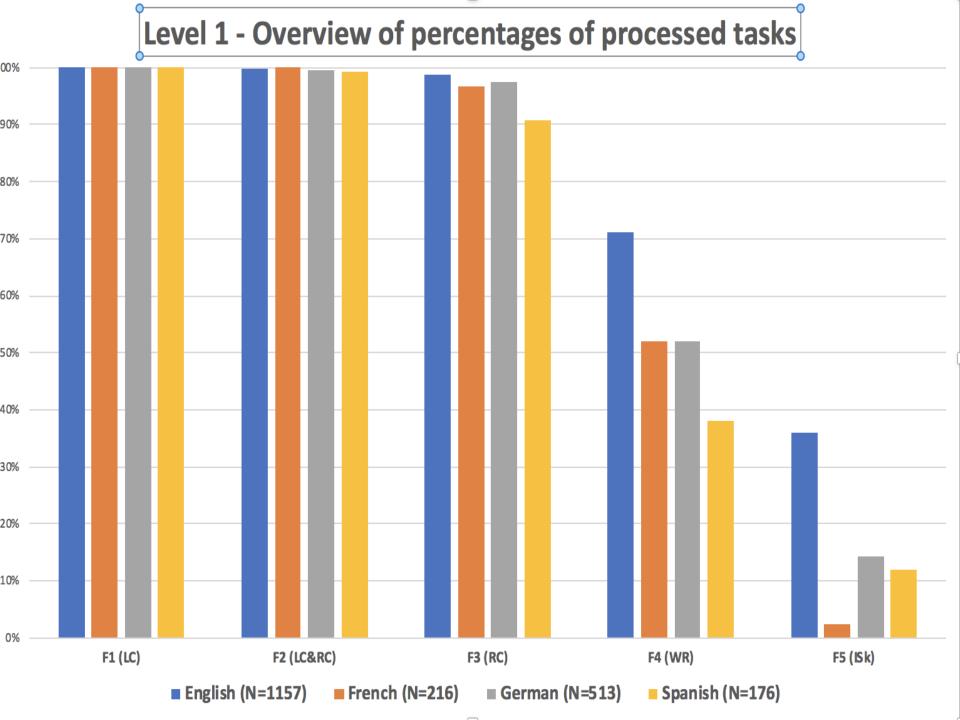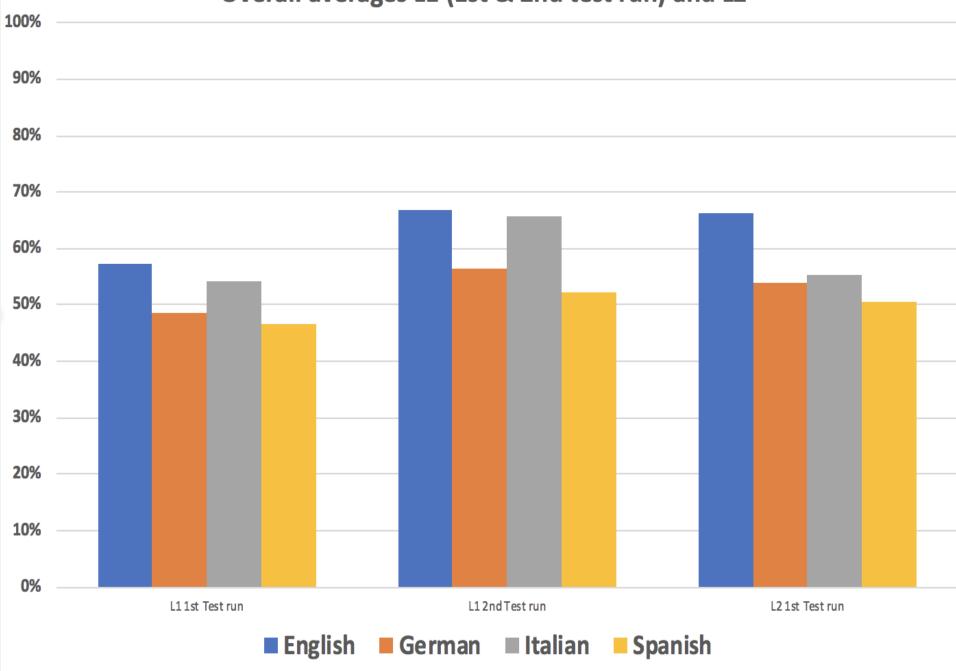
  - Key indicator of overall difficulty level

Level 1 - Overview of percentages of processed tasks

Legend: ■ English (N=1157) ■ French (N=216) ■ German (N=513) ■ Spanish (N=176)

Categories: F1 (LC), F2 (LC&RC), F3 (RC), F4 (WR), F5 (ISk)

Overall averages L1 (1st & 2nd test run) and L2

More results to come

Josefine Klein is going to talk about the results from a statistical point of view.

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DESCRIPTION LEVEL 2

N = 885

- 141 test language: German // Great Britain

- 96 test language: Spanish // Great Britain

- 80 test language Italian // Great Britain

- **568 English** // 268 Spain, 189 Germany, 116 Italy

HISTOGRAM

Mittelwert = 58,27
Std.-Abw. = 12,729
N = 568

ITEM DIFFICULTY

N = 568	Mean	Item difficulty	Cronbach's Alpha
Reading & Listening	17.76	88.73	.64
Reading	15.84	79.20	.68
Listening	11.16	74.40	.63
Integrated Skills	12.01	66.72	.82
Writing	4.82	24.10	.81
Total	12.31	66.63	.85

C-TEST

- Certain form of cloze test
- Tapping ability to predict from context with reduced redundancy
- Proficient speakers are able to decode the message
- Empirically and theoretically valid measures of language proficiency
- Do not possess face validity
- Statistically solid, reliable and valid instrument

MEASURING LANGUAGE PROFICIENCY

How well can the c-test (as an instrument to measure general language proficiency) predict the total score of the test?

In how far is the c-test and the battery of tests in the game related?

- Verification of the model: $F(1/338)=673.77$ (p=.000)

- Significance of regression coefficients : t=25.95, p=.000

- Goodness of fit: r^{2} = .66

Thank you for your attention!

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Learner motivation and individual differences in language learning

Dr Louise Courtney

Professor Suzanne Graham

University of Reading

London May 2018

Learner Motivation

- Key element to success of the Language Magician game

- Concern over de-motivating effects of traditional assessment

- Feelings of self-efficacy crucial to developing resilience and long term commitment to language learning

- Learners able to see that they are making progress

Individual Differences

- Research Evidence indicates:
  - Age-related differences in terms of motivation and outcomes
  - Motivation and feelings of self-efficacy are related to outcomes
  - Hours of instruction linked to FL outcomes

Questionnaire Design

- Data collected via an online questionnaire immediately following the game session

- 22 questions related to the game, language learning in general and perceptions of their own ability (self-efficacy)

- 3437 responses (2620 L1, 817 L2)

Questionnaire Design

- Scale 1-4 – average scores will be reported

a) THE LANGUAGE MAGICIAN game is fun to play.

Agree very much	Agree	Disagree	Disagree very much

Questionnaire results – all learners

Scale	Average All	Range
Overall	3.28	1-4
TLM Game	3.39	1-4
Self-efficacy	3.01	1-4
Attitudes to language learning	3.46	1-4

Results for game questions - all learners

Question	Average	Range
1_0 Game is fun to play	3.69	1-4
1_1 Game is easy	2.79	1-4
1_2 Would like to play game again	3.70	1-4
1_3 Tells me how well I'm doing	3.39	1-4

Results for self-efficacy questions - all learners

Question	Average
2_0 I can say some words about myself	3.15
2_1 I can write some words about myself	3.02
2_2 I understand what my teacher says to me	3.03
2_3 I can spell the words I've learned at school	2.96
2_4 I know what order to put the words in a sentence	2.83

Results for language learning questions - all learners

Question	Average
3_0 Learning xx language is important	3.60
3_1 Learning xx language is fun	3.53
3_2 Learning xx language will help me get a good job	3.37
3_3 Learning xx language will help me if I want to travel	3.60
3_4 I would like to have more time to learn xx language	3.21

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Gender differences – all learners

For the most part the girls displayed significantly more positive attitudes

Scale		Average	Sig Diffs?
Overall	F	3.31	Yes
	M	3.24	
TLM Game	F	3.43	Yes
	M	3.34	
Self-efficacy	F	3.01	NS
	M	3.00	
Attitudes to language learning	F	3.51	Yes
	M	3.41	

Age-related differences

– Average age at testing for Level 1 was 9.06 years (6.95-12.13)

– Average age at testing for Level 2 was 10.43 years (6 - 13.59)

	Questionnaire Average	Attitudes to Game	Self-efficacy	Attitudes to language learning
Age at testing L1	-.088**	-.003	-.132**	-.107**
Age at testing L2	-.098**	-.019	-.109**	-.148**

Open questions – general themes

- Most liked – everything!, the animals, spells, element of challenge, learning while playing, avatar, the story
- Not liked – difficulty for some, need more time, a lot of conversation
- Easiest – first floor, casting spells, yes/no questions, familiar content (e.g. days of week, months)
- Most difficult – the last two floors, making sentences, typing (writing), spelling, making the potion
- What learned – new words, more of the language, writing, spelling, that learning can be fun!

Quotes from learners

Das ich gesehen habe das ich die englischen Woerter echt gut verstehen kann- und es hat auch voll Spass gemacht

(That I realised that I can understand English words really well and it was fun at the same time)

its AWESOME and it tests me and i see how good i am at french i would love to play it all day long and i love the story line

It was hard and it only gave me a little bit of choice of clothes for the avatar. more would be better.

That we didn't get to stay on for as long as we liked.

I didn't like when you had to make sentences in German

Quotes from learners

About how to make lurning FUN :D :)
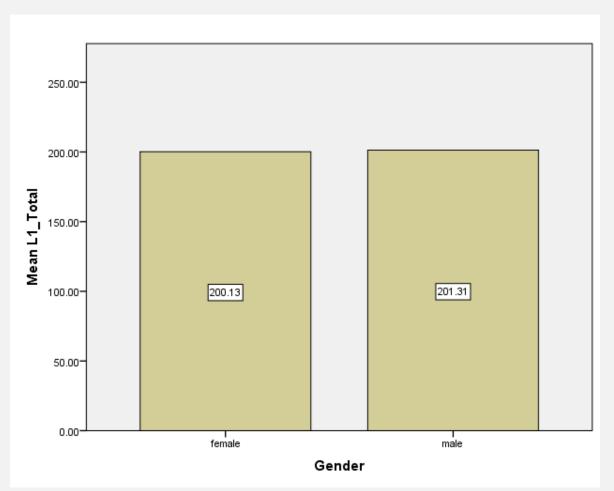
That we could do more german than we think

i learnt that i know a lot more about french then i thought i did

don't give up all ways try your best!!!!!!!!!!!

Motivation and Results

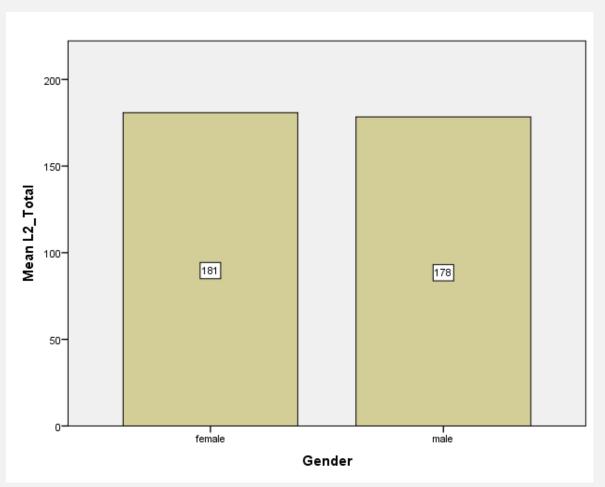|	Results	
	L1	**L2**
Questionnaire Mean	.190**	.228**
TLM Game	.155**	.175**
Self-efficacy	.134**	.296**
Attitudes to language learning	.112**	.101**

Gender Differences – outcomes Level 1
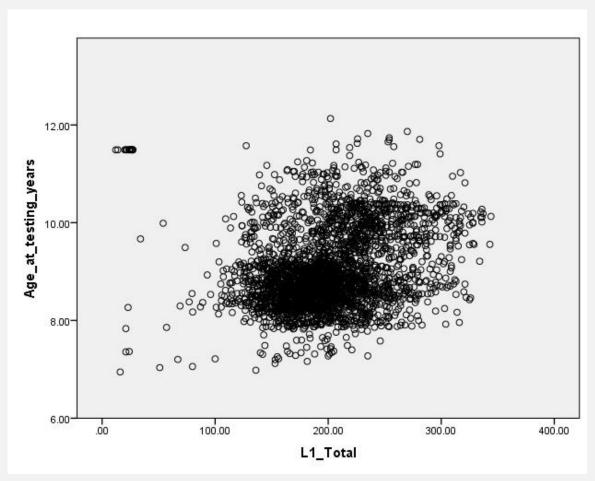

Girls - n=1502; Boys n=1501

Gender Differences – outcomes Level 2
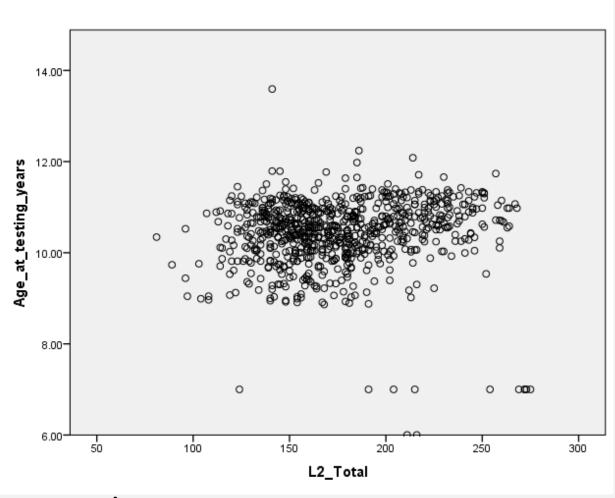

Girls - n=438; Boys n=483

TLM results and age-at-testing – Level 1

r= .221**

TLM results and age-at-testing – Level 2

r=.073*

Hours of instruction

- There is a very small but significant relationship between hours of instruction and results for Level 1 (r=.237**) and Level 2 (r=.135**)

- However, if you control for age at testing then the correlation is stronger and significant for both Level 1 (r=.305**) and Level 2 (r=.244**) meaning that hours of instruction influences outcomes

Summary

- Generally very positive attitudes to the game and to language learning in general

- Girls display higher levels of motivation than boys but there is no significant difference in test results

- There are no age-related differences in attitudes to the game

- Motivation related to outcomes but age at testing and hours of instruction are the key factors to explain this variation

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Piloting in Italy:

a year in review and
future directions

Anna Cicogna, researcher at University for Foreigners of Perugia, Italy

Testing THE LANGUAGE MAGICIAN in Italy

Let's take a look back at 2017…

- ➢ **11 schools, 20 classes**

- ➢ **testing with PC and/or tablet**

- ➢ **around 360 players** (number of players per class: 9 to 26, average of 17)

- ➢ **two rounds** of testing: Jan-Feb; end of May

Testing THE LANGUAGE MAGICIAN in Italy

Let's take a look back at 2017…

What did we find out?

		n. players	hs of education	reached Floor 5		completed game	
1st round (Jan-Feb)	Siena	278	100	51	18,35%	14	5,04%
	Perugia	82	150	12	14,63%	3	3,66%
	Tot:	360		63	17,50%	17	4,72%
2nd round (end May)	Siena	275	150	128	46,55%	51	18,55%
	Perugia	77	200	35	45,45%	15	19,48%
	Tot:	352		163	46,31%	66	18,75%

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Testing THE LANGUAGE MAGICIAN in Italy

Let's take a look back at 2017…

What did we find out?

➢ In which area did Italian pupils perform best?

Floor 2, LISTENING and READING

➢ In which area did they struggle?

Floor 4, WRITING

Italian piloting confirmed results presented in Leipzig, January 2017

Testing THE LANGUAGE MAGICIAN in Italy

Let's take a look back at 2017…

Perugia, Year 5 (4° elementare)

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Let's take a look back at 2017…

How did we improve the game?

➢ swapped Floor 1 (listening) and 2 (listening and reading)

➢ swapped Floor 4 (writing) and 5 (integrated skills)

➢ amendments to a few templates

➢ game shortened to 35'

Testing THE LANGUAGE MAGICIAN in Italy

Let's take a look back at 2017…

Future areas of research

➢ Comparing **effectiveness** <u>within Italian schools</u>

- do pupils perfom better with this innovative tool rather than using traditional testing methods?

Testing THE LANGUAGE MAGICIAN in Italy

	Level 1	Level 2
Nr. of rounds	2 rounds (Jan-Feb; May)	1 round (October)
Nr. of schools	11 schools (9 in Siena, 2 in Perugia)	3 schools (1 in Siena, 2 in Perugia)
Nr. of players	360 pupils	101 pupils
School year	Year 3, 4, 5 (aged 7-9)	Year 5, 6 (aged 9-10)
Average hours of instruction	134 hours (1st round), 164 hours (2nd round)	201 hours

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Testing THE LANGUAGE MAGICIAN in Italy

➢ Why less schools and pupils involved?

Same tasks ⟶ already knew how pupils could approach them

➢ How did pupils score in Level 2? Did they perform better than Level 1?

➢ If you used mostly old templates, what is new in Level 2?
▪ new, interactive tasks
▪ whole new floor with a unique challenge
▪ new storyline

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Students

| Tracking data ✓ | Test progress |

Students: **19**
Finished: **4**

● correct 1st try ● correct 2nd try ● incorre
average country 54
average class 67

Student	correct 1st try	correct 2nd try	incorrect	%
Hamster	64	10	14	79
ron	23	14	21	39
Gold	56	14	16	75
Dog	60	12	18	77
Potter	39	18	19	61
Grey	52	17	14	74
Lion	39	15	18	58
Pear	34	18	29	55
White	48	12	15	64
Tomato	30	23	24	56
Pink	68	11	7	84
Potato	48	17	8	69
Stitch	40	27	19	72
Fox	34	14	40	51
aladdin	49	16	24	69
Tiger	40	20	33	64
Mufasa	56	11	26	72
carrot	54	13	26	72
Black	87	2	4	95

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*"do pupils perfom better with this innovative tool
rather than using traditional testing methods?"*

➢ *short questionnaire for children and teachers*

➢ *comparison standard test vs TLM session*

Testing THE LANGUAGE MAGICIAN in Italy

Pupils' questionnaire

1. Did you have fun with TLM?

A lot: **83,3%** - Quite liked it: **16,7%**

2. Did you like the story and the characters?

A lot: **72,2%** - Quite liked it: **22,2%** - A bit: **5,6%**

3. How were the tasks?

All fun: **50%** - Almost all fun, excpet for a few: **50%**

4. How difficult were the tasks?

All easy: **11,1%** - Quite easy: **83,3%** - A bit difficult: **5,6%**

5. How were the instructions?

All clear: **50%** - Quite clear: **36,1%** - Difficult, but I managed anyway: **11,1%** - Difficult, I had to ask my teacher: **2,8%**

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Pupils' questionnaire

7. Did you notice that TLM was a test?

Yes: **33,3%** - No: **66,7%**

8. Do you prefer FL tests or TLM?

FL tests: **2,8%** - TLM: **94,4%** - n/a: 2,8%

10. Do you think you scored better in FL test or in TLM?

FL tests: **16,7%** - TLM: **83,3%**

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Pupils' questionnaire

6.   While playing the game, you felt…

- happy   83,3%
- surprised   19,4%
- amused   88,9%
- focused   69,4%
- happy with your work   38,9%
- bored   2,8%
- anxious   16,7%
- scared   2,8%
- concerned about your score 47,2%

Testing THE LANGUAGE MAGICIAN in Italy

Pupils' questionnaire

6. During language tests, you usually feel…

- happy   5,6%
- surprised   5,6%
- amused   8,3%
- focused   88,9%
- happy with your work   19,4%
- bored   13,9%
- anxious   63,9%
- scared   58,3%
- concerned about your score 86,1%

Testing THE LANGUAGE MAGICIAN in Italy

Teachers' questionnaire

. shortened and simplified version of official teacher questionnaire

. will complement study on children's performance with TLM and their performance with usual FL tests

. focus on teachers' experience with TLM and how they judge its validity as an assessment tool for their classes

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Teachers' questionnaire

3) Please choose a value whitin 1 and 5 for each of the following aspects of the TLM game

(*1 = strongly disagree; 5 = strongly agree*)

The game is easy to use for teachers	1	2	3	4	5
The game is easy to use for pupils	1	2	3	4	5
It saves time when assessing a whole class	1	2	3	4	5
It is an accurate tool to assess FL	1	2	3	4	5
It eliminates stress and anxiety	1	2	3	4	5
Pupils are excited to play the game	1	2	3	4	5
The quality of the tasks is excellent	1	2	3	4	5
Contents of the game are adequate for the target age group	1	2	3	4	5
It draws motivation into the class	1	2	3	4	5

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Teachers' questionnaire

4) Do you think that your pupils enjoyed the game and its tasks? Why so?

[…] Children associate both PCs and tablets with playing; therefore, bringing such devices into foreign language teaching strongly motivates children and arouses their interest in FL. The look, story and the design of the levels in TLM have also been really appreciated by all pupils involved in the piloting sessions.

5) Which differences could you observe between assessing with your usual FL tests and with the TLM game?

PCs, tablets and the playful aspect of the tasks prevented pupils from recognising the game as an assessment. Such factors eliminated the stress provoked by the anxiety to perform well in the test and helped especially those pupils with special needs.

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Testing THE LANGUAGE MAGICIAN in Italy

Teachers' questionnaire

➢ further quantitative data: FL tests and results of TLM sessions

➢ pupils' and teachers' questionnaires

➢ prove that non-threatening assessment methods are beneficial to both children and teachers

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Vielen Dank.

Thank you.

Grazie mille.

Muchas gracias.