

# TRANSLATION COMPETENCE: PACTE'S EXPERIMENTAL RESEARCH

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On behalf of

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# TRANSLATION COMPETENCE: PACTE'S EXPERIMENTAL RESEARCH

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## INTRODUCTION

I. RESEARCH DESIGN

II. RESULTS

III. CONCLUSIONS

### **Main objective:**

- Identify the distinguishing features of Translation Competence (TC)

### **RESEARCH**

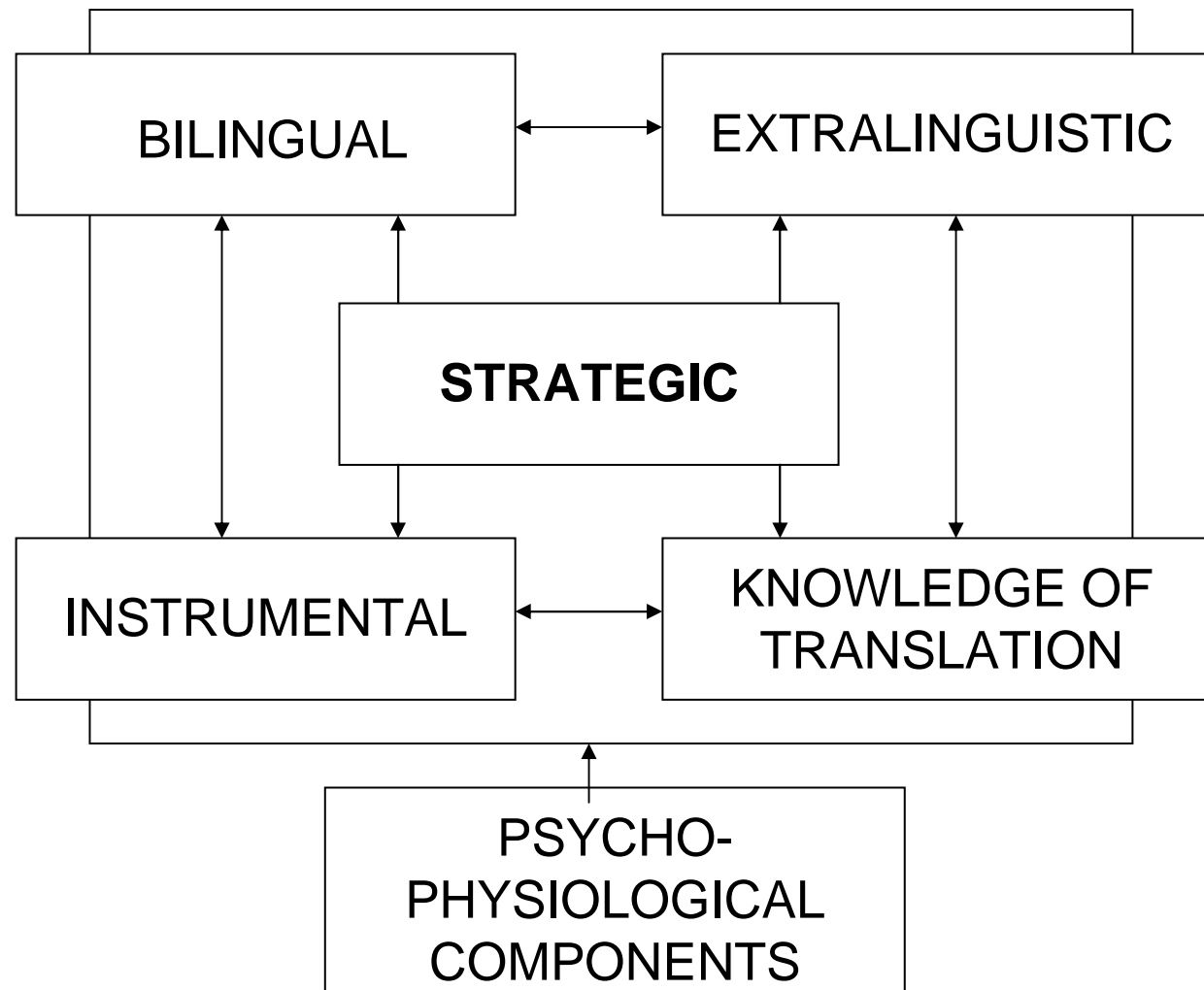
Empirical-experimental

Process and product

### **6 LANGUAGE COMBINATIONS**

The underlying system of knowledge and skills required to translate

- ✓ Expert knowledge
- ✓ Predominantly procedural
- ✓ Comprises different inter-related sub-competences
- ✓ Includes a strategic component which is of particular importance



- ✓ Exploratory studies TC (2000-2001)
- ✓ Pilot test TC (2004)
- ✓ Experiment TC (2005-2006)

# **I. RESEARCH DESIGN**

- The degree of expertise in translation is reflected in both the process and the product of translation
  - Definition of 'expertise' based on:
    - years of experience as a translator
    - translation as a main source of income



**EXPERIMENTAL UNIVERSE**

- Professionals working with foreign languages

**SAMPLE**

- Expert translators (35)
- Teachers of foreign languages (24)

### **Independent variable**

- ❖ Degree of expertise in translation

### **Dependent variables** -18 indicators-

- ❖ Knowledge about translation
- ❖ Efficacy of the translation process
- ❖ Decision-making
- ❖ Translation project
- ❖ Identification and solution of translation problems
- ❖ Use of instrumental resources

- Direct translation
- Completion of a questionnaire about the problems encountered in the translation
- Inverse translation
- Completion of a questionnaire about the problems encountered in the translation
- Completion of a questionnaire about translation knowledge
- Retrospective interview

- Texts and translations
- Translation protocols (Proxy and Camtasia)
- Direct observation
- Questionnaires
- Retrospective interviews

# **PACTE** INSTRUMENTS FOR DATA COLLECTION

## ■ Questionnaires:

- Selecting subjects
- About translation problems
- Knowledge about translation

## ■ Texts:

- Rich Points (Nord 1994, Agar 1992)

#### EMAIL VIRUS STRIKES IN NEW FORM

Computer users were warned last night to be on the lookout for an email virus that can steal confidential information and allow hackers to take control of infected machines. The virus, a new variant of the BugBear email worm that infected tens of thousands of computers around the world last October, began to spread rapidly from Australia to Europe and the USA at around 8am yesterday. According to MessageLabs, a **Cheltenham-based virus filtering firm** which reported about 30,000 infected messages in 115 countries, the **propagation rate** of BugBear.B almost **doubled** every hour throughout the morning. There was also a huge **surge** as US users came online. Like its predecessor, the variant spreads by sending itself as an attachment to every address in an infected machine's email address book. To disguise where it came from, it uses different subject headings. As well as searching for anti-virus software and disabling it, BugBear.B installs a **keylogger** to record what the user types, which may allow hackers to record confidential information such as credit card details and passwords. It also installs a **"Trojan horse" program which could allow a hacker to take remote control of infected machines.** [...]

*The Guardian* - Friday, June 6, 2003

- WURM IN DER LEITUNG  
- BUGBEAR.B, LE VIRUS INFORMATIQUE QUI LIT PAR – DESSUS L'ÉPAULE DE SES VICTIMES

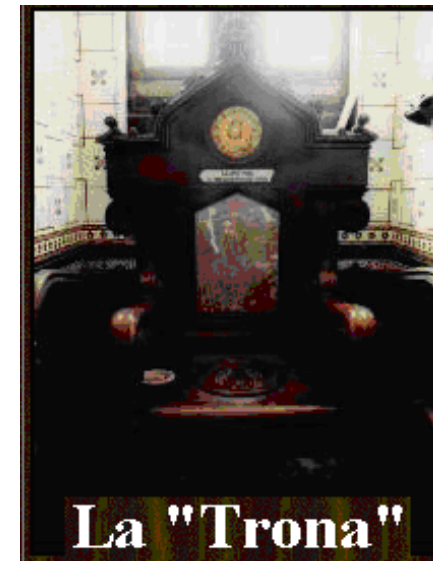
-Tastatureingaben von PC-Nutzern nach Kreditkartennummern und Ähnlichem überwacht  
- Enregistrer les caractères tapés sur le clavier

- Schädling / E-Mail Würmer / Vorgängervariante  
- Le ver / résurgence / ses congénères

- Download-Verzeichnis  
- Édition de logiciels antivirus

- Dateien-Tauchbörse Kazaa  
- Soumissions, des communications du virus

La Plana Novella es una antigua heredad adquirida por el Indiano Pere Domenech i Grau en 1885 que se encuentra en una pequeña planicie en el centro del Parc Natural del Garraf y pertenece al municipio de Olivella. La Finca fue declarada colonia agrícola 10 años más tarde por el gobierno alfonsino, pero de aquella época perdura una leyenda de desenfreno y dilapidación que hizo desaparecer la fortuna del americano. El estilo arquitectónico del Palacete es ecléctico, es decir que mezcla diferentes estilos. La geografía comarcal de Cataluña lo califica de "Castillo de Bambalinas" como si fuese un decorado de teatro. Sin ningún tipo de duda la construcción estilísticamente más original del Palau Novella es el lavadero gaudiniano, pero una de las piezas más características y llamativas del Palau es la comuna, conocida como "la trona".



## **II. RESULTS**



# **ACCEPTABILITY**

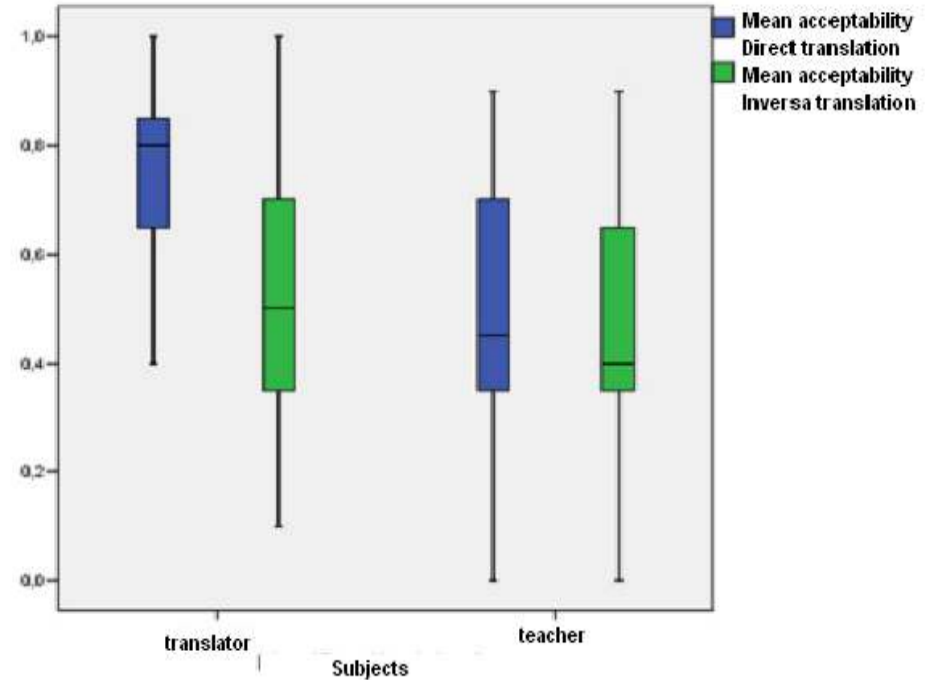
**(PACTE 2009)**

*Quality of the translation product*

Transversal indicator

## ACCEPTABILITY Results

		Subjects	
		Translators	Teachers
Acceptability	Mean	0.73	0.49
Media <b>Direct</b>	Median	0.80	0.45
Acceptability	Mean	0.52	0.48
Mean <b>Inverse</b>	Median	0.50	0.40



# **KNOWLEDGE ABOUT TRANSLATION**

**(PACTE 2008)**

*Subjects' implicit knowledge of the principles of translation  
and aspects of the translation profession*

### □ Instrument:

- ✓ Questionnaire on knowledge about translation
  - Categories:
    - ✓ Dynamic: textual, communicative and functionalist concept of translation
    - ✓ Static: linguistic and literal concept of translation

### □ Indicators:

- ✓ Dynamic index
- ✓ Coherence coefficient

Differences between the two groups of subjects

	Mean	Median	Max.	Min.
<b>Translators</b>	0.273	0.200	0.900	-0.200
<b>Teachers</b>	0.088	0.150	0.625	-0.400

### **CONCLUSION**

**The dynamic index of the translators is significantly higher than that of the teachers.**

	Mean	Median	Max.	Min.
<b>Translators</b>	0.37	0.50	1.00	0.00
<b>Teachers</b>	0.27	0.50	0.50	0.00

**CONCLUSION**

**There is no significant difference between the two groups (translators and teachers) in coherence.**

**Both groups are coherent.**

# **TRANSLATION PROJECT**

**(PACTE 2011a)**

*The subject's approach to the translation of a specific text and of the units it comprises*

# **PACTE** TRANSLATION PROJECT (TP)

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## **□ Instruments:**

- ✓ Questionnaire on translation problems
- ✓ Retrospective interview

*What were your priorities when translating the text?* (overall TP)

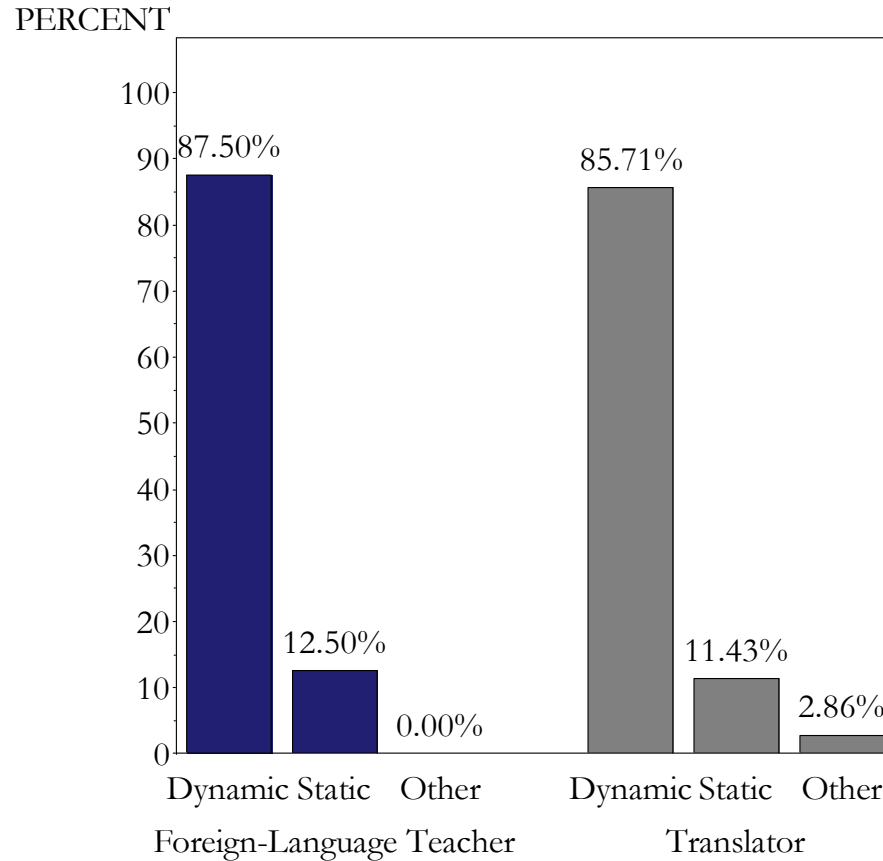
*What were your priorities when solving it?* (TP of each Rich Point)

## **□ Indicators:**

- ✓ Dynamic index of overall TP
- ✓ Dynamic index of TP of each Rich Point
- ✓ Coherence coefficient of overall TP and of each Rich Point
- ✓ Acceptability



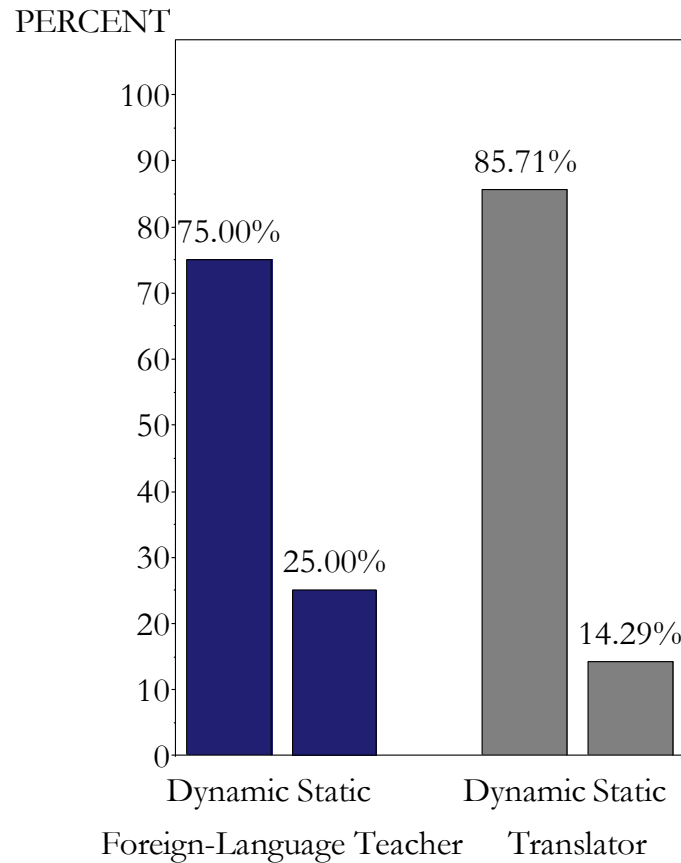
Overall Translation Project (direct translation)



No significant differences between translators and teachers in direct translation

## DYNAMIC INDEX OF OVERALL TP

Overall Translation Project (inverse translation)



Differences between translators and teachers  
in inverse translation

Table of id by idin

id	idin(Dynamic Index)			Total
	dynamis m. 25% or less	dynamis m. 26% - 74%	dynamism : 75% or more	
Foreign-Language Teacher	1 1.69 4.17 33.33	7 11.86 29.17 53.85	16 27.12 66.67 37.21	24 40.6 8
Translator	2 3.39 5.71 66.67	6 10.17 17.14 46.15	27 45.76 77.14 62.79	35 59.3 2
Total	3 5.08	13 22.03	43 72.88	59 100. 00

Both groups' approach to their translation was dynamic.

This may be attributed to the fact that both groups were language professionals and their aim, by default, was to communicate.

Table of id by idin

id	idin(Dynamic Index)			Total
	dynamis m. 25% or less	dynamis m. 26% - 74%	dynamism : 75% or more	
Foreign-Language Teacher	1 1.69 4.17 33.33	7 11.86 29.17 53.85	16 27.12 66.67 37.21	24 40.6 8
Translator	2 3.39 5.71 66.67	6 10.17 17.14 46.15	27 45.76 77.14 62.79	35 59.3 2
Total	3 5.08	13 22.03	43 72.88	59 100. 00

		Identificación del sujeto	
		traductor	profesor
Aceptabilidad Media <b>Directa</b>	Media Mediana	,73 ,80	,49 ,45
Aceptabilidad Media <b>Inversa</b>	Media Mediana	,52 ,50	,48 ,40

Although the teachers' approach to translation overall was dynamic, their solutions to specific translation problems were not as acceptable as those of translators. The explanation for this lies in the teachers' lack of expertise.

If we consider the mean percentages obtained for the translation of all the Rich Points, it can be seen that the translators' approach to translation is clearly more dynamic than that of the teachers

Profesores  
TRADUCCIÓN DIRECTA

N	Mean	Std Dev	Minimum	Maximum
5	52.50	6.32	45.83	62.50

Traductores  
TRADUCCIÓN DIRECTA

N	Mean	Std Dev	Minimum	Maximum
5	71.43	11.43	54.29	85.71

Profesores  
TRADUCCIÓN INVERSA

N	Mean	Std Dev	Minimum	Maximum
5	51.67	6.32	45.83	58.33

Traductores  
TRADUCCIÓN INVERSA

N	Mean	Std Dev	Minimum	Maximum
5	68.57	12.29	48.57	80.00

### id=Foreign-Language Teacher

<u>Label</u>	<u>Mean</u>	<u>Median</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Std Dev</u>
<u>Coherence Coefficient (direct translation)</u>	0.563	0.500	0.000	1.000	0.425
<u>Coherence Coefficient (inverse translation)</u>	0.688	0.750	0.000	1.000	0.355

### id=Translator

<u>Label</u>	<u>Mean</u>	<u>Median</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Std Dev</u>
<u>Coherence Coefficient (direct translation)</u>	0.786	1.000	0.000	1.000	0.389
<u>Coherence Coefficient (inverse translation)</u>	0.814	1.000	0.000	1.000	0.345

1. Teachers are coherent in both direct and inverse translation.
2. The group of translators is, however, more coherent than the group of teachers in both direct and inverse translation.
3. Neither group behaves differently when translating into or out of the foreign language – they are equally coherent independent of directionality.

→ The selection of subjects in the experimental groups was appropriate. 30

# **‘Dynamic Translation Index’**

**(PACTE 2011a)**

*Translation project + Knowledge about translation*

- Translation project (TP): *Procedural knowledge*
- Knowledge about translation: *Declarative knowledge*

**‘Dynamic translation index’ (DTI) =**

$$\begin{aligned} & \textit{Dynamic index of TP overall} \\ & \quad + \\ & \textit{Dynamic index of TP for rich points} \\ & \quad + \\ & \textit{Dynamic index of knowledge about translation} \end{aligned}$$

(It is not the average of these three indices, but the sum all three)



### Foreign-Language Teacher

Analysis Variable : idinsuma Suma de Dinamismo					
Mean	Median	Minimum	Maximum	Std Dev	N
0.921	1.200	-1.300	2.250	0.968	24

Kruskal-Wallis Test	
Chi-Square	8.5309
DF	1
Pr > Chi-Square	0.0035

### Translator

Analysis Variable : idinsuma Suma de Dinamismo					
Mean	Median	Minimum	Maximum	Std Dev	N
1.559	2.100	-1.800	2.900	1.087	35

The group of translators is significantly more dynamic than that of the teachers both in their approach to and their concept of translation (procedural and declarative knowledge)



# 'DYNAMIC TRANSLATION INDEX' + 'ACCEPTABILITY'

Scattered plot of DTI + acceptability:

Both the Dynamic Translation Index and acceptability move in the same direction; as one increased, so did the other.



# **IDENTIFICATION AND SOLUTION OF TRANSLATION PROBLEMS**

**(PACTE 2011b)**

*Difficulties encountered by subjects when carrying out a translation task*

- ❑ Instruments:
  - ✓ Questionnaire on translation problems
  - ✓ Retrospective interview

*How difficult do you think this text is to translate?*

*Name 5 of the main problems you found when translating this text and answer the following questions about each:*

*Why was it a problem?*

*Are you satisfied with the solution?*

- ❑ Indicators:
  - ✓ Coefficient of perception of the overall difficulty of the translation of the text
  - ✓ Identification of prototypical translation problems
  - ✓ Characterisation of prototypical translation problems
  - ✓ Coefficient of satisfaction
  - ✓ Acceptability

**COEFFICIENT OF PERCEPTION OF THE OVERALL  
DIFFICULTY OF THE TRANSLATION**

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	<b>DIRECT TRANSLATION</b>	<b>INVERSE TRANSLATION</b>
<b>TEACHERS</b>	<b>0.43</b>	<b>0.70</b>
<b>TRANSLATORS</b>	<b>0.28</b>	<b>0.63</b>

- **Between groups:** teachers perceived direct and inverse translation to be more difficult than translators
- **Directionality:** both groups perceived inverse translation to be more difficult than direct translation

- No relation exists between subjects' perception of the overall difficulty of the translation and the acceptability of the results obtained

	Pearson (r) coefficient of correlation	Degree of freedom	Significance
<b>Translators (direct)</b>	0.13	32	Not significant
<b>Teachers (direct)</b>	0.01	22	Not significant
<b>Translators (inverse)</b>	0.04	32	Not significant
<b>Teachers (inverse)</b>	0.19	22	Not significant

## ■ Direct translation

DIRECT	RP 1 Title	RP 2 Technical term	RP3 Reference	RP 4 Apposition	RP 5 Comprehension and reformulation
Translators	62.9%	51.4%	54.3%	40.0%	22.9%
Teachers	33.3%	45.8%	62.5%	50.0%	33.3%

## ■ Inverse translation

INVERSE	RP1 <i>indiano ... fortuna</i>	RP 2 <i>gobierno alfonsino</i>	RP 3 <i>desenfreno y dilapidación</i>	RP 4 <i>geografía comarcal</i>	RP 5 <i>común...trona</i>
Translators	71.4%	65.7%	57.1%	68.6%	68.6%
Teachers	66.7%	66,7%	70.8 %	62.5%	75.0 %

- **Between groups:** Subjects in both groups found difficulty in translating the Rich Points
- **Directionality:** The percentage of Rich Points identified was greater in inverse translation than in direct translation
- The Rich Points identified varied according to each individual



- No notable difference was found between the way translators and teachers characterised the translation problems they identified

This was because:

- (i) the number of subjects was small
- (ii) subjects' descriptions were often confusing and therefore difficult to classify

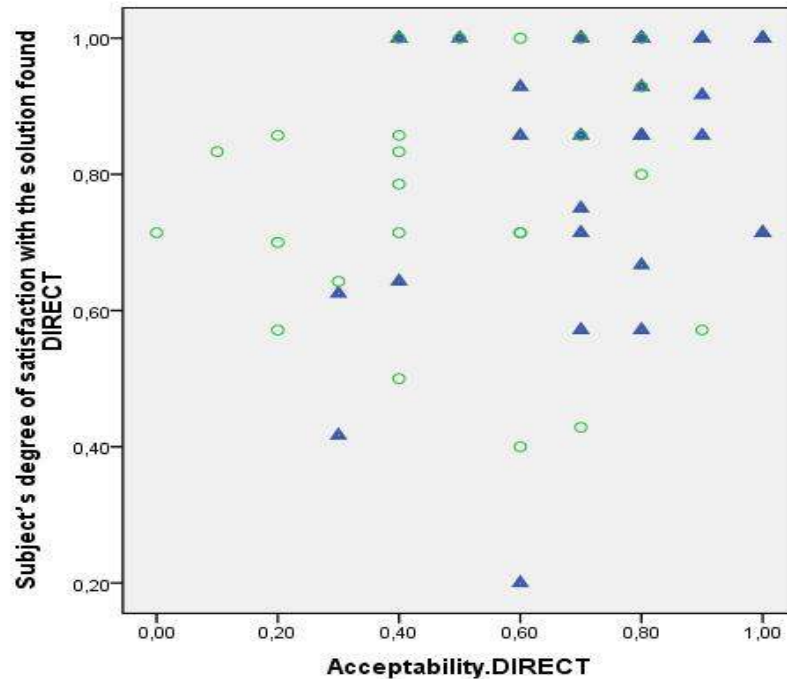
- There was a greater tendency for teachers to describe problems as linguistic, either of re-expression or of comprehension
- Problems of intentionality: most teachers described them as linguistic whilst most translators assigned them to a wider range of categories (textual, function, intentionality)

**Coefficient of satisfaction for each Rich Point**

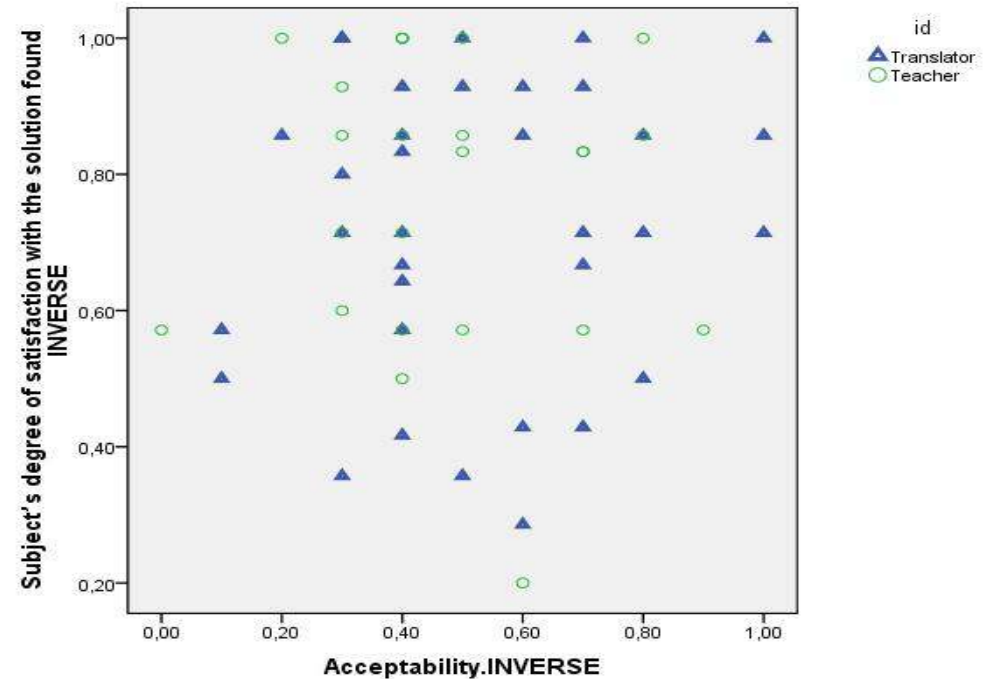
	DIRECT TRANSLATION		INVERSE TRANSLATION	
	Translators	Teachers	Translators	Teachers
RP1	.78	.76	.78	.79
RP2	.76	.61	.82	.74
RP3	.89	.90	.74	.70
RP4	.83	.64	.61	.85
RP5	.89	.76	.69	.76

- Subjects' coefficient of satisfaction is similar for each Rich Point

(direct)



(inverse)



- No relation was found between subjects' satisfaction with their solutions to translation problems and real acceptability

## DECISION-MAKING

(PACTE 2009)

*Decisions made during the translation process which involve the use of automatic and non-automatic cognitive resources (internal support) and the use of different resources of documentation (external support)*

### Instruments :

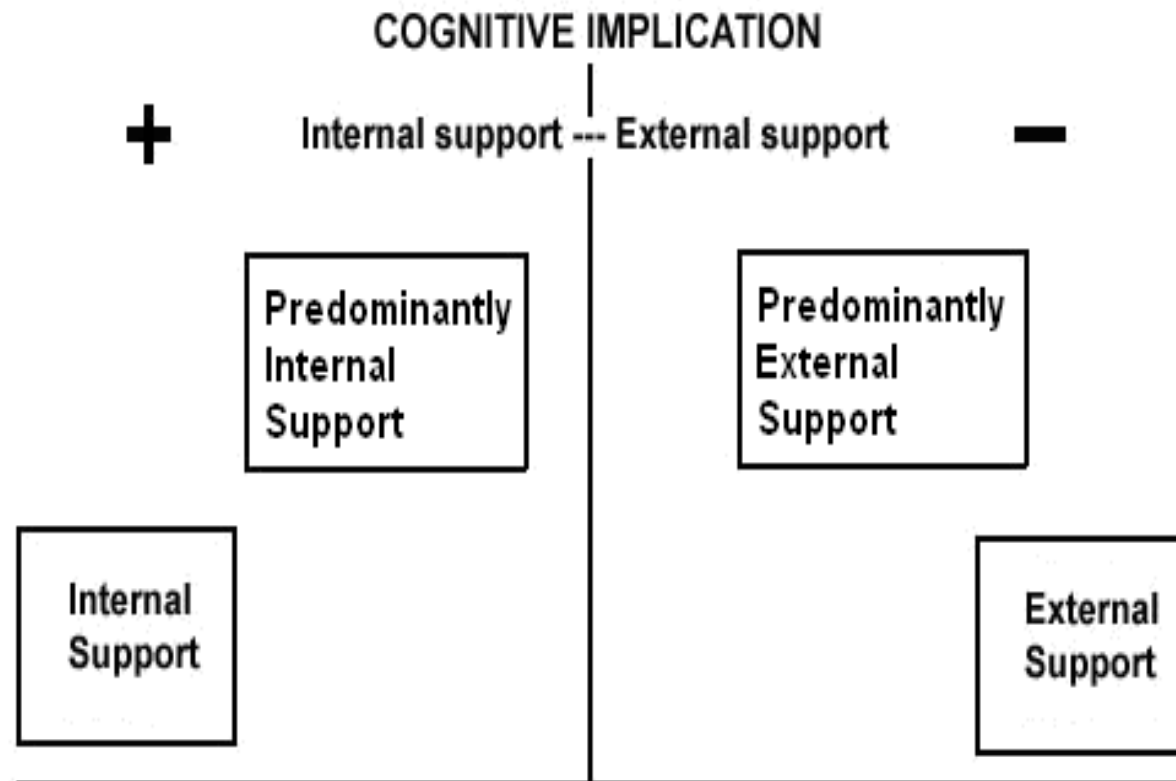
- ✓ Translations
- ✓ Direct observation
- ✓ Translation protocols (Proxy and Camtasia)

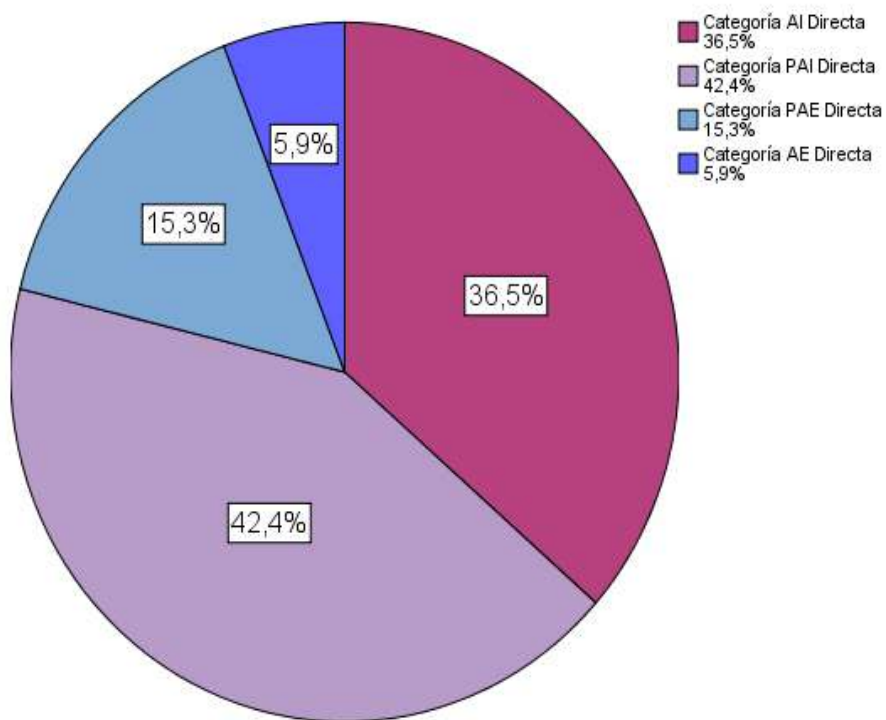
### Indicators:

- ✓ Sequences of actions
- ✓ Acceptability

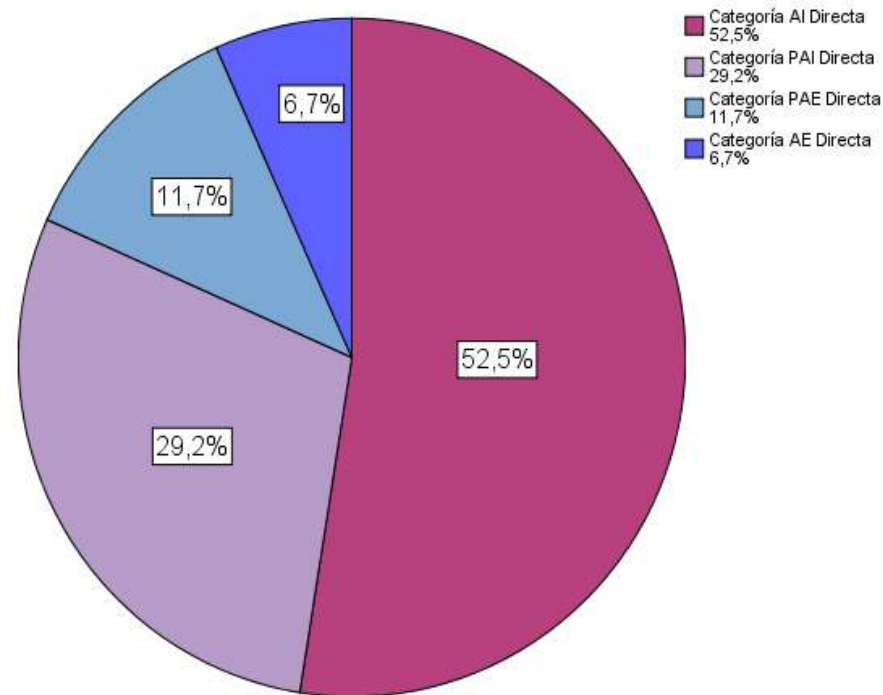
## SEQUENCES OF ACTIONS

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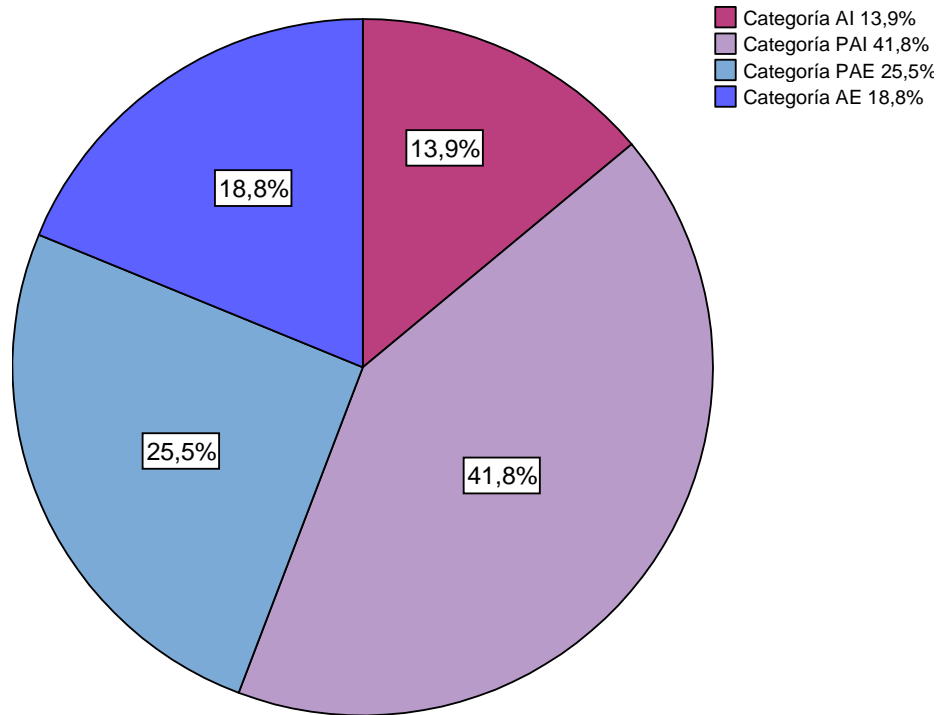
Porcentaje de las secuencias de acciones. TRADUCTORES. Traducción directa



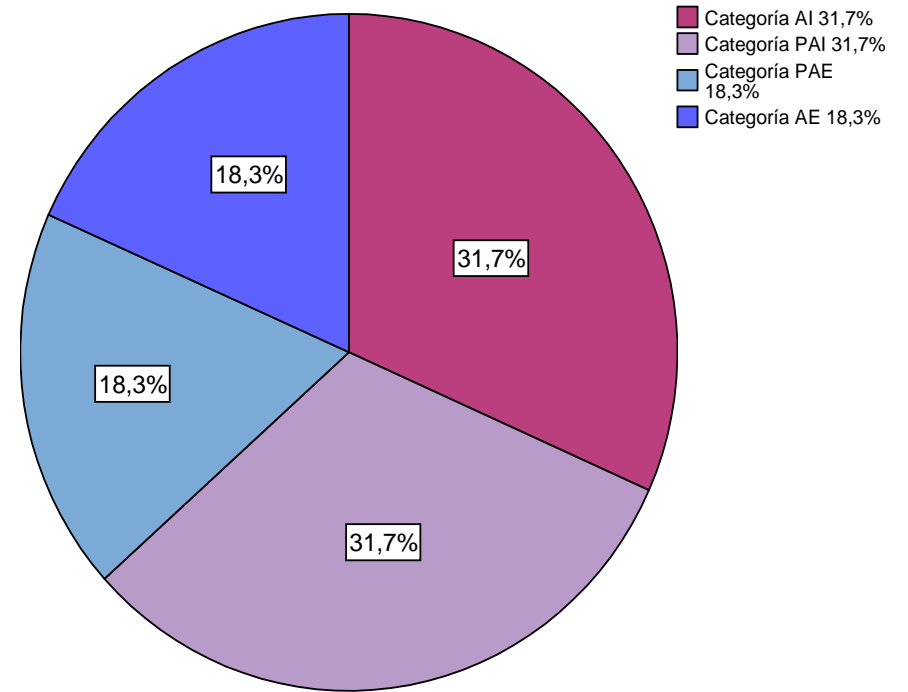
Porcentaje de las secuencias de acciones. PROFESORES. Traducción directa



# PACTE SEQUENCES OF ACTIONS [inverse translation]



Porcentaje de las secuencias de acciones. TRANDUCTORES. Traducción inversa.



Porcentaje de las secuencias de acciones. PROFESORES. Traducción inversa.

- **Internal Support** is more characteristic of teachers
- **Predominantly Internal Support** is more characteristic of translators
- **Predominantly External Support** is used a little more often in inverse translation than in direct translation by both groups
- **External Support** is used much more often in inverse translation than in direct translation by both groups

**In general, Predominantly Internal Support leads to more acceptable solutions.**

### **DIRECT TRANSLATION**

In the case of Translators, Predominantly Internal Support leads to more acceptable solutions (47,3%).

In the case of Teachers, Internal Support leads to more acceptable solutions (63,7%).

### **INVERSE TRANSLATION**

In both groups, Predominantly Internal Support leads to more acceptable solutions (Translators 51,9%; Teachers 38,6%).

## **Internal support: Automated and Non-automated**

- Automated internal support: Use of internal support and Rich Point is not identified as a problem
- Non-automated internal support: Use of Internal support and Rich Point is identified as a problem (*thinking*).

**Automatized internal support (AIS)**

<b>DIRECT Automatized</b>	<b>% Automatized</b>	<b>Index of acceptability Automatized</b>	<b>Overall acceptability</b>
Tranlators	25.0%	0.66	0.73
Teachers	37.5%	0.54	0.49

<b>INVERSA Automatizado</b>	<b>% Automatized</b>	<b>Index of acceptability Automatized</b>	<b>Overall acceptability</b>
Tranlators	7.0%	0.60	0.52
Teachers	12.0%	0.37	0.48

- Both groups use more AIS in direct translation
- Teachers used AIS more often than translators (in both direct and inverse translation), with less acceptable results
- Fewer translators used AIS but with more acceptable results than teachers (especially in inverse translation)

## Non-automatized internal support (NAIS): *thinking*

DIRECT Not automatized	% (thinking)	Index of acceptability Not automatized	Overall acceptability	INVERSE Not automatized	% (thinking)	Index of acceptability Not automatized	Overall acceptability
Tranlators	11.0%	0.89	0.73	Tranlators	9.0%	0.50	0.52
Teachers	17.0%	0.45	0.49	Teachers	19.0%	0.50	0.48

- Fewer translators than teachers used NAIS
- The index of acceptability of translators in direct translation is particularly high (even exceding overall acceptability)
- The index of acceptability of teachers is much lower than that of translators' in direct translation

## CONCLUSION

Translation competence involves the use of both automatized and non-automatized internal support:

- Translators obtain acceptable solutions thanks to their internalisation of acceptable solutions as a result of their experience in translation (AIS) and knowledge of translation (NAIS)

# **EFFICACY OF THE TRANSLATION PROCESS**

**(PACTE 2008)**

*Optimum relationship between time taken to complete a translation task  
and the acceptability of the solution*



# **PACTE** EFFICACY OF THE TRANSLATION PROCESS

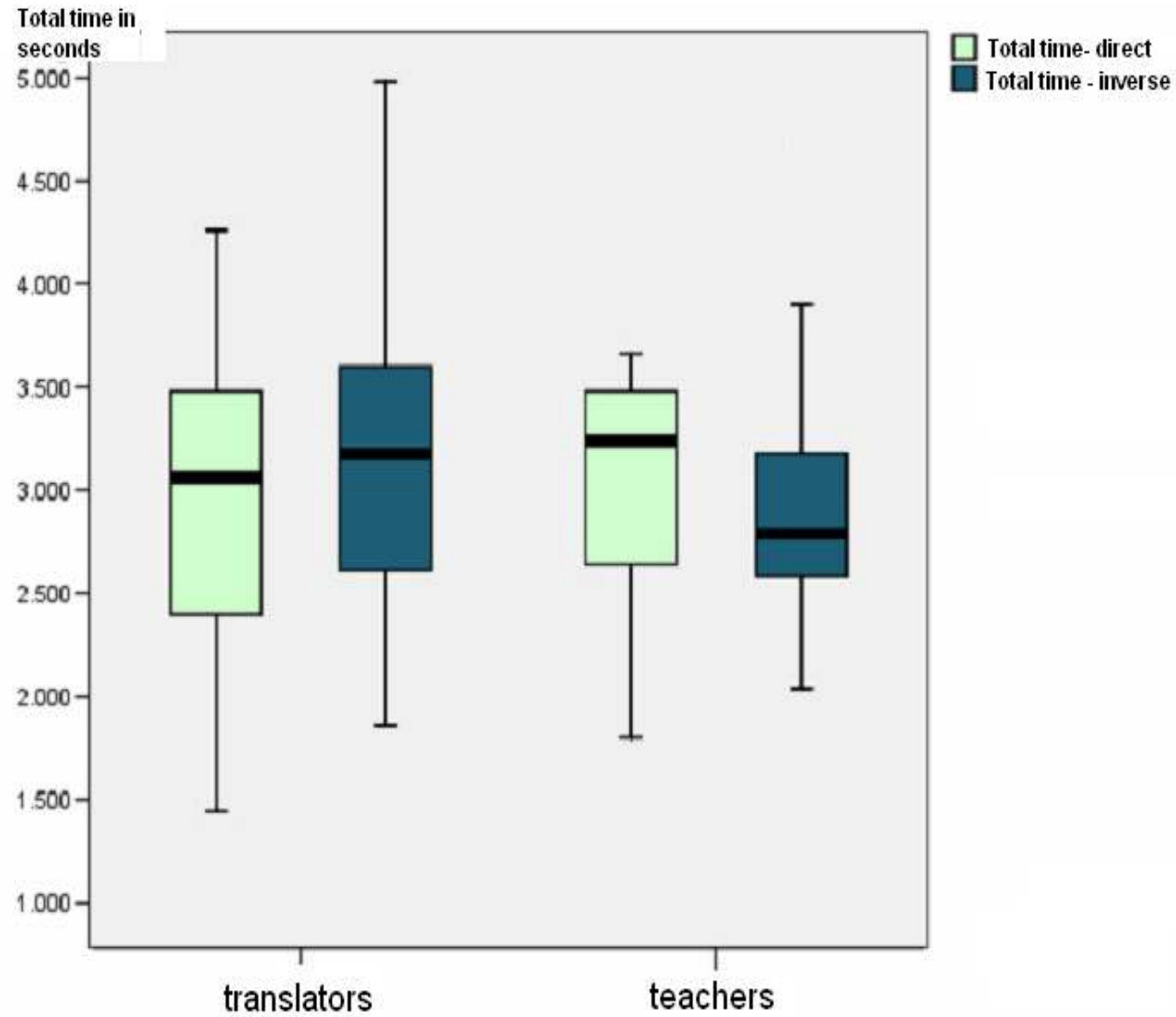
## Instruments:

- ✓ Translations
- ✓ Direct observation
- ✓ Translation protocols (Proxy and Camtasia)

## Indicators:

- ✓ Acceptability
- ✓ Total time taken
- ✓ Time taken at each stage

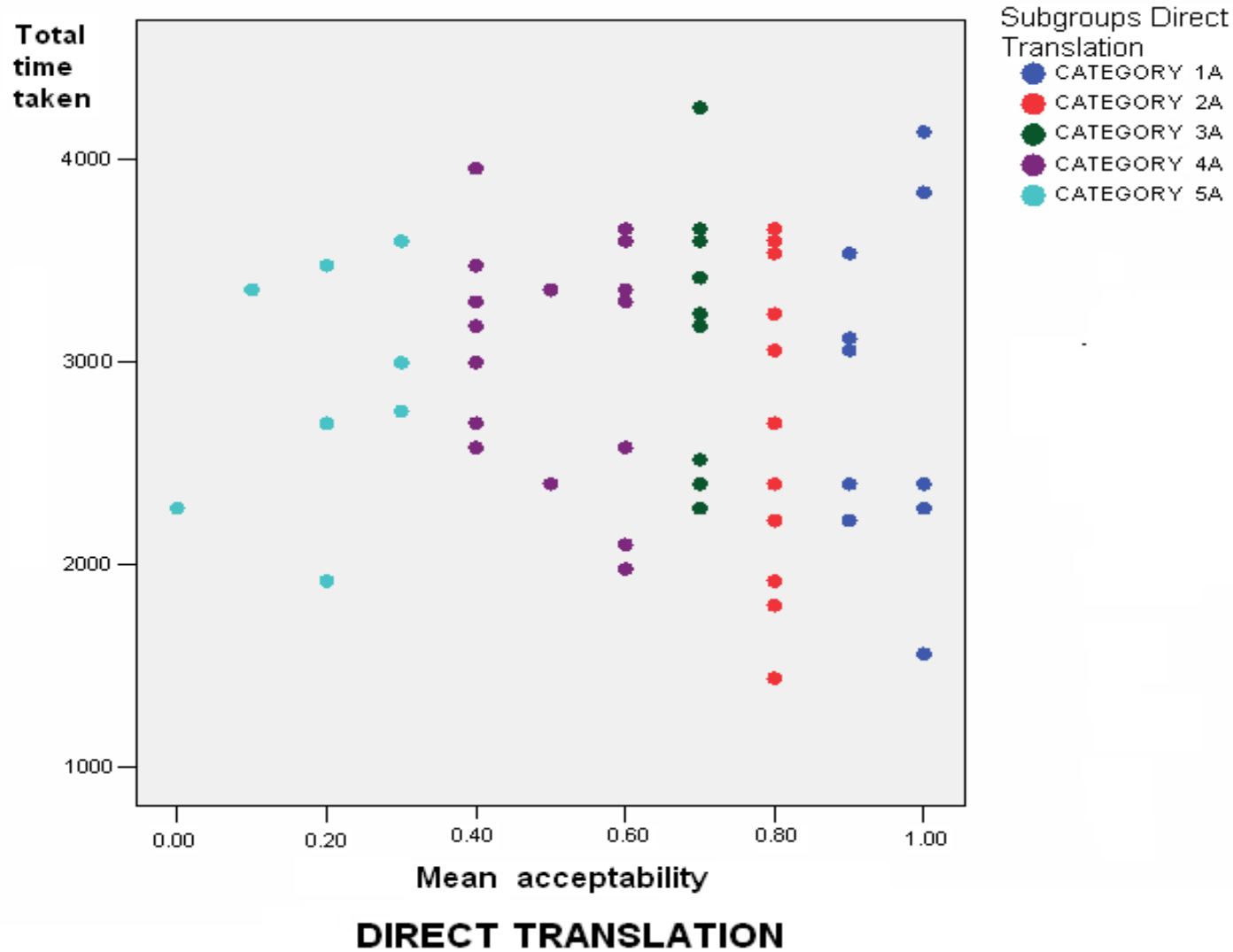
## TOTAL TIME TAKEN Results





# TOTAL TIME TAKEN + ACCEPTABILITY

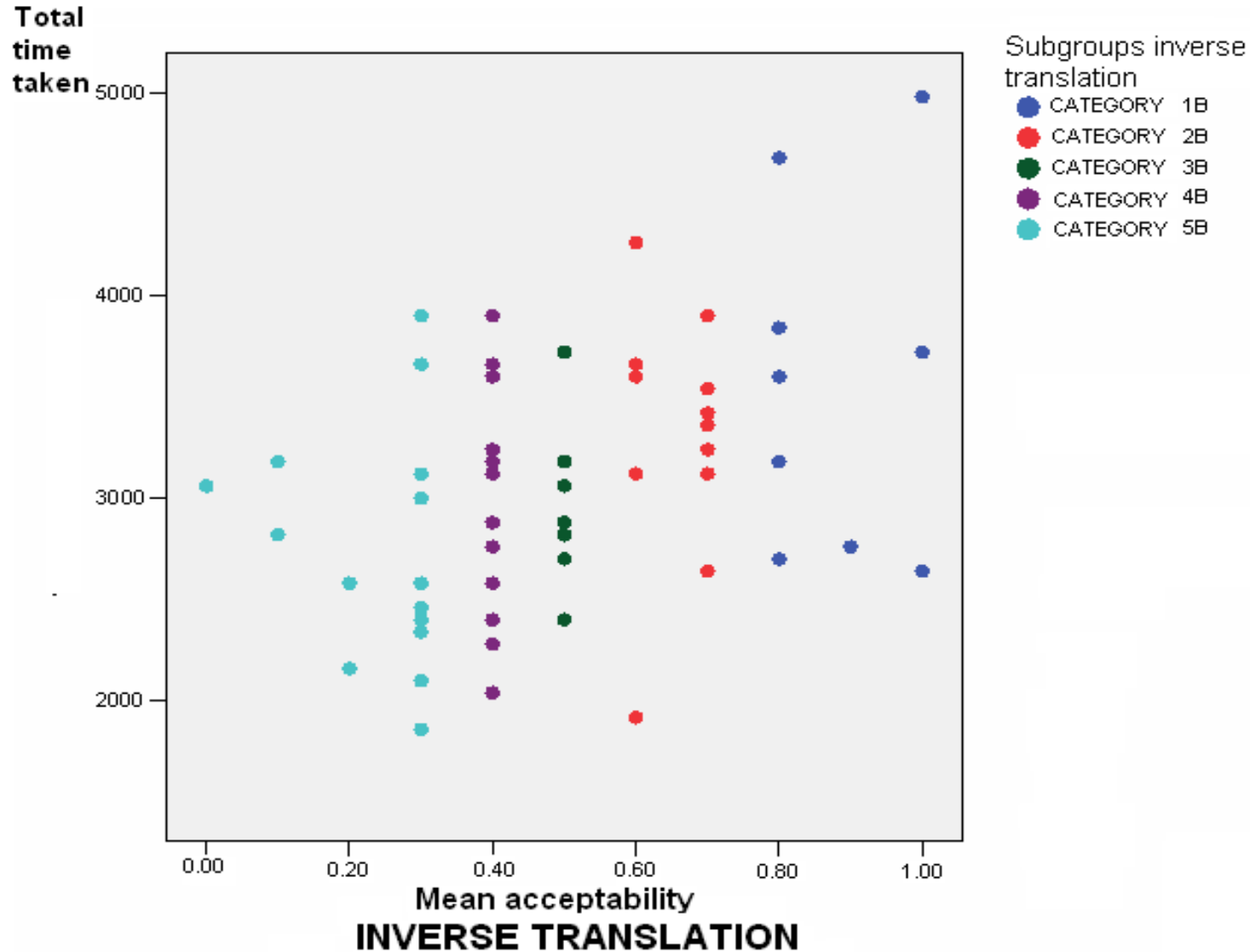
## Direct translation





# TOTAL TIME TAKEN + ACCEPTABILITY

## Inverse translation

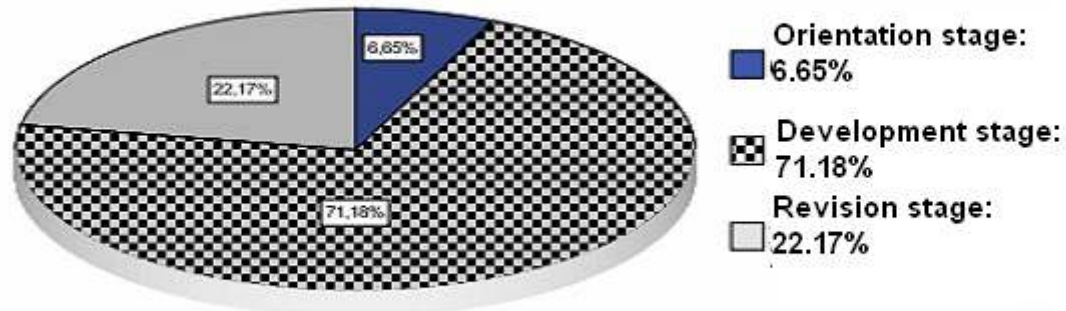


## TIME TAKEN AT EACH STAGE Direct translation

Translators:  
mean percentage of time taken at each stage: Direct translation



Teachers:  
mean percentage of time taken at each stage: Direct translation

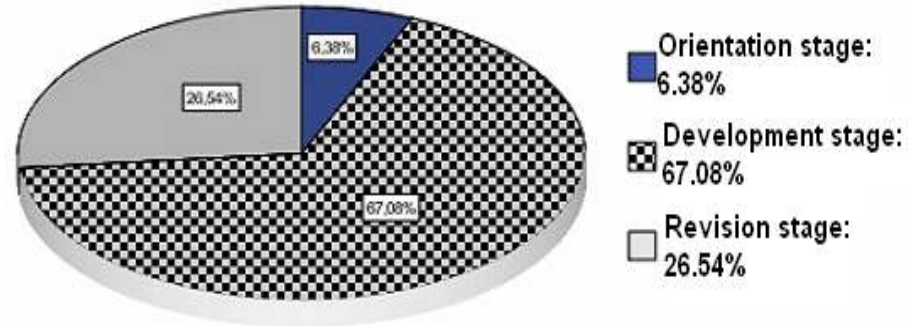


## TIME TAKEN AT EACH STAGE Inverse translation

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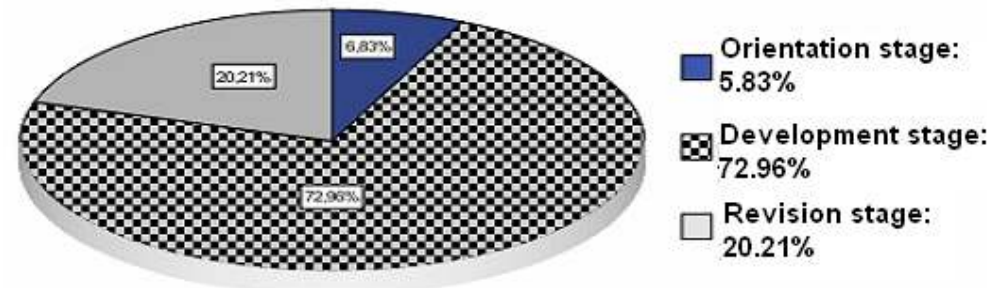
Translators:

mean percentage of time taken at each stage: Inverse translation



Teachers:

mean percentage of time taken at each stage: Inverse translation



TOTAL TIME TAKEN: no significant differences between two groups

TOTAL TIME TAKEN + ACCEPTABILITY:

- Direct translation: no significant relationship (in either group)
- Inverse translation: significant relationship in translators

TIME TAKEN AT EACH STAGE (orientation, development, revision):

- Development stage is shorter in translators (especially in Direct translation)
- Revision stage is longer in translators (especially in Direct translation)

# **CONCLUSIONS**



It has been observed:

- TC can be acquired through experience
- The relevance of the strategic, instrumental and knowledge about translation sub-competences
- The inter-relation between sub-competences: translators use more (external) resources than teachers
- The relevance of strategic sub-competence: translators combine cognitive and external resources in an efficient manner
- A smaller degree of automatization than in other kinds of procedural expert knowledge :  $\leftrightarrow$  use of instrumental and knowledge about translation sub-competences
- Presence of subjectivity:  $\leftrightarrow$  psychophysiological components
- Differences between direct and inverse translation

Distinguishing features of TC:

- To solve translation problems with acceptable solutions *STRATEGIC*
- To have a dynamic and coherent concept of translation (declarative knowledge) *KNOWLEDGE ABOUT TRANSLATION*
- To have a dynamic approach to translation (procedural knowledge) *STRATEGIC*
- To combine cognitive resources (internal) and documentary resources (external) in an efficient manner *STRATEGIC + INSTRUMENTAL*
- To use automatized (due to experience) and non-automatized cognitive resources in an efficient manner *STRATEGIC*

- PACTE (2000) "Acquiring Translation Competence: Hypotheses and Methodological Problems in a Research Project". In A. Beeby, D. Ensinger and M. Presas (eds.) *Investigating Translation*, Amsterdam: John Benjamins, p. 99-106.
- PACTE (2001) "La Competencia traductora y su adquisición", *Quaderns. Revista de Traducció* 6, p. 39-45.
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