I. INTRODUCTION: PACTE’s research on translation competence.
1. Theoretical model
2. Research design

II. IDENTIFICATION AND SOLUTION OF TRANSLATION PROBLEMS
1. Translation problems in PACTE’s research on translation competence
2. The variable Identification and Solution of Translation Problems

III. RESULTS
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2. Subjects’ identification of prototypical translation problems
3. Characterisation of the prototypical translation problems identified
4. Coefficient of subjects’ satisfaction
5. Type of internal support used to solve prototypical translation problems

IV. CONCLUSIONS

REFERENCES
TRANSLATION COMPETENCE MODEL (PACTE 2003)

TRANSLATION COMPETENCE: Translation competence is the underlying system of declarative and predominantly procedural knowledge required to translate. It comprises a number of interrelated subcompetences.

**Bilingual sub-competence.** Predominantly procedural knowledge required to communicate in two languages. It comprises pragmatic, socio-linguistic, textual, grammatical and lexical knowledge.

**Extra-linguistic sub-competence.** Predominantly declarative knowledge, both implicit and explicit, about the world in general, and field-specific. It comprises bicultural, encyclopaedic, and subject-domain knowledge.

**Knowledge about translation sub-competence.** Predominantly declarative knowledge, both implicit and explicit, about translation and aspects of the profession. It comprises knowledge about how translation functions (translation units, processes required, methods and procedures used and types of problems); and knowledge about professional translation practice (the work market, types of translation briefs, target audiences, etc.)

**Instrumental sub-competence.** Predominantly procedural knowledge related to the use of documentation resources and information and communication technologies applied to translation (dictionaries of all kinds, encyclopaedias, grammars, style books, parallel texts, electronic corpora, search engines, etc.)

**Strategic sub-competence.** Procedural knowledge to guarantee the efficiency of the translation process and solve problems encountered. This is an essential sub-competence that affects all the others since it creates links between the different subcompetences as it controls the translation process. Its function is to plan the process and carry out the translation project (selecting the most appropriate method); evaluate the process and the partial results obtained in relation to the final purpose; activate the different sub-competences and compensate for any shortcomings; identify translation problems and apply procedures to solve them.

**Psycho-physiological components.** Different types of cognitive and attitudinal components and psycho-motor mechanisms. They include: cognitive components such as memory, perception, attention and emotion; attitudinal aspects such as intellectual curiosity, perseverance, rigour, critical spirit, knowledge about and confidence in one’s own abilities, the ability to measure one’s own abilities, motivation, etc.; abilities such as creativity, logical reasoning, analysis and synthesis, etc.

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1 Other aspects intervene, such as: knowledge about translation associations, tariffs, taxes, etc.
### DEPENDENT VARIABLES
(adaptation of PACTE 2005a, 2005b)

#### KNOWLEDGE ABOUT TRANSLATION
- **Conceptual Definition**: The subject’s implicit knowledge about the principles of translation and aspects of the translation profession
- **Indicators**: Dynamic index and coherence coefficient
- **Instruments**: Questionnaire on knowledge of translation
- **Data Source**: Subjects’ answers to the questionnaire

#### Efficacy of the Translation Process
- **Conceptual Definition**: Optimum relationship between time taken to complete a translation task and the acceptability of its solution
- **Indicators**: Total time taken; time taken at each stage of the translation process (orientation, development, revision); acceptability
- **Instruments**: Translations, direct observation charts, PROXY and Camtasia recordings
- **Data Source**: Total time taken and time taken at each stage of the translation process in relation to the acceptable and partially acceptable results obtained

#### Decision-Making
- **Conceptual Definition**: Decisions made during the translation process which involve the use of automatized and non-automatized cognitive resources (internal support) and the use of different sources of documentation (external support) (Alves, 1995, 1997)
- **Indicators**: Sequences of actions; acceptability
- **Instruments**: Translations, direct observation charts, PROXY and Camtasia recordings
- **Data Source**: Sequences of actions leading to results that are acceptable, partially acceptable and unacceptable in relation to Rich Points (specific source-text segments that contained translation problems; see Data Analysis below)

#### Identification and Solution of Translation Problems
- **Conceptual Definition**: Difficulties encountered by the subjects when carrying out a translation task
- **Indicators**: Coefficient of perception of the overall difficulty of the text; subjects’ identification of Rich Points; characterization of Rich Points identified by subjects; coefficient of subjects’ satisfaction with the solution found for each Rich Point; type of internal support used to solve each Rich Point; acceptability
- **Instruments**: Translation problems questionnaire and retrospective interview
- **Data Source**: Problems identified and subjects’ comments

#### Use of Instrumental Resources
- **Conceptual Definition**: Strategies used when consulting documentary resources in electronic format (websites, dictionaries and encyclopaedias in CD-ROM)
- **Indicators**: Variety of resources, number of searches, time spent on searches (total and for each phase)
- **Instruments**: PROXY/Camtasia recordings, Catalogue of searches
- **Data Source**: Phase(s) of the searches; Time spent (initial/first); Categories of resources (type, sub-type); Number of resources (variety of searches); Number of searches (quantity of searches)

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2 Based on the distinction made by Jakobsen 2002.
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. [...]
PACTE 2007b, 2011

QUESTIONNAIRE ON PROBLEMS OF TRANSLATION

1. How difficult do you think this text is to translate?
   *On the scale between ‘very easy’ and ‘very difficult’, put a cross on the line of squares below to show how difficult you think it would be to translate this text.*

<table>
<thead>
<tr>
<th>Translation of this text is very easy</th>
<th>Translation of this text is very difficult</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. What are the general characteristics of the text that make you think so?

3. What were your priorities when translating the text?

4. What were the main problems you found when translating this text?
   Name 5 and answer the following questions about each.

<table>
<thead>
<tr>
<th>Problem 1:</th>
<th>Why was it a problem?</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Why was it a problem?</th>
<th>What were your priorities when solving it?</th>
<th>Explain as clearly as possible what you did to solve it</th>
<th>Are you satisfied with the solution?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ Yes □ No Why?</td>
</tr>
</tbody>
</table>
PACTE 2009

- **Internal Support**: the Definitive Solution is based exclusively on internal support, with no consultation prior to the Definitive Solution being adopted.

- **Predominantly Internal Support**: the Definitive Solution is based essentially on internal support, i.e., any combination of consultations which does not include a consultation of bilingual resources from which the variant offered is adopted in translation.

- **Predominantly External Support**: the Definitive Solution is based essentially on external support, i.e., any combination of consultations that includes consultations of bilingual resources from which the variant offered is adopted in translation.

- **External Support**: the Definitive Solution is based exclusively on consultation of bilingual resources, from which the variant offered is accepted in the translation.