RESULTS OF PACTE’S EXPERIMENTAL RESEARCH ON
TRANSLATION COMPETENCE ACQUISITION,
KNOWLEDGE OF TRANSLATION
AND TRANSLATION PROJECT

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I. INTRODUCTION
OVERALL OBJECTIVE
Acquisition of Translation Competence

PHASES
1st Translation Competence (TC) (2000-2006)
2nd Acquisition of Translation Competence (ATC) (2011)

RESEARCH
Empirical-experimental
Process and product

6 LANGUAGE COMBINATIONS
The underlying system of knowledge required to translate

- Expert knowledge
- Predominantly procedural
- Comprising different inter-related subcompetences
- Important strategic component
TC MODEL (PACTE 2003)

- BILINGUAL
- EXTRALINGUISTIC
- STRATEGIC
- INSTRUMENTAL
- KNOWLEDGE OF TRANSLATION
- PSYCHO-PHYSIOLOGICAL COMPONENTS
II. ACQUISITION OF TRANSLATION COMPETENCE: THEORETICAL MODEL AND RESEARCH DESIGN
ATC MODEL (PACTE 2000)

Pre-Translation Competence

Integrated development of sub-competencies

ACQUISITION

Translation Competence

Learning Strategies
HYPOTHESES

General hypothesis:
Translation competence is acquired as a result of a process of development and restructuring of different sub-competences.

Operational hypotheses:
1. Translation competence comprises several inter-related subcompetences.
2. The development of the strategic, instrumental, and knowledge of translation sub-competences is of particular importance de traducción, instrumental y estratégica.
3. Not all sub-competences develop in parallel, i.e. at the same time and at the same rate.
4. Learning-to-learn strategies must also be acquired.
5. The acquisition of translation competence is dependent upon directionality (direct/inverse translation), language pairs in use, the field of specialized translation (legal, literary translation, etc.) and the learning environment.
INDEPENDENT VARIABLE

Degree of experience in translation:

- Novices
- Second year students
- Third year students
- Fourth year students
- Recent graduates
- Professional translators
VARIABLES

DEPENDENT VARIABLES = (as in the TC experiment)

- Knowledge of Translation
- Translation Project
- Identification and Solution of Translation Problems
- Decision-Making
- Efficacy of the Process
- Use of Instrumental Resources

20 indicators

- Acceptability as a transversal indicator
Measurements from cohorts of 1\textsuperscript{st} year, 2\textsuperscript{nd} year, 3\textsuperscript{rd} year and final-year students

- Advantages
  - Data collected in one year
  - Validated instruments available from the TC experiment
Simulation of a longitudinal study

- Fourth year students (end academic year = “6th year students”)
- Fourth year students (start academic year)
- Third year students
- Second year students
- Novices

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- Test 1 (Sept.)
- Test 2 (Sept.)
- Test 3 (Sept.)
- Test 4 (Sept.)
- Test 5 (June)

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Pedagogical intervention

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ATC

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Professional translators
EXPERIMENTAL UNIVERSE AND SAMPLE

EXPERIMENTAL UNIVERSE
- Students from different years in the FTI/UAB Degree in Translation and Interpreting
- 6 language combinations (as in the TC experiment)

SELECTION PROCESS
- Pre-selection questionnaire
- 5 cohorts of approx. 30 subjects each

SAMPLE
130 subjects

CONTROL GROUP
- 35 translators from the TC experiment
Instruments validated in the TC experiment:

- **Observation:** on-screen real-time recordings
  
  *Camtasia*

- **Questionnaires:**
  
  - Knowledge of Translation Questionnaire
  
  - Translation Problems Questionnaire (revised)

- **Texts:**
  
  - Rich Points
  
  - Criteria for acceptability

- **Corpus of electronic texts**

  *WordSmith Tools*
EXPERIMENTAL TASKS

- Direct translation
- Completion of a questionnaire on the translation problems encountered
- Inverse translation
- Completion of a questionnaire on the translation problems encountered
- Completion of the Translation Knowledge Questionnaire
III. KNOWLEDGE OF TRANSLATION
DECLARATIVE KNOWLEDGE
KNOWLEDGE OF TRANSLATION

Subjects’ implicit knowledge of the principles of translation

- **Indicators:**
  - Dynamic index of Knowledge of Translation
  - Coherence coefficient of Knowledge of Translation

- **Instrument:**
  - Knowledge of Translation Questionnaire
    - Categories:
      - Dynamic: interpretative; textual, communicative and functionalist concept of translation
      - Static: linguistic and literal concept of translation
TRANSLATION KNOWLEDGE QUESTIONNAIRE

Developed and validated over time:
(Neunzig & Kuznik 2007; PACTE 2008 & in progress)

- Pilot Test (35 UAB/FTI students)

- TC Pilot Study (3 translators & 3 teachers)

- Validation Test (10 translation users)

→ Final Questionnaire (27 items)
→ 5 pairs of contrastive items analysed
<table>
<thead>
<tr>
<th>Pair</th>
<th>Dynamic</th>
<th>Static</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Item 3</td>
<td>Item 24</td>
</tr>
<tr>
<td></td>
<td>The client conditions the way the translator translates.</td>
<td>When you translate a text, you should not be influenced by the target reader.</td>
</tr>
<tr>
<td>II</td>
<td>Item 10</td>
<td>Item 4</td>
</tr>
<tr>
<td></td>
<td>A text should be translated in different ways depending on who the target reader is.</td>
<td>The aim of every translation is to produce a text as close in form to the source text as possible.</td>
</tr>
<tr>
<td>III</td>
<td>Item 23</td>
<td>Item 11</td>
</tr>
<tr>
<td></td>
<td>If you begin to translate a text using certain criteria (e.g. respecting the format of the original text, adapting the text to target readers, etc.) these should be kept to throughout the text.</td>
<td>All translated texts should maintain the order of the sentences and the paragraphs of the source text.</td>
</tr>
<tr>
<td>IV</td>
<td>Item 14</td>
<td>Item 5</td>
</tr>
<tr>
<td></td>
<td>When translating a technical text, complicated vocabulary is not the main problem.</td>
<td>Most translation problems can be solved with the help of good dictionaries.</td>
</tr>
<tr>
<td>V</td>
<td>Item 27</td>
<td>Item 6</td>
</tr>
<tr>
<td></td>
<td>If there is a word in a text that you don’t understand, first of all you try to work out its meaning from the context.</td>
<td>As soon as you find a word or expression you don’t know the meaning of, you should look it up in a bilingual dictionary.</td>
</tr>
</tbody>
</table>
# RESULTS: DYNAMIC INDEX

<table>
<thead>
<tr>
<th>ATC</th>
<th>Mean (-1/+1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>0.10</td>
</tr>
<tr>
<td>2nd year</td>
<td>0.33</td>
</tr>
<tr>
<td>3rd year</td>
<td>0.37</td>
</tr>
<tr>
<td>4th year</td>
<td>0.36</td>
</tr>
<tr>
<td>Graduates</td>
<td>0.41</td>
</tr>
<tr>
<td>ATC</td>
<td>Mean (0/1)</td>
</tr>
<tr>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; year</td>
<td>0.16</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; year</td>
<td>0.42</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; year</td>
<td>0.42</td>
</tr>
<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt; year</td>
<td>0.39</td>
</tr>
<tr>
<td>Graduates</td>
<td>0.41</td>
</tr>
</tbody>
</table>
IV. TRANSLATION PROJECT
PROCEDURAL KNOWLEDGE
TRANSLATION PROJECT

Subjects’ approach to the translation of a text and the units it comprises

- **Indicators:**
  - Dynamic Index of the overall Translation Project (TP)
  - Dynamic Index of the Translation Project for Translation Problems (Rich Points)
  - Coherence Coefficient of the Translation Project

- **Instrument:**
  - Translation Problems Questionnaire

*What was your priority when translating the text?* (overall TP)

*What was your priority when translating the underlined segments of the text?* (TP for each Rich Point)
Dynamic (D) answers:
- Adapt the text to meet target readers’ expectations
- Communicate the meaning of the source text

Static (S) answers:
- Reproduce the lexis and morphosyntax of the source text
- Reproduce the same structure and formal aspects of the source text

None (NT) answer:
I had none
In direct and inverse translation, all groups showed a mostly dynamic approach to their translation project.

There would appear to be a difference between subjects in their first year of study and others.
Obtained by collating the overall Dynamic Index for both direct and inverse translation and measured on a scale of -1, 0, +1.

<table>
<thead>
<tr>
<th>Direct translation</th>
<th>Inverse translation</th>
<th>Overall TP</th>
<th>Dynamic Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>D</td>
<td>Dynamic</td>
<td>+1</td>
</tr>
<tr>
<td>S</td>
<td>S</td>
<td>Static</td>
<td>-1</td>
</tr>
<tr>
<td>D</td>
<td>S</td>
<td>Inconsistent</td>
<td>0</td>
</tr>
<tr>
<td>S</td>
<td>D</td>
<td>Inconsistent</td>
<td>0</td>
</tr>
</tbody>
</table>
Statistically highly significant differences ($p=0.0026$) were observed between cohorts. The Dynamic Index for the overall TP increased from the 2nd year onwards.

<table>
<thead>
<tr>
<th>ATC</th>
<th>Mean (-1/+1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>0.35</td>
</tr>
<tr>
<td>2nd year</td>
<td>0.79</td>
</tr>
<tr>
<td>3rd year</td>
<td>0.83</td>
</tr>
<tr>
<td>4th year</td>
<td>0.85</td>
</tr>
<tr>
<td>Graduates</td>
<td>1.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compared of cohorts</th>
<th>Total Dyn. Index</th>
<th>Chi-square</th>
<th>DF</th>
<th>Pr</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16.31</td>
<td>4</td>
<td>0.0026</td>
<td>**</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Chi-square</th>
<th>DF</th>
<th>Pr</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL DYNAMIC INDEX OF THE OVERALL TP</td>
<td>16.31</td>
<td>4</td>
<td>0.0026</td>
<td>**</td>
</tr>
</tbody>
</table>
To measure this index, dynamic responses were divided into 3 categories and a scale of measurement -1, 0, +1 used:

<table>
<thead>
<tr>
<th>Dynamic TP for more than 75% of Rich Points</th>
<th>+1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic TP for 25%- 75% of Rich Points</td>
<td>0</td>
</tr>
<tr>
<td>Dynamic TP for fewer than 25% of Rich Points</td>
<td>-1</td>
</tr>
</tbody>
</table>
RP1 and RP 5 were the Rich Points that would appear to show some difference between cohorts

There is no evidence of statistically significant differences between cohorts for any Rich Point in direct translation
RP 3 is of linguistic nature (not taken into account)

Statistically significant differences ($p = 0.0342$) may be observed between cohorts in the Dynamic Index for RP1. This Dynamic Index increased from the second year onwards.
Both direct and inverse translation

<table>
<thead>
<tr>
<th>ATC</th>
<th>Mean (-1/+1)</th>
<th>Statistically significant differences (p= 0.0239) may be observed between cohorts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; year</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; year</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; year</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt; year</td>
<td>0.93</td>
<td></td>
</tr>
<tr>
<td>Graduates</td>
<td>0.91</td>
<td></td>
</tr>
</tbody>
</table>
RESULTS: COHERENCE COEFFICIENT OF TP

<table>
<thead>
<tr>
<th>ATC</th>
<th>Mean (0/1)</th>
<th>No statistically significant differences may be observed between cohorts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1\textsuperscript{st} year</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>2\textsuperscript{nd} year</td>
<td>0.88</td>
<td></td>
</tr>
<tr>
<td>3\textsuperscript{rd} year</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>4\textsuperscript{th} year</td>
<td>0.93</td>
<td></td>
</tr>
<tr>
<td>Graduates</td>
<td>0.95</td>
<td></td>
</tr>
</tbody>
</table>
V. DYNAMIC TRANSLATION INDEX
Dynamic Translation Index =

Average of

Dynamic Index of Knowledge of Translation
+ Dynamic Index of the overall Translation Project
+ Dynamic Index of the Translation Project for Translation Problems
Three categories were established. A scale of measurement -1, 0, +1 used for purposes of statistical analysis.

**Static (-1)**
Knowledge of Translation (S) + Translation Project (overall/Rich Points) (S)

**Inconsistent (0)**
Knowledge of Translation (D)+ Translation Project (overall/Rich Points) (S)
Knowledge of Translation (S)+ Translation Project (overall/Rich Points) (D)

**Dynamic (+1)**
Knowledge of Translation (D)+ Translation Project (overall/Rich Points) (D)
## RESULTS: DYNAMIC TRANSLATION INDEX

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<tr>
<td>1\textsuperscript{st} year</td>
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</tr>
<tr>
<td>2\textsuperscript{nd} year</td>
<td>0.62</td>
</tr>
<tr>
<td>3\textsuperscript{rd} year</td>
<td>0.69</td>
</tr>
<tr>
<td>4\textsuperscript{th} year</td>
<td>0.72</td>
</tr>
<tr>
<td>Graduates</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Statistically significant differences (p= 0.0003) may be observed between cohorts.
CONCLUSIONS
RESULTS OF THE ACT EXPERIMENT

- Continuous progress from a dynamic concept of and approach to translation (declarative and procedural knowledge) is a characteristic of the process of Acquisition of Translation Competence.

- Dynamic Index is always higher in procedural knowledge (Translation Project) than in declarative knowledge (Knowledge of translation).

NEXT STEP:
- Compare results of variables with those obtained for the indicator Acceptability.
Thank you!

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