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The Evolution of the Efficacy of the Translation Process in the Acquisition of Translation Competence. Results of the PACTE Group's Experimental Research

PACTE Group

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- To present the measurement of and results for the dependent study variable **Efficacy of the Translation Process** of the **ATC PACTE** experiment
- One of the variables related to the Strategic sub-competence.

I. INTRODUCTION

GENERAL HYPOTHESIS

Translation competence is acquired as a result of a process of development and restructuring of different sub-competences: Bilingual, Extra-linguistic, Knowledge of translation, Instrumental and Strategic (+psycho-physiological components)

THEORETICAL HYPOTHESES

1. ATC is, like all learning processes, a dynamic, non-linear, spiral process.
2. ATC involves an evolution from novice knowledge (pre-TC) to TC.
3. ATC is a process in which the development of procedural knowledge - and, consequently, of the Strategic sub-competence - is essential.
4. ATC is a process in which the sub-competences of TC are developed and restructured.
5. In ATC, the development of the Strategic, Instrumental, and Knowledge of Translation sub-competences is particularly important.
6. In ATC, not all sub-competences develop in parallel, i.e. at the same time and at the same rate.
7. ATC is dependent upon directionality (direct/inverse translation).
8. ATC is dependent upon the learning environment.

INDEPENDENT VARIABLE

- Degree of experience in translation:
 - Novices
 - Second-year students
 - Third-year students
 - Fourth-year students
 - Recent graduates

 - Professional translators

DEPENDENT VARIABLES (as in the TC experiment)

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

20 indicators

- **Acceptability as a transversal indicator**

SIMULATION OF A LONGITUDINAL STUDY

Measurements from cohorts of 1st year, 2nd year, 3rd year and final-year students

- Advantages
 - Data collected in one year
 - Validated instruments available from the TC experiment

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
(fourth-year students and recent graduates took the older, unadapted Translation and Interpreting degree course).

SAMPLE

- 130 subjects

CONTROL GROUP

- 35 translators from the TC experiment

TOOLS AND INSTRUMENTS

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

II. EFFICACY OF THE TRANSLATION PROCESS

↔ Related to Strategic sub-competence

Relationship between the time taken to complete a translation task, its distribution between stages, and the acceptability of solutions

(PACTE in press b)

Efficacy of TP = optimal relationship between solution acceptability and time, i.e. achieving maximum acceptability in minimum time



Initial premise: coming up with acceptable solutions should take less time as TC is acquired

Empirical hypothesis:

There is a relationship between the degree of TC and the efficacy of the translation process

Operational hypotheses:

Differences can be observed at each level of TC acquisition in relation to:

- *the time taken (OH1).*
- *the distribution between stages of the time taken (OH2).*
- *the time taken and the acceptability of results (OH3).*

☐ Instruments:

- ✓ Translations
- ✓ Translation process recordings (*Camtasia*)

☐ Indicators:

- ✓ Total Time Taken
- ✓ Time Taken at each Stage
- ✓ Acceptability

EVOLUTION DESCRIPTION: SCALES

(scale of 0 to 100)

- under 5 points = no change
- 5 to 9 points = slight change
- 10 to 19 points = **substantial change**
- 20 to 29 points = very substantial change
- 30 points or over = extremely substantial change

EVOLUTION DESCRIPTION: TYPOLOGY

Different types of evolution:

- **Non-evolution:** *no difference in the values between successive groups between the first year and the end of training.*
- **Rising evolution:** *values rise between the first year and the end of training, with each value between successive groups being higher than or equal to the previous one.*
- **Falling evolution:** *values fall between the first year and the end of training, with each value between successive groups being lower than or equal to the previous one.*
- **Mixed evolution:** *a combination of rising and falling evolution between the first year and the end of training.*

PROGRESSION

(between 1st year and recent graduates)

- under 10 points = no progression
- 0 and 19 points = little progression
- 20 and 29 points = **progression**
- over 30 points = major progression

III. RESULTS

RESULTS: Acceptability

(PACTE 2009, in press a)

Direct translation	Mean
1 st	0.45
2 nd	0.59
3 rd	0.63
4 th	0.65
Graduates	0.70
Translators	0.73

Acceptability begins to increase gradually from the 2nd year onwards until training is complete.

RESULTS: Acceptability

(PACTE 2009, in press a)

Inverse translation	Mean
1 st	0.31
2 nd	0.36
3 rd	0.39
4 th	0.51
Graduates	0.49
Translators	0.52

There is a marked increase between 3rd and 4th year.

RESULTS: Total Time Taken

Direct translation	hh:mm	%
1 st year	00:50	80.65%
2 nd year	01:02	100% ↑
3 rd year	00:56	90.32% ↓
4 th year	00:47	75.80% ↓
Graduates	00:58	93.55% ↑
Translators	00:48	-

- Type of evolution: **mixed** evolution.
- Graduates versus translators. The graduates take longer than the professional translators did. The difference involved is statistically significant.

RESULTS: Total Time Taken

Inverse translation	hh:mm	%
1 st year	00:40	66.66%
2 nd year	00:53	88.33% ↑
3 rd year	00:51	85.00% =
4 th year	00:54	90.00% ↑
Graduates	00:59	98.33% ↑
Translators	00:53	-

- Type of evolution: **rising** evolution.
- Graduates versus translators. The graduates have a slightly higher mean time than the professional translators did.

Direct translation	Orientation %	Development %	Revision %
1 st year	6.4%	72.7%	20.9%
2 nd year	7.4% ↑	77.3% ↑	15.3% ↓
3 rd year	8.5% ↑	61.6% ↓	29.9% ↑
4 th year	3.8% ↓	66.5% ↑	29.7% ↓
Graduates	8.4% ↑	63.1% ↓	28.5% ↓
Translators	8.8% ↑	52.8% ↓	38.4% ↑

1. Distribution between stages: development, revision and orientation
2. Type of evolution: Mixed evolution in each stage
3. Differences between groups in terms of distribution between stages
4. Graduates versus translators: development (graduates more time) and revision (less time)

Inverse translation	Orientation %	Development %	Revision %
1 st year	5.5%	78.0%	16.5%
2 nd year	5.6% =	81.6% =	12.8% ↓
3 rd year	6.2% ↑	77.7% ↓	16.1% ↑
4 th year	10.7% ↑	70.6% ↓	18.7% ↑
Graduates	9.0% ↓	67.7% =	23.3% ↑
Translators	6.4% ↓	67.1% =	26.5% ↑

1. Distribution between stages: development, revision and orientation
2. Type of evolution: Mixed evolution in orientation and revision, falling evolution in development
3. Differences between groups in terms of distribution between stages
4. Graduates versus translators: orientation (graduates more time) and revision (less time)

RELATIONSHIP BASED ON EACH GROUP'S MEAN VALUES

Direct translation	TOTAL TIME TAKEN hh:mm , %	ACCEPTABILITY
1 st year	00:50, 80.65%	0.45
2 nd year	01:02, 100%	0.59
3 rd year	00:56, 90.32%	0.63
4 th year	00:47, 75.80%	0.65
Graduates	00:58, 93.55%	0.70
Translators	00:48, ---	0.73

RELATIONSHIP BASED ON EACH GROUP'S MEAN VALUES

Inverse translation	TOTAL TIME TAKEN hh:mm , %	ACCEPTABILITY
1 st year	00:40, 66.66%	0.31
2 nd year	00:53, 88.33%	0.36
3 rd year	00:51, 85.00%	0.39
4 th year	00:54, 90.00%	0.51
Graduates	00:59, 98.33%	0.49
Translators	00:53, ---	0.52

RELATIONSHIP WITHIN EACH GROUP: CORRELATIONS

Direct translation	Spearman correlation coefficient
1 st year	0.41
2 nd year	-0.39
3 rd year	-0.07
4 th year	0.40
Graduates	-0.54
Translators	-0.28

- A positive correlation (more time, greater acceptability) in the first and fourth years
- A negative correlation (less time, greater acceptability) in the second year and at the end of training; and no correlation in the third year

RELATIONSHIP WITHIN EACH GROUP: CORRELATIONS

Inverse translation	Spearman correlation coefficient
1 st year	0.15
2 nd year	0.19
3 rd year	0.09
4 th year	0.01
Graduates	-0.07
Translators	0.44

- No correlation
- A moderate *positive correlation* in the case of the translators

IV. CONCLUSIONS

Empirical hypothesis confirmed: *there is a relationship between the degree of TC and the efficacy of the translation process*

Operational hypotheses confirmed:

1. *Differences can be observed at each level of TC acquisition in relation to the time taken*
2. *Differences can be observed at each level of TC acquisition in relation to the distribution between stages of the time taken*
3. *Differences can be observed at each level of TC acquisition in relation to the time taken and the acceptability of results*

1. Predominance of mixed evolution
2. Low level of progression between first year students and graduates
3. Distance between graduates and professionals
4. Differences according to directionality
5. Influence of training

Our results seem to corroborate 7 of our 8 ATC theoretical hypotheses:

- ATC is a dynamic, non-linear, spiral process (TH 1)
- ATC process involves evolution (TH 2)
- ATC is a process in which the sub-competences of TC are developed and restructured (TH 4)
- In ATC, not all sub-competences develop in parallel (TH 6)
- ATC is a process in which the development of procedural knowledge - and, consequently, of the Strategic sub-competence - is essential (TH 3)
- ATC is dependent upon directionality (direct/inverse translation) (TH 7)
- ATC is dependent upon the learning environment (TH 8)



**Our data has been obtained from students
corresponding to a particular educational context.**

Thank you!

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