Common grounds & interfaces

Multilingual interdisciplinary R&D in the 21st century

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Roadmap

- General and specific discussion on the importance of interdisciplinarity;
- Research possibilities;
- General trends;
- Applications & Learning mechanisms;

General Reflections and Trends I

- Main faculties interconnect, such as:
  - Medicine and economics
  - Medicine and diplomacy
  - Neurosciences and bilingualism
  - Economy and Neurosciences (research with Oxytocin)
  - Medicine /neurosciences and T& I
  - Law and Medicine/translation

  In order to find new orientations more likely to meet the market needs

Why interdisciplinary approach?

- IT ENHANCES SUBJECT MATTER KNOWLEDGE!
- It enhances skills
- It enables better knowledge construction
- EX:
- Hospital interpreting
- Court interpreting.

General Reflections and Trends II

- T&I studies:
  - Need to enlarge their research in order to enhance their teaching;
  - Have to improve their research on an interdisciplinary level in order to walk new ways.
  - Should deepen their knowledge in adjacent fields,
  - with the aim that one day, other disciplines will want to do more interdisciplinary studies with T&I.

Why?

- 1. To improve the teaching –learning process and training;

- 2. Interdisciplinarity allows for an individualization of the development of competences;

- 3. Learning mechanisms are more and more explained through cognitive sciences;

- 4. interdisciplinarity contributed highly to the scientific framework of our discipline.

From product to process

- New training methods in order to:
  - Understand the different processes which lead to good or bad quality translations;
  - To correct the process;
  - Determine positive working patterns;
  - Identify translational strategies;
  - Empirical research to examine: where is information treated, and how?
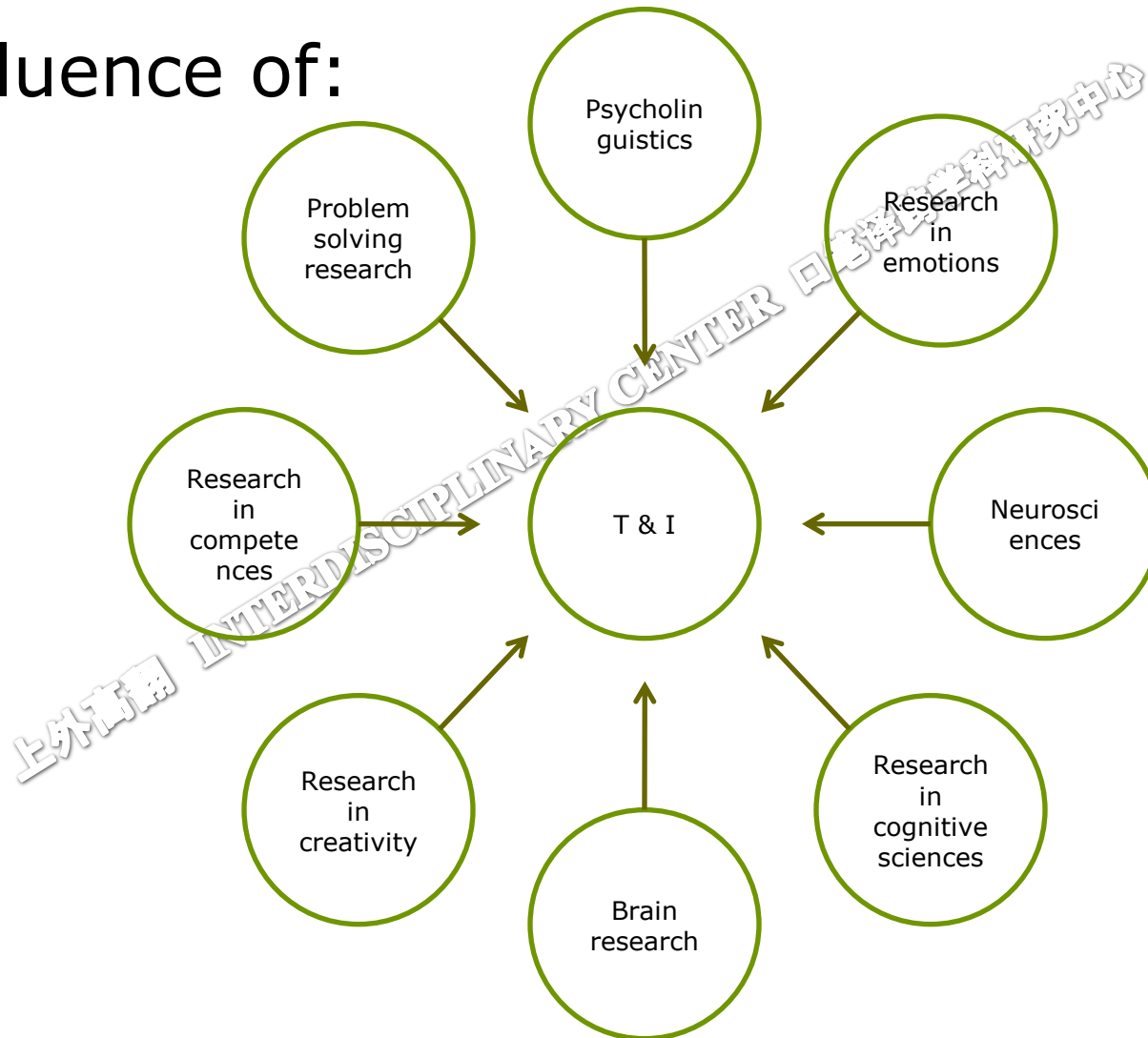
Disciplines used in TD: An overview

- Psycholinguistics
- Research in emotions
- Neurosciences
- Cognitive sciences
- Brain research
- Research in creativity
- Research in competences
- Research in problem solving

How does it work?

□ Influence of:

Research

Psycholinguistics

- Research on the level of the translation process:

  TAPs – Think aloud protocols were at the very beginning of this stream of research

  - in order to improve translation competence through more efficient teaching and learning,

  - in order to better understand the linguistic processes in the brain

  - to improve scientific work in translation studies.

Research in Emotion

- Recent studies in psychology and neurobiology show how important emotions are in decision processes (Bruun 2011)

- Current interdisciplinary studies search for the impact of emotion in errors made by translators (2010:Lee-Jahnke/Lehr/Scherer)

Trendsetter: Emotion

- Emotions and language are closely related (Damasio 1994, 2003) Cyrulnik (2010) Scherer (2001, 2008, 2012);

- Interest for translation studies: to better understand the reason for certain mistakes, which are NOT linked to lack of vocabulary.

- We do need systematic schemes to implement them in translation training!

Real project with "diplomatic" outcome

- Geneva emotion wheel (Scherer 2000)
- Main emotions in 8 languages
  - Arabic, Chinese, Hebrew, English, French, German, Russian, Spanish
  - Outcome: Information brochure for diplomats

Emotion & Oxytocin

- We know now:
  - Stress inhibits oxytocin-release
  - A major stress factor is fear
  - Hence, persons who are afraid, are inhibited in their learning activities

Trendsetter: Motivation

- Competences & motivation:
  - Where, when and how evaluation matters.

Motivation is the drive which mobilizes cognitive resources.

Adults are motivated by the progress they make – therefore:

Trainers have to find means to enhance this progress, i.e. through:

Project teaching

Motivation & Project teaching

- Projects help students to work more process-oriented:
  - The objective of the task will help them to choose;
  - The selection of translation strategies will be more appropriate if the constraints imposed are more precise;
  - Higher responsibility will help to improve autonomous learning.

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Motivation & Evaluation

- Where does evaluation count?
- 1) in translation didactics
- 2) in professional evaluation

Didactical evaluation:

- Student centeredness
- Learning outcome
- Competence orientation

Formative evaluation in PSI:

□ Occurs:
- A) before
- B) during
- C) after translation

Motivation: Stimulation of Learning Mechanisms

- Inference
  - **Deduction**: aims at getting a truthful conclusion, starting from one or more premises known to be correct. This deductive capacity can be stimulated by the use of a translation report;
  - **Induction**: is based on particular premises which worked well in other circumstances and aims at applying them in a more general way.

Learning Mechanism: Judgement

- **Evaluative judgement**: is characterized by a choice of options which can be put into a hierarchical order or not. Decisions have to be made and, to be able to make decisions, criteria have to be established;

- **Predictive judgement**: is based on probabilities which go back to experience. It is normally found in advanced learners or professionals, where it is also linked to automatisms.

Reasoning by Analogy

- Learning by analogy:
- The learner has two options:
  - Either he generates knowledge through analogy, or:
  - An analogy is created through a connecting mechanism, in which the subject, through inference, finds the answer to the problem.

Analogy and Cognitive Activities

- Understanding
- Reasoning
- Problem solving
- Learning
  - Which have to be divided in
    - source situations and
    - target situations

1.Understanding, 2.Reasoning, 3.Problem Solving: Important

- 1. Specificities of the ST are listed as well as cultural specificities and translation problems;

- 2. Text coherence and language register are analyzed

- 3. Some problems can be discussed in class, for others individual work is requested via the translation report.

Neurosciences

- Research in bilinguals show the activation of the brain and the language selection mechanism;

- Studies language proficiency

(2007:Mouthon/Annoni/Lehr/Lee-Jahnke/Khateb)

- What happens ins the brain during the translation process?
  - Comparative studies between novices – advanced learners – experts

What can we learn from Cognition

- 1. Neurocognitive aspects of translation:
  - Cognitive learning strategies and especially the so-called organisation strategies, enable the learner to group information in a form which is easier for him to understand(based on the personal experience & knowledge);
  - The importance of individual processing of knowledge (hence, disadvantages of pure ppt-training)

Cognition : cognitive learning strategies

- Cognitive learning strategies
  - Elaboration strategy:
  - Helps learners to integrate new knowledge into the existing one;
  - Is mainly responsible for critical examining, and
  - The so-called repetition strategies, which enhance procedural knowledge

Research in cognitive sciences

- On the level of:
  - Memory
  - Abstraction
  - Analytical and holistic reading/working
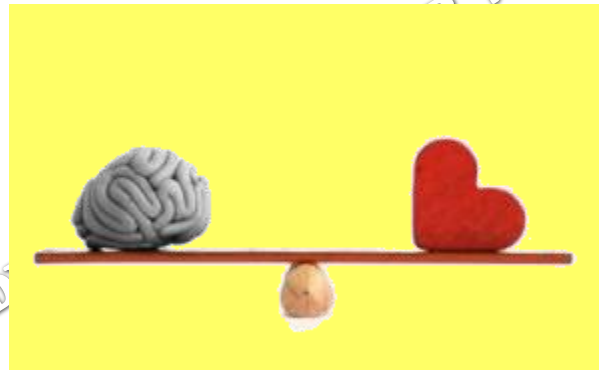   - in order to plan the training course in an optimal way with real projects

In fine

- We are probably only at the beginning of an exciting period of interdisciplinary research in which cognition, emotion, neurosciences and motivation play a role.

My wish: We need more collaboration in order to exchange best practices and to be able to make our contribution to interdisciplinary studies.

What it needs for interdisciplinarity