

# **DISCIPLINARY LITERACY : HISTORY, EVIDENCE, AND CHALLENGES IN THE EUROPEAN AND NORTH AMERICAN CONTEXTS**

## **NEEDS FOR DISCIPLINARY LITERACY IN A COMPETENCIES APPROCH BASED CURRICULUM**


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Analyse et accompagnement  
du développement professionnel des enseignants

# PLAN

1. The FW-B context
  2. The needs for disciplinary Knowledge
  3. Two teaching/learning proposals closely linked to disciplinary literacy
    - 3.1 How to teach disciplinary vocabulary/concepts ?
    - 3.2 How to help students to rely on discourses to learn from their activity ?
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# 1. The FW-B context



- A pendulum principle
  - Before 1997: main focus on teaching knowledges
  - After 1997 : main focus on « the Competencies approach »
- Core skills: mainly define disciplinary Competencies
  - Many competencies are cross-disciplinary “transversal”
  - Very few disciplinary knowledge defined in the curricula

Article 5. – Décret « missions » définit les compétences comme « l'**aptitude à mobiliser** un ensemble organisé de connaissances, de compétences et d'attitudes en vue de **réaliser** un ensemble de tâches ». (Article 5. – Décret « Missions », p. 2)

## Mother tongue /French/

### 2. *Transversal skills*

- Mental approaches
- Learning strategies
- Relational attitudes

### 3. *Disciplinary skills*

#### Reading

- Guiding reading according to the communication situation

- Building meaning

- Bringing out the organisation of a text

- Perceiving the coherence between sentences and groups of sentences throughout

- Taking grammatical units into account

- Processing lexical units

- Perceiving the interactions between verbal and non-verbal elements

#### Writing

# Competencies approach based curriculum

## Strenghts

- Avoid unused (« dead ») knowledges
- Develop a capacity to learn from its activity (learn to learn)

## Weakness

- Principle : teach with complex tasks !
- How to assess competencies ?
  - How to teach competencies ?

- Mobilise cognitive resources
- Develop functional knowledge

## Opportunities

- Disappearance of knowledge
- Invisible learning : focus on DOING , some students struggle in identifying what is LEARNED

## Threats

Role of disciplinary knowledges?

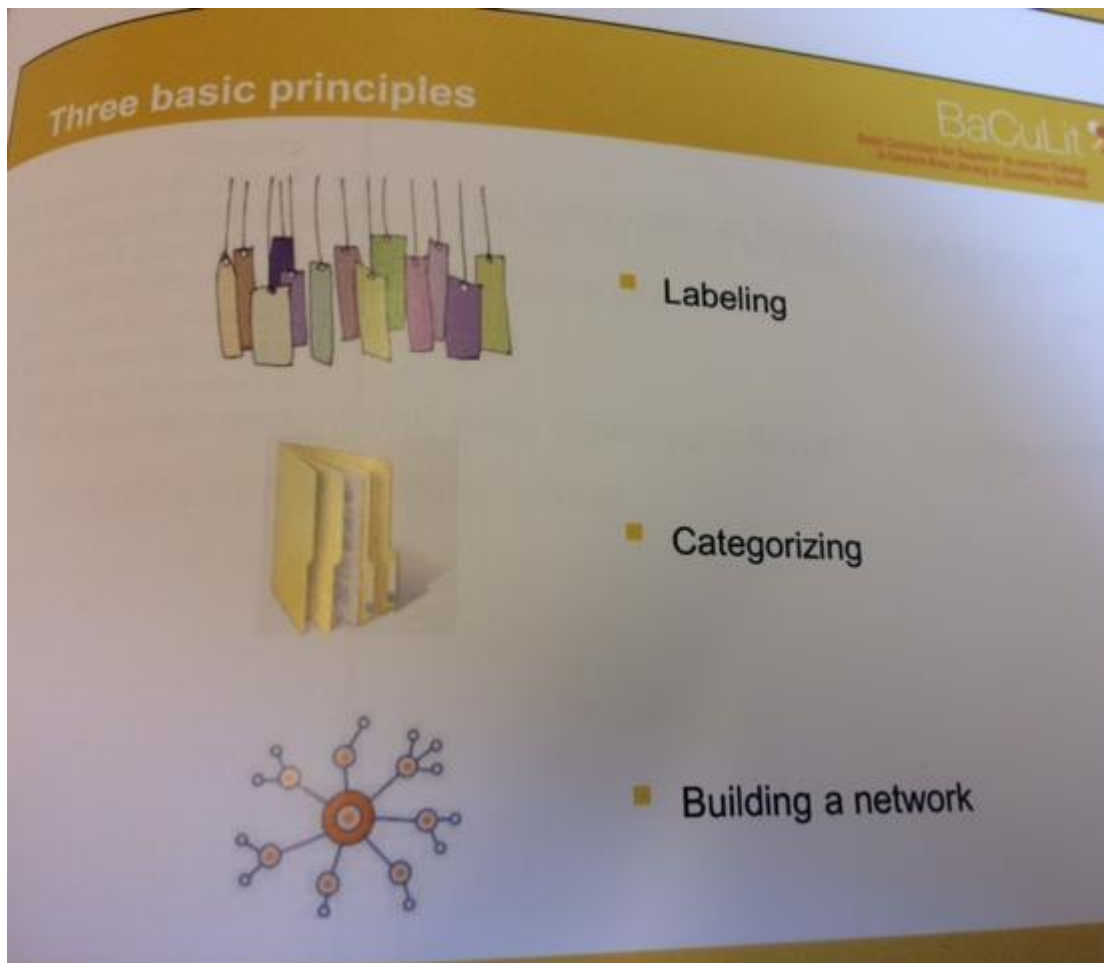
## 2. The need for disciplinary knowledge

- Return to disciplinary knowledge as part of the competencies approach based curriculum
- Help students to weave the link between actual experience, classroom activities and targeted learnings : take a reflexive stance towards activities ( problem solving tasks , experiments, ...)
  - What I did => what I learned

**construction of cognitive and language skills  
required for school learning**

# 3.1 How to teach disciplinary vocabulary / concepts ?

Vocabulary instruction (BaCuLit Handbook for trainers, p. 133)

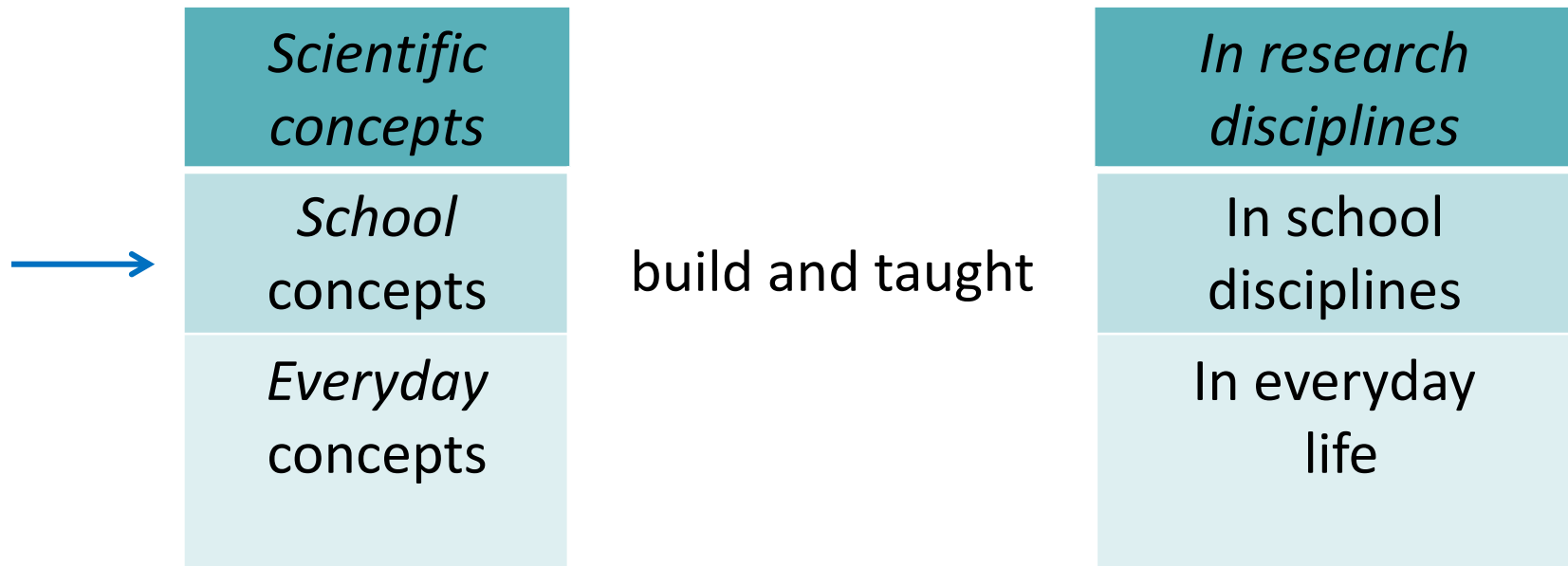


“Categorization is a skill that enables to extrapolate the non-visible properties of an object and to project them on other objects.”

➔ Building concepts

# 3.1 How to teach disciplinary vocabulary / concepts ?

- A concept is a construct reflecting characteristics common to a set of objects, facts, or phenomena: “habitus”, “sister”, “capital city” ...(Reuter, 2017)





# The theory of conceptual fields

- Vergnaud (1990, 2009) focuses on school concepts
- central function of **learners' activity** in the development of representation, competences and concepts (operational invariants contained in schemes)
- **language and symbols** play an important role in the conceptualizing process of linguistic and symbolic representations.
- Considers a set of **situations** as part of the concept

# Example : the concept of « CAPITAL (City) »



## Situation 1

- Bruxelles – is the capital city of Belgium
- Capital at the national level
- Function : head office of the executive power

## Situation 2

- Bruxelles – capital of the European Union
- Capital at the supra-national level
- Function : head office of the executive power

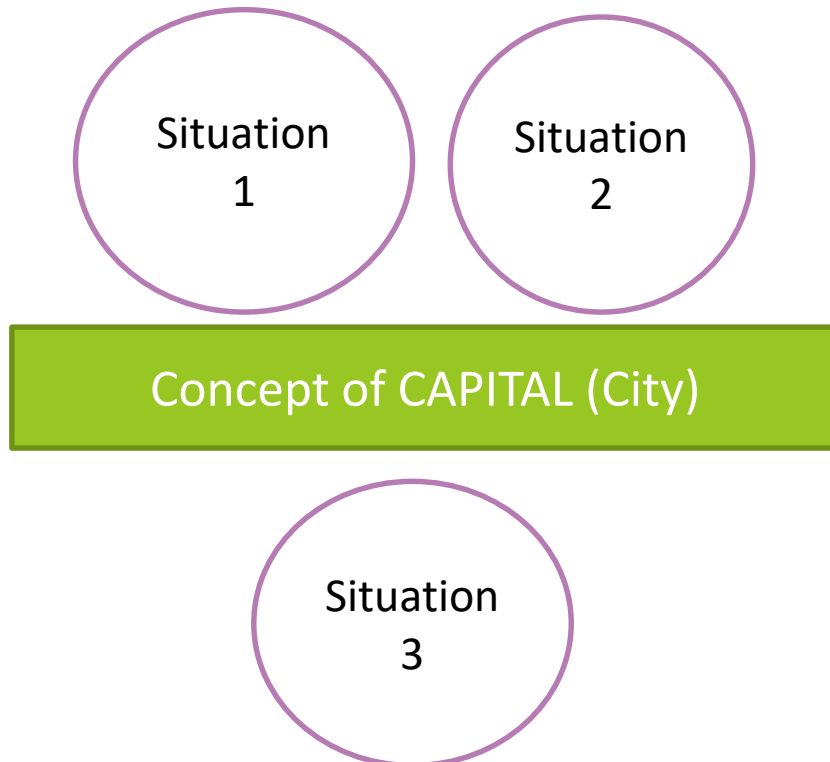
## Situation 3

- Bruges – capital of lace (predominance in one sector)

# What Is a Conceptual Field?


It is at the same time a set of situations and a set of concepts tied together.

=> a concept's meaning does not come from one situation only but from a variety of situations



**How to help students to create links between those different learning situations ?**

## 3.2 How to help students to learn from their activity ?

- Contextualisation/Decontextualization/Recontextualisation  
  
=> Revisit its own activity to identify the cognitive steps implemented, to self-assess the effectiveness of the procedures implemented , to see changes in ones beliefs or conceptions, ....Reflexive stance
- =>To put his thoughts into words, alone or with their peers. Which means helping students to write , talk to learn (reflexive / communicative function of language)
- **How to develop the reflective dimension of language in school subjects?**

# The reflexive function of language

- “The language is not only a way to record and communicate the **results** of the work of thought; one of its key functions is to make possible this activity even, to allow it to develop, to intensify and to organize itself “

Bucheton, 2014, p.184

# The reflexive function of language

- Writing activities :
  - for students = thinking tool;
  - for teachers = window on student cognitive activity. Texts : traces of a productive activity
- Condition : to focus on the author's processes rather than on the written product , => to assess the way the students develop themselves.

**Produce intermediate discourses in school disciplines**

# The role of intermediate discourses

- To rewrite means to think again
  - To put the text in movement again in all its dimensions (semantic and linguistic)
- ⇒ To learn from ones own activity
- ⇒ To learn to social interactions about its writings

- Examples of friendly definitions\* : “living being”

Je naît, je meurt, je me nourris,  
je me reproduis, (je suis un vivant)

Tu es le fruit d'une fécondation

The characteristics are described in simple terms which do not exceed what was noted in the synthesis.

The characteristics are formulated in a more personal way or with more details.

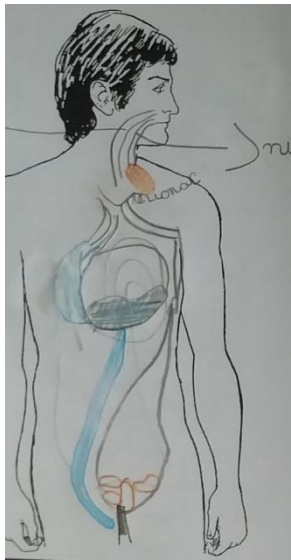
- Quand je respire, que je consomme de l'oxygène et rejette du  $\text{CO}_2$   
 - Quand tu manges, tu assimiles de la matière de manière régulière pour développer ton propre corps.  
 Quand  
 - quelque chose se reproduit, laine une descendance  
 - Quand quelque chose grandit, se développe, qu'il change en forme ou en taille.  
 Quand quelque chose meurt, qu'il cesse de respirer, se développer, de manger, de se reproduire.  
 Quand ses cellules cessent de fonctionner de manière globale et permanente.

\* Fisher, Brozo, Frey, Ivay (2015, 2011)

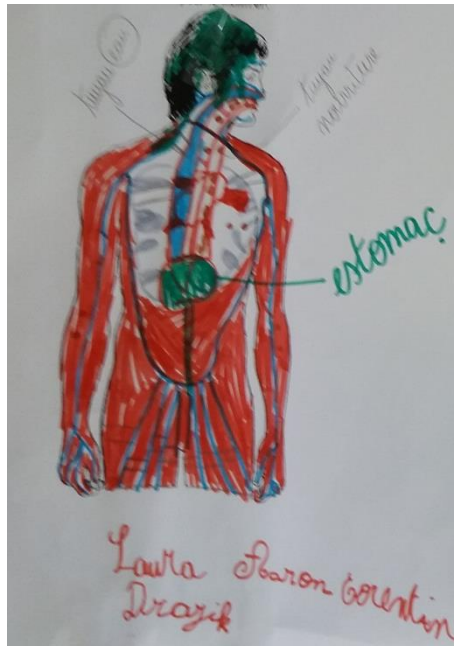


- Examples of schematization about the digestive system

Individual  
« text »  
student's  
concepts



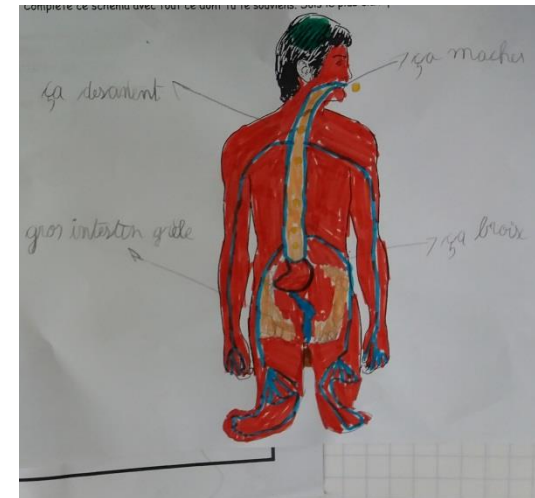
« Text  
produced  
in groups  
Sharing  
concepts



« Text » produced in  
groups  
After a documentary  
research

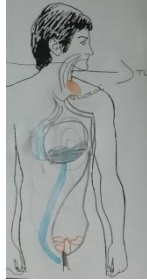


Final individual  
« text »



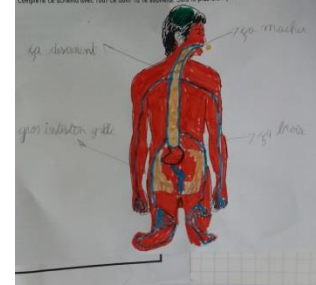
# Progress of the lesson

Question:  
«what is  
the  
purpose of  
eating ? » +  
débate

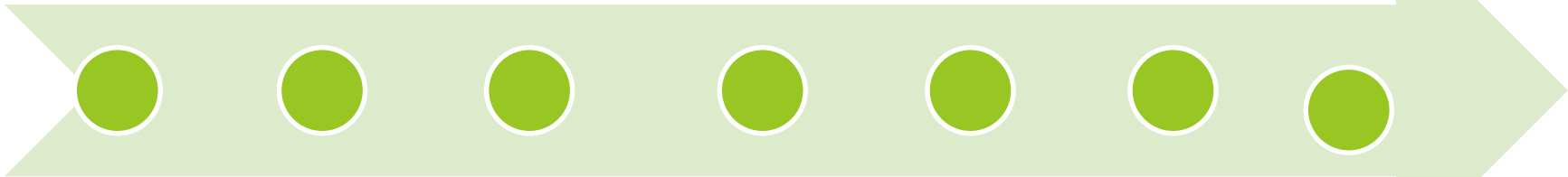


Individual  
schematization

Docu-  
mentary  
Research



Individual  
schematization



Research  
question  
: « How  
does  
food  
makes  
you  
grow ? »

Discussions  
, poster  
production,  
presenta-  
tion

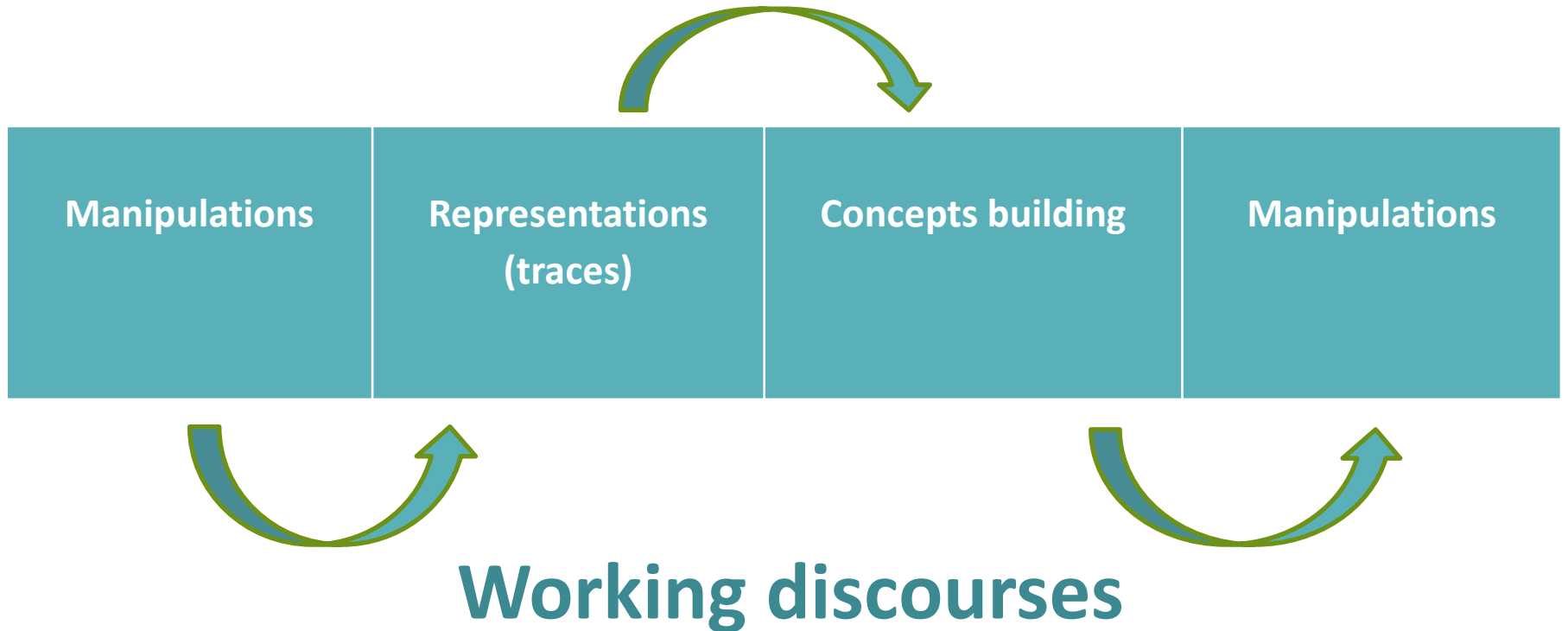
New  
Schema-  
tization in  
groups



## From everyday concepts to scientific concepts

- While they manipulate, create or make observations, students mobilize their everyday concepts as well as the learned concepts.
- How will they acquire scientific concepts through this activity ?

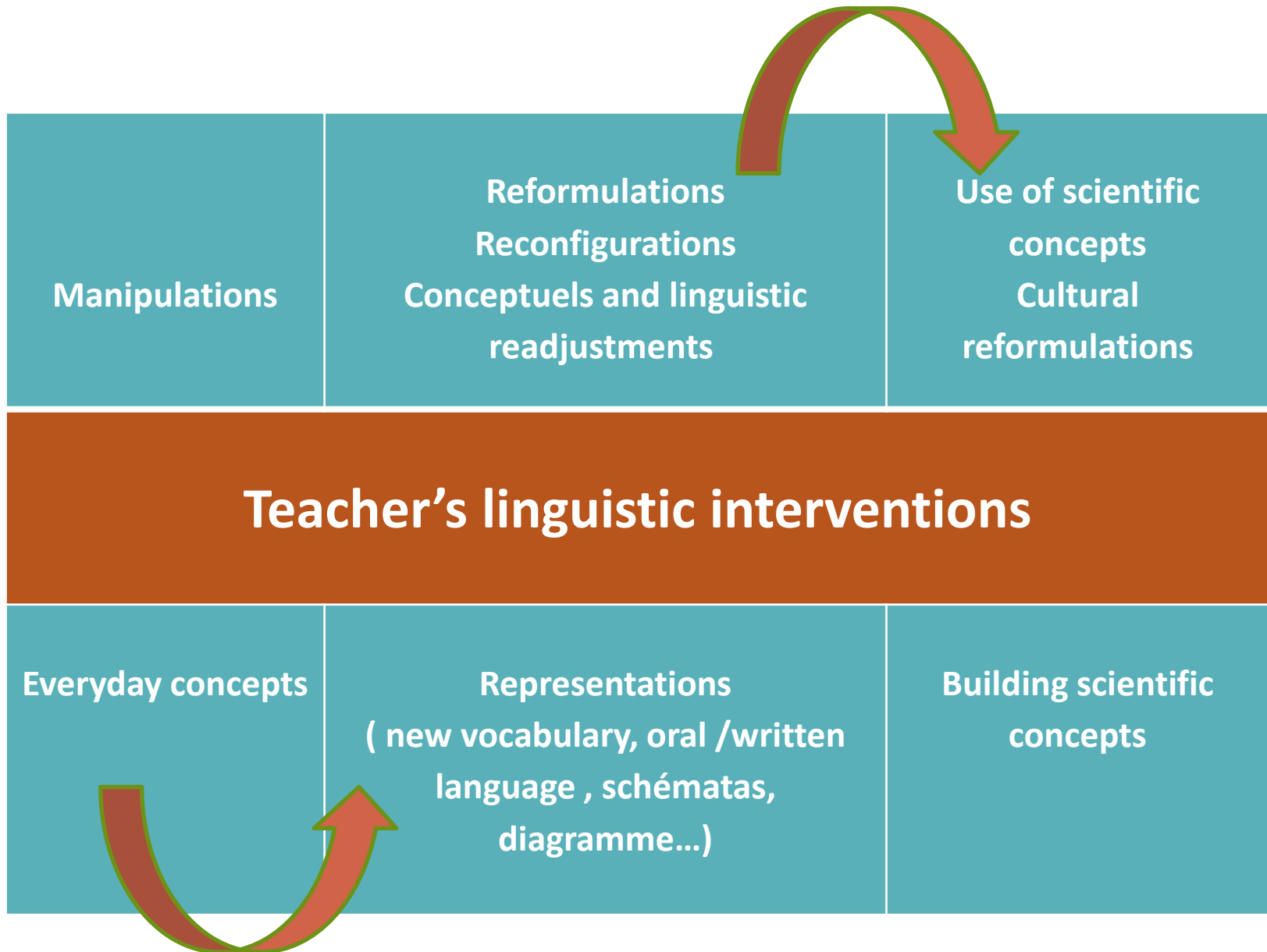
# From everyday concepts to scientific concepts



Jaubert et Rebière : Communautés discursives disciplinaires scolaires et construction de savoirs : l'hypothèse énonciative

Leforum.ch

# The teacher's professional linguistic gestures



# Conclusion

- Importance of Intermediate discourses
  - to develop the reflexive dimension of discourses in disciplinary subjects
  - To help students to master scientific /school concepts
- Professionnel developpement : linguistic gesture

Thank you for your attention

## Elements of bibliography

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