

Metacognition and the development of competency

2008

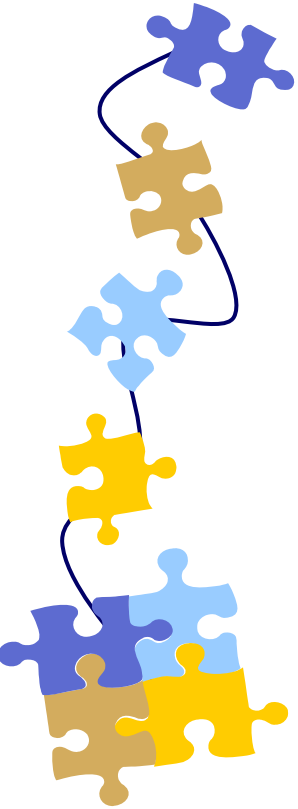
Louise Lafortune

Université du Québec à Trois-Rivières

Téléphone : 819-376-5011 poste 3644

louise.lafortune@uqtr.ca

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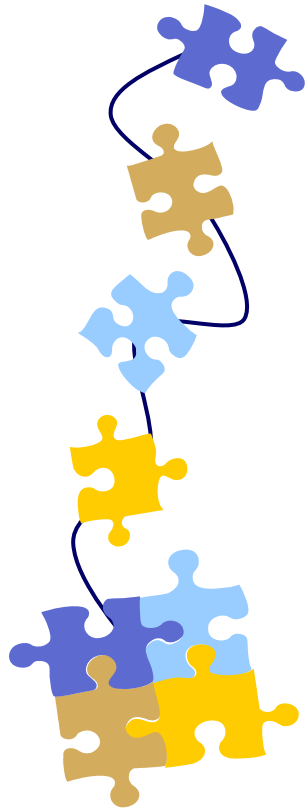


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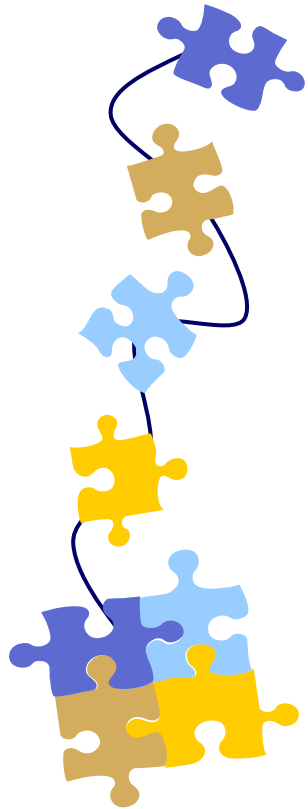


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Moment of reflexion

- Name three key words that you associate with the concept of metacognition
- Name three key words that you associate with the concept of competency
- Name three key words that you associate with the QEP

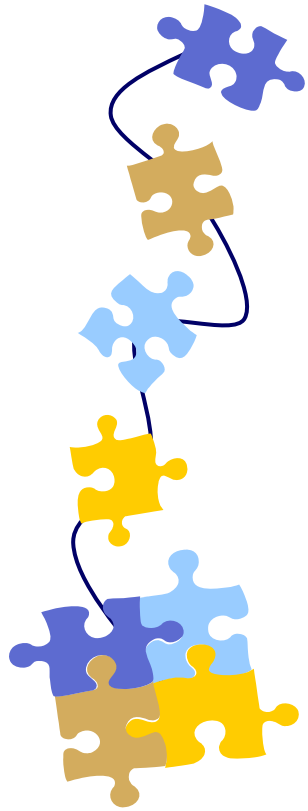


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Metacognition

- Three key features:
 - Metacognitive knowledge
 - ◇ Of persons
 - ◇ Of the task
 - ◇ Of strategies
 - Management of the thinking processes
 - ◇ Planning
 - ◇ Control - self-evaluation
 - ◇ Regulation - adjustment

- Consciousness of one's thinking processes
 - (Lafortune et Deaudelin, 2001)

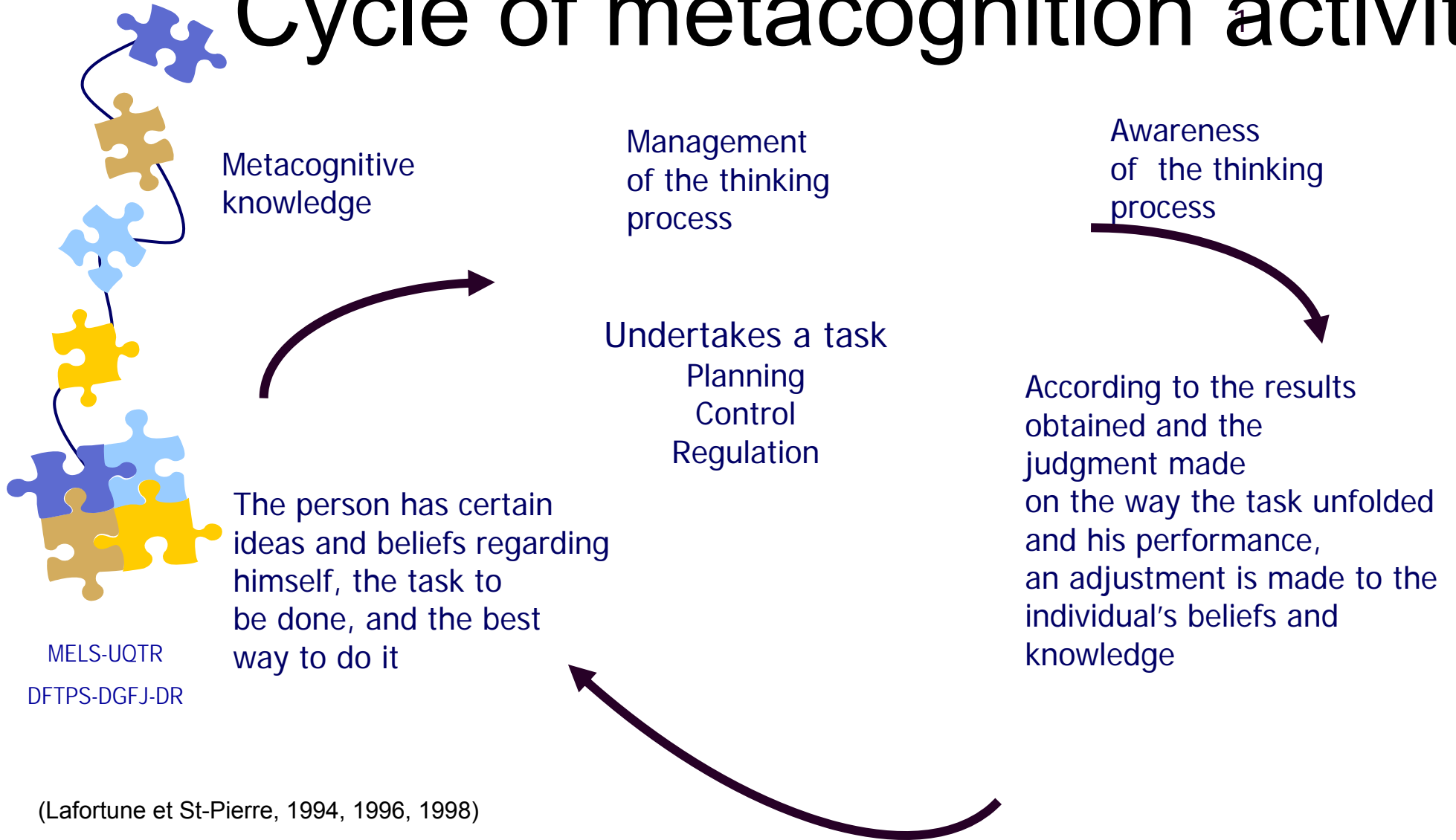


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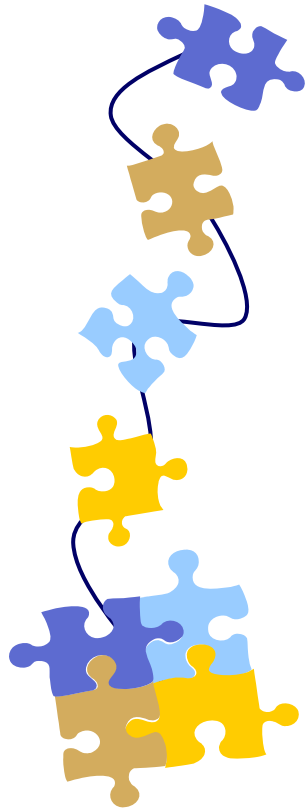
(Flavell, 1979; Lafortune, 1998; Lafortune et St-Pierre, 1994, 1996, 1998)

Cycle of metacognition activity



Competency

- The capacity to act effectively by drawing on a variety of resources

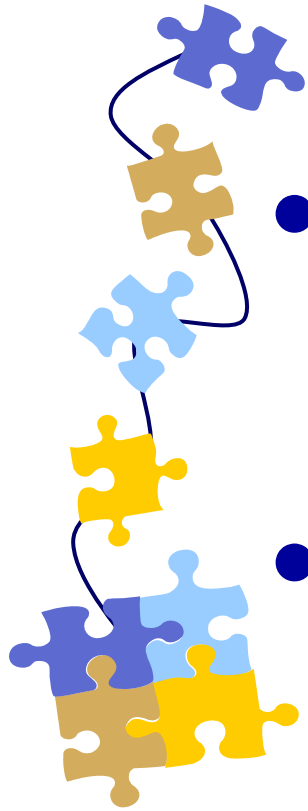


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To act effectively

- The capacity to act effectively by drawing on a variety of resources
- The capacity to appropriately mobilize and use a range of resources, both internal and external, that are acquired in a school setting and elsewhere



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Resources

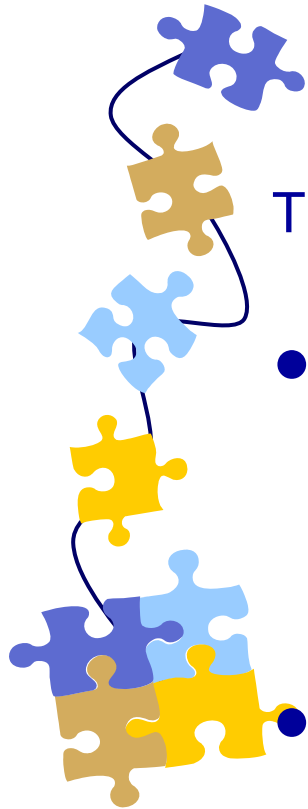
The capacity to act effectively by drawing on a variety of resources

- Internal resources:

- The sum total of what the student has acquired, knowledge, experiences, abilities, interests, etc.

- External resources:

- Peers, teachers, written texts, materials, technologies, etc.



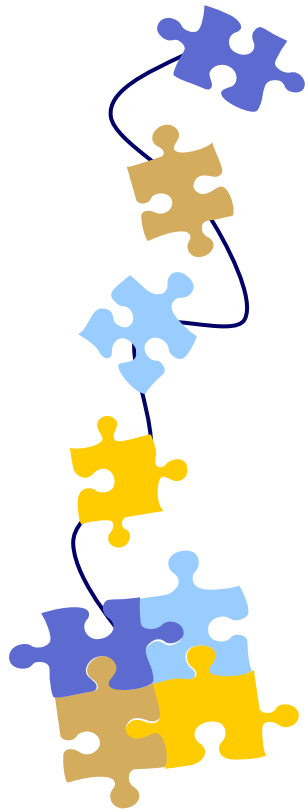
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Effectively drawing on resources

The ability to act effectively by drawing on a variety of resources

- Working toward a clearly defined intention
- Appropriate use of knowledge and diverse abilities
- Search for an efficient approach for the realization of a task, an adequate solution to a problem
- A complex process that leads to the development of competency

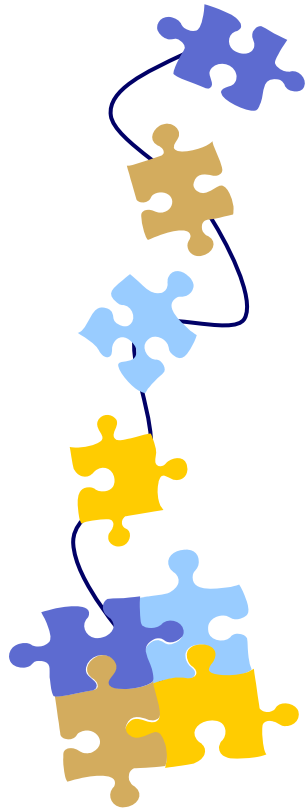


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Moment of reflection

- What would be the characteristics of someone who is competent ? (name three)

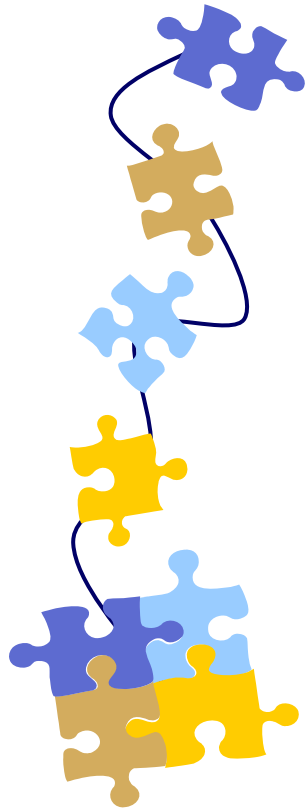


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Moment of reflection

- What connections can you make between the characteristics of a competent person and the concept of metacognition?

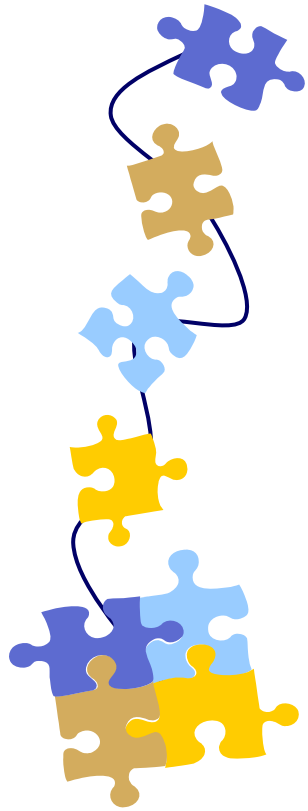


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Competencies used, developed

- What does it mean to use a competency as while working on a task?
- What does it mean to develop a competency while working on a task?

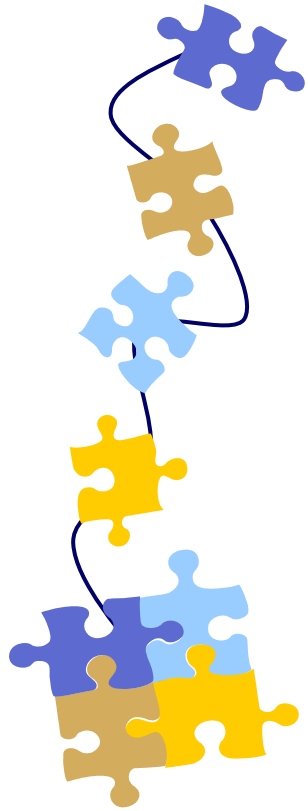


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Competencies used

- Place students in a situation where they make use knowledge and ability already mastered
- Remarks:
 - A competency is never completely developed; it is the key features that are mastered
 - It is important, however, to place students in situations where they are familiar with the competencies needed to complete a task

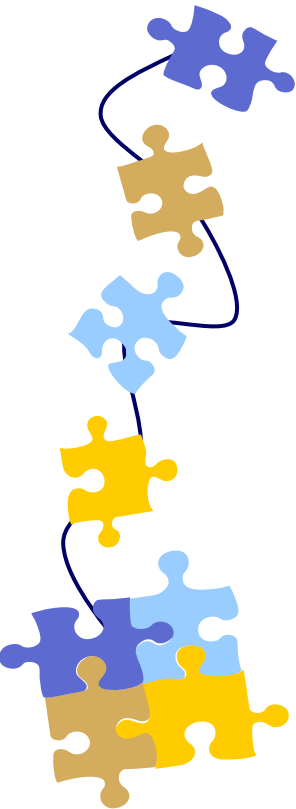


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Toward autonomy

Competencies developed

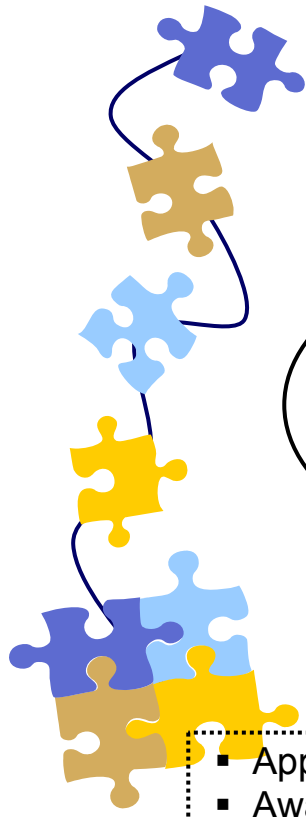
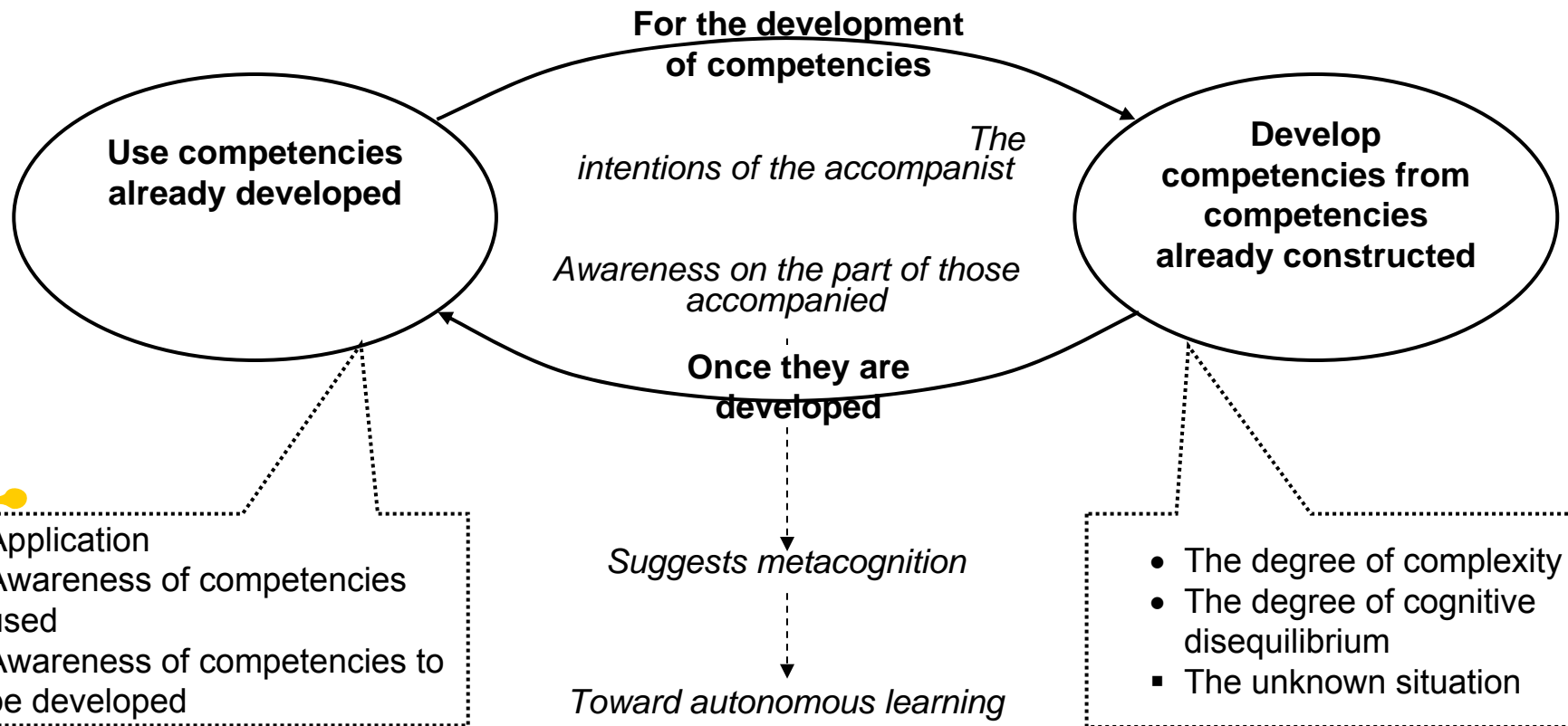
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- Progression in the mastery of the competency
 - Increasing degree of complexity
 - Sociocognitive Conflicts
 - Requiring disequilibrium (supported)
 - Facing obstacles: doubts, questioning, errors...
 - Development in action (taking into account the cognitive, metacognitive, affective and social domains)

Toward autonomy

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The cycle of competency developed



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Competencies, used, developed

STEP ONE: Refer to the cross curricular competency *Uses Information* in your QEP. On the left side of the table name three strategies (activities) that your group believes will lead to the development of the competency, *Uses Information*. An example has been provided for you

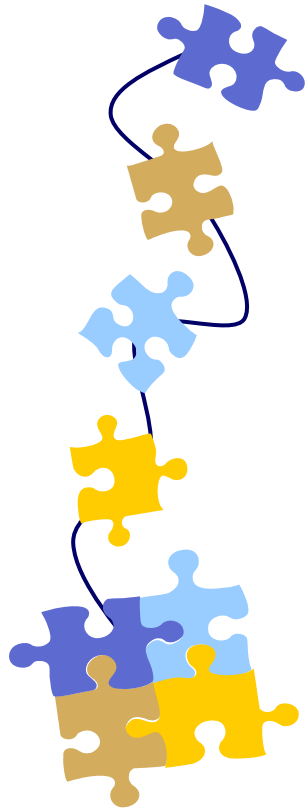
- Present a drawing/schema to others	—	-
-	—	-
-	—	-
-	—	-

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Moment on reflection

- In what ways might the strategies (activities) named in the previous activity be used to develop students' metacognitive ability?

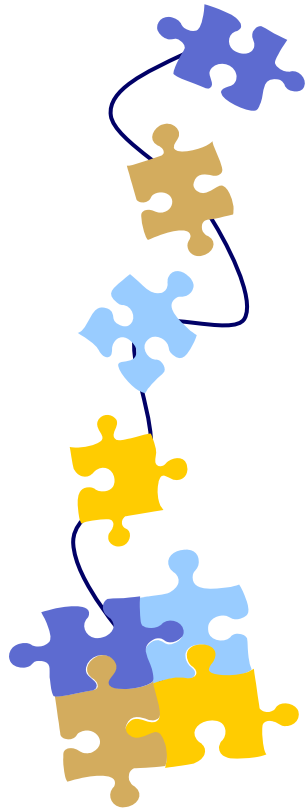


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Moment on reflection

- What are some strategies that can be used to support the development of metacognition?

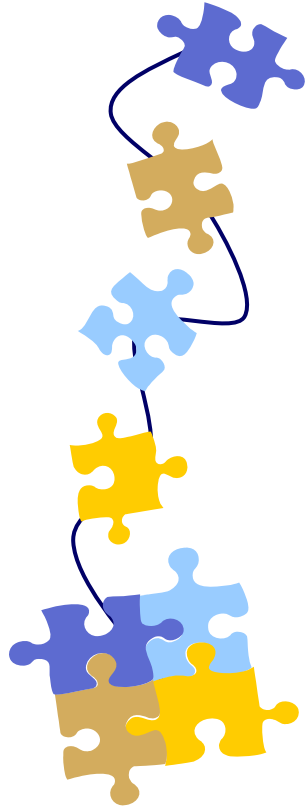


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Methods that encourage metacognition

- Questioning
 - Both alone or with others
 - Both internal or external
 - Linked to the process
 - Specific to certain types of questions
- Interactions
 - Context
 - Moments of exchange, confrontation, argument
 - The type of interaction



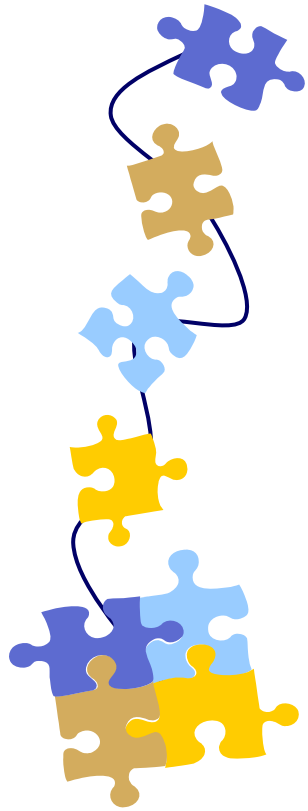
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(Lafortune et Deaudelin, 2001; Lafortune et Robertson, 2004)

Methods that encourage metacognition (continued)

- Self-evaluation
 - Analysis of the steps taken
 - Evaluation of the steps taken
 - Judgment of the steps taken
- Moments of reflection
 - Standing back to consider the steps taken
 - Awareness
 - A metacognitive perspective



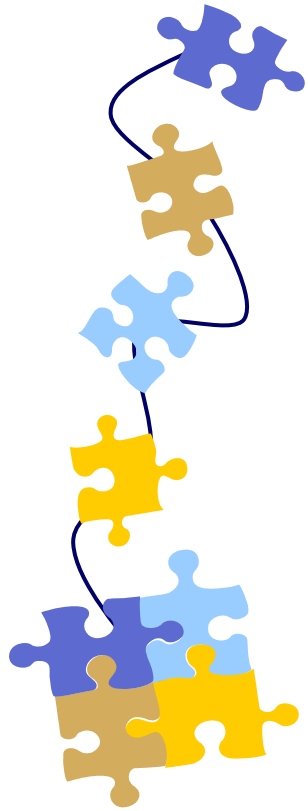
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(Lafortune et Deaudelin, 2001; Lafortune et Robertson, 2004)

Group reflection

- Connect each of the nine cross-curricular competencies to one of the strategies that support the development of metacognition

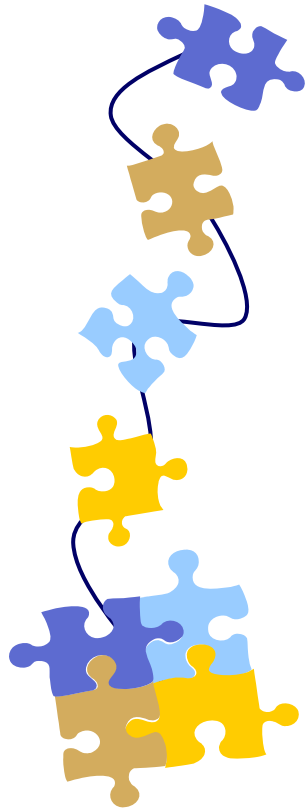


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Group reflection

- Refer to the key features and the manifestations of the cross-curricular competency Exercises critical judgment
- Name some specific strategies (activities) that you would use if you wanted to develop the cross-curricular competency: exercises critical judgment

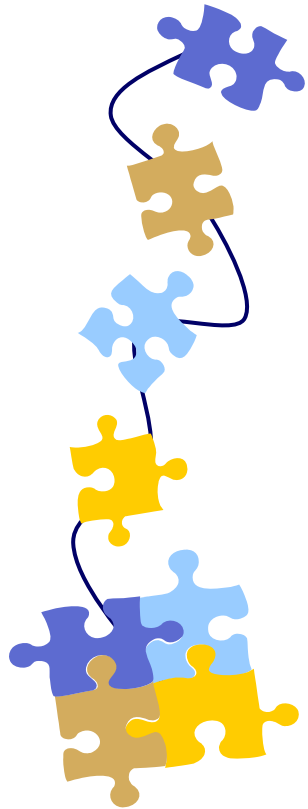


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Group reflection

- In your disciplinary group, choose one subject-specific competency that you will target that will be part of a learning situation that also develops metacognitive ability
- Describe the strategies (activities) that would be part of the scenario



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Bibliography

Flavell, J.H. (1979). « Metacognition and Cognitive Monitoring : A New Area of cognitive-developmental Inquiry », *American Psychologist*, 34, p. 906-911.

Jonnaert, P. (2002). *Compétences et socioconstructivisme*, Bruxelles, De Boeck.

Lafortune, L. avec la collaboration de C. Lepage, F. Persechino (2008a). *Compétences professionnelles à l'accompagnement. Un référentiel*, Québec, Presses de l'Université du Québec.

Lafortune, L. avec la collaboration de C. Lepage, F. Persechino et K. Bélanger (2008b). *Un modèle d'accompagnement professionnel d'un changement. Pour un leadership novateur*, Québec, Presses de l'Université du Québec.

Lafortune, L. avec la collaboration de C. Lepage (2008c). *Guide d'accompagnement professionnel d'un changement*, Québec, Presses de l'Université du Québec.

Lafortune L. et A. Robertson (2004). « Métacognition et pensée critique: une démarche de mise en relation pour l'intervention », dans R. Pallascio, M.-F. Daniel et L. Lafortune (dir.), *Pensée et réflexivité. Théories et pratiques*, Québec, Presses de l'Université du Québec, p.107-128, 220 pages.

Lafortune, L. et C. Deaudelin (2001). *Accompagnement socioconstructiviste. Pour s'approprier une réforme en éducation*, Québec, Presses de l'Université du Québec, 208 pages.

Lafortune, L. (1998). « Une approche métacognitive-constructiviste en mathématiques », dans L. Lafortune, P. Mongeau, et R. Pallascio (dir.), *Métacognition et compétences réflexives*, Montréal, Les Éditions Logiques. p. 313-331, 482 pages.

Lafortune, L. et L. St-Pierre (1998). *Affectivité et métacognition dans la classe*, Paris-Bruxelles, De Boeck Université, 256 pages.

Lafortune, L. et L. St-Pierre (1996). *L'affectivité et la métacognition dans la classe*, Montréal, Éditions Logiques, 374 pages.

Lafortune, L. et L. Saint-Pierre (1994). *La pensée et les émotions en mathématiques. Métacognition et affectivité*, Montréal, Les Éditions Logiques, 551 pages.

Ministère de l'éducation du Québec (2001). *Programme de formation de l'école québécoise, éducation préscolaire, enseignement primaire*, Québec, Gouvernement du Québec.

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