The emergence of the principle «Real ideas, authentic problems» in teachers’ and students’ usage of KF in remote networked schools

Stéphane Allaire, Université du Québec à Chicoutimi, Marie-Hélène C.-Bouffard, Christine Hamel, Thérèse Laferrière, Université Laval

Statement of the problem
Getting acquainted with the principle «Real ideas, authentic problems» as a milestone for inquiry development in rural classrooms.

Context
Social context
- About 60 primary and secondary rural schools
- Collective inquiry to progressively develop a knowledge culture
- Using KF between multiple classrooms to enrich the learning and KB context

Technological setting
- High bandwidth to support the networking of different classrooms
- Few computers in each classroom; sometimes laboratories are used
- Various ICT skills and available support

Methodology
Intervention
- Basic KF training provided to teachers
- Progressive and emergent appropriation of the tool
- Just-in-time support available
- Data returned back to teachers to help them shed light on their action (ATK, content analysis)

Data analysis
- We identified the amount of questions asked by teachers/students on the basis of the way a sequence of discourse began. We considered: 1) the view’s title; 2) the build-on trees’ first notes and 3) the content of the problem in each first note.
- We defined 2 types of questions based on the kind of answer solicited from students.
- Description-identification questions
- Explanation-interpretation questions
- All views built between September 2004 and June 2006 were coded according to the three criteria stated above.

Results

Large amount of questions. Students initiated a lot more questions than teachers.

Primary and secondary students initiate the same amount of explanation-interpretation questions (P: 43%; S: 44%)

Similar pattern for teachers (P: 46%; S: 48%)

Examples of questions
- Description-identification
  - Name the 6 phases of water cycle.
  - What are the 13 provinces and territories in Canada?
- Explanation-interpretation
  - What are the possible consequences of the inversion of the pyramid of ages?
  - What importance has genetic on the growing of human life?

Discussion
- Great potential for KB in many initiated questions.
- However, the amount of questions is a limitation to depth of inquiry. Short time spent on activities may be an issue.
- The sociodigital affordances of KF shaped the nature of teacher questioning. They progressively came to say that KF is more efficient when starting from complex and authentic questions.

Next steps
Intervention:
- To put forward more explicitly KB principles
- To increase the duration of students’ inquiries

Research:
- Content analysis of specific build-on trees to evaluate the nature of discourse in each type of question.