SoTL PROJECT

SoTL: What and Why?
What might a **SoTL mindset** look like at the college level?

The four examples below show the form a SoTL mindset might take at the college level. Can you see yourself performing the five steps of the SoTL cycle?¹

### The SoTL cycle adapted to the college milieu in Quebec

Inspired by the many models found in literature, this cycle will be used in the SoTL Project you’re invited to participate in.

1. **Assess the need or problem**
2. **Prepare to act**
3. **Apply the change**
4. **Analyze the impact**
5. **Share your new knowledge**

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¹ The literature proposes several models of the SoTL cycle. By drawing on these models and the work of Catherine Lord, *Immerscience*, the SoTL Project team adopted a SoTL cycle adapted to the college milieu in Quebec.
Case 1  
The authentic situation

Anne-Marie and Mélanie were both college French teachers. They were wondering about their students’ ability to draw meaningful links between the various courses the students had taken during their college program. Specifically, they wondered about the role they could play in making these links more apparent between the general and specific education components in the context of the last compulsory French course, Communication, a general curriculum course specific to the student’s field of study.

By creating a final assignment called the Municipal Project—intended in a sense as a program-based approach and modelled on the work conducted by colleagues at another college—they led their students to draw their own close links between the two components of their education. Note that in Anne-Marie and Mélanie’s college, the course groups for students in Communication are based on three program families: sciences, arts and the humanities. Within each course group, multidisciplinary teams of students (sometimes from four different programs!) were tasked with drafting an informative document in layman’s terms, intended for non-experts, which presents concepts linked to their academic field. The students then had to present oral arguments to the municipal council of the fictitious city of Sainte-Victoire to obtain a grant for their public project.

Several educational concepts guided the teachers in implementing this project, especially authentic assessment, authentic situation, motivation in an educational setting, teamwork, and supervision of students during long assignments. Over several sessions, the very conclusive experimentation of this project found an increase in students’ involvement, engagement and motivation, due in large part to the realistic context and its similarity with the “real life” that awaits students at graduation. These qualitative findings were made from course evaluations students were asked to fill out at the end of each session. In addition, the initial objective, to integrate potential links between general and specific education, was achieved and demonstrated by the wealth and depth of the students’ learning, observed in the summative assessment of the students’ written and oral productions.

In light of the outcomes obtained, the teachers believed that the Municipal Project, and all its surrounding concepts, might interest other teachers and programs. They first shared and disseminated the resources among their colleagues in their college’s French department, then extended the reach through an article published in the journal Pédagogie collégiale as well as a paper presented at a symposium of the Association québécoise de pédagogie collégiale (AQPC). Initially, their thinking focused mainly on integrating components of the general and specific curricula. During their work, they centred their analysis on the authentic situation aspect. When they became pedagogical counsellors, they wrote a book on the subject and developed a workshop on authentic situations, presented first at their college and then to the entire college system through a turnkey activity offered by AQPC.

LEARN MORE:

Links to the article published in Pédagogie collégiale in 2009:
- In French: http://aqpc.qc.ca/revue/article/un-diptyque-pour-allier-formation-generale-et-formation-specifique;

Link to the book published by AQPC:
- La situation authentique..., in French: http://aqpc.qc.ca/situation-authentique-conception-evaluation;

Link to the Turnkey Training Activity:
Case 2

The flipped classroom

When Dave was a college biology teacher, he noted that his students often came to class unprepared, even after he had very clearly stated their assigned homework, such as appropriate exercises or readings accompanied by short questionnaires to help them target the most relevant content. In discussions with his students, Dave learned that some found the content too abstract and complex when doing the readings. Others said that the hours devoted to homework exceeded the weighting for the course. They explained that all this undermined their motivation to prepare adequately for their classes.

The consequences were so serious in his first-term biology course (classroom practice time spent on repetition of theory; superficial learning; poor knowledge transfer; low grades) that Dave went into research mode to find teaching methods that might improve the situation. After surveying a range of literature on the effectiveness of teaching methods and consulting his pedagogical counsellor for technical and logistical support, Dave chose to combine three different methods to address the problem: the flipped classroom, concept mapping and case studies.

Dave developed material to implement these methods, creating video capsules (slide shows with voice-over commentary by the teacher) for students to view outside classroom time (to make the content less abstract and less complex for them) as well as concept mapping templates (using the Cmap Tools software) for the students to use in preparatory activities at home. After handing in their concept map at the start of the next class, the students wrote a brief summary of the content covered and solved cases in class to integrate and transfer what they had learned. Dave experimented with this new approach six times during the term, while retaining the traditional approach for the remaining lessons to avoid disrupting the students (and the teacher!) too much during this initial transformation conducted in the fall of 2012.

The outcomes of this first experiment, documented in a SurveyMonkey poll of the students, persuaded Dave to fine-tune and continue to use these three methods in subsequent terms. In the fall of 2012, students experienced no major problems meeting the new requirements and liked the clarity of the video capsules, compliance with the course weighting, and the usefulness of the concept maps, to the point where some students adopted concept mapping as a learning method in other courses. This was an unexpected bonus for Dave. Furthermore, the quality of learning improved, because the test and course marks rose over those obtained by the students in the 2011 cohort. At the same time, the changes Dave made revitalized the biology course for students and teacher alike, making it more dynamic, motivating and stimulating as a learning forum.

Pleased with these results, Dave shared them with colleagues at his college during education lunches and a professional development day. He then was invited to various events for similar sharing, but this time with the network (REPTIC day, Performa assembly, professional development days in various colleges). He also wrote two articles for the journal Pédagogie collégiale on the flipped classroom, and submitted a paper at the 2015 AQPC symposium. In addition, he developed a three-credit training activity called La classe inversée au collégial [the flipped classroom in college], as part of the master’s program in college teaching offered by Performa.

LEARN MORE:

Links to the article published in Pédagogie collégiale in 2013:
- In French: http://aqpc.qc.ca/revue/article/un-exemple-applique-classe-inversee;

Link to the article published in Pédagogie collégiale in 2016:

Link to the complimentary document made available following the workshop presented at the 2015 AQPC symposium:

Link to Performa training:
Case 3
The case-study method in the context of a course final exam

Pierre has been teaching orthotic and prosthetic orthopedic techniques in college for many years. Over time, he came to realize that the final exams in his courses did not focus on the cognitive taxonomic aspect set out in the skills linked to the course, a taxonomic level more related to analysis, synthesis and assessment. After reading literature on the taxonomy of learning objectives to integrate appropriate assessment strategies, Pierre chose to introduce the case-study method into a first-term course as a final exam strategy, giving the students real-life situations to analyse and resolve individually.

To prepare his students adequately for this type of final exam, Pierre used the case-study method as a one-time learning activity at least twice during the term. During these activities, however, the learning process was divided into three parts: first an individual case analysis; then a discussion in teams of four students until a consensus was reached on the case; and finally, a plenary discussion to debate the various solutions and decide on those with the greatest potential to resolve the case. During one of these activities, one student exclaimed, “Too bad we can’t do this on the exam!” This remark got Pierre thinking again about his practice and encouraged him to review his approach laid out for the course’s final exam.

Supported by new readings on evaluation as an integral part of the learning process, Pierre reconsidered the form of the final exam, to include the three parts of the case-study method: individual, in small groups and in plenary. Working on their own, the students first analyze two complex cases representative of the skills covered by the course. Once they hand in their exam copies, the students form teams to discuss the cases and submit a joint solution for both. The period ends with a plenary discussion. This approach awards points for the individual assessment (20 percent) as well as a team portion (5 percent) for the course’s final exam. Pierre also reviewed his assessment tools to produce, with the help of a colleague, a grid with a comprehensive descriptive scale. Since he was not sure about the validity and reliability of his new grid, he tested it at the same time as he used his traditional tools for marking the final exam.

To gauge the effects of this change in practice, he systematically surveyed the students informally after the first and second application in a one-time learning activity. They were also asked to write their assessment of the teaching methods in their journal. Since changing his practice, Pierre has noticed several benefits. The grid for the comprehensive descriptive scale has reduced his correction time and eliminated “microweighting” of the assessment criteria. Moreover, since the solutions are discussed in the plenary session, the students can better gauge their performance on the exam and thus are less inclined to challenge the final grade on their individual exam. These discussions also help Pierre adjust his teaching for the next term, based on his observations of the main difficulties linked to the subject matter. Finally, this change fosters genuine integration of the assessment with the learning. And all because of one student’s comment!

Enthusiastic about his teaching discoveries, Pierre was quick to share his new practice and the tools he developed with colleagues, for example, in a course as part of MIPEC (Performa) held in his college, and through a video for a teaching boot camp. He also wrote an article published in the journal Pédagogie collégiale, with a complementary resource attached to his article on the AQPC website.

LEARN MORE:
Link to the article published in Pédagogie collégiale in 2017 as well as the complimentary resource:
- In French: http://aqpc.qc.ca/revue/article/vol30-4_baudry.

Link to the YouTube video of Pierre Baudry’s narrative on practice:
- In French: https://youtu.be/6qXHOnlxYpw.

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For readers’ information, the course is called Appliquer un processus de conception aux orthèses préfabriquées. This is a 60-hour course consisting of two hours of theory and a two-hour laboratory each week. The assessment strategy for the remaining 75 percent of the course consists of two design specifications (40 percent) and a three-phase project that includes an oral presentation (30 percent) and a journal (5 percent).
Example 4
Engaging Students in Formative Assessment

Angela’s most nagging issue as a teacher in the Fashion Design program occurred during her third year design course where students designed clothing collections of about 35 to 40 garments per collection. To provide her students with feedback on their initial collection plan, Angela would ask her students to self-assess their plan using a very basic formative assessment tool and then she would coassess their plans, providing detailed feedback so they could develop the rest of the collection. She spent long hours writing up this feedback outside of class time and then meeting with each student individually to discuss it. This went on for a few years and without fail each year Angela was dissatisfied with the results. The students didn’t seem to understand the feedback nor did they grasp the understanding of the criteria involved and their final collections did not always show the impact of the feedback. This made her feel that the lengthy hours she invested in providing the feedback was neither effective nor optimal. And oddly enough, when she approached her immediate colleagues, who taught the same course as she did, they admitted to experiencing the same thing with their students.

Reading and reflecting on pedagogical topics related to formative assessment and metacognition provided an opportunity where the different aspects of the problem suddenly fell into place. Three major principles emerged and pointed Angela in the direction of a possible solution: students must be able to assess their own learning and productions; students must develop their metacognitive capacities; and students must teach to peers. It eventually led her to redo the first planning step to allow classroom time for students to become more responsible for their own learning and to give feedback. The development of the new activities, tools and material were designed with the student as a novice evaluator in mind. Angela dug deep into her own metacognitive capacities as an evaluator to develop the questions, grids and rubrics that would make sense from the students’ perspective.

Angela’s two colleagues did not hesitate in coming on board for the trial run, which included: an active learning activity to cover the theory part of the first step; a practice run with a formative assessment tool applied to previous years’ collection plans; a peer assessment activity of the plans using the formative assessment tool; and additional self-regulation metacognitive type questions using another tool. Each teacher then coassessed the plans, outside of the classroom, building her feedback on what the students had already written.

In analyzing the impact of the changes, the three teachers observed their own notetaking during the trial run and also the students’ grids. All of their observations pointed to the conclusion that the changes provided a viable solution. For the students it provided a real opportunity to learn about what was important in the course, being able to self-critique one’s own design work based on a deep understanding of the criteria involved. For the teachers it helped to reduce the correction time spent outside of the classroom and made it much more agreeable to do. With these results in mind, the material was tweaked for use during the two follow-up collection plans of the term.

Satisfied with the results of the initial experiment, Angela was eager to share her new knowledge with others. She started small by approaching the 2nd year design teachers and then the full department during an end of the year program review. Angela’s interest in formative assessment blossomed and she has since developed training workshops for professional development days at her own college and other colleges across the province (AQPC Turnkey Training Activities). She’s also given them during different symposiums (AQPC and SPEAQ-RASCALS). In addition, she developed a one-credit training activity on formative assessment as part of the master’s program in college teaching offered by Performa. During 2017, Pédagogie collégiale and Profweb have respectively published an article and done interviews with Angela on the topic of formative assessment.

LEARN MORE:

Links to the Profweb interviews posted online in English in 2017:

Link to the article published in Pédagogie collégiale in 2017:
- In French: [http://aqpc.qc.ca/revue/article/evaluation-formative-comme-aide-apprentissage](http://aqpc.qc.ca/revue/article/evaluation-formative-comme-aide-apprentissage)

Link to the AQPC Turnkey Training Activities:
- In French: [http://aqpc.qc.ca/ formations/evaluation-formative-evaluer-pour-faire-apprendre](http://aqpc.qc.ca/ formations/evaluation-formative-evaluer-pour-faire-apprendre)
What is the benefit of adopting a SoTL mindset in college?

Adopting a SoTL mindset allows teachers to:

1. Resolve the dissatisfaction they feel over an aspect of their teaching (correction workload, poorly motivated students, superficial learning, etc.);

2. Gradually address educational questions in their daily work, by focusing on realistic objectives;

3. Exert a positive effect on their students’ learning through a systematic, informed approach;

4. Enjoy revitalizing their teaching practices;

5. Actively contribute to advancing their teaching practices through aspects of their choosing that are of a personal concern;

6. Further their thinking, curiosity and creativity in their subject area, as well as teaching and didactics in general;

7. Ensure the quality of teaching provided in their courses;

8. Break their isolation and inspire peers through dialogue as well as sharing of materials and outcomes (positive and negative) from their experience, at the local, provincial, national and even international levels (and even generate collaborations at these levels).