

Final Report - Developing Information Literacy Skills in Secondary Students

1. Project Description

The purpose of this project was to increase the expertise of library personnel and teachers in developing high school students' information literacy skills: how to find relevant and reliable information, and how to use it ethically and legally. In particular, we looked at:

1. Getting a better understanding of current information literacy issues and becoming familiar with existing resources.
2. Adapting these resources as needed in the context of actual class projects.
3. Building collaborative relationships with the teachers and library personnel.

We followed the original plan of the project without any problems. Our major challenges were:

- The initial information literacy skills in the students were lower than expected.
- There were more issues than we could cover in the 6 days.
- It was hard to choose priorities and limit ourselves to focussing only on those priorities.
- Even though the participants benefited greatly from the PDIG, they felt that there was much more work to be done.
- Students were reluctant to ask for and accept help when doing online research.

Each day of the PDIG included sharing what was happening in the classrooms and libraries as the participants incorporated what they had learned. There was also an open-ended online self-assessment for each topic. We discussed the answers as a group and identified gaps in our knowledge to address during the PDIG.

Day 1 was an introduction to what information literacy means, the "Uses Information" competency, and existing standards and tools. The participants did a self-assessment on their current ability to teach information literacy skills. Areas they identified to work on were: helping students evaluate websites; knowing subject specific sites; helping students get information efficiently; knowing which sites are most reliable; knowing where students should start searching for information; and helping the student define their question/topic.

Day 2 focussed on determining students' current information literacy skills, identifying priorities to focus on, and defining our roles. We identified and discussed the weaknesses in our students' information literacy skills: knowing how and what to research, identifying keywords, knowing the differences between the various resources available, finding information, and knowing how to use the information appropriately. We decided on four priorities to focus on:

- Narrowing research topics and identifying keywords
- Searching efficiently
- Evaluating information

- Copying and pasting issues/plagiarism

We looked at the roles of teachers and library technicians when collaborating on teaching students how to do research. We concluded that the teacher sets the topic and learning outcomes of the project, while the library technician guides students in finding the resources they need to work on the project.

Day 3 focussed on the planning and searching steps of a research project. We reviewed the steps of the research process: plan/analyze, search, evaluate, use. We established what both students and teachers need to plan for in a research topic, and looked at existing resources on the planning step. An important part of the day was identifying what makes good research questions: high quality, authentic questions that engage students and ask them to arrive at new understandings of real world issues. The issue of teaching students how to identify the pertinent keywords in their research question was also addressed.

Day 4 continued the focus on the searching step of a research project, as well as looking at the evaluating information step. Most of the students do not have the skills expected at their grade level, so the teachers have to start at the beginning with them. We explored:

- Advanced search settings and tools in the Google search engine that could help students do more effective and efficient searching.
- Online resources that students (and teachers) do not always know exist such as subscription encyclopedias and databases on school board intranets, LEARN, and the Bibliothèque et Archives nationales du Québec.
- Finding images that were legal for the students to use online: public domain and creative commons images.
- How to evaluate a website using the criteria of: authority, purpose, scope, currency and accuracy.
- The advantages and disadvantages of using information from subscription resources (less evaluation needed, but harder to find and access) and using information from a search engine like Google (quicker to find, but need to be critically evaluated).
- Existing website evaluation checklists, which we revised for our needs.

Day 5 targeted the issues of using information ethically and legally. We looked at the learning outcomes for students for using information, and again noted that our secondary students are presently at a much lower level than where they should be. We examined and evaluated resources such as the LEARN graphic organizers and the videos from The Inquiry Process. We also explored online citation generators that students could use to help create their bibliographies.

Day 6 concentrated on making sure that we could adapt our knowledge, resources and tools to different contexts. We planned for continued collaboration and learning, and discussed how to share our work. Binders of the resources and topics covered in the PDIG were assembled, and

we discussed how to share these resources online. After looking back at our original Day 1 self-assessment, we compared it to our current knowledge and skills and did final a self-assessment in small groups which we discussed all together.

2. Project Goals

We went beyond what we had originally planned for our project outcomes. The participants identified and worked on four instead of three information literacy skills. Many additional information literacy topics were also addressed as they came up organically in the discussion.

The participants became familiar with existing tools and resources for teaching information literacy (The Inquiry Process, Common Sense Media, Media Smarts). They developed the ability to adopt these tools for their students' needs in the context of activities that they were already doing. They moved toward a partnership model of teaching information literacy as the need arises naturally in the context of real class projects.

The participants expressed a desire for continued PD on this topic and an interest in preparing and presenting workshops to colleagues.

3. Project Outcomes

The library technicians and teachers collaborated to give instruction on information literacy skills to students. Resources and tools for teaching those skills were collected and/or created. The participants did pre-, during, and post self-assessments on their ability to teach the priority skills. The comparison between the pre- and post self-assessment shows that not only did they learned a significant amount about each topic, but they were now aware of the many different issues in information literacy. This was matched by their gained confidence and their eagerness to share what they had learned with their students and colleagues.

A few examples of how the teachers and library personnel brought back what they had learned in the PDIG to their students are:

- Increased enthusiasm from the students about picking their research topic because the questions were engaging ones and had personal connections for the students.
- Modelling how to choose relevant keywords for searching online.
- Showing students how to use the online encyclopedias and teaching the difference between websites and databases.
- Teaching students about triangulation as a way to cross check information found online.
- Bringing students to the library for a workshop with the library technician on using the online resources.
- Teaching students to create bookmark folders in Chrome to keep track of the resources they used.

- Recommending to students other ways of getting information beyond online sites, such as personal interviews.
- Students embracing creative ways of putting the information they researched into their own words: [Peanut Butter Heritage Minute](#).
- Library personnel coming up with innovative ways to bring their expertise outside the library, such as offering to “loan” themselves to classes who are borrowing Chromebooks from the library.

4. Reinvestment

In this project we curated a collection of existing tools that work well for teaching information literacy in the context of actual class projects. We also created some tools ourselves. These tools are listed below and will be made available on the Lester B. Pearson Libraries website: libraries.lbpearson.ca.

The following handouts for students were created/revised during the PDIG to help students in planning research and evaluating information sources:

[Search Strategy Analysis](#)

[Identifying Quality Sites Revised](#)

[Grille d'évaluation de sites de haute qualité \(revisitée\)](#)

We identified the following existing resources as being particularly helpful for teaching information literacy to students:

[Inquiry Process Steps](#) (The Inquiry Process)

[Le processus de recherche](#) (The Inquiry Process)

[Stickman Adventure Videos](#) (The Inquiry Process)

[Smart Google Searching Handout](#) (LBPSB)

[CC Search](#)

[CC Search Handout](#) (LBPSB)

[How to Make Creative Commons Searches](#) (LBPSB)

[Graphic Organizers](#) (LEARN)

[Les Organismes graphiques](#) (LEARN)

[Citation Machine](#)

[BibMe](#)

[Online Writing Lab \(OWL\)](#) (Purdue University)

We submitted a workshop proposal for the QPAT convention and we will submit one for the Association pour le promotion des documentaires scolaires (APSDS) conference. We may also submit proposals for other conferences depending on the conference theme. There was a lot of interest in preparing workshop presentations as a way to consolidate what was learned and to put it into a format that works for sharing with colleagues.

There is definitely more work that could be done on this project. Students are far below where they should be in their information literacy skills. Teachers need PD and resources to help teach the students these skills. There was a feeling that although we had accomplished a lot in the PDIG, there was still much to be done in both learning about information literacy ourselves, and in putting together the tools in a format that could be shared with other staff and with students. In particular, there is desire to create something brief for students, similar to what we have done, but on a smaller scale, and to create workshops to present to colleagues.

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