Collective authoring of Wikipedia articles as a learning task in embedded information literacy instruction

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Introduction

The Internet has become a dominating information environment. One consequence has been that approaches based on students’ independent search for and use of information sources in knowledge construction challenges traditional teacher- and textbook-centred learning in schools. Information literacy has become an explicit or implicit sub-goal of schools’ curricula. Unfortunately, past research has revealed that teachers have serious difficulties in supporting students to learn appropriate information practices and strengthen their independent, inquiry-based learning capacity (See e.g. Limberg, Alexandersson, Lantz-Andersson & Folkesson 2008).

The situation in schools motivates information literacy (IL) research in school classrooms. In general, teachers have not succeeded to develop effective pedagogical strategies to embed IL instruction into classroom practice. However, many individual schools and teachers are working on the problem and experimenting various pedagogical approaches to solve it. We see here a chance for IL researchers to participate these authentic professional experiments and help in the systematic analyzes of experiences.

In our earlier study (Hongisto & Sormunen 2010), we collected data in a class of eight-grade students working on a research paper on cultural geography. The study demonstrated the complexity of inquiry-based learning both for the teacher and for the young students. The students worked on their personal themes and encountered a lot of problems in managing the various aspects of the task and the learning environment. Especially information searching related activities were challenging for them. The teacher was busy in helping students to solve their problems. Surprisingly little attention was paid on the learning contents (here cultural geography) and on how information was used in constructing knowledge.

In the present study, we are cooperating with a group of teachers interested in developing embedded information literacy instruction by including a collaborative authoring of a Wikipedia article into the course program. The approach adopted by the teachers sounds interesting because

- It encourages students to develop focused and concrete learning tasks since a Wikipedia article cannot be of a broad theme. Wikipedia gives a quality standard for the outcome of the assignment and a taste of realism to make the task meaningful for learners.
- Collaborative authoring requires that students discuss the issues of seeking, selecting and using information and make their justifications in constructing knowledge more explicit and observable both for the teacher and the researcher.
- The focus of the assignment is on the content of learning but at the same time raises many aspects of information literacy for students’ reflection.

In this presentation we describe the pilot study conducted in courses organized for two groups of ten/eleven -grade students.

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Research questions

Very little research has been made on embedded information literacy instruction in naturalistic classroom situations based on the direct observation of actors. Thus, our research agenda is quite broad and open for modifications during the project. We want to repeat some parts of the earlier study in a new environment (older students, different learning assignment) to improve the validity of our findings. The preliminary research questions are the following:

1. How do student teams work and proceed in collaborative authoring of a Wikipedia article?
   a. How do they focus the theme of the article?
   b. How do they search for and select information sources?
   c. How do they evaluate and process information for the article?
   d. What are the students’ priorities in completing the article?
2. What problems do students face during the process and how are they solved?
   a. To what aspects of the learning task are the problems (perceived by the team) related?
   b. Which problems are negotiated and solved within the team?
   c. Which problems lead to between-teams and team-teacher interactions?
3. What kind of intervention strategies does the teacher use in supervising students’ work?
4. What kind of learning experiences on information practices do the students report?
5. What kind of pedagogical experiences does the teacher report?

The pilot study

Our study is tied to a project organized by the City of Tampere to promote information literacy instruction in the upper secondary schools (grades 11-13). The project develops school libraries, physical and virtual learning environments, and organizes a lot of IL instruction both for teachers and students. Collaborative authoring of Wikipedia articles is one of innovations of the project and we were asked to study two courses where this innovation was applied. The first nine-week course on Geography was titled ‘The world of risks’ (Jan-March 2010). The second course on Biology was titled “Environmental ecology” and lasts from March to May 2010.

In the first course, we collected data using an approach similar to our earlier study (Hongisto & Sormunen 2010). The researcher followed the course from the beginning to the end (seven two-hour sessions):

- Basic data were collected from students by a questionnaire and from the teacher by an interview.
- All classes held in the PC room were observed to collect core data by manual note making about student and teacher activities, especially communicative interactions.
- In the end, the groups of students and the teacher were interviewed.
- Wikipedia articles and the teacher’s written assessments were also included in the research data set.

In the second course, we decided to expand observations by conducting micro interviews. The researcher interrupts the work of each group twice during the two-hour class and asks them to tell what they have been doing and plan to do, what problems they have faced and so on. Direct observation did not work in the first course as it did in our earlier study. The students were asking help less frequently. There were also less interactions within student groups than we expected because students seemed to be efficient in dividing the task into fragments suitable for individual effort. Further, the physical conditions of the classroom made inconspicuous working of the observer impossible.

At the time of writing, we have started to analyze the data collected during the first course. The preliminary results indicate that the distribution of problem areas discussed in the classroom is surprisingly similar to what we found in the earlier study (Table 1).
Table 1. Problems expressed/discussed by students.

<table>
<thead>
<tr>
<th>Problem category</th>
<th>Hongisto &amp; Sormunen 2010 (n=163)</th>
<th>Present study (n= 116)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information seeking and use</td>
<td>33 %</td>
<td>30 %</td>
</tr>
<tr>
<td>Work process</td>
<td>21 %</td>
<td>31 %</td>
</tr>
<tr>
<td>End product (article)</td>
<td>16 %</td>
<td>13 %</td>
</tr>
<tr>
<td>Technical problems</td>
<td>15 %</td>
<td>15 %</td>
</tr>
<tr>
<td>Subject content of the course</td>
<td>15 %</td>
<td>11 %</td>
</tr>
<tr>
<td>Total</td>
<td>100 %</td>
<td>100 %</td>
</tr>
</tbody>
</table>

There were more changes in the support given by the teacher (of course these results are sensitive to individual differences between teachers). The distribution of strategies used by the teacher in supporting students moved from expert advice, giving ideas and encouragement towards controlling the process (Table 2).

Table 2. Support categories applied by the teacher (and mate students).

<table>
<thead>
<tr>
<th>Support category</th>
<th>Hongisto &amp; Sormunen 2010 (n=234)</th>
<th>Present study (n= 84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert support</td>
<td>39 %</td>
<td>27 %</td>
</tr>
<tr>
<td>Ideas and encouragement</td>
<td>38 %</td>
<td>19 %</td>
</tr>
<tr>
<td>Collaboration</td>
<td>14 %</td>
<td>15 %</td>
</tr>
<tr>
<td>Controlling support</td>
<td>9 %</td>
<td>38 %</td>
</tr>
<tr>
<td>Total</td>
<td>100 %</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Both sets of preliminary results are not in line with our expectations. However, it is too early to make any conclusions before we have analyzed the data of both courses.

Discussion themes for the seminar

In the workshop we would like to discuss our approach in research design, data collection methods and preliminary findings.

List of References
