

Pippi's Pancakes - Culinary Jam Sessions in the School Library: The Library as an Educational Resource in Project-Based Learning

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Abstract

Project-based learning is a way of working which is gaining ground in Swedish schools. The Swedish Government has recently decreed that senior high school students must carry out a fairly extensive piece of research in the form of a project. The project has to be finished in one and a half years from preparatory planning to final presentation. Working with projects has now more clearly made the School Library in Sweden into an educational resource. In our seminar we will give you some idea of how project-based learning is being practised as teamwork between librarians, students and teachers in two Swedish senior high school libraries. We show how we guide teachers and students in our libraries, now well equipped with traditional media as well as modern technology. We will also point out specific problems that we meet and draw attention to new thinking about learning in modern society.

Introduction

A very famous literary character well known to all Swedish children and also to many children in the world is Pippi Longstocking. Do you know her?

The books about Pippi Longstocking are written by Astrid Lindgren, whom we believe to be one of the most admired Swedish authors in the world. Her books have been translated into a great many languages. A lot of people think she should have been given the Nobel Prize. She died this spring at the age of 94. Altogether she wrote almost one hundred books. Pippi was born in 1945 and this very special girl was something new in the literature for children in Sweden. The book became very controversial among critics, teachers and parents. Some loved Pippi and others hated her!

We loved her! We were both simply brought up with Pippi, her horse and monkey, Mr Nilsson. She served somehow as a model to us, not just to us girls but also to our brothers. She was so different! Pippi Longstocking is brave and strong, courageous and independent. And she knows how to make the most delicious pancakes! She can do whatever

she likes and she is rich. We think every child has now and then wished to be like Pippi, just as her two neighbouring friends Tommy and Annika did.

When rereading the books as grown-ups we find more that is characteristic of Pippi such as her way of being helpful to others and conscious of her responsibilities, her solidarity to people who are in need of sympathy, her joy in sharing with others her knowledge and the way she shows them respect. Not to forget her sense of humour and curiosity about life! In many ways she is more a young adult than a child, especially compared with her best friends. Tommy and Annika are not so mature as Pippi. They have good manners and are more submissive. They dare not tell anybody their own thoughts and don't show that they also have the right as children to interpret the world as they see it. Like Pippi does with her strong self-confidence!

When Astrid Lindgren died in January this year there were lots about her and her writings to read in the papers and to listen to on the Swedish radio and television. Many memories from our childhood were brought to light. As we reread the books about Pippi Longstocking it suddenly struck us that several of Pippi's characteristic features are those which our students need today: to be independent, creative learners with lots of self-confidence as well as a curious mind and a desire to learn. These are qualities you need especially when you enter Senior High School and are around 16 – 19 years old. We realised that both of us. How can we help our students to become somewhat like Pippi?, we said.

Today we demand that students should manage their schoolwork more independently, learn how to sort out and evaluate information in a critical way and express their thoughts with their own words, not copy word for word from books. We want them to make their own opinions, be curious and ask questions.

Just as Socrates and many other famous philosophers have done, Astrid Lindgren's Pippi tackles the great questions in life. Recently, by the way, two Norwegian philosophers wrote a book in which they make certain comparisons between Pippi and Socrates. They have found many things that the two of them have in common. They both put a lot of questions to people: What is justice? What is courage? What is in a word? They also ask such questions as we who work in the modern school put to our students: What is knowledge? How do we learn and what is important to know?

Socrates and Pippi seem to agree that we have knowledge when we have learnt something and made it our own. We understand and are familiar with the facts or the skill and are able to talk about them with others. Just like Pippi does in the company of Tommy and Annika and Socrates with his friends. They both teach us to be curious ("the unexamined life is not worth living", says Socrates), but also critical ("You must not let people put all kinds of things into your head!", Pippi says to Tommy. "Sometimes I tell so many lies that my tongue turns all black!")

The student must be active and control his own learning. In the modern school the teacher is not a walking encyclopaedia. This is how we interpret the new Project Course that was introduced into Swedish Senior High Schools in July 2000. Now the student should develop his/her ability to plan, structure and take responsibility for a fairly extensive piece of research in the form of a project. The student becomes the leader and the working process is as important as the result.

To cope with this kind of work our students must be a bit like Pippi Longstocking:
 curious
 critical
 independent
 brave
 helpful,
 kind, and
 tolerant

This way of working may help them to become mature and independent individuals. It can lead to positive results for them in their private lives as well as in their functions as responsible citizens in modern society.

Background

From the year 2000 it is compulsory for all senior high school students in Sweden to carry out a certain amount of research as part of their learning. This task is expected to take about one and a half years in around one hundred working hours.

Normally, the research project should be connected with the programme chosen by the student. It can be carried out by a group of students working together, or achieved individually. Whether it is a theoretical or practical piece of work it must be presented together with a written report showing procedure as well as result and a final evaluation.

The aims of the project can be listed as follows:

The student must learn

- how to choose a field and define a particular problem within that field
- how to choose relevant materials and method as well as relevant tools
- how to make a plan for the project and if required revise it
- how to write a logbook about the work process and show the results continuously
- to discuss with his/her tutor how to proceed
- how to make a final product, which is a personal solution of the target set
- how to write a report describing the working process from idea to the final product
- and finally how to evaluate the procedure and result either in a specific report or in an oral presentation

A general model for the Project includes basic *ideas*, a *plan*, *procedure*, a *presentation* and an *evaluation*.

In the *plan* should be stated the reasons for the choice of project, a formulation of the particular problem to be tackled as well as a discussion of possible methods to achieve a solution. Ideas about where to look for the most useful information, how to choose fellow students willing to co-operate, and how to make a reasonable work- and time schedule are all equally essential. What kind of presentation to use at the end is also an important decision.

For the *production* of a satisfactory result it is necessary to collect relevant information as well as to arrange it properly. At this stage a logbook should be continuously

kept about how the work is progressing. The student should also see his or her tutor regularly.

The **presentation** can be either a written essay or an object or a practical method, but finally a written report must be presented, followed by an **evaluation**.

The School Librarian's Role

On many of these points the school library has a part to play. That is why the National Agency for Education in Sweden has taken the initiative to invite teachers and school librarians all over the country to attend courses at which ideas and methods for project-based learning have been presented and discussed. The school libraries in particular have been given a great deal of attention. Special grants have been allocated to school librarians to make sure that they attend the courses arranged at Swedish Universities in different parts of the country.

Both of us were lucky to attend last year's course together with quite a few teacher colleagues. For us Senior High School librarians it was truly stimulating to be accepted as fully competent members of a teaching team. No longer "warehouse workers" storing books and checking out book loans for students and teachers, but now partners in a team with the teachers contributing to the learning process and to what should actually be taught in the school.

We feel very excited about this new role! It is an historic change in the Swedish school! In an age with an overload of information it has become clearer that the library has an important part to play for student learning in all schools. Today it seems to us that the school library's focus is not only on the access of information resources and teaching information skills, but more on how the librarian's involvement in the curriculum can develop knowledge and understanding. The librarians can be seen as links between information and learning. They are there to support both teachers and students in the learning process.

Today we feel quite confident that many of the targets we aim at can be reached. The Swedish Government spend money on school librarians and we are mentioned in the Bill signed by the Minister of Finance! "Therefore the Government pays special attention to the development of the school library's educational role". Wow!

The more we get involved in the curriculum the more we become aware of the necessity of a new way of thinking as we are training the students in Information Literacy. We understand that there is no such thing as a subject called "Library Knowledge". Information Literacy is no general process that follows a strict order.

It is part of the learning process and it differs according to subjects and problems. As you most certainly understand from this theory we have been inspired by Dr Carol Kuhlthau's work on the Information Search Process. Many school librarians in Sweden talk about her today. Louise Limberg, who is our foremost expert in Library- and Information Science and Research was the first in Sweden to introduce Kuhlthau's theories about how important the stages of Exploration and Formulation are to learning within the process. In Louise's thesis *"Experiencing Information Seeking and Learning"* (1998) she is referring to Carol Kuhlthau.

What is the library 's function in the reformed Senior High School?

During the course about project-based learning at the University last year, there were these two questions that we especially tackled: What is the role as a librarian in project-based learning? How do we best co-operate with the teachers in this new course?

We were surprised that there was still so little written about the Information Search Process in the literature about PBL, for instance, and other activity-stimulating methods. It seemed to us that the school authorities in Sweden take it for granted that students know how to choose relevant materials and method as well as relevant tools. Too little was said in our course about training students in searching, sorting out information and being critical of their sources, especially those that they find on the Internet. Neither the librarian, nor the teacher is expected to stand there ready to serve project groups with relevant information. Instead students must be given lots of chances to learn efficient search strategies. This can also be of use for them in their private lives and later in their professions.

The students should not be left to drift aimlessly. Their tutors have to supervise them through the working process of a project and help them to structure it. The logbook is an excellent way to keep track of how they proceed.

In order to learn new things the students must go to different sources or experts to find out more about their subject. Step by step they learn how to ask the right questions to get the information they need and finally make it their own knowledge. Then it is time to do something about the knowledge, perhaps write it down in a report, create a piece of furniture, arrange an exhibition, carve a statue or make pancakes.

Then how will these delicious pancakes be, that we expect our students to serve us, when they have finished their projects? Our instructions, have they been good enough? Have we trusted them to be able to prepare the batter on their own, without much support? Some students manage to get a more fully flavoured batter, whereas that of other "cooks" is thin and running. Perhaps one explanation is that some students have been better trained to sort out and find the good ingredients? To be able to learn all students must be given more time to study the "recipe" carefully, time to search, sift and select information in all kinds of sources, but also time to evaluate and examine the facts. (*Who says what to whom and for what purpose?* Wiklund, 1999)

The adults around the student are the most valuable support! Teachers, librarians, parents and others. But they all have to co-operate! In the next section we will focus on how we as librarians in our schools can co-operate closely with the teachers in project-based learning.

The part played by the Library in our schools can be listed in five points:

1. A method course for students
2. Meeting with the tutors
3. Workshop in the library
4. Individual tutoring by school librarians
5. Support for the Project on the school library web page

1. A method course for students

The Method course initiates the senior project and takes place during the spring term of second year. The ten-hour course includes, among other things, the students' rough ideas and work plan. There is a total of nine units in this course and the library is involved in two of them.

In the unit called "*The library*" the librarian comes to the classroom for half an hour and describes to the students how the library's resources can be used in their projects. The following points are discussed:

- Process of information retrieval

The librarian talks with the students about the process. There is not only one way to go about it. The students may have to try different approaches. They are encouraged to spend a considerable effort in formulating their questions asking each other as many questions and follow-up questions as possible, so that they can eventually demarcate their work and identify keywords to be used in their research. They should ask the questions: why? what? who? where? how? when? They should look for connections, relationships, tendencies, origins, characteristic features in the chosen subject. As an example one can use a project dealing with a waste disposal works in Värmdö Municipality. The Waste Disposal Works is situated in a sensitive environment in the Stockholm archipelago and the company has now applied for permission to expand its operations. The students' task has been to make an investigation in order to analyse how an expansion would affect the environment. Stress is placed here on the use of relevant keywords to make the search process more effective and get appropriate sites.

- Workshop

As a regular programme the library offers workshops in Information Literacy at a fixed time every week. Students and staff can register whenever they need it. A tailored workshop can also be booked at a different time. The teacher or a group of students can ask the librarian to give an orientation in searching around a specific subject. In this kind of workshop the participants get an opportunity to train how to define a problem, to practise searching strategies and critical evaluation of sources. They continue to work independently with information seeking and special exercises guided by the librarian.

- Library rules

This is an orientation in the library about its organisation, rules and resources such as the staff, media and the computers connected to the Internet and how to use other libraries. The librarian explains to the students how the sources in the library can be valuable tools for them when they are working with their projects.

In the method course the librarian also participates in the unit "*Criticism of sources*". This training seems more important and necessary today because of the extensive use of the Internet as a source. For practical reasons these lessons often take place in a computer classroom. A lesson lasts for 1,5 hours. The starting point can be from the questions: who? what? aim? objectivity? current interest? Each student then goes on to look closely at several web sites. Afterwards follows a joint discussion. The question of who is responsible for a particular site has proved to be interesting. Even the web address can raise many queries. In what way can we be fooled on the Internet? A good example is if we compare the addresses *whitehouse.gov*, *whitehouse.net* and *whitehouse.com*. By getting the students to draw their own conclusions and become detectives "*Criticism of sources*" has become really enjoyable!

2. Meeting with the tutors

In today's school the teacher is not the only one who defines the questions or has the answers. Nor is he/she there in the classroom to spoon-feed the students. To be able to learn the student has to work on the material and make it his own knowledge. The teacher is at hand to support, answer questions and assist with research, just as the librarian does. The librarian is familiar with the information technology, the different sources and how to find them as well as evaluate them. In a close collaboration where the teacher and the librarian plan a unit together the students really get the opportunity to train the whole process that is required to be able to cope with a project independently. We find it very important for teachers and librarians to create a teamwork that can function for everyday use. We believe that with that kind of co-operation the students will get a better chance to do a good job and become critical thinkers and problem solvers.

3. Workshop in the library

When the student has chosen a topic and has made a plan for the project he/she can register for a workshop in the library. Attendance at a workshop is voluntary. However, the workshop is included as a point on the checklist that the tutors have made, so participation has a certain amount of importance for the final grade. The workshop takes place in the library. It usually lasts 90 minutes.

Preparing

When a project group (2-4 students) arranges a time for a workshop they then receive a questionnaire, which is to be handed in to the librarian before the workshop takes place. The questions are:

What is your project about?

Why have you chosen this particular project?

How much do you already know about the subject?

What exactly do you want to know about this subject?

Make a list of as many keywords for your research as possible!

The purpose with these questions is of course to find the best and most relevant research terms. But they are also useful in helping the project group to demarcate and to formulate what exactly they are looking for. In addition, there is a follow-up of that which the students learnt in the method course. The questionnaire is an excellent aid for the librarian in preparing for the workshop.

Contents

- Discussion about questions and keywords.

To begin with the workshop takes place in a study room next to the library. It starts with a 20 minutes discussion about the questions mentioned above. The group with the librarian's help should now decide which research words they will use first.

- A run-through of how to find books, articles and how to use data bases and links in categories using the keywords. When appropriate, we also try to find current research, public authorities and private organisations within specific areas. We get acquainted with our own web site where support for students in project-based learning can be found.

- Criticism of sources

We examine one of the web sites with help from the critical questions. If it is accepted by the group, we agree about how to present it in the bibliography.

- Conclusion and questions
- Individual research in the library for half an hour with the librarian as tutor.

4. Individual tutoring by school librarians

The librarian also meets students working on projects in the library and can give them individual support when they need. It is important that the tutors co-operate with the librarian and that they have time to discuss the students' work together now and then.

The librarian can catch a student who is running behind or is stuck with a problem and then draw the tutor's attention to this.

Where in the school this prep work helping the students to prepare the batter (formulate and focus on a problem, discuss possible methods and sources etc) takes place, does not seem so important today, especially if the school has a virtual library as well as a traditional "warehouse". Very convenient is to have an extra meeting-room close to the library so that you can use both traditional media and the Net, when the students sign up for a workshop.

Time for thinking and evaluation in groups is very valuable for both teachers, librarians as well as for students. In our schools we realise more and more that meetings for planning, discussion and evaluation are of great importance for finding new ways in teamwork. As librarians we would like to be more involved in the final presentations and evaluations of the projects, but if you are the only librarian at a school with more than 1000 students this is quite impossible.

5. Support for the project on the school library web page

On the school library web page the students can find valuable support when working with their tasks. There is a site where they can get inspiration as well as practical advice such as how to cite sources and make a reference list. The school's web page is easy to grasp for students and teachers in need of ideas for strategic information searching and source evaluation. Here they will find a checklist for young researchers, help for searchers on the Net, FAQ, questions for criticism and other useful links about working with projects. A very useful site, for instance is "Check the Source" provided by the Swedish School Net and run by the National Agency for Education in Sweden. www.skolverket.se/skolnet/english/

Looking forward

In a delicate balance between strict control and free thoughts you probably find the most favourable learning situation. Just like Pippi we want to give our students freedom to think for themselves and draw their own conclusions and at the same time expect them to structure and take responsibility for a project – that is to say become the manager of the Senior Project in their third grade. We want them to learn the ability how to co-operate and how to show their fellow students respect. At the same time we think it is right to give them a chance to choose their research project according to interest and talent. We believe in the students' silent yearning to use both their brains and their hands. One goal must be to make them feel a desire to learn and a joy to share their knowledge with friends and others around them.

Another goal must be that teachers, librarians and principals join in establishing good and creative learning "kitchens", where the students experience that it is both useful and fun to make "pancakes". May they realise that what is most essential is not the finished pancake,

but the road taken to reach the goal and all the necessary preparations before beating the batter into shape!

This reminds us of a poem we learnt when we were students in Senior High School in the 60s. With this poem by another very famous Swedish author, Karin Boye (1900 - 1941) we wish to end our presentation.

On the move

The sated day, it shouldn't get a first.
More stunning is by far a day of thirst.

Life 's journey has, it seems, a secret goal.
The road means more than does the last control.

The finest stop-off is a one-night halt:
A fire 's lit and shared some bread that 's brought.

In places where we pitch our camp but once
Our sleep is sound, our dreams are full of dance.

"Move on, move on!" we hear the new day call.
A venture without end awaits us all.

Karin Boye's poem *I rörelse*
translated by Hans Andersson

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