

Qualities of the Storyline Method for Teaching in Primary Schools in Iceland

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Content

1 Introduction	1
2 The Storyline Method	4
2.1 The beginning	4
2.2 Storyline	5
2.3 What is Storyline?	6
2.4 Storyline topic outline	7
2.5 Working with Storyline	9
2.6 The following principles are basic to the Storyline Method	11
3 Methodology	15
3.1 Case study	15
3.2 Why a Case Study?	15
3.3 How the study was done: An overview	16
4 How I did the research	18
4.1 Preparation	18
4.2 My class	18
4.3 Using Storyline in my own class	19
4.4 The method of keeping my diary	19
4.5 The other class	21
4.6 Consulting with parents	21
4.7 Introducing Storyline into every class in the school	22
5 The topic work	23
5.1 Teachers preparation	23
5.2 The pupils knowledge	24
5.3 The pupils activities and interest	26
5.4 The pupils co-operation	28
5.5 The Storyline topic outline	30
5.6 Practising basic skills	32
5.7 Building conceptual models	34
6 Questionnaires	37
8 Discussion	51
9 References	56

1 Introduction

As a teacher, I want the problems and activities that make up the pupil's work at school to be relevant to them and to life in general so that they see the purpose of the work they are doing. This makes the pupils more interested and enthusiastic and research shows us when pupils are interested they are more ready to learn. In our teaching and when we are helping pupils to learn, we have to have this aim in mind. I have been a teacher in a primary school in Iceland for 17 years. Over that time I have developed an interest in teaching subjects in an integrated way as much as possible and where appropriate. I studied at Jordanhill College of Education in Glasgow during the school year 1992 - 1993. My aim was to learn about effective ways to reach those goals mentioned above. When I started to read and hear about the Storyline method I found that it had many of these qualities e.g. structure, possibility to teach in an integrated way, different work organisation and the whole process seemed purposeful for the pupils. I liked the method and I also liked very much that it had been developed in co-operation with class teachers. The more I learned and thought about the method the more I felt that it had the qualities I had been looking for.

After this experience I wanted to try to develop the Storyline technique further as a teaching procedure for use specifically in Icelandic schools, because I think it is a good teaching method and can be used in Iceland with a little adaptation. I knew it had worked in Scotland and many other countries and I felt that by carrying out a formative evaluation of a limited number of aspects of the Storyline method in an Icelandic setting it could help me and other teachers to learn more about this approach. We could then develop our work with very valid Icelandic experience.

Storyline is a teaching method and also, just as importantly, an approach to learning. Every experienced teacher uses a lot of methods derived from various theories in her teaching. The Storyline method is based on teachers experience. It was developed in the Inservice Department at Jordanhill College with the help of many primary school teachers in the West of Scotland over a period of many years beginning around 1965 (Rendell 1984; Bell pers. com. 1992; Barr and McGuire 1993).

Iceland is a small country with only 250000 inhabitants that speak their own language, Icelandic. Naturally the Icelanders get a lot of their higher education in other countries. What has very often happened in Iceland and probably also with other small nations is that educators learn about a teaching method abroad and think that this could be good for teachers in Iceland. They go home and introduce it to the

teachers. Many try to use it because they like the idea, but then, unfortunately, the enthusiasm slowly dies, because no one had the time or made the effort to adapt this new method to Icelandic circumstances. This was also the case with Storyline in many ways. To try to change this I wrote a guidance book for teachers in Iceland about the method (Eiríksdóttir 1993a). The book describes the method, its principles and also introduces some new topics that would be appropriate for Icelandic schools. This book has been used by many teachers during the school year 1993-1994 and more will be using it next year. I have also made some new topics that have been tried out in my school.

In order to get this work a little further and also to assure my self about the qualities of the Storyline method I decided to carry out a case study in my school in Kópavogur to evaluate some of the aspects of Storyline when used in an Icelandic setting. This was carried out both in my class and in one other class with the help of one of my colleagues. All the other 13 teachers at my school who used the method last year have also been very helpful and I have gathered a lot of useful information from them.

I chose to carry out a case study on Storyline as a teaching method because it is an attractive method with which to observe how the children react, behave and learn. Children are not so good in describing with words what they like or dislike. Case studies have many advantages for researchers in education as described by Cohen and Manion (1989). Case studies data is strong in reality and allows generalisations either about an instance or from an instance to a class (Cohen and Manion 1989). The data describes the process during the working period and it is possible to learn from it what was effective and what might have been done differently.

By doing this case study I learned from what I observed, both in my class, the other specially chosen class and other classes in my school, how effective the Storyline method can be as a teaching method in Primary Schools. Bell (1990) has described the main principles of the Storyline method. The principles are listed below and the six principles chosen especially for this case study are bold in the list.

- It is learner-centred

- It is an active methodology

- It provides a high degree of motivation

- It provides an extremely powerful structure for both teacher and student

- It links basic skills with real world

-It provides a forum for dealing with the more difficult, 'extra' aspects of the curriculum

- It encourages feelings of mutual respect between teachers and students
- It gives relevance to the use of up-to-date technology
- It helps teachers to provide the correct level of difficulty for each student in the classroom
- **It provides many relevant opportunities for co-operative learning**
- It provides a pattern which is repeatable but ever-changing
- It fits easily into language arts/social studies curriculum
- **It emphasises the importance of encouraging the children to develop their conceptual model first.**

The case study was carried out in a primary school in Kópavogur, Iceland. The school system in Iceland is in some ways different from what it is in Scotland. The most significant differences are that both the school day and the school year is shorter than in Scotland. A regular school year in Iceland has 165 days and the children stay about 20 to 25 hours at school every week, different by age. Usually there are two classes in every classroom one in the morning and the second class after lunch. Classes are usually smaller in Iceland than in Scotland, not more than 24 pupils in first and second grade and not more than 28 after that. The children start one year older at school than in Scotland but compulsory education is also 10 years. In most schools there are specialised teachers for music, art and crafts, home economics, physical education and sometimes foreign languages. Some of these activities will take place in the afternoon for those starting their school days in the morning, because these subjects are taught in special classrooms. Most of the topic work takes place with the class teacher, but there has been good teamwork with the other teachers too. In small schools in the country the same teacher will teach everything. Because of the many different teachers for each class in Iceland the planing of the topic work is probably more complicated than in Scotland but the similarities are more important and we have successfully been able to use the knowledge that Scottish teachers have gained with experience.

2 The Storyline Method

2.1 The beginning

According to the COPE report (COPE 1987) the main ideas behind modern teaching in primary schools in Scotland were influenced by individuals like Rousseau, Dewey, Froebel, Montessori, Piaget and later by Margaret Donaldson. Official reports such as "Primary Education in Scotland", published 1965 and better known as the "The Primary Memorandum", and "The Plowden Report" published in England 1967, also influenced the modernisation of teaching in Scotland. A part of the modernisation was to look at the teaching of children as an important step in education with its own emphasis. The development and progress of each child was put at the centre of teaching as well as active participation. The pupils are supposed to learn about their surrounding and the world as a whole through their own research and experience (COPE 1987).

The Primary Memorandum and The Plowden Report emphasised the changing of children's education in such a way that no longer should the teaching material be distant from the child's experience and without direct contact towards an education which should take into consideration the child's experience and interests. The children should also see a direct connection between the teaching material and the life surrounding them. The reports also emphasised that the teaching process is as important as the knowledge gained through the study (COPE 1987).

A number of articles were written about this new approach to teaching and in general educators were rather positive towards it. However most of the articles were very general and did not describe how this new approach should be realised in the classroom. The teachers had to find out by themselves methods to use and try them out.

The origin of the Storyline method dates back to 1965 (Bell 1994). At that time three teachers, Bill Michael, Fred Rendell and Steve Bell, with the Inservice Department at Jordanhill College of Education were asked to find methods to help teachers in primary schools to arouse pupils interests in Environmental studies, and to put forward some of the ideas from "The Primary Memorandum" (Bell 1988). Until then the teaching of environmental sciences had been subject oriented and divided into special lessons in e.g. geography, history, natural sciences and physics. Every subject was taught in a very similar way, such as "take up your book and turn to page one". The teacher asked questions and the pupils were expected to answer with facts from the chapter they were supposed to read at home. Exams dealt only directly with

the material covered in the lessons and main emphasis was put on learning facts from the books. The exams were summative rather than formative. This teaching method was not very successful, especially in deprived areas, so a change was necessary.

The teachers from Jordanhill worked in close co-operation with teachers in Primary schools in the West of Scotland to find ways to change the teaching methods and the topics. They visited different schools and worked with the primary teachers in the schools in stead of having inservice courses at Jordanhill as had been done before. In other words, staff tutors approach modelled the teaching process that teachers in schools were to use. The main emphasis in this new approach was to find a method which would arouse the pupils interest in learning, as well as connecting classroom education with real life outside. The method should also teach pupils how to gain knowledge by themselves and, last but not least, it should emphasise that the teaching should always relate to each pupil's individual development. In short this new teaching method should emphasise that learning is the goal - not the teaching - and learning is individual.

2.2 Storyline

The Storyline method has been developed over many years and many teachers and educators have participated in the work. The method did not get its present name, Storyline, until 1988, when an organisation was founded with the main purpose to develop, inform and educate people about the approach. Until the foundation of this organisation the method had been called The Topic Method or The Topic Approach to Learning. It has been used extensively in schools in Western Scotland for a number of years and in other countries as well under different names. In Denmark it has been called "Den skoske metode", in Germany "Die Methode Glasgow" and "söguaðferðin" (the story method) or "skoska aðferðin" (the Scottish method) in Iceland.

An organisation has been founded around the Storyline method, called "European association for Educational Design" (EED). It is supported by The Institute for Curriculum Development in Enschede, in the Netherlands. Members are mainly teachers that have used the method or are interested in the method and they come from many different countries. Members meet regularly (The Golden Circle seminars) and share their experience and ideas and learn about development in different countries. Reports from the seminars and articles have been published by EED (e.g. EED 1990; EED 1993) for members and those interested to learn about the Storyline method.

2.3 What is Storyline?

Storyline is not only a theory. It is above all a teaching method, or more correctly how a teacher should approach subjects during topic work. How will the teacher help her pupils to learn?

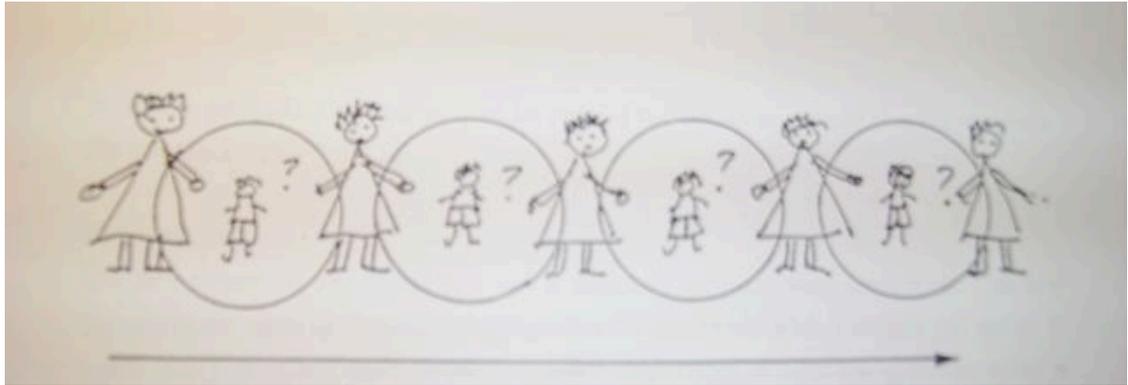
The development of the Storyline method has been based on experience from teachers who actively use the method. The method is also based on the theory (Egan 1988) that we can more easily learn a subject if it is put forward as a story.

"The invention of the story was a crucial stage in the discovery of the mind. What was invented was a narrative form that worked at increasing the memorability of its contents.

In recognizing its power and refining it through millennia, people discovered something remarkable about how the human mind works. We are a storying animal; we make sense of things commonly in story forms; ours is a largely story-shaped world. Rational and empirical science inquiries, of course, are not generally story-shaped, seeking as they do to reflect the logic of their subject matter, but they provide in their results further material out of which we make stories. We seem to have to do this in order to make their results more generally meaningful" (Egan 1988).

The story describes the environment and puts the events in a chronological order. The story has a definite plan, with a beginning some incidents and an end. The story is a vehicle to put the incidents together in a coherent way. "There are no never ending stories, except on television it seems. Stories have the limitations of their own boundaries" (Letschert 1992). Parents have always used story-telling extensively and through the years people have told stories about things that happen. That way we can remember the events. We can say e.g. that the history of Iceland was passed from one person to another through the years until it was written many years later. The Storyline method builds on this foundation with a very rigid planning structure, which the teacher knows but the pupils do not.

Each topic is made out of chapters that are linked together by the teacher. The teacher asks questions to lead the story on, but also participates in the pupils activities as an organiser and a helper. On the following diagram the circles are the chapters with the pupils activities linked together with the teacher.



A schematic diagram of Storyline (Bell 1990).

When a teacher uses the Storyline method it is necessary to make the beginning interesting and exciting so the pupils are willing to continue. The main point is that each pupil feels that he or she is a part of the story. When the teacher has started the story, the pupils will develop it by themselves and they feel that the story is theirs, although the teacher knows all the time the thread of the story because she controls the topic without the pupils knowing. The teacher knows what she wants to do and what the purpose is. However, the teacher must be open minded towards changes and suggestions from the pupils and to be able to react to unexpected events if they will improve the story. Because the teachers must be flexible in their approach and accept ideas from the pupils, this introduces risks for them. Hence there is the need to develop the framework as securely as possible to give teachers the maximum confidence.

2.4 Storyline topic outline

During the last few years a specific form has been developed for the layout of topic outlines (Bell pers. com. 1992). The Storyline topic outline has six headings (see form in appendix 1):

1. Storyline
2. Key questions
3. Activities
4. Class organisation
5. Resources
6. Product (learning/outcome)

Storyline

The first column lists the chapters of the story. The teacher has to be careful not to move far away from the Storyline in any chapter, otherwise the pupils might lose the Storyline (thread). One has also to be careful for the same reason that the chapters are not too long.

Key questions

The key questions are listed in column two and they are very important. The key questions are open questions, which cannot be answered with a simple yes or no. It is necessary to avoid teacher-pupil-teacher sequences in which a question about a matter of fact is followed by the answer from the pupil then to receive feedback from the teacher. There is much more to effective questioning than this and Storyline opens possibilities for effective questioning. If a closed question is asked in Storyline work and the answer is "I don't know" or "no" it can be the end of that particular topic, because the key questions and their answers must lead the story forward. The key questions begin often with "what ..., how ..., how do you think ...". There is not only one correct answer to a key question, however, usually the teacher has an idea about the answer (e.g. Vos 1992; Frame 1993).

Activities

The third column lists the pupils activities, and consists basically of the answers to the key questions. The activities are listed in the topic outline and are teacher-chosen. However, they are chosen in such a way that the pupils find the activities as a natural continuation of the questioning and the discussions that took place.

Class organisation

The fourth column lists the organisation of the class during the topic work. The pupils may work in small groups, individually or the class may work together as one big group. The organisation depends on the work being done each time. One of the purposes of the Storyline method is to let the pupils have the opportunity to work in various ways with different pupils from time to time, or individually.

Resources

The fifth column lists possible materials (paper, cloth, colours, etc.) or other resources (books, maps, etc.) which are needed for each chapter. In the beginning one usually lists the resources that are needed for the whole story, so this column lists only specific resources which are needed.

Product (learning/outcome)

The last column lists the product of the topic work, which can be assessed. However, one has to remember that the work performed during the topic work itself is not less important, and also has to be evaluated or assessed.

2.5 Working with Storyline

Although the Storyline method was developed as a teaching method, the contents of the topics are no less important. They should always deal with real problems. The topics can cover different time intervals, deal with real or imaginary problems, but the problems that one has to solve during the topic work are always a real problems. The Storyline method provides a good structure to integrate different subjects. During each topic study, various emphasis are put on different subjects, depending on the main theme of the topic. In topic work one must always take into consideration the aims of the curriculum and that the tasks for the pupils must always become more and more difficult as their topic work progresses. In the beginning the subjects are usually the child and it's surrounding, but as the work continues the subjects become more and more complicated and comprehensive. The main purpose in integrating in topic work is that the pupils are exposed to many different sides of human society (Letschert 1988).

Mathematics and mother tongue have for a long time been taught separately, but are of course a necessary and obvious part of topic work with the Storyline method.

"It might be reasonable to look at two different sides or "structures" of a topic. One can say that it has a "surface structure" and a "deep structure". The "surface structure" deals with the knowledge a topic is supposed to provide. A topic on traffic is for instance supposed to provide some knowledge about traffic rules, danger you are facing on the streets, what is good or bad with cars, buses, trains etc. ... In the "deep structure" of a topic are all kinds of factors not directly related to the subject of the topic. The teacher can however use the topic to develop these factors, some of which are very important for the child's development, both mentally and physically. These are factors like: Language, research skills, logical thinking, social development and motoric development" (Kristmundsson 1990).

The work performed during the topic study is therefore very important and gives the opportunity to practise and take a look at different working methods and social factors.

The Storyline method emphasises both the skill practice during the topic work as well as the content of the topic, and these two things go very well together.

This approach to topic work always takes notice of each pupil's stage of development. The main feature that distinguishes the Storyline method from other teaching methods is that at the beginning of a topic study the pupils examine what they know about that particular topic. They then share their knowledge with other pupils within the class. It is only after they have designed their own conceptual model that they then compare it with the real thing. (See examples in appendix 2).

The pupils must find out what they know about a particular subject before they analyse the real subject .

This is a key factor of the Storyline method and has the following advantages:

1. The teacher learns what the pupils know and can start the topic work based on that knowledge. The knowledge of each pupil is important for himself and useful for the class as a whole.
2. When the pupil has drawn or described something in another way, he has thought about it, made comparisons with other pupils and tried to remember and imagine.
3. When the pupil later meets or sees the real thing, whether it is an object or some circumstances, he knows what to look for. He can compare the real thing with what he made.

It could be argued that this is bad practice as it allows misconceptions to be created. Yet the sharing of understandings is a powerful technique. However, if the teacher feels at some state that the pupils are getting confusing or wrong ideas from their work, she always has the opportunity to correct them and lead them to the right track.

In this chapter I have tried to explain the main characteristics of the Storyline method, its origins and how it can be used. To sum this up the main principles of the Storyline method (Bell 1990) are listed in chapter 2.6.

I wanted to try out these principles to see if they were true and would work for me and my colleagues in Iceland. In order to do that I decided to initiate this case study. I used these principles as a working base to decide how I was going to organise my

diary and other work concerning my study. I decided to chose six of the principles (already mentioned in chapter 1) to put my main focus on, but had all of them in mind when collecting data for my study.

Those six principles were chosen because they include factors that I find from my experience as a teacher very important and I wanted to try to find evidence for. A part of the fact that I liked the idea of the Storyline method was that it includes these principles. Motivation is in many ways difficult to examine but at the same time very interesting because it plays an obvious role in learning. To teach subjects in an integrated way has been discussed in my school for many years. I had tried it to some extent before going to Scotland and found it so logical, but needed a structure so it could become as effective as I thought it could be. To use the pupils knowledge and experience to build on future work, I felt was an effective way of teaching pupils with different abilities. Organising the topic work in such a way that the pupils work in groups of different sizes or alone, I thought was a very good argument to meet the needs of the pupils and to let them practice useful working arrangements.

2.6 The following principles are basic to the Storyline Method

Bell (1990) has listed the main principles of the Storyline method and explained their meaning as follows:

"-It is learner-centred

One of the most important resources available to classroom teachers is the knowledge already contained in the heads of their pupils. Children's own ideas and prior experience provide the starting point for the topic.

-It is an active methodology

The pupils are actively involved in producing their own visual texts. The context created provides many opportunities for the children to use all their senses both in the exploration of their environment and in expressing their ideas about what they discover.

-It provides a high degree of motivation

The pupils feel personally involved in the creation of the storyline which is usually about a place that they have created and inhabited by people they have produced.

-It provides an extremely powerful structure for both teacher and student

Confidence grows when teacher and pupil regularly meet with successful outcomes. Pupils feel supported by the Storyline to which they constantly refer. Teachers can structure their activities based on a series of episodes arising from the same Storyline.

-It links basic skills with the real world

Working with the topic gives many opportunities for pupils to practise the same basic skills again and again without becoming bored. In addition, it demonstrates a relevance to children's reality which provides proof of the general usefulness of these skills.

-It provides a forum for dealing with the more difficult, 'extra' aspects of the curriculum

When children create an imaginary environment and inhabitants with whom they identify, questions often arise in the sensitive areas of values clarification, substance abuse, family relationships, politics, etc. These issues can be addressed in a non-threatening manner through role play, as very often the children adopt the personality of the characters they create.

-It encourages feelings of mutual respect between teachers and students

The teacher has a plan in the form of a Storyline but the plan is only brought to life through the work and imagination of the pupils in the classroom. The teacher's role is one of collaborator, working in partnership with the learners. The children depend on the teacher for leadership and the teacher depends on the pupil's work and participation to carry the story forward.

-It gives relevance to the use of up-to-date technology

Teachers often feel threatened by their lack of knowledge and experience in the use of calculators, audio-visual equipment, computers and word processors. Within the context of a topic, these resources can be seen to be of real value. Frequently, this recognition is initiated by the pupils and their use produces more confidence and more skill through practice.

-It helps teachers to provide the correct level of difficulty for each student in the classroom

The children's involvement in producing their own visual text and participation in the accompanying language development activities give the less able pupil tremendous support. Due to the open-ended nature of the problem-solving episodes, the more able pupils benefit from the opportunities to work at higher levels of thinking and development.

-It provides many relevant opportunities for co-operative learning

In order to achieve success from a planned activity within a topic study, the teacher relates the number of children involved with the desired outcome. Is it a job for individuals, pairs, small groups of three to five, or would a half or whole class organisation be more appropriate? The variety of activities produces reasons for a range of work groupings.

-It provides a pattern which is repeatable but ever-changing

An important variable in Retention Theory is practice. Planning appropriate amounts of meaningful practice is a challenge for any teacher. The topic study provides a vehicle which maintains a high level of interest while presenting the frequency of opportunities needed for effective skill practice.

-It fits easily into language arts/social studies curriculum

The Scottish primary school curriculum is based on the notion of a spiral which starts with a narrow diameter at the early grades with topics of immediate relevance to the early learners such as me, my home, my family. The spiral gradually widens to topics which encompass the learner's community. In the upper grades, topics include the study of other countries. It is easy to develop topics which fit into this pattern, i.e. The Oregon Trail or Cruise to the Mediterranean.

-It emphasises the importance of encouraging the children to develop their own conceptual model first

The Storyline Method recognises the limiting effect that direct observation at an early stage of a study can have on the children's ingenuity and imagination. When a group of pupils is asked to design a shop front, for example, the visual they create is their conceptual model of what they think that type of shop should be. Having completed their visual, they visit a shop of the same type in their locality. The quality of such a visit after all the thinking that has had to be done is qualitatively richer. The children have all the questions ready. They know what to

look for and are often surprised by what they have forgotten to include in their own visual. They may also think that their own end product has many qualities not apparent in the real thing.

The alternative and perhaps more traditional strategy is to visit the shop first and reproduce what the children have observed after the visit. Supporters of the Storyline Method argue that visiting too early in the study provides easy answers for the questions children have not yet been challenged to ask. The variety of possible answers is limited and prevents children from using problem solving skills in a relevant manner" (Bell 1990).

3 Methodology

3.1 Case study

In order to clarify the principles of the Storyline method I chose to do a case study, which is primarily based on observations of my own class of ten year old children. It is mainly about the class working on the topic The New Settlers (Eiríksdóttir 1993b) from September to December 1993 and also, but not nearly as closely, about the same class working on the topic “Icelandic Natural Phenomenon“ (Eiríksdóttir 1994a) from February to May 1994.

3.2 Why a Case Study?

The case study approach was chosen because it provides an attractive method for observing how the children react, behave and learn. Children are not so good in describing with words what they like or dislike. Case studies have many advantages for researchers in education as described by Cohen and Manion (Cohen & Manion 1989):

"1. Case study data, paradoxically, is 'strong in reality' but difficult to organise. In contrast, other research data is often 'weak in reality' but susceptible to ready organisation. This strength in reality is because case studies are down-to -earth and attention holding, in harmony with the reader's own experience, and thus provide a 'natural' bases for generalisation."

I liked the idea of a case study of a regular class in an ordinary school that most likely has different pupils. I feel that way the results will be very practical and useful for me and for other teachers.

"2. Case studies allow generalisation either about an instance or from an instance to a class. Their peculiar strength lies in attention to the subtlety and complexity of the case in its own right."

I think that by doing a case study in my class and my colleague's class the results can tell us some useful things about how effective this method can be when used in other classes.

"3. Case studies recognise the complexity and 'embeddedness' of social truths. By carefully attending to social situations, case studies can represent something of the discrepancies or conflicts between the viewpoints held by participants. The best case studies are capable of offering some support to alternative interpretations."

This case study can also tell us about the behaviour of the pupils in different situations which helps us to understand them and hopefully adapt our teaching methods to each pupils ability.

"4. Case studies, considered as products, may form an archive of descriptive material sufficiently rich to admit subsequent reinterpretation. Given the variety and complexity of educational purposes and environments, there is no obvious value in having a data source for researchers and users whose purpose may be different from our own."

I would like this kind of description of my use of Storyline because it will be useful for staff development in Iceland.

"5. Case studies are 'a step to action'. They begin in a world of action and contribute to it. Their insights may be directly interpreted and put to use; for staff our individual self-development, for within-institutional feedback; for formative evaluation; and in educational policy making."

My use of Storyline is not pure research. I see this case study as a way of promoting what is, in my belief, a good methodology.

"6. Case studies present research or evaluation data in a more publicly accessible form than other kind of research report, although this virtue is to some extent bought at the expense of their length. The language and the form of the presentation is hopefully less esoteric and less dependent on specialised interpretation than conventional research reports. The case study is capable of serving multiple audiences. It reduces the dependence of the reader upon unstated implicit assumptions . . . and makes the research process itself accessible. Case studies, therefore, may contribute towards the 'democratisation' of decision-making (and knowledge itself). At its best, they allow the reader to judge the implications of a study for himself."

I think that the results of this case study could be accessible for primary school teachers and other educators and also for school authorities interested in finding effective teaching methods.

3.3 How the study was done: An overview

I wrote a diary about the first topic and took notes about the second one and I collected a portfolio of the pupil's work and kept a photographic record. The class also answered a questionnaire about how they liked working on the topic The New Settlers.

The three ten year old classes in my school (among them my own class) took an achievement test that had been prepared on the same subject (Icelandic history) for pupils studying this subject the previous year.

In order to get more width in this study I had one of my colleagues write a diary about his seven year old class working on the topic "The Dinosaurs" (Eiríksdóttir 1994b) from January to April 1994.

All the other class teachers in my school (13 in all) were also willing to try to use the Storyline method last winter if I helped them with the work and wrote the topic outlines they used. Nine of the teachers had been on a short Storyline course with Steve Bell in Glasgow in the spring of 1993 the other four I helped out. After the first topic I had some of them answer questions about the work. In May all the teachers in the school had a special meeting about the Storyline method, how they liked to use it and the method's advantages and disadvantages. This was discussed in small groups first and then all together. All winter I got many comments from my colleagues and I also visited their classes and went to one of their parent's evenings. I took a lot of photographs of the pupils and their work throughout the school.

Still to get a better idea of how effective the Storyline method is, and because parents are so important in the educational process, I had the parents of my class answer a questionnaire about the work with the first topic, The New Settlers. In addition I and my colleagues also recorded many remarks from parents in the school.

4 How I did the research

4.1 Preparation

I started by visiting my head teacher to describe the intended study. He gave his permission and told me I had to get an authorisation from The District Office of Education to do a study like this. This I did and was told that I needed the parents agreement too.

I chose a class with eighteen 10 year old children. In collaboration with my two colleagues teaching the same age group in my school I decided what topic to use. We decided to do the topic The New Settlers. It is about the first people who came from Norway to settle in Iceland in the ninth century. This material is a part of the curriculum for this age and a Storyline outline (topic outline) about this material had already been written (Eiríksdóttir 1993b).

At the beginning of the term in early September, I called a meeting with parents and asked for a permission to do this study. Then I explained the methodology and gave them a chance to ask questions. They were interested and gladly gave their permission. I also informed them that they were asked to note their children's response to the topic work and to help to evaluate their work at the end of the term.

4.2 My class

The class is in a school named Kársnesskóli in the town of Kópavogur with approximately 20000 inhabitants which is more or less a suburb of Reykjavík. There are about 370 pupils in the school from the age of 6 to 11. The school is 37 years old and has kept many of the same teachers for many years. The facilities for the school are average for schools of this age and size.

The class consists of 18 pupils born in 1983, 9 girls and 9 boys. It is unusual in many ways for classes in primary schools in Iceland, and rather small for a class in a town. It has unusually many pupils that are special in many ways, but also many “regular” pupils. (See details in appendix 3).

The class is for me rather unusual although I have been teaching for 17 years (often two classes each year). At the beginning there was great conflict between the boys and the girls, especially from the boys point of view. For them to work with girls in a group was terrible. They listened badly to each other and there were a few boys that wanted to talk all the time during the discussions. The class as a whole is a little below average in intelligence, but there are individuals who are very good at everything.

As a group they gradually got much better over the year and it was totally different to work with them during the second topic after Christmas than The New Settlers which I wrote the diary about.

4.3 Using Storyline in my own class

I used the Storyline method to help my pupils to learn about Environmental studies. It is a tradition in many schools in Iceland to have the ten years old children learn about the settlement of Iceland and Icelandic nature, how Iceland was formed and about animals living in the country. I and my colleagues decided to start with an history based topic about The New Settlers of Iceland. Usually I worked on the topic three to four times a week from twenty minutes to two hours and tried to integrate teaching mother tongue (Icelandic) as much as I could, especially writing and reading. I followed the Storyline topic outline The New Settlers very closely (see appendix 4), but made some minor changes. Throughout the project a photographic record of class development was kept and a portfolio of pupils work collected. By keeping a photographic record it is possible to see the pupils working on some of the products they made and how the work developed. It is also possible in some cases to gather information about the group work and how active individual pupil is. It is interesting to look at the portfolio, e.g. to compare the work with previous work of the same pupils and with work from other pupils, to see the pupils development in their work and how different abilities of the pupils appear.

In the last week of the topic work I had my pupils take an old test from the previous year based on the same subject (Icelandic history). They did not know about the test beforehand. This was only done for us to see if the pupils knew the facts that had usually been required before. Test was not designed as part of the Storyline method. It was used because it was on the topic being taught and would allow comparison with the more traditional means of teaching. Because it was not specifically designed for this Storyline case study, it may under-estimate the benefits of the approach.

At the end of the topic work a parents evening was held at which the pupils told their parents about a lot of what they had learned during the topic work.

The day after the parents evening, the pupils answered a questionnaire (see appendix 5). This was done in school and took a short time only.

4.4 The method of keeping my diary

Keeping a diary was a good way to record what happens from day to day (see appendix 6). It also makes it possible to see if any changes have occurred with time, if there are some incidents that occur again and again, if the teacher can see different

reactions to different ways of teaching, how individual pupils change their behaviour and how the behaviour of the whole class and or smaller groups develop. The diary was helpful because reading it later enabled me to recall the context of the work better than I could have if I had relied only on my memory.

The system I used for writing the diary was as follows:

1. I wrote down what was done during the lesson, the material that was covered, how it was done and often how it went.

2. I wrote about the six principles I had chosen especially.

- It is learner-centred

I wrote down if the pupils had answers to my key questions and then if they used their knowledge to work on different projects which we did afterwards. I was curious to find out the link between those who came forward with many good ideas in the discussions in the whole class and the quality of the work they did connected with those ideas.

- It provides a high degree of motivation

I wrote down everything I found to clarify if the pupils were interested in the work or not, about the whole group, individuals and smaller groups at work.

- It provides an extremely powerful structure for both teacher and student

I examined if the structure was good to work with for me (the teacher) and how it seemed to fit the pupils as well.

- It links basic skills with the real world

I wrote down activities of the pupils, like writing, reading, listening, drawing and other related activities and other things like drawing conclusions, finding arguments for and against.

- It provides many relevant opportunities for co-operative learning

I wrote down in what group sizes the pupils worked from time to time to see the balance between individual work, group work and the whole class working together. Also I noted how well they worked in a group and the difference between the groups in the class.

- *It emphasises the importance of encouraging the children to develop their own conceptual model first*

I wrote down every time where I felt this principle was working.

3. Finally I sometimes wrote down comments about the work in general, individual pupils, incidents or whatever I found interesting.

In the whole there were 37 entries in the diary about lessons from 20 minutes to 2 hours. The first entry was on the 8th of September and the last entry was the 30th of November.

4.5 The other class

The other class consisted of 14 seven year old children. This is an unusually small class, but was not chosen because of that. It was chosen because the teacher was willing to be part of this study. The class teacher used the Storyline approach and he used a topic Dinosaurs, which is the one I have written about (Eiríksdóttir 1994b) (See a topic outline in appendix 7)

The teacher kept a diary (see appendix 8), as requested by me. The first entry is the 11th of January and then there are 25 entries until the last one, dated the 27th of April. In the diary he wrote about all the principles selected for the study. However comments on them were all combined together and not kept separately as in my diary. His diary describes what the pupils were doing and how it went, and he also remarked on different aspects of the work that he thought were interesting.

By having my colleague write this diary I felt I would get evidence to compare with my diary and also I found it interesting to see if the Storyline method would work for a teacher that is not as involved in this “work“ as I am.

4.6 Consulting with parents

At the parents evening, the parents were asked if they would answer a questionnaire and this was passed out before they returned home (See appendix 9). Most of the questionnaires came back the following day and 100% of the families answered within a few days. I was curious to know what the parents felt about this kind of work ,which was new for most of them, and if they thought it was a feasible method for their children. I also thought it was interesting to know if the children talked about their topic work at home and what they said. If they did it gives us reasons to think they are interested and active or at least that they have some opinion about the work, and are not passive which is the worst.

4.7 Introducing Storyline into every class in the school

In addition to the above it was decided in my school that every class teacher (14 teachers and myself) would use the Storyline method during the winter 1993-1994 and do at least one topic. However most of them did two topics.

As mentioned earlier many of the teachers of my school participated in a short Storyline course in Glasgow and visited some schools there in the spring of 1993. After the course and during discussions in and out of school it was decided to have a meeting before school started in the fall of 1993. The conclusion of this meeting was that the teachers wanted to try to use the Storyline method, because they liked what they had learned about it in Scotland, and they felt they had some help during the work because I was there willing to advise and write or translate and adapt topics that would fit to the curriculum. They also had my guidance book to read (Eiríksdóttir 1993a). A few days later I had a short course in one of the topic outlines in the guidance book *New Neighbours* (Bell 1993) which was going to be the first topic in three age groups with different emphases (see topic outline in appendix 10). After that I met the teachers from each age group where we discussed the topic they had chosen, if it was available and/or brainstormed an idea for a new topic that needed to be written.

In the autumn I was hired by the school for few hours a week to be an advisor and helper for the teachers. I followed their work from time to time and we had regular meetings. I visited their classes and took a lot of photographs. The teachers told me about the work and gave me much valuable information. When the teachers had finished working on the first topic I asked them to answer some questions concerning whether they thought the six principles I had chosen specially had worked. I thought it would be valuable to read their comments. In the spring all the teachers in the school had a meeting and discussed the advantages and disadvantages of using the Storyline method. They also discussed topics and the need for more Icelandic topics. At the end of the meeting it was decided to continue on the same track next year. All this work gave me valuable information about how the Storyline method worked for an “ordinary” Icelandic primary teacher and what needed to be done to make the method more attractive and effective for them.

5 The topic work

5.1 Teachers preparation

Before teachers teaching the same age group started on a new topic they read the whole Storyline outline through and discussed the work. Almost every week the teachers (three or four) would meet and look at the plan and discuss and prepare the work. Often they would divide up some of the work, like finding references, finding material and so on. They also discussed ideas of how to do some of the things mentioned in the Storyline outline. Even though the classes were at about the same place in the work it was often the case that one teacher would be a little further ahead and then it was possible to look in her classroom to see the work and discuss whether that was the “best “ solution or if she had learned that it might have been better to do it in another way. I went to those meetings from time to time and sometimes because the teachers wanted to discuss something special. I also encouraged the teachers to look into the other classrooms. I think a teacher can always get some ideas from their colleagues, because no two come to the exact same solution. All the teachers found this working procedure very helpful. Similar arrangements have been used with other preparations in previous years and the experience has been good.

I was teaching two age groups, a ten year old class as described before and a seven year old class. (I did not teach all the lessons in that class). In these two age groups we had the working methods as described before, but I was often the teacher that was a little ahead. This was because I had naturally thought more about the topics, because I had written them and also some of my colleagues found it convenient to have me do it first. The rumour was that it was good to have me make all the mistakes, then they could do it "right", but truth was that they could do it but liked to discuss it first with me or other colleagues. I found the weekly meetings very helpful and got a lot of interesting ideas from my colleagues. We would not only discuss the work during those meetings, but at any time in school. It very often happened that an excited teacher would come down to the teachers' room with some pupil's work to show and discuss.

There were many interesting discussions about “teaching“ in the teachers room this winter and the teachers were very interested. I am sure there were factors that influenced this. Probably something like this: Most of the teachers were ready to change and this was a good opportunity. (The visit to Glasgow and my interest came at the right moment). They liked the method, but were not sure if it worked. The work was not as difficult as many feared in the beginning. The children were

interested most of the time. They had a good plan and knew where the work was going. They could get help if they needed it. They got positive response from the parents. Teachers in other schools whom they told about the work showed interest., and the classrooms were filled with exciting work on the walls and so on.

5.2 The pupils knowledge

Before starting a new topic we discussed the beginning closely, because the beginning is so important. If it is possible to make the pupils interested right from the start it helps. In The New Settlers' topic I started by reading about West Norway in the ninth century for the whole class. This was done because we felt that they needed some background information before it was possible to start to ask key questions. We sat together on pillows in one corner of the classroom. Discussions most often took place in those circumstances, because I felt it was better to get their full attention and it helped to ease the conflicts between individuals in the class having to sit close together. By doing this so often and regularly I was also convinced about how important it is not to have those discussions too long, 5-15 minutes. This is no new truth, but confirms it further. In The "Dinosaurs" topic we started with a key question "*Which big animals do you remember?*" and brainstormed with the pupils after that, hoping that one suggestion would be dinosaurs, which was the case in all three 7 years old classes. If that had not happened the teacher was ready to ask more questions to lead to the dinosaurs. In Halldórsson's diary from the 11th of January he comments: "The knowledge of the pupils came as a pleasant surprise, even though I knew that much discussion had taken place in their surroundings the last year or so, but I did not realise that such young children would comprehend this material so well." Other topics started in a different way, with a letter, with a part of a poem, but many with some kind of a brainstorming. Every chapter in the story starts in a similar way to that described and the start leads to the pupils activity, which varies concerning the subject or task. It is also deliberately varied by the person that makes the Storyline outline to fulfil the principles of the Storyline method.

When we get the ideas in the brainstorming process we get information about what is in the heads of our pupils and knowledge of how to continue. Also the pupils get their opportunities to communicate what they know and to be experts for a little while. It is also the case that their knowledge is often on the level that fits the other pupils in the class in the same age group. All the teachers in the school were surprised to discover how much abstract knowledge their pupils had. Teachers working on a topic about Japan with nine year old children were amazed how much

they knew about this faraway country. Evidence from my diary shows that only once on the 5th of November did I write: "No one in the class knew any answer to this question." The question was: "*Do you think there were any inhabitants in Iceland before the Norwegians came?*" It is a difficult question because only vague knowledge exists about Irish monks staying in Iceland prior to the Norwegians. Part of the difficulty comes from the fact that this is a very specific question for which there is (should be) a factually correct answer. It is not a typical Storyline question, and pupil's failure to answer is probably not at all significant. Apart from this question, someone always had an answer, maybe not the best answer, but some idea that the class could continue to work on.

From Halldórsson's diary of 9th of March is this example of a brainstorming and how it develops:

What is the neighbourhood of the dinosaurs like?

The children said: Plants, people, palm trees, trees, animals, grass, an eruption, water, cars, a cave, straws, a nest, eggs, mountains, birds, nature, a volcano, huts, mud and flowers.

After the brainstorming the children were quick to sort out things that they thought were not appropriate. They said no cars and people and then after that . No people no huts.

From my diary the 15th of September:

When making the farm in West Norway it was obvious that the pupils could not comprehend at what time the story was happening. The pupil making the slaves put them in striped clothes. Another pupil came to me and asked if I could tell the other pupil that slaves had not worn striped clothes. Instead, they had worn simple woollen clothes in natural colours.

From my diary the 22nd of September:

I and pupils red together in the textbook description of how life was in West Norway in the ninth century. Then we compared our frieze to the description and found that our farmhouse was not quite right, but everything else was basically correct. The pupils liked this way of comparing their work to the "real thing".

Similar processes to that described happened frequently in my class as can be seen from my diary. Even though the pupils mentioned something that was wrong in the beginning they very often corrected it themselves or with the help of their classmates.

Evidence from my diary shows that in the beginning it was often the same pupils that raised their hands in the brainstorming sessions, or even shouted out their ideas. Also

there were a few that used the opportunity to show off by mentioning far out things that everyone knew were wrong, but the intention was to be funny. This behaviour changed quite quickly and more and more pupils took part, sometimes with my encouragement, and they learned to raise their hands before speaking most of the time.

The seven year old class I taught was so perfect in this process that it was almost too good. The only thing was that there is a little girl in the class who is a late developer and she had difficulty in concentrating and therefore did not take much part in the discussions, but I found out afterwards that she knew some of what we had been discussing.

5.3 The pupils activities and interest

Most chapters in a Storyline outline begin in a similar way as has been described here. After the beginning follow the activities of the pupils. If we can manage to get them interested in this starting process they begin naturally the activities, but even if this is not so the pupils often find the activities interesting when the teacher has described them. The activities vary, but usually they are: To draw or make something, write about the subject, discuss in small groups or a mixture of two or more of those. Teachers know when the children are interested. Some signs are e.g. if they work well and do it with some enthusiasm and also if the work is somewhat original and of good standard concerning their ability. From the photographic record it is possible to see signs of their enthusiasm (See appendix 11) also from their workbooks it is possible to see interesting work (See photocopied examples in appendix 12). The teacher also notices interest by the pupils behaviour, their concentration and endurance. The pupils remarks are also very interesting and tell us a lot, because most children say what they think.

From my diary 10th of September 1993:

Most of the pupils were interested, some were occupied by the person sitting next to them. Not used to sit like this yet.

From my diary the 29th of September 1993 there is more evidence to support this interest:

The children were so interested, that they themselves asked when we would continue.

From my diary the 8th of October 1993:

Everyone interested. The first thing they asked in the morning was if they could continue the topic work now.

From my diary the 25th of October 1993:

They liked the idea of writing a diary. Most of the pupils wrote a rather long piece without me pushing. A few asked how long it needed to be. It is still apparent how uncomfortable they are in working together.

From my diary the 19th of November 1993:

The pupils were interested to hear stories about the old Nordic gods from me and their classmates.

Out of thirty seven entries from my diary seven times I report that all pupils were very interested. Twenty three times all pupils were interested and seven times I report that all pupils except two or three, most often the same ones, were interested. The lessons where all except two or three pupils were not interested took place during the first month of the topic work.

After reading all the comments in the diary relating to whether the children were interested and motivated to do topic work the overall feeling is that they were interested and liked the work. This I judge from their questions about the work, remarks they made and how they behaved and worked during the topic. I get similar feeling from Halldórsson's diary. He remarks on how willing they were to work; how pleased they were with their work; how much fun they had, but he also remarks in two places (9th and 22nd February) that the work is going rather slowly.

From Halldórsson's diary the 11th of January 1994:

The children said that this had been an entertaining day and they did not want to stop and go home.

From Halldórsson's diary the 15th of March 1994:

It was a proud group of pupils and their teacher that looked at their finished frieze on the wall today.

5.4 The pupils co-operation

In the Storyline outline there is a suggestion about class organisation. The organisation considers the grouping that would fit the activities. Most of the time the teachers would follow the outline, but if they thought another arrangement was better they would change it or it could be that pupils would ask if they could work in pairs when the outline said individuals or groups or the other way around and then it is the teacher who decides because she knows the circumstances and her pupils.

To be able to work in different situations with different numbers of people and also by yourself is important in preparing a Primary School pupil for further education and for any kind of work after that. People have their preferences in how they prefer to work. By trying to vary the grouping and other work situations as is relevant for the work being done, those who use the Storyline method try to meet the needs of everyone, but also to let them practise being in work situations that they are not as fond of. Such situations often occur when pupils have not had practice in working in them, e.g. in groups.

Evidence from the 37 entries in the diary shows that the pupils in the class worked:

16 times as individuals, at least part of the time they worked on the topic that day.

5 times as pairs, at least part of the time they worked on the topic that day, but they also often help each other in pairs when they are working as individuals.

20 times in groups at least part of the time they worked on the topic that day.

18 times as a whole class at least part of the time, then the teacher is the leader in the big group.

This class had many difficulties in working together in groups or as a whole group in the beginning. (See appendix 3 for information about the pupils). The reasons for this are many:

They were not used to this kind of topic work.

They had little practice in group work.

They were not friends, especially not boys and girls.

There are very strong individuals in the class that want to have things as they want them, and do not like compromise.

There are two individuals that have great difficulty in working with others for different reasons.

Some of the evidence on which these conclusions are based is to be seen in the following diary entries about group work.

From my diary 14th of September 1993.

Why am I doing this? If this method works with this class it must work!

From the same day:

The class worked in groups. Did not go well. They are not at all used to working in groups and have difficulties in working together. Everyone wants, to do it their way no one wants to give in.

From the diary 22nd September 1993

All together in a big group. Discussions go a little better now.

From the diary 12th October 1993

The class worked in groups and in pairs and as individuals where it was appropriate. Group work goes much better now than in the beginning.

From the diary 13th October 1993

Some of the groups worked very well. When they prepared for telling the others about the ship it was interesting to see whom they chose to do it. This went well, no arguing!

It was interesting to note that it was not the most dominant pupils who were chosen to talk, but rather those that worked well and therefore knew most. Somehow the others in the group knew that.

From the diary 27th October 1993.

They are working better and better together. Probably important that they work in the same group for some time. Some are too bossy.

From the diary 4th November 1993.

They were very patient and did not criticise each others drawings.

From the diary 5th November 1993.

The co-operation was very good in one group, and good in two more. They were kind of bored in one group (they had a very difficult individual) and one group has been a problem the whole time, but is getting a little better.

From the diary 24th November 1993.

Co-operation in pairs went well except one girl was not satisfied with what her partner did.

As can be seen from those quotations the co-operation was not easy, but it gradually and steadily got better, because they worked like this two to four times a week for three months. This is very important. It has been more common in Iceland to do topic work in periods, probably one week at a time once or twice a year and then the whole school day. Then they do not get used to this kind of work and e.g. group work does not develop effectively, because this is not a “normal“ working situation. By doing it several times a week as is done using the Storyline method the pupils learn to work this way and find it natural. This same class worked on another topic from February to May and I could see the difference when we started the second one. They had learned a lot. Their co-operation was much better.

It is important to notice that pupils sitting in a group are not necessarily working as a group. Sitting in a group does not mean that the pupils are working in a group. They could all be working as individuals or pairs. So when I talk about group work it is about the pupils working together as a group. Evidence from the diary shows that pupils of this age like to work in pairs and the group work goes well in small groups of three or four. If there is a bigger group the teacher has to be the leader.

Halldórsson makes an interesting comment in his diary from the 18th of January:

Also there came an opportunity to refresh the rules in group work. Not all agreed which dinosaur they should draw in the beginning and statements were made like “I am going to.....“ and complaints about: “He absolutely want's to do it this way....“. When I asked what should be done when everyone did not agree they remembered that then they should take votes or discuss the matter until they came to a common agreement. Also that in a group everyone works together or decides to divide the work between group members. It was a pleasure to see that they have learned this in their previous topic work before Christmas and this made the work much easier now.

5.5 The Storyline topic outline

Why is it important to have a structure to work from? Is it not better to be spontaneous and do what you think fits the circumstances from time to time? Can we be efficient working like that? I think most teachers like to be effective and use the time at school as well as they can, but they like to have some room to use ideas from the pupils and circumstances that come up. I think the structure involved in the Storyline outline includes those factors. The Storyline outline is a framework.

From my diary and Halldórsson's diary I can see that from the teachers' point of view the structure was very good. At random I also asked half of my colleagues this question: *How do you like this structure (Storyline outline) to work from?* This was not intended to be a part of the study, but their answers are interesting.

These are the answers:

- Very good.
- I like the structure to work from and I find it getting easier as I get used to this system.
- Very good and it gets better as the teacher gets more experience and skill in working a little differently from what she is used to.
- This structure is very good for me and it is fun and really very easy to use the Storyline outline.
- I like the structure and find it good to work after. My main problem was to become involved in all the families the pupils had made and be able to discuss their family life.
- From my point of view very good. We talk about that school work should be moved closer to the children's experience. Even though the topic is new the story is the pupils story and is therefore theirs.
- I find this structure good to work from. I think the better the structure and description of what the outcome should be, the better for the teacher to use it effectively.

This structure is good for teachers because it helps them to prepare and organise their work so it becomes as effective as possible. It is easy to see what is going to be happening next week or even further on and this gives the teacher a lot of time to think about the work and to be prepared. The work has been organised from the beginning to the end which gives the teacher an extensive knowledge of the whole, like a package. The structure is not so rigid that the teacher cannot use good ideas that come up, or incidents that happen.

As a guidance teacher for my colleagues last winter I found that they liked the structure (the Storyline outline). When we were deciding on a new topic they found it much easier to start to work on it if I wrote it in this form. Because it was the same structure they were using again with a totally different topic, they felt secure with it and it helped them to work in a different way from what they had previously done. There are examples from my classes which indicate that pupils like this structure too. I have heard from my pupils that they feel that a topic has finished. Once they asked after a parents evening: "When are we taking the frieze down so we can start a new topic?" Another time a frieze had fallen down from the wall before we had taken it down after having finished the topic. I asked if we should put it up again. The class said: "No, we have finished it". Pupils also often ask if we are going to do something which is a part of the structure next, although they do not know the structure at all.

5.6 Practising basic skills

One of the factors that is important in all school work is to practise the basic skills like math, reading, writing, listening, discussing, drawing, reasoning, putting yourself into others situations, researching, grammar, spelling and many more. To practise a skill needs repetition. The difficulty is to provide this without it becoming boring.

Evidence from my diary shows that there were many opportunities to practise basic skills in many different ways during the topic work. Every week the pupils would read in various books both poetry and stories about the new settlers. We used the textbook (Landnám Íslands, Sigurgeirsson et al. 1982) that we have as a reference book and the pupils would often read at home about what we had been discussing and learning about at school the previous week.

22 times the children practised their talking and listening skills.

This included:

- taking part in discussions in a big and a small group
- standing up and talking to others in a rather formal way
- explaining what they were doing
- supporting their actions or opinion with arguments
- listening to others in a big group and a small group

This was done for various reasons. The activities included e.g. Telling the class about a known settler in Iceland who they had read about and had to stand up and tell the others about him. The family group (three or four pupils made a family that

moved from Norway to Iceland) told the others in the class about their ship and the route they thought was best to take. The family group had to support their choice of land in Iceland. All the class took part in brainstorming. All the class took part in discussions. The groups had to discuss what they needed to take with them from Norway and listen to poetry and stories about the settlement.

14 times the pupils had to draw, colour, use scissors and glue, plan a project. This they did alone, with a partner or in a group.

15 times the pupils wrote something. This included:

- writing a report
- writing a poem
- writing a draft and then making a fair copy
- writing a description
- writing a summary
- writing a conclusion of group discussions

In all this writing they have to think of spelling and the teacher uses the opportunity to teach them rules about spelling. I find it much easier to get them to think about spelling when they are making a fair copy in their work book when they are writing about something that is relevant for them at that time rather than a spelling exercise that has no meaning for them. This is also true for writing. They like their workbook which they are organising themselves to look nice and therefore are willing to write carefully. Integrating - as far as possible - mother tongue teaching with environmental studies has been seen to provide an effective way of teaching both. It also seems that, with practice, teachers can get good at such integrated teaching. On one occasion, I was teaching my class about nouns and I asked them to look at the wall where all the topic work was on display and try to find as many nouns from there as they could. Afterwards they read out loud their lists and I and the class checked if they were nouns and if they were off something on the wall. During this work the following conversation took place. The first pupil said the word: "book" another said: "There is no book on the wall". The first one answered: "It is inside the house". The second one said: "There were no books in those times". That is true and these discussions were very interesting and showed good reasoning and understanding. Then we continued to work with the nouns we had found. Doing grammar in this or a similar way gives the grammar a different meaning than if the words are from a textbook and not relevant to what is happening. This is even more important when we want the pupils to write short or long reports or stories. If it is

connected with the topic it is so much easier for them to write and they use more varied vocabulary. They are also better motivated to write and sometimes they do it just because they want to. This can be seen in their work book. In the topic work with my seven year old class it was remarkable to witness how interested they were to write stories about the dinosaurs. To see those pupils that could not write or read easily make stories with complicated words was very rewarding. I can say it was far from easy for them. They really had to make a serious effort, but they wanted it themselves and that is the key I think. All three seven year old classes made the diaries of the dinosaurs that were published and each pupil got a copy (appendix 13). We use our mother tongue to talk and write about something relevant in our life and why should we not try to teach it in a similar way? In the topic about the dinosaurs there was much work with math included. There was e.g. to try to find out how big and heavy those animals were compared to something they know. A dinosaur can be as big as a four storey house or a man or as heavy as 80 cars, 12 elephants or a child. Questions like: How much do they need to eat? How big is a tyrannosaurs' footprint? and many others needed to be answered. All this helps them to understand proportions and gives numbers real meaning.

5.7 Building conceptual models

One of the interesting factors that is stressed in the principles of the Storyline method and one of the things that got me very interested is to have the pupils build their own conceptual model before they see or hear about the real thing. Most teachers do this from time to time and have always done, but I am not sure if they have thought of how good and effective it is. After I started using the Storyline method in my teaching, not just in the topic work, I have had the children build their conceptual model first when possible. So the method has helped me and other teachers to be more aware of this and use it effectively. This we discussed in the teachers' room often last winter. One example we discussed: A teacher comes in and says that the local pastor had come to talk with one of the six year old classes. The pastor told them about the Sunday school. After he left the classroom a pupil asked the teacher if this had been the head teacher. They are both men and dressed in a suit. The visit was something the pupil was not prepared for and he did not listen carefully. The pupil did not understand what the pastor was saying. If the teacher had asked the pupils first what a pastor did and then had short discussion about his job the pupils would have been more ready to listen to the pastor when he came. This situation could not be repeated to prove it but here comes an other example:

Last year there was what was called a "green winter " in my school. Everyone was learning about aspects of conservation of nature. I was going to show my seven years old class a video about pollution. Before I did that I decided to ask this question, which is difficult for that age: *What is conservation of the world?* I did not really expect an answer, but many had ideas and one could explain it as a grown up. After five minutes discussion or so we went to see the video. I am sure by then the children were much more ready to look at the video and comprehend the messages that were in it. It is also a good feeling for the pupils to find out that what they know is important. They become positive and interested and therefore they learn. When we ask first we also know what the pupils know, and can in that way decide what key question should be asked next.

When working on the topic The New Settlers the pupils were going to make the farmhouses on the new land, they were asked how they thought the farmhouses were in those days. In this particular lesson we did it so, that the pupils with ideas came up to the blackboard and drew farmhouses on the blackboard. So in the end we had many suggestions on how they might have been and arguments had been given for why the house had been so or so. After some time they went to look at pictures of houses from the ninth century in books.

This comment is in my diary:

It was obvious that they looked at the pictures of the farm houses very closely and with some enthusiasm after having drawn a farmhouse built on their own ideas. There it is clear how good it is to have them build their conceptual model first.

When they made the house afterwards it went well and they knew what to do.

The pupils wrote a diary about their person sailing to Iceland. The following day they read it out for the others in the class and we all discussed how probable their account was. They listened well to the other diaries and we had very interesting remarks and discussions.

They wrote down ideas in groups about what the new settlers ate on the way to Iceland. One of the things they suggested was that they had fished and therefore always had enough to eat. They thought they would cook on the way and therefore they would be able to slaughter animals on the way, because it is difficult to keep food fresh. We found out that the settlers did not do it this way. They did not use fire on the ships and could not cook. The pupils listened, surprised by the facts from the books, but felt that their ideas were better.

When the seven years old were discussing what the difference was between dinosaurs that ate other animals and those that ate grass and leaves they were asked

to draw their mouths. They made good drawings and then looked into several books to see the specialists' ideas. They were glad to see that they were right.

It seems to me that when the pupils build conceptual models, these models are really hypotheses and are recognised as such. The children do not believe they have found the truth but that they have set up questions/hypotheses that will enable them to discover the truth.

6 Questionnaires

The evidence from the questionnaires are interesting in many ways and support the evidence from my diary and that of Halldórsson's diary in the other class.

By looking at results from the first pupils question (Figure 2):

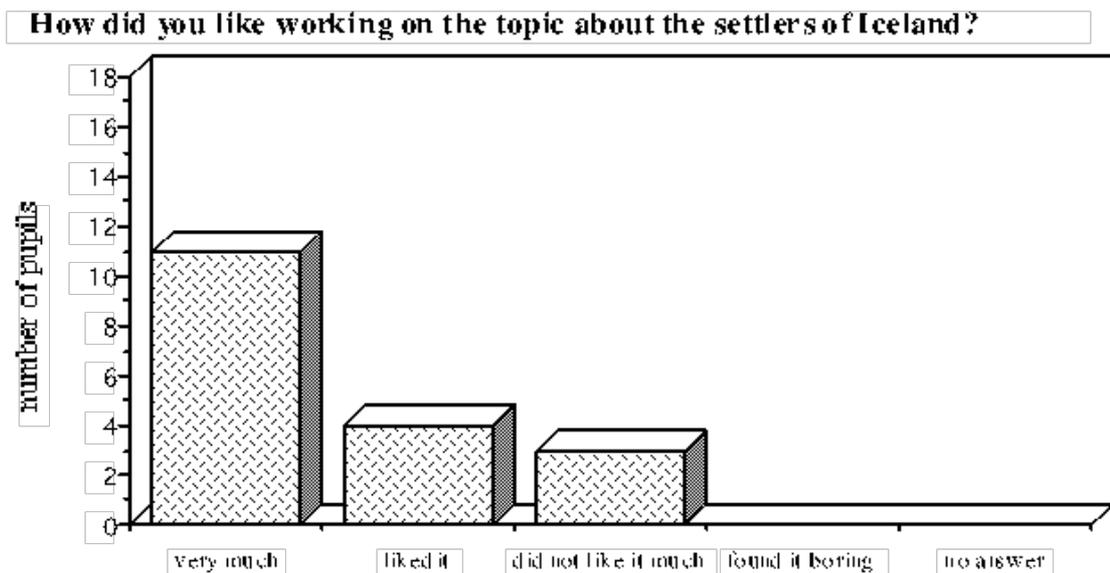


Figure 2. Results of pupils' first question.

Clearly most of the pupils liked the topic work and we can probably add that if they like it they are learning. This supports the principle that *The Storyline method provides a high degree of motivation*. The result from the first of the parents' questions also supports this principle (Figure 3).

Has your child talked about the topic 'The New Settlers' at home?

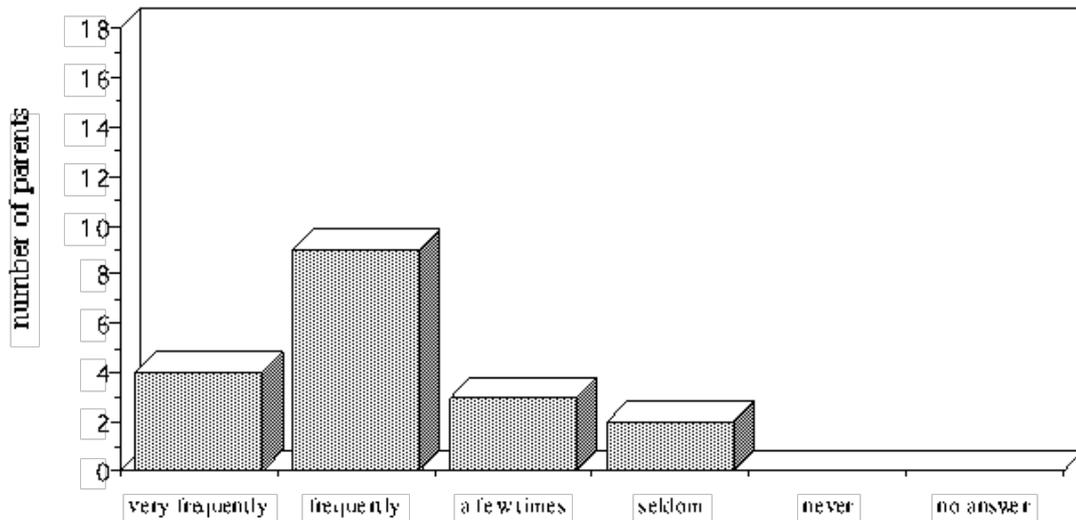


Figure 3. Results of parents' first question.

Thirteen of eighteen pupils talk very frequently or frequently about the topic at home. When a pupil talks at home about what he or she is doing at school, it means that the pupil is interested. The answers to the second parents' question supports this further as the results show (Figure 4):

Do you think that your child has been interested in the topic work about the settlement of Iceland?

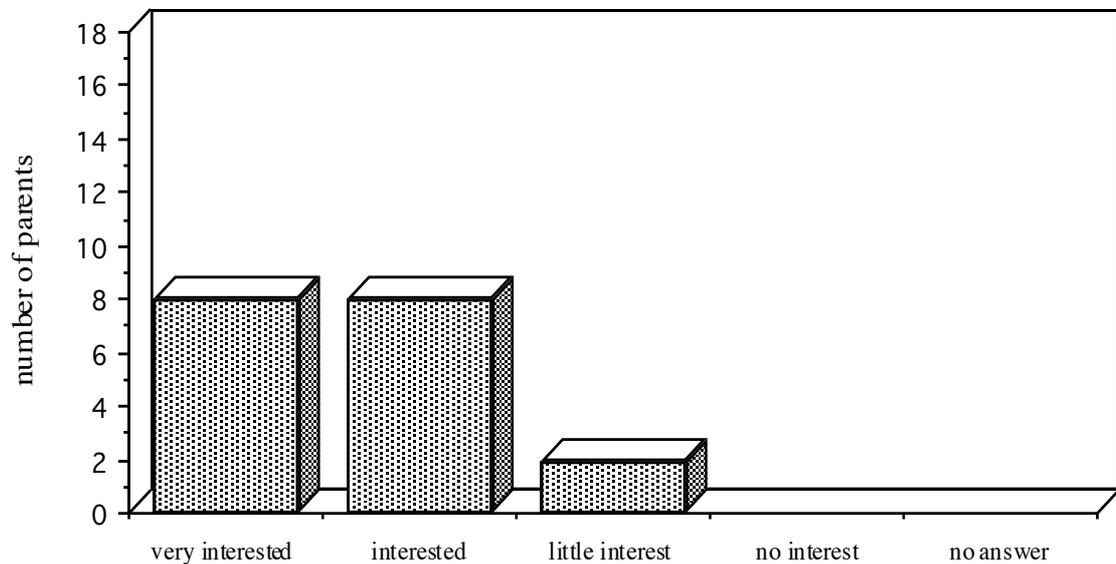


Figure 4. Results of parents' second question.

Sixteen parents think that their children are interested about the topic work and only two say that their child showed little interest and none said their child had no interest at all.

One's attitude to work, learning and to life in general, is very important, because if a person has a positive attitude to what he/she is doing the results are likelier to be "good" than if the attitude is negative.

The answers to the third parents' question are interesting concerning this argument (Figure 5):

What do you think about children learning about the settlement in Iceland in this way?

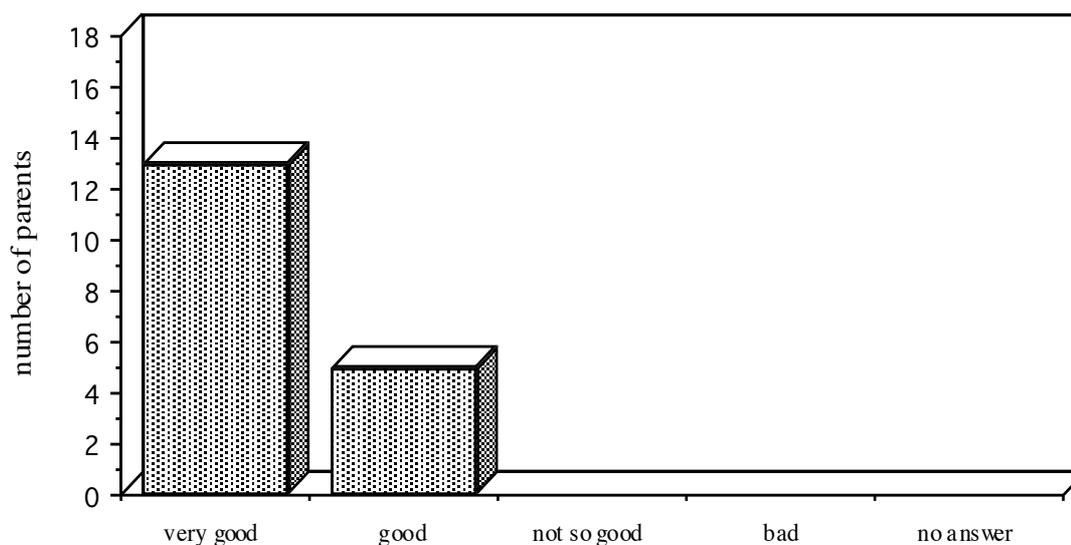


Figure 5. Results of parents' third question.

Thirteen parents think it is very good that their children learn about the settlement in this way and the five remaining parents think it is good. This positive attitude towards the work from the parents is bound to effect the pupils too. They feel that their parents find their work interesting when they are talking about it at home and that makes the pupils even more interested than they were before. In the eighth parents' question the results correlate to the above (Figure 6).

What attitude does your child have towards the topic work about the settlement of Iceland?

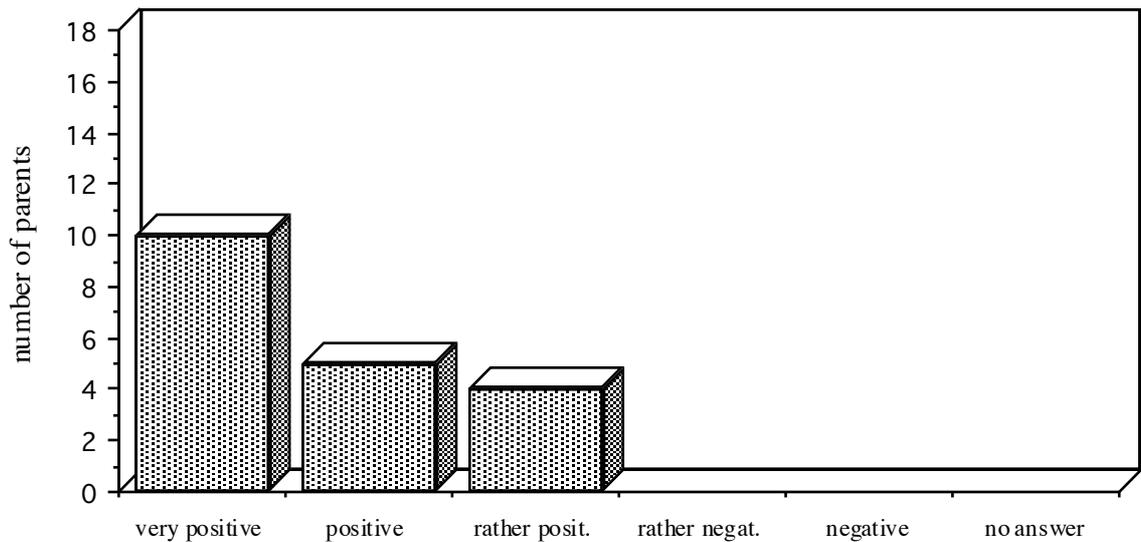


Figure 6. Results of parents' eighth question.

Fifteen parents find their children to have very positive or positive attitude towards the topic work about the settlement. It is also possible to draw similar conclusions from some of the pupils answers to questions number three, four and eight. (See appendix 5).

In the Storyline method it is emphasised (Bell pers. com. 1993) that it is important to begin a new topic in an interesting and an attractive way and try in that way to work for positive attitude. In the Storyline method it is also stressed that it is feasible to have the topics exciting. They have a thread, a Storyline, but the pupils do not know the story beforehand and therefore do not know what happens next. Those two factors definitely help to build up a positive attitude.

It was interesting to notice the attitude of the two different classes in the classroom towards the topic that the other class was working on. (There are two classes in the same classroom, one in the morning and another in the afternoon.) In my classroom there were seven years old and ten years old children. Both the classes were working on a topic at the same time. The children in both the classes found it interesting to follow what was happening in the other topic. The seven years old often started the day by looking at the wall to see what had changed since yesterday. They also knew a lot about the settlement after seeing the work build up on the wall in their classroom. The ten years old made some jokes about how childish the work was from the younger children, but were also interested to see what was happening. This shows that the pupils attitude towards this kind of work was positive.

I find the answer to the second pupils' question interesting (Figure 7)!

How much do you think you have learned about the settlement of Iceland?

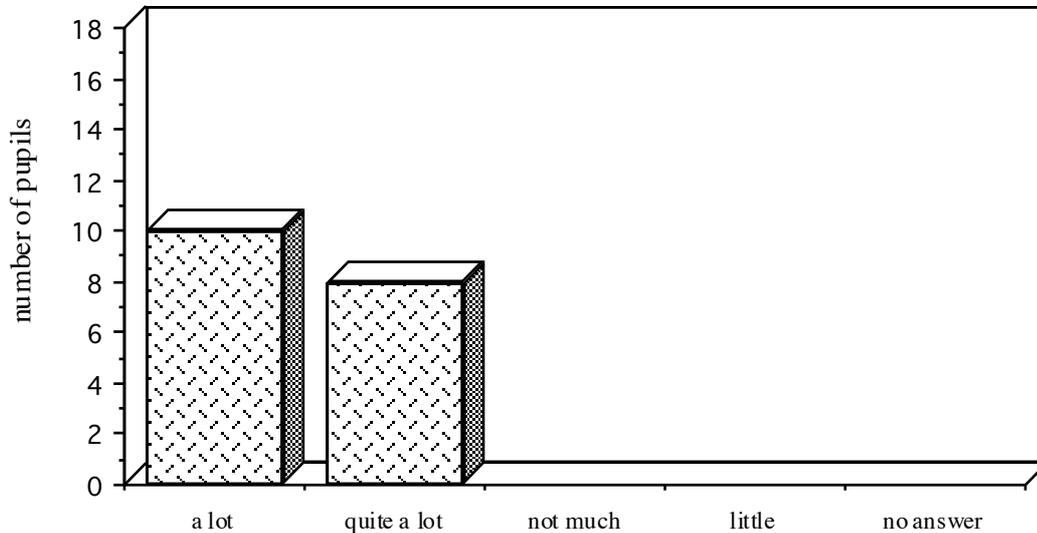


Figure 7. Results of pupils' second question.

All the pupils think they have learned a lot, or quite a lot about the new settlement in Iceland. What does it mean when a pupil thinks he has learned? Is it significant? Is their judgement true? The evidence from the exam, the work they did in their work book and from discussions show that they are right. The exam was not a part of the structure that was followed during the topic work, but was carried out because of curiosity. The results were different from the previous year, when the pupils had a few days to prepare for the test, but this time they did not know about it in advance. This time the bulk of the pupils had 60 to 90 % of the test correct. The previous year pupils got similar marks but also higher and lower.

Part of this kind of work is to try to let the pupils identify themselves with the persons they are working with in the topic, and by that understand better what happened. In this case how the life of the new settlers in Iceland was in the ninth century. One of the parents made the following remark as an answer to question number seven:

Was there anything that got your attention about the topic work or some remarks that your child made during the topic work?

" Yes, by making her own family it is easier for her to understand those old times, than just by reading about them in books."

Another parent said: "We were surprised to learn how good an understanding he had of words (concepts) used during the topic work".

The fourth parents' question shows that parents think their children have understood in their way how life was in this time and place (Figure 8). Evidence for this also comes through in the pupils' work.

Do you think that your child has understood how life was during this time?

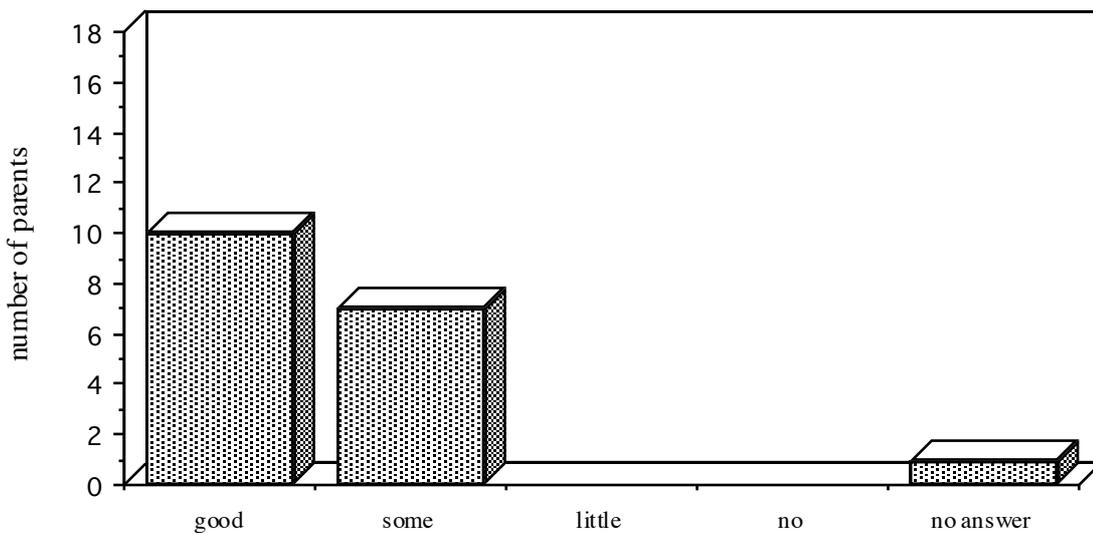


Figure 8. Results of parents' fourth question.

Those who like the Storyline method think that one of the important factors in its structure is that the children work in groups of different sizes and also sometimes alone. The answers to the ninth of the pupils question show that it varies how they like best to work (Figure 9):

In what group sizes did you like the most to work in?

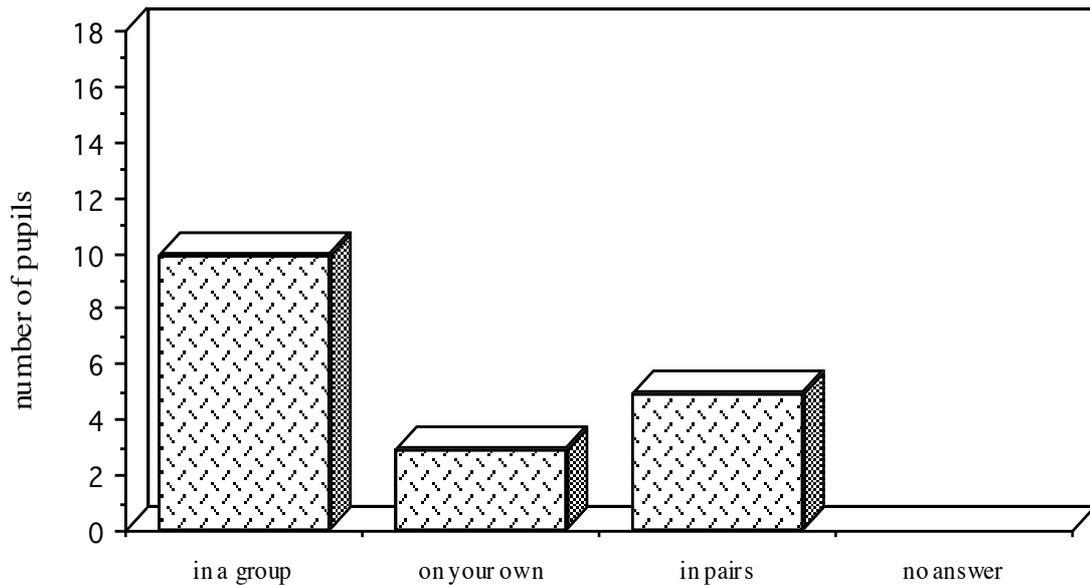


Figure 9. Results of pupils' ninth question.

Evidence supporting this is also apparent in the answers to the fifth of the parents' question (Figure 10):

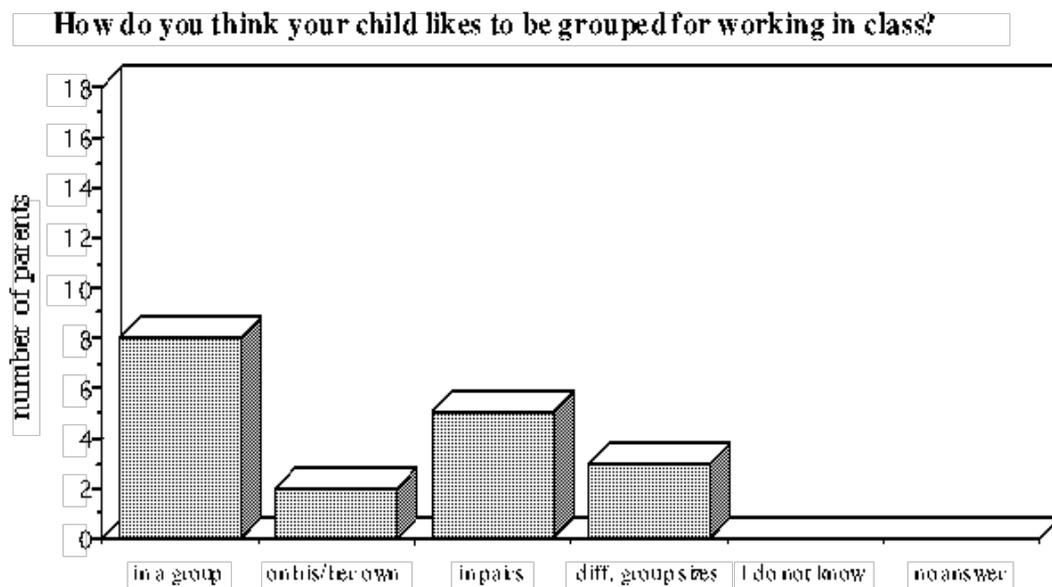


Figure 10. Results of parents' fifth question.

This structure meets the pupils needs to work as suits them best and it also involves a practice in working in different situations that they do not like as much, but is good for them to learn.

Often pupils find it difficult and/or boring to write about what they are learning e.g. in Environmental studies and often the teacher ends up telling them what to write. In this topic the pupils had a workbook and they could more or less decide what they wrote in it as long as it was about the settlers and the settlement.

The answers to the eighth pupils' question show that sixteen of them liked to write in the book and two did not like it (Figure 11):

How did you like writing in your workbook about the settlement?

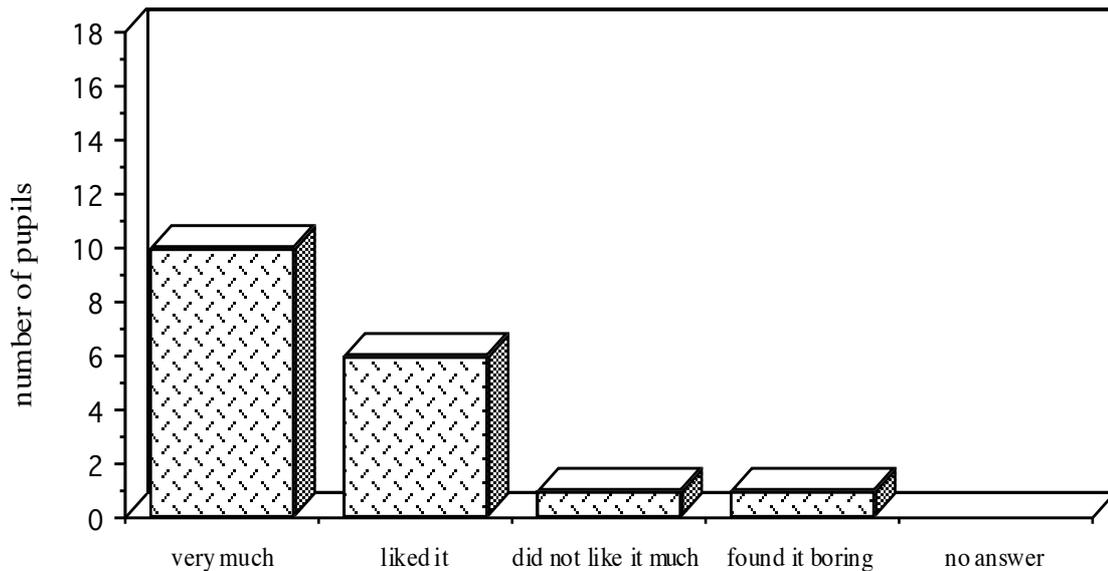


Figure 11. Results of pupils' eighth question.

Their work is of very different quality, but so is also their ability. The reasons for this positive attitude towards the workbook are probably many e.g.:

- They were involved in the story and could therefore write about their experience.
- They could choose themselves most of the time what to write about.
- They like to work on their own sometimes.
- The workbook was small and they could see that it was not too difficult to finish.

(Most of them did more than one book)

These suggestions are hypothetical and need to be followed up.

However, it is clear that the parents like this kind of work where the children can write in their own personal style (Figure 12).

How do you like the work in their workbook?

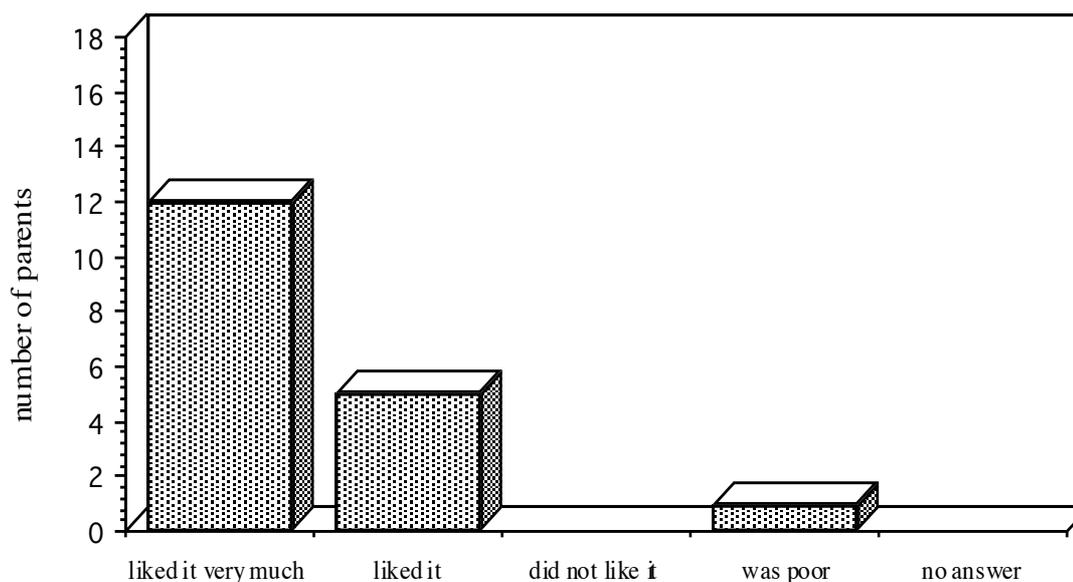


Figure 12. Results of parents' sixth question.

Looking at the answers to the tenth of the parents' question it is difficult to find out what they liked the least and it is very personal.

What do you think your child liked the least during the topic work?

- Nothing
 - Did not talk about it.
 - I don't know.
 - To work with references.
 - To read about the old Nordic gods (aesar) and in general to have to read the book *Landnám Íslands* (Sigurgeirsson et al. 1982). (A textbook for children about the settlement of Iceland).
 - Nothing special
 - Not to have more time to work on the farm in West Norway.
 - To make the animals.
 - To make a frieze from the sailing to Iceland.
 - To write in their workbook.
 - Never heard about anything boring.
 - Nothing boring.
 - To draw and do handicraft.
 - To make the people.
- 4 parents did not answer this question.

(It was noticeable that some parents did mostly answer questions which they could mark with an x).

In two answers parents mention reading or working with references. There are also signs of this in my diary and from my experience working with the children. I think that the reason for this might be that we do not always have reference books in Icelandic that are good for children so we are trying to use books intended for older pupils or adults. They have also not had much practice in this kind of work and there are some pupils in the class that are not good readers.

I find the parents answers to the following question interesting and significant. They show that the parents agree with many of the principles of the Storyline method:

Is there anything else that you would like to tell me concerning the topic work your child has been doing about the settlement of Iceland?

- He was interested and it was a pleasure to follow what he was doing.
- It is very positive to work like this in groups and to experience this time in the history through the topic.
- The child took the work very seriously and worked as well as he could. Sometimes he was not sure what he should do and then sought help from his parents.
- I think it is very good for children to work in groups, because then they learn to work and share ideas with others not to mention that they learn to respect others.
- Maybe we would have liked to have better information about the work from time to time so we would have been able to take part in the work at home.
- We think it is very important that children learn to acquire knowledge by themselves, e.g. by going to the National Museum and draw their own conclusions from what they saw. It also is very good that they have to stand up to tell the others what they have learned.
- I like this method and find it enjoyable and I am sure the children will remember better what they have been learning this way.
- It has made the child very interested in Icelandic history and the story about the old Nordic gods (aesir).
- We parents thought that our child got more understanding about how life was during the settlement. This was a very lively and enjoyable topic. We

think that other subjects at school might be taught this way, that is to say lively and with active participation of the children.

-Great interest and pleasure with the topic.

-I missed not seeing the textbook more often, then there would have been more discussions at home.

7 parents did not answer this question.

The parents mention e.g. interest, pleasure, co-operative learning, active participation, experience, understanding, to draw conclusions and acquire knowledge by themselves, as positive points and they are certain that their child is learning.

The pupils' answers to question number three also say a lot:

What did you like most while working on the topic about the settlement of Iceland.

- To make the ship, the person and the farm in Iceland and everything.
- The ships
- To make the ship
- To sit together and discuss
- I liked everything equally much
- The parents' evening in the end
- I liked the most to make the ship and the farm
- To work in the family group
- Make the old Nordic gods (aesir), the ships, and the new farm in Iceland Fagrafjörð
- Just everything
- Everything
- To make the ship
- The persons
- To work in the workbooks we made (Landnám one and two)
- About the ships
- To make the ship and the people
- The ships

It woke my interest and I was also very pleased to read these answers from the pupils and to see how many different activities they mention. It seems that different pupils with different interests have found something they liked to work on during the topic work and the points they mention are important parts of the Storyline method.

Making the ship is the most popular activity in this topic about The New Settlers of

Iceland. That is understandable, because a ship is very important for a family sailing over the Atlantic ocean to a new unknown land.

The overall impression that one gets after looking at the evidence from these questionnaires is obvious. Both parents and pupils like this kind of topic work. They also think they are learning in an attractive and an effective way and are pleased with the interest.

7 Specific advice to teachers

I have not devoted much space in this dissertation to instruct teachers in the use of Storyline, because my study is about the qualities of the method. However, the effectiveness of the Storyline method depends on the teachers using it and it is not possible totally to separate the teaching of Storyline from the qualities of Storyline. Therefore I enclose the following advice to teachers using the method.

- Prepare your topic work well before you start working with the pupils, preferably with colleagues using the same topic outline if possible. This makes the topic work much easier and more enjoyable.
- Keep in mind that your pupils have a lot of knowledge in their heads that is very useful for the topic work.
- Do not give up in letting the pupils work in groups, even though it is difficult in the beginning. The pupils learn by practising and the teacher has the opportunity to guide them in these work situations. It can be good to make simple rules for group work.
- The beginning is important. Think carefully how you are going to start.
- If it is possible to make the pupils interested right from the start it helps enormously.
- Discussions should not be too long 5 -15 minutes could be used as a norm.
- It is better to have the pupils sitting close together during discussions. It helps to get their full attention.
- Pupils of this age (6-11) like to work in pairs and the group work goes well in small groups of three or four. If there is a bigger group the teacher has to be the leader.
- Try to make the pupils as interested in their work as you can. That is a very powerful to help them to learn.

- Try to get on with the work, rather than wait for the product to be "perfect". This can e.g. be done by telling the pupils how much time they have to finish their drawings, writings or discussions.

- Let your pupils stand up and tell, not just read to their classmates. They can do it and they quickly get better at it.

- Ask your pupils first about what they know and their ideas before you tell them. They might know!

- It is necessary to work on the topic steadily so the pupils do not lose the context. Preferably two to three times a week, more often is fine too. The length each time can vary from fifteen minutes to one and a half hour.

- Do not give up even though you think the first time you used the Storyline method was far from perfect. Teachers learn by practising just like pupils.

8 Discussion

I started to read and hear about the Storyline method seriously in 1992. I found it interesting, but was not convinced right away. I felt it was a method that could work for me and other Icelandic teachers. My question was: "Does the Storyline method work?". The only way to try to find out was to use it in several classes in Iceland and try to analyse what we saw and experienced.

After using the Storyline method for a year in two classes of different ages, working on two very different topics in each class I feel that I can say that the Storyline method work's for me.

By asking colleagues at my school and other schools about how Storyline worked for them, by visiting their classes, talking to the pupils and having one of my colleagues write a diary for his class I can also say that Storyline worked for them.

I talked to my pupils and had some of them answer a questionnaire about how they liked working in this way and they gave answers like *"I cannot decide what I liked the most, because I liked it all"* I visited other classes during their topic work, saw how they worked and behaved, listened to their remarks and from all this I draw the conclusion that it worked for them.

After talking to parents, seeing their reactions in parents' evenings, both in my classes and others and getting their answers to a questionnaire in one class, I can conclude that the parents thought it worked too. One parent made this remark about the work *"I like the method and find it enjoyable and I am sure the children will remember better what they have been learning this way"* .

From the evidence of my research I cannot say that The Storyline Method is perfect, but I do not think that there is a method in teaching that is "the right method". The pupils and circumstances are so different and last but not least so are the teachers. Teachers have very different attitudes to teaching in general and of course also background and personalities. I found Storyline to have many of the qualities that teaching should be all about and so did many of my fourteen fellow teachers at Kársnesskóli in Kópavogur indicate in discussions during the first year of Storyline in our school. Of course we are all different in many respects.

Learner-centred

Many adults and among them teachers, misjudge children in believing that children know little about the world around them, often without asking them to find out. I found in both my classes that there was almost always someone in the class that had an answer to my key questions. I was not always "the right answer", but it was an idea so the discussion could continue and lead to a good answer to the question. Evidence from my diary shows that only once no one knew an answer to my key question concerning the new settlers in Iceland. (However, the question was rather particular and the pupils could not be expected to know.) I think this is very interesting and should be taken into serious consideration in all learning and teaching. So the conclusion is: Always ask the pupils first when you are teaching. This is not only true for topic work but for almost everything. When they find out their knowledge is valuable they become positive and interested and therefore they learn. When we ask first we also know what the pupils know, and can in that way decide where to start to add or as would be done using the Storyline method decide what key question should be asked next.

Interest

I wanted to know if pupils would be more interested in general in what they were learning at school by using the Storyline method, than other teaching methods. It is common knowledge that if pupils or others are interested they are much likelier to learn than when they are not interested and their behaviour will also be more agreeable. This tells us that the first and probably the main challenge for teachers at school is to awaken their pupils interest. My pupils were interested when I used Storyline, not always, but often and more often than before. This I judge from remarks and reaction of the pupils and the amount of work they did without me pushing them all the time. Remarks like these were heard regularly and often early in the morning:

- When are we working on the topic today?
- Can we work on the topic now?
- Can I write a story about the dinosaurs?
- Can I go to the library to find more books about the old gods?
- Can I take this home to finish?

Those remarks all show that the pupils are interested in the work and are ready to make an effort to learn. When a boy that has great difficulty in writing and is also rather lazy in general writes a few sentences about what the settlers had to take with

them to Iceland with out me pushing him, it shows interest and he is also learning. Parents told me and my colleagues about their children talking very positively about the topic they were working on and also that they had looked for books at home to read about the topic. This definitely shows interest.

Some of my pupils were interested from the start, others got gradually more interested. Only one of the 36 pupils 7 and 10 years old that I taught last year was very seldom interested, but this was also true for almost everything except films, especially horror films. What he showed some interest in from time to time were discussions, especially when the teacher was telling them about something connected to the topic. Evidence from Halldórsson's diary also shows general interest in his class. This showed in many ways e.g. when the pupils started to carry all kind of things connected with dinosaurs to school and even telling the teacher about news of recently found evidence about dinosaurs. This remark in Halldórsson's diary says a lot: *"Where the interest is it is possible to put a load on the pupils, even rather complicated matters that need consideration and will probably not be solved completely"*.

Structure

I found the structure that is included in the Storyline method very good. It makes it easier for the teacher to organise and prepare. She can easily see what is supposed to happen in the story next week, what she needs to do and prepare for and how she could organise the work in the class. A good Storyline outline also helps the teacher to conduct effective teaching, have good balance in working in various ways with different group sizes and to prevent the work becoming monotonous. The structure is helpful, but not so restricted that it is not possible to change if the teacher feels she has a better idea or wants to add something. During the work with The New Settlers' topic one of the teachers using it came up with an idea to add a work book for the pupils to the plan. The book was small and the pupils could write or draw everything they wanted connected with the topic. The book was a success and will be added to the Storyline outline next time.

In Iceland some teachers talk about the short time we have at school to do everything that is required and what we like to do. Because of this it is very important to organise topic work well. Often I think that teachers have lacked a structure for their topic work to make it effective. I see the structure in the Storyline method being very good to organise and use the time well.

Basic skills, integration

For many years I have found it necessary to integrate subjects as much as I can when I think it is relevant. By integrating subjects the learning becomes more relevant and understandable and is put into context. To learn to use your mother tongue through topic work is so natural, because in life we almost always use our language within a context, not for the sake of the language, it is the meaning and purpose. In topic work using Storyline the pupils have to:

- Write their own text (that includes spelling, making sentences and writing)
- Read text to get information (that includes reading and finding main points)
- Describe in text and orally
- Tell others both parents and pupils (that includes being able to stand in front of people and talk and being organised).
- Listen to each other
- Make poems about peoples feelings
- Read poems and stories from other authors and so on.

This is not only true for mother tongue learning. Every topic is a mixture of e.g. history, geography, math and science. That does not mean that there is a balance in every topic. One is more history based and another geography based and so on. On the other hand I think we should not try to integrate all subjects at school just for the sake of integration. We should have it in mind and do it when it is relevant.

Co-operation

As we all know it varies how people find it best to learn. Some like best to learn by themselves in a quiet place others like to work in a busy place or in a group. Included in the structure of Storyline is that sometimes pupils work in groups like when they made the ship in The New Settlers' topic, alone making the poem and then the whole class in discussions. They develop different skills and something suits every pupil. It is important to learn to work in a group and also to be able to work by yourself. It is also important to recognise that if pupils are sitting in a group it does not mean that they are working in a group. Group work is an important factor in the Storyline method and therefore if the pupils have not got practice in group work Storyline gives many opportunities to practise working in different group sizes. The evidence from this study strongly recommends not to have the groups too big except when the teacher is the leader. Three or four in a group is good and children also work very well in pairs.

Conceptual model

We want our children to be able to think, solve problems and be able to express their ideas in writing and orally. In every occupation and life in general we need to be able to solve problems. It must be an important factor in education to have the children practise these skills. Let's think of a teacher asking a question and she does not get a good answer so she tells them the answer. This way the pupils do have to think in the beginning if they know the answer or not, but there the thinking stops and they only have to listen. If, as would be done using the Storyline method, the teacher would continue to ask questions to help the pupils to build their own conceptual model the pupils have to continue to think, imagine, listen and express their thoughts or write or draw their ideas. This means also that they are ready to get information when they see it or hear about it. They know what they are looking for in a book or in their surrounding. They notice in what way their idea was right or wrong and also can often give reasons for why they think their model is better. I find this factor included in the Storyline method very interesting. From both the diaries I can see many good examples of this. When they wrote the new settlers diary and later started to make the new settlers farmhouses in Iceland and also when they decided on the teeth of a dinosaurs. It is interesting to consider how natural it becomes to work like this when you start doing it.

The experience I have acquired during the last two years since I seriously started to think and read about The Storyline method and by using it myself, seeing other teachers use it, listening to remarks from teachers, parents and pupils it has gradually, but steadily persuaded me that this method helps us as teachers to help our pupils to prepare them for life. Is that not what education is all about?

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