



## Implementing “Learning In Depth”

by Linda Holmes

These reflections are from the first implementation of the LiD program in the 2008/9 school year. Linda Holmes is an experienced teacher in Langley, British Columbia, Canada. She took on implementation of the program after hearing LiD discussed quite briefly, and before any of the resources that have now been developed were available.

**July – August, 2008**

Reflections on Learning In Depth by L. Holmes

I first heard Kieran speak of Learning in Depth, LiD at a class in 2007 at Simon Fraser University. LiD was an idea he was conceptualizing and talking about to us, grad students. The LiD concept I thought sounded interesting, simple and unfinished. I quickly put LiD aside as “just an idea” and went on with studying the theories of Lev Vygotski. A year later when I attended the I.E.R.G. July 2008 conference Kieran Egan formally presented a fully developed Learning in Depth as his keynote speech.

Yep, I know when a great idea passes my way and when I heard of Kieran Egan’s new concept for “Learning in Depth” a second time, I knew I would try it with my students.

First. What is Learning in Depth?

Unsure of the depth and parameters of this project, let alone any expectations there may be involved, I waver. Having heard Kieran Egan speak a few times of his new concept for learning I find myself hesitating yet really intrigued.

What I do know of Learning in Depth (LiD) is it is Kieran’s brain child and he is asking for teachers to work with him to develop more fully his concept of children studying one specific subject from kindergarten to grade 12. One topic for 13 years is quite a cracker of an idea when I think of the way curriculum works now; hundreds of topics taught with just hours of study.

Kieran believes it is best if topics are handed out randomly in kindergarten, or whenever a school or teacher begins the program. What excites teachers when I tell them about LiD is it is not to be assessed by teachers. LiD need not add to a teachers’ workload. What a student puts into the project is up to them. A teacher is a facilitator and guide. Given the opportunity, what would children learn, create and become?

“Anything one man can imagine, other men can make real.” Jules Verne

I must admit I am rather enamored with the idea of replacing my class's weekly project time with something that will provide more creative and stimulating results. Learning in Depth needs a 'body' to hold it and I believe I might be able to create that body.

"Education *is* risky, for it fuels the sense of possibility." Jerome  
Bruner, *The Culture of Education*

In order to propose LiD in my school I need to create a process. The best way I can do this is if I am studying in depth one topic myself. I opt to explore the concept of APPLES. Using a large poster board I create a web drawing. Writing apples in the center I start drawing links to ways of thinking about apples. Starting with questions about Apples, the why, where, when, how, who and of course what questions led me to further questions. Below are just a few:

- ☐ Where did apple come from?
- ☐ Where do apples grow?
- ☐ Where are apples in literature?
- ☐ How many kinds of apples are there?
- ☐ How did apples evolve?
- ☐ How can we grow, use or share apples?
- ☐ How did apples become gifts for teachers?
- ☐ What is the most delicious... or biggest... or costliest... or smallest apple in the world?
- ☐ What is an apple made of?
- ☐ What do apples mean to people?
- ☐ What can people do with apples?
- ☐ What is the future of apples?
- ☐ When have apples been referred to in history?
- ☐ When is an apple, not an apple?
- ☐ When did apples become a 'crop'?

- ☒ Why are there apples?
- ☒ Why are apples the shape they are?
- ☒ Who grows the best apples?

I have created for myself a stonger understanding and enthusiasm for the LiD concept. It now sounds simple, engaging and straight forward to me, a long standing and highly trained educator, but how do I teach LiD to my 5 to 9 year olds, let alone my colleagues and administrators? What are the strategies, the ‘nuts and bolts’ involved in the day to day learning?

We need a surer sense of what to teach to whom and how to go about teaching it in such a way that it will make those taught more effective, less alienated, and better human beings.

-Jerome Bruner, *The Culture of Education*

This LiD project is going to be a lot more creating work than I thought. I will need to create and design my LiD purpose; structure and process. I will need a clear, strong case to enrol and engage colleagues, administrators, parents and students in LiD. That’s a lot of people to connect and that’s why I will quietly create it on my own without involving Kieran Egan. Until I have a stronger understanding of how, and if, LiD will function in my reality, I think it is best to just keep this LiD project of mine ‘in house’.

### Second Step the HOW...Building a Foundation

It was the challenge of creating the web by myself that inspired me with enthusiasm to start what I believe were far reaching possibilities that LiD and I could bring to my young students, aged 5 to 9. I have been teaching for 35 years and I do know that no matter how interesting a concept like Learning in Depth may be in wooing one’s imagination—taking one broad topic to study for ones’ entire school career—I need also to look at finding a balanced view that I could present to my school administrators and colleagues. I constructed a web of questions and likely resistance to the idea, which started with the difficulties involved in instituting a 13 year program. Difficulties like:



- ☒ Our school system has curriculum neatly compartmentalized, so what learning outcomes would LiD satisfy?
- ☒ Where would I find the TIME needed for LiD?
- ☒ What do I need to do to enroll and train teachers to assist me in LiD?
- ☒ How would I enroll and educate administrators, parents and students so that they agree to participate and commit to LiD.
- ☒ How was I going to organize the LiD program as there was no set outline of what to do?

We cannot do everything at once,  
But we can do something at once.  
-Calvin Coolidge

My first conclusion was to drop the ‘13 year commitment’ from my agenda. Thirteen years is way too long for me to fight for at this time. I believe I can persuade everyone into seeing the value of Learning in Depth for one year, and that once everyone saw its value, I would propose to continue with the children who stay in my class for a second and third year. This would lead me to show the value of LiD and in itself be persuasive enough to sway teachers and administrators to take on the project. Time would tell how successful my plans would be.

My second task... drop the ‘give each student a random topic’. My lifetime of training is hard to erase! No, my training persuades me to involve the children in the process of creating and choosing a topic. How will this look? I will ask my students for topic suggestions. I will add some of Kieran’s suggested topics as examples. The topics need to be broad enough to cover a lifetime of learning. Topics like; apples, volcanoes, cats, water, birds, pets, cars, money, trees, bugs, trains, space, etc.

My third task... to add a dimension to Kieran’s LiD concept, working out a realistic timeline for my LiD project. In Kieran Egan’s LiD booklet he states the children receive their topic at the end of the first week of school in a ceremony for all to witness. But schools in my district do not settle on ‘homeroom’ classrooms until the second week and there are still many changes of timetables after that. Also, I really don’t know what I need in order to create this wonderful opportunity for myself and my class. This will take time. Therefore before I start the actual

‘how to’ part of the journey I need to create the foundation for Learning in Depth for myself and my students. I need to create—

### **THE PLAN.**

*What do I want to achieve by implementing Learning in Depth?*

*What are my intended results?*

#### **Intended results**

- ☒ Each child develops a sense of mastery and ownership of their topic.
- ☒ Children develop library knowledge and skills for research.
- ☒ Children develop independence and the desire and excitement to ‘know’.
- ☒ Children share their knowledge throughout the year and in particular at report card time
- ☒ Children experience knowledge as ‘ever-growing’, infinite

*Why am I implementing Learning in Depth?*

**Purpose:** Children focus on one topic for the entire year so they experience what it is like to know their topic in a deep, meaningful way.

*How do I need to be in order to realize my purpose and achieve my intended results?*

**Context:** “Love and knowledge led upwards to the heavens,” Bertrand Russell

#### **Let the Games Begin**

### **September, 2008**

Welcome to September, its fresh faces full of enthusiasm, fear and awkwardness ready to begin a new adventure or chapter in school life. And if this is how the teachers are feeling, imagine how the children are feeling!

I have cornered my administrator and garnered five minutes of time to brief her on Learning in Depth and my keenness to begin it this year with my class. She would like to know more and wants to see something in writing. I also am talking with the librarian who seems keen to

participate. She has the knowledge, skills and access to the library and computers that will be essential for us to have access to. What better environment than the library to bring students to. A large airy space to help them focus on their quest for knowledge and understanding. With the librarian and me assisting students in their quest, students will develop deeper understanding in a timelier manner. As L.S. Vygotsky, *Mind in Society* wrote,

What children can do with the assistance of others might be in some sense even more indicative of their mental development than what they can do alone.

Our Librarian is, I believe, a key cornerstone of a successful LiD project. I am highly encouraged and believe all is going to work out well.

The only place success comes before sweat is in the dictionary and the road there is often under construction. – Anonymous

I soon realize the blush is off of my LiD proposal when the librarian starts asking questions—lots and lots of questions. It is now clear I need to put into writing a detailed proposal outlining a structure, assign jobs, locations and responsibilities for the people involved. Below is my proposal, which I sent to the librarian and administrator.

#### LiD – Learning In Depth Proposal by L. Holmes

##### Purpose:

Children will focus on one topic for the entire year so they experience what it is like to know their topic in a deep meaningful way.

##### Intended Results:

- ☒ Each child develops a sense of mastery and ownership of their topic.
- ☒ Children develop library knowledge and skills for research.
- ☒ Children develop independence and the desire to ‘know’.
- ☒ Children share their knowledge throughout the year and in particular – report card time
- ☒ Children experience knowledge as ‘ever-growing’, infinite

##### Action Steps:

\_\_\_\_\_ Children choose 3 topics (in order of preference) they would like to learn in depth. Where possible, they are given their first choice.

\_\_\_\_\_ Children take an oath of intention to research their topic & declare this to the class.

\_\_\_\_\_ Children learn alphabetical order and the use of dictionaries in their quest

- Meaning / history of word
- Sounding out – syllabication
- Spelling – root word
- Alternative words (homonyms, antonyms, synonyms)

\_\_\_\_\_ Children learn how to use simple encyclopedias

\_\_\_\_\_ Children learn how to access information and materials in the library / school

- Catalogs
- Encyclopedias
- Reference material
- Non-fiction and fiction books
- computer

\_\_\_\_\_ Children learn how to express their growing knowledge in a variety of possible ways

- Cluster sheets
- Journaling
- Posters
- Graphs
- Stories (verbal and written)
- Paragraphs
- Photography
- Audio taping
- Video presentations
- Overheads

- Art

\_\_\_\_\_ Children learn from reaching out to Experts in their fields

Timeline	Process	Location	Teacher
October	☒ Children receive their project /topic folder	In class	Holmes
2008	☒ Children choose their topics for their knowledge quest and take an oath	In class	Holmes
			Holmes
	☒ children will learn dictionary skills	In class	Holmes
	☒ encyclopedia <i>access</i> and skills	<b>Library</b>	Holmes & Gennai
	☒ cluster ideas for research	In class	Holmes
	☒ how to <i>access</i> topic from general library shelves	<b>Library</b>	Holmes & Gennai
November	☒ continue learning how to <i>access</i> topic from the general library shelves	<b>Library</b>	Holmes & Gennai
	☒ Journal and note writing techniques	In class &	Holmes
	☒ The use of art in journaling	library	Holmes
December	☒ Children are prepared for presenting their research to date	In class &	Holmes & Gennai
	☒ Art? Speech? Overhead? Poster?	library	
			Holmes
January 2009	☒ continue learning how to <i>access</i> topic from the general library shelves	In class &	Holmes & Gennai
		library	
	☒ introduce students to creating posters / overheads/ data/spreadsheets with computers	Computer	Holmes & Gennai
	☒ story writing – creative - imaginative	Room	
		In class	Holmes

February	☒ continue learning how to <i>access</i> topic from the general library shelves	In class & library	Holmes & Gennai
	☒ Continue training students and using computers where applicable	Computer room	Holmes & Gennai
March	☒ Children are prepared for presenting their research to date	In class & library	Holmes & Gennai
	☒ Continue training students and using computers where applicable	Computer room	Holmes & Gennai
April	☒ continue learning how to <i>access</i> topic from the general library shelves	In class & library	Holmes & Gennai
	☒ introduce grade 3s to computer research	Computer room	Holmes & Gennai
May	☒ continue learning how to <i>access</i> topic from the general library shelves	In class & library	Holmes & Gennai
	☒ Continue training students and using computers where applicable	Computer room	Holmes & Gennai
June	☒ Children are preparing to present their final research for the year – VIDEO?	In class, library & Computer rm	Holmes & Gennai

Lydia,

I hope this helps to define the Learning in Depth program I am envisioning. Your role is basically the “Library Expert”, and we will seek and extract your vast library knowledge. All other aspects of LiD, I am responsible for. Hopefully in the coming months the children and I will settle down in the library, get to work at the tables and use the library resources. I envision everyone focused on and at different stages of research competence. I see you and I as roaming,

sitting and guiding students to use the facilities so they can express what they know, at the level they can achieve.

Thank you for being so willing to travel this unknown path with me and find adventure wherever we may.

Linda

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From the librarian's and administrators response I believe LiD is a go and it is now time to move to the next stage of informing and enrolling the parents. Below is my letter home to parents describing what I am developing and what I am asking the children to do with parental support.

### Letter to Parents

September 27, 2008

Dear Parents,

This year I am introducing a new type of project study. In the past, students would study a variety of topics in which they would learn a little about each one. Rather than learning a little about several topics, the children this year will choose one topic and learn about it in depth. We are calling it our Knowledge Quest. A knowledge quest is when one seeks, pursues, hunts, searches and strives to learn as much as possible about one broad topic.

Each child in the class has participated in putting forward a number of topics of interest and today they have selected the topic they will be learning about for this school year. They will research, write, read, draw and present their learning three times throughout the year.

In order to do this Knowledge Quest, the children and I need a fair amount of access to the library and fortunately, Mrs. Gennai, our school librarian, has found time for us on Friday mornings. We will be working in the library, researching, drawing, discussing and reviewing our topics. Through exposure to the library, we will be learning how the library works and how it can best serve our learning needs.

I am looking forward to learning along with the children. It is exciting to think of all the knowledge children will uncover in their journey and how in-depth learning will help build a sense of understanding beyond a few facts. I can only imagine how much they will learn and the wealth of knowledge they will be gathering and sharing. Your support, enthusiasm, interest and help are always appreciated. Please, questions are most welcome.

Sincerely,

Linda Holmes

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Since I have had very little response to the letter, which I had the children glue into their agendas so they wouldn't get lost, I believe we are a go in the parent department. Now, my biggest challenge, is setting up my students for success. As William Arthur Ward stated, "The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires". How inspiring will I be?

## **October, 2008**

Here I sit on our classroom stage in front of my class, seated on the carpet I take a deep breath and look at my eager students. This year I have 21 students, ages 5 to 8 years of age. We are a multi-age primary classroom in a regular public school. The children stay with me for up to 4 years depending on parental wishes and what age the child is when they enter the class. This year half my students are continuing with me from the year before. This will be the third year with me for some of the children.

I started by telling my children the story of how I went to school in the summer and that I heard a great idea of how to do projects differently from how we had done projects in the past. In the past the class and I had one hour of time on Friday mornings where they studied topics of interest. I did not plan any activities for the children, however, I was available to help them research or prepare for presenting their work to the class. There was a file drawer full of project outlines on a myriad of topics for the children to choose from. Most of the completed projects were a peripheral view of a topic with a minimum of five facts that would be presented to the class once the project was complete. Each student would choose a project outline or create their own to complete. Resources would be used from the class library or on occasion from the school library. In the past, some students would choose a topic each week, while others slowly worked through materials over a few months. As an aside, I have to admit I was not satisfied with the results produced by the students. The level of knowledge and quality of the work achieved lacked inspiration, commitment or knowledge. LiD appeared at the right moment for me to replace a faulty project system with a system that will help students develop a deeper, more meaningful way to learn.



I had talked generally about LiD, the knowledge quest and what it meant with my children prior to sending home the Knowledge Quest letter to their parents. Now I shared the purpose and structure of ‘project time’ to take place this year. So after telling my story of how enthusiastic I was about all the possibilities to really become knowledgeable about one topic I gave my students one week to think of topics they would be interested in learning about. I put a poster paper on the board and wrote at the top, “topics to learn about”. No topic was refused and all would be considered. Over the week the paper filled. I added a few of my own topics as well. During the week the children and I discussed quests from history. We discussed the topics in general and visualized ourselves as knowledge seekers in the school library. I took the children to the library and explained how over time we would learn how our library could help us in our quest.

I have heard from the librarian and administrator. They are impressed with the outline proposal and all is a go! We have set up a first Library time for the following Friday from 9 – 10am. For LiD to begin the children will need to have their portfolio / project folders, tools and topics in hand.

- ☒ Each student received a red plastic folder with two pockets with their name on the cover.
- ☒ Children have their topics for their LiD knowledge quest...

Once I introduced the idea of a QUEST—where one seeks, pursues, hunts, searches and strives to learn—the children started putting forward their ideas, topics and areas of interest. We discussed the topics in general over a one week period. By the fourth day each child was asked to choose three topics they would like to have. They were to sign their name by each of the topics putting a 1<sup>st</sup> 2<sup>nd</sup> or 3<sup>rd</sup> by their choices. This gave me an idea of what my students were interested in, a chance to gather materials that would assist their quests and hopefully, a commitment from them to take responsibility for their choices. In this beginning process I am looking to teach my students at every step. As Wendell Philips once said, “Responsibility educates.” This is an opportunity for my children to learn what responsibility is, what is expected of them, to instill the importance of owning their topic and experience the profound moment of publicly declaring one’s intension.

Thus, we come to the public part of Learning in Depth...

☒ Children take a knowledge quest oath...

The purpose of the oath is to teach the children not only what their commitment looks like in time, work load and community participation but it is a promise to themselves.

☒ Teacher takes the knowledge oath...

There is a saying in leadership, “so goes the leader, so goes the group”. As a life-long learner I too have a quest and therefore declare it in my oath before other knowledge seekers, my students.

“I Linda Holmes

Will seek, write, create and learn all I can about

My chosen topic called

EDUCATION.”

Finalized list of Topics;

AM... HORSES

DM... (switched after a month to)...VOLCANOES

NM... BUGS

JL... TRANSPORTATION

KW... SPORTS

CD... GIRAFFES

ML... WHALES

AC... PETS

GG... NATUARE

EH... PENGUINS

AS... BIRDS

DM... FISH

PS... PETS

MC... TREES

LL... BOATS

MS... DINOSAURS

LM... CATS

CK... CARS

JK... OCEAN

SC... DOPHINS

(Two students moved before the new year and are not included above.)

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## My Knowledge Quest Oath

I \_\_\_\_\_,

will seek, write, create and learn all I can about my chosen topic called,

\_\_\_\_\_.

### **I agree to...**

- ☐ Ask for help and give help when needed.
- ☐ Honour the library by caring for and respecting the books and equipment
- ☐ Present my work before each report card date.

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### Our First Knowledge Quest Class in the Library

The day after all the topics were submitted the children receive their portfolio folders, make their oath and place the oath in their folders. We pack a pencil case with tools and we ceremoniously walk to the library. We meet the librarian at the door and she welcomes us in. Once inside we proudly show the librarian our list of topics on a large poster. She helps us find the areas in the library that hold the children's topics. Beside each topic on our chart the numbers from the library shelves are recorded so the child will return to the books they need for their research. ! [In retrospect it would have saved a lot of time if I had given the topics to the librarian in advance of our coming to the library.]

This was a first lesson of where everything we need is in the library and a beginning to see and understand how a library is ordered. My greatest learning this day is... all libraries are ordered the same way. I never knew that or if I did never thought of it. I see now why the statement, "The more I learn, the less I know." is so true.

### In class Lesson

Each child received an 11" by 17" sheet of paper. They wrote their topic in the center of the sheet and circled it. The children brainstormed words and pictures about their topic. They were asked to draw a line to connect their words and pictures to each other if they saw a connection between these thoughts. An example: 'Horses' was surrounded by 'hay', 'colt', and 'run'. Hay joined with horses because hay is something horses eat, while colt is a young horse and so on. These cluster sheets are great for displaying what the children know at the beginning. As the year goes by I look forward to see their knowledge and understanding grow. Nonetheless cluster sheets are a great first record of knowledge.

Achievements of October's plan: 3 items.

- ☒ ~~children will learn dictionary skills~~ (way too ambitious)
- ☒ ~~encyclopedia access and skills~~ (way too ambitious)
- ☒ *students know their topics and receive their portfolio folders*
- ☒ *cluster ideas for research*

## November, 2008

This is around the time I honestly think I am not doing all this Learning in Depth stuff right. Still, my students seem to be flourishing. In fact, they are producing better results than any of my prior project classes. The results I am most noticing are that students are engaged and are asking lots of questions. My students are keen to tell me what they are discovering. They are talking about their topics with enthusiasm and interest. The students are also helping one another by referring each other to books and materials they come across that may be of relevance to someone else. In particular, one of my youngest students who is struggling with learning has found his role in project time as 'project assistant'. He works on his topic, Bugs, for about 10-20 minutes and then begins to wander the library looking for books. In my class we call it, a "walk-about". In his search he finds all kinds of useful items for other students who thank him for his help. This inspires him to search more and thus he has learned how he can positively make a difference in the lives of others. He also knows where all the topics are in the library better than most. All in all, he is finding a way to be a useful and productive member of our research group.

The students are remaining focused for the entire time we are in the library. Conversation is in full force and what they are talking about is what they are doing and what they are learning.

Gratifyingly, I am also seeing students refer to their topics outside of project time. During 'free time' at school a few of the children are choosing to study, discuss and create 'artifacts' for their research folders.

So how am I doing?

What I am discovering as I travel this unpaved road of LiD is the children need a lot of skills and direction once they have knowledge of how to use the library. Some of my children do not read, while others are struggling with the organization of and retention of the information they are discovering. In order to cope with this problem I am teaching the children to take notes. One method I found useful is giving the children **clipboards**. As they search the library they can take note of a book or reference material they might find useful. This is great for collecting general

information such as title and location of materials and a general description of what the materials are basically about.

I ended up creating 4 Information sheets for students to record and store information on. The sheets are kept in their portfolio folders for future reference. (Information sheets - see below)

**Information Sheet #1**    *TOPIC:* Apples  
*TITLE:* Ten Apples Up On Top  
*AUTHOR:* Dr. Seuss  
*LOCATION:* Dr. Seuss box  
*NOTES:* (this can be words or pictures)

Name: \_\_\_\_\_

**Topic:** \_\_\_\_\_

Date: \_\_\_\_\_

***TITLE:*** \_\_\_\_\_

***TITLE:*** \_\_\_\_\_

***AUTHOR:*** \_\_\_\_\_

***AUTHOR:*** \_\_\_\_\_

***LOCATION:*** \_\_\_\_\_

***LOCATION:*** \_\_\_\_\_

***NOTES:*** (This can be words or pictures.)

***NOTES:*** (This can be words or pictures.)

***TITLE:*** \_\_\_\_\_

***TITLE:*** \_\_\_\_\_

***AUTHOR:*** \_\_\_\_\_

***AUTHOR:*** \_\_\_\_\_

***LOCATION:*** \_\_\_\_\_

***LOCATION:*** \_\_\_\_\_

***NOTES:*** (This can be words or pictures.)

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***TITLE:*** \_\_\_\_\_

***TITLE:*** \_\_\_\_\_

***AUTHOR:*** \_\_\_\_\_

***AUTHOR:*** \_\_\_\_\_

***LOCATION:*** \_\_\_\_\_

***LOCATION:*** \_\_\_\_\_

***NOTES: (This can be words or pictures.)***

***NOTES: (This can be words or pictures.)***

**Information Sheet #2** [This sheet is for my students who enjoy collecting facts. They liked to fill it up and share with others.]

Here are 6 things I know about;

**Topic:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_



**Information Sheet #3 [This sheet worked well with my youngest students who seemed overwhelmed with too many boxes. Finding 2 things about... was doable for them.]**

**Topic:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Information Sheet #4 [This sheet was the last to be created and it came about only after the students got ‘stuck’ on what and where to go next with their topic.]**

**Questions about:**

**Topic:** \_\_\_\_\_

**Answers I have found are:**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**?**

**?**

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?

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It is also time to start thinking about the children's first presentation to update the class on how they are doing and what they have learned so far in their Knowledge Quest. At the end of November I introduced the concept of Research Posters. I brought a few done by older students and a few I found online. I have included a beginning piece for developing research posters from the site mentioned below.

What is a Research Poster?

Working with my students we formed **5 basic design elements of a poster** that they needed to incorporate to achieve a good research poster:

1. A clear topic... we should know what your poster is about by looking at it. Don't overcrowd your poster with lots of words or pictures but pick only 5 to 10 pictures to write about.
2. A poster advertises or TELLS us about what you know about your topic. Have one or two sentences to tell us about your topic.
3. Use colour and outlining to have your poster stand out. Think BIG, BOLD and BEAUTIFUL!
4. Present your research poster by displaying it in front of the group. Stand tall and speak up.
5. Be prepared to receive comments and questions.

Take a bow... you are DONE!

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## Research Posters 101

by [Lorrie Faith Cranor](#)

Poster sessions at conferences and university research fairs provide excellent opportunities for students to show off their work and to discuss their research in an informal setting. While it is important to present good work at a poster session, even the most outstanding research projects will receive little attention if they are not presented well. This article provides a guide to creating and presenting an attractive and informative research poster.

### Content

The most important part of your poster is the content. Before you start planning your poster design, decide on the content you wish to present. Students often make the mistake of trying to present an entire thesis or journal article on a poster. Don't try this approach. People do not have the time or patience to read a lengthy report at a poster session. Your poster should be an abstract that advertises your work. If your audience likes the poster, they can request a copy of your whole thesis or paper to read when they get home. You might provide copies of your paper next to your poster or pass out flyers with information on how to get your paper electronically, but don't put the whole paper on your poster.

Given that you have limited space, you must decide what aspects of your research are most important to present. This depends a lot on your audience. If you are presenting your poster to a general audience you

will need to provide a lot of background information and emphasize the applications of your research. If your audience already understands and appreciates your research area, you should focus on your unique contributions and emphasize your results (if you have any -- some poster sessions allow students to display research in progress).

Regardless of what you decide to emphasize, make sure your poster includes a clear and succinct statement of your research problem, a brief description of your approach, and summary of any results you have obtained to date. The organizers of the poster session might also supply a list of items that your poster should include.

Create an outline of the content you plan to present. Then fill in each section of the outline with short paragraphs and bulleted or numbered lists. Do not include lengthy paragraphs on your poster. Unless you will be presenting to a very technical audience, avoid complicated equations and code fragments of more than a few lines. Depending on the size of your poster and the number of graphics you include you will generally have room for somewhere between 500 and 1500 words. If your initial draft is longer than that, reduce the number of words before you start working on the poster design.

## Overall Design

Before you begin designing, determine the overall size and shape for your poster. Find out whether your poster session has any size limits that you must adhere to. Also find out whether you are expected to present a free standing poster or whether you will be given a board on which you can attach the various components of your poster. Even if you will be given a board, you may still wish to mount all of your poster components on one or several large panels. This tends to give your poster a more unified look and it will be easier for you to assemble and disassemble your poster quickly at the poster session.

Regardless of whether you design your poster in panels or small components, you should divide your content into modular components, each of which will be placed in its own "box". Boxes can be created by printing rectangles around each component or mounting the components on sheets of colored construction paper. If you design your poster in panels you can easily group boxes together, placing several small boxes in one larger box. This allows you to visually group related elements. If you design your poster in small components you can use color, position, or even lines made of string to visually group related elements on the board.

You should also arrange your poster elements so that there is a sensible visual flow -- left to right or top to bottom, for example. If you have multiple columns or rows of elements it is sometimes helpful to number elements with bold numerals or use arrows to mark the suggested flow.

## Presenting Your Poster

Go to the poster session ready to talk to a lot of people. Not only is this a good opportunity for you to tell people about your work, but it is also a good opportunity for you to get new ideas that might improve your work. So if people seem interested in what you are doing, engage them in conversation. A poster forum I presented at a few months before I began interviewing for a job was good practice for answering the types of questions I got asked about my research while interviewing.

It's also a good idea to think ahead of time about some of the questions you might get asked. This is especially important if you are presenting a small component of a large group research project. You should have a working knowledge of the whole project and be able to answer questions about the project in general. If you don't think you can do that, talk with the other members of your research group to get a better understanding of the rest of the project. You should also have some knowledge of similar research projects and how your project differs from them. A frequent question people ask about research is how it differs from similar work, so be prepared with an answer.

For the Complete article go to <http://www.acm.org/crossroads/xrds3-2/posters.html>

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### **Achievements of November's plan: 3 items.**

- ☒ Journal and note writing techniques
- ☒ Start presentations
- ☒ The use of art in journaling
- ☒ Continue learning how to *access* topic from the general library shelves

### **December, 2009**

This is the month we do our first presentation to the class of what we have learned in the past two months about our topic. All the students are making or have made a research poster of their topic. Once the poster is complete the students practice presenting their work to small groups of children. The presenter is looking for feedback on clarity, interest and audibility. When a presenter comes to me to tell me they are ready to do their final presentaion I refer to the listeners in their group and ask them;

1. Could you hear the presenter clearly?
2. Do you know what the presenter was talking about? Did it make sense to you?
3. Was the presentation interesting/entertaining?

All the listeners had to say yes in order for the presenter to be approved for a final presentation. If the child did not achieve all yeses, the presenter was given time to rehearse and a new group of listeners. [In retrospect I would use our grade 5 buddy class to be guides and listeners as well. They could model and help direct some of my students more.]

Over the span of 6 days all my students bravely present their Knowledge Quest to the class.

Achievements of December's plan: 2 items.

- ☒ Children are prepared and present their research to date
- ☒ Art? Speech? ~~Overhead?~~ Poster?

## January, 2009

The 2 to 3 students are collecting information with the librarian in the **computer** room (conveniently next door to the library) to learn how to find suitable sites for their topics. The youngest students are struggling with all the print. They eagerly join in a lesson on **tracing**. With a stack of tracing paper in hand (approx. 6" by 8") the students place and trace pictures relevant to their topic. This is exactly what my younger students need. They are fully engaged in tracing and **collecting drawings** of their topic. Tracings are stored in their portfolio folders.

At this point I am also talking with individual students regarding finding out if they know of any **fictional work** regarding their topics and encouraging them to find out. The youngest students are taking up the suggestion more readily than the older students. The older students have discovered encyclopedias and are fascinated by them.



C.D. and G.G. have started their 4<sup>th</sup> month of studying their topics, 'Giraffes' & 'Nature'.





M.L. and D.M. have started their 4<sup>th</sup> month of studying 'Whales' & 'Volcanoes'.



L.M. and G.J.L. have started their 4<sup>th</sup> month of studying 'Cats' & 'Transportation'.



E.H. has started her 4<sup>th</sup> month of studying 'Penguins'. All the children are busy gathering information.

Achievements in January's plan: 1 item.

- ☒ continue learning how to *access* topic from the general library shelves
- ☒ ~~introduce students to creating posters / overheads / data / spreadsheets with computers~~
- ☒ ~~story writing — creative — imaginative~~

## February, 2009

I bravely decided to let Kieran Egan and LiD know about the progress the children and I are making in LiD. It was also time for me to ask for more direction as to whether or not I am acting within the spirit of what Learning in Depth is all about. I emailed him some photos along with my outline of what I was doing. Kieran responded most positively with what I was attempting to create and asked if there were any way I could get permission to use the photos on the I.E.R.G. website. As always, a picture is worth a thousand words. The January photos of my students in the library speak volumes as to their progress, interest and focus.

I sent home a letter to parents asking for their permission to give I.E.R.G. (Imaginative Education Research Group of SFU) to use their child's photos on IERG's website. I have 8 positive responses. It was wonderful to see my students showing up on my screen when I next visited the I.E.R.G. website.

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### Knowledge Quest

Feb., 09

Dear Parents,

As you know your child has been participating in a program called Learning in Depth (LID), developed by I.E.R.G. (Imaginative Education Research Group of SFU). We are preparing for our second presentations and all is going very well. I have been taking pictures of the students working and presenting their work. Dr. Egan, the lead of I.E.R.G. would like to put some photos of students who are working on LID onto the web site. The photos are needed for purely educational use and no names will be used. Please fill out the slip below and return it to me.

Thank you,

L. Holmes

-----  
I give permission to I.E.R.G. (Imaginative Education Research Group of SFU) to use my child's  
\_\_\_\_\_ photo on their website. I understand the photos are needed for  
purely educational use and that no names will be used.

Parent Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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Achievements of February's plan: 2 items.

☒ continue learning how to *access* topic from the general library shelves

☒ Continue training students and using computers where applicable

## March, 2009

It is once again presentation time. All the students have been collecting the tracings and pictures they have been gathering over the past few months. I brought in National Geographic and other magazines for children to pull out what they needed. Our presentations will be **collages** (a picture made by sticking cloth, pieces of paper, photographs, and other objects onto a surface) made up of their collections. Each student has a large sheet of paper they are to fill with their topic collections. All is going very well and the students are very engaged. The more advanced and capable students are challenging themselves with outlining and colouring their collage pictures.

As the students complete their collages they turn to me and once again I bring out the clip boards. This time I give the students lined paper. Their task is to **collect questions**. They are to ask people (students, parents, teachers, administrators) if they have any questions about their particular topic. Once all the questions had been collected the student will choose three to answer. This would be for their final presentation in June.

I quickly realized we first need to have a lesson on what a question is. Once everyone came together we were able to formulate what a question is, what it does and why we need them. Lots of examples were given and we even categorized the value of different kinds of questions. Some questions are answered by a simple yes or no, while other questions require research, thought

and consultation. Which questions teach us the most? Which questions give us the most information? What kind of questions helps us learn?

Now the students were armed and ready to find their topic questions. What were fascinating to watch were the faces of people who were asked to offer up a question. Both students and teachers stopped and took some time thinking in order to formulate what they wanted to ask. In response I heard my students say, "That's a good question." Or "I never thought of that."

Over a two day period most of the students presented their posters, first to their listening team and then, if they were approved by their listeners, the presenter presented to the class. The listeners were reminded to keep in mind the 3 questions that needed to be answered.

1. Could you hear the presenter clearly?
2. Do you know what the presenter was talking about? Did it make sense to you?
3. Was the presentation interesting/entertaining?

A few of my youngest students could not complete their projects and were given extensions and were able to complete their presentations over the next two months. [Hindsight... I would occasionally partner some of my youngest students with their buddies to give the students more individual support.]





NATURE

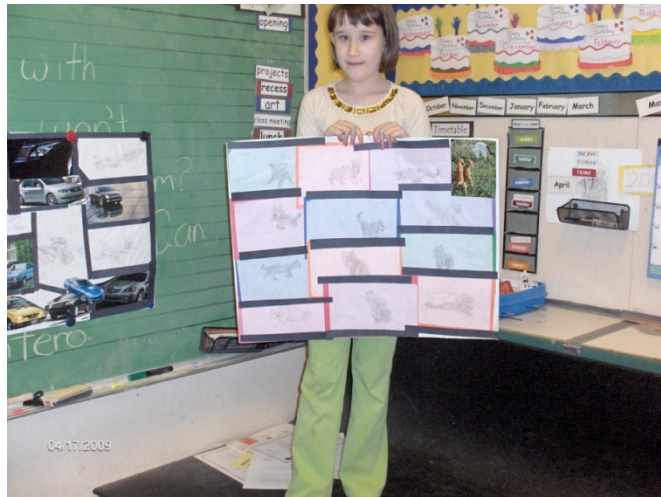


PETS

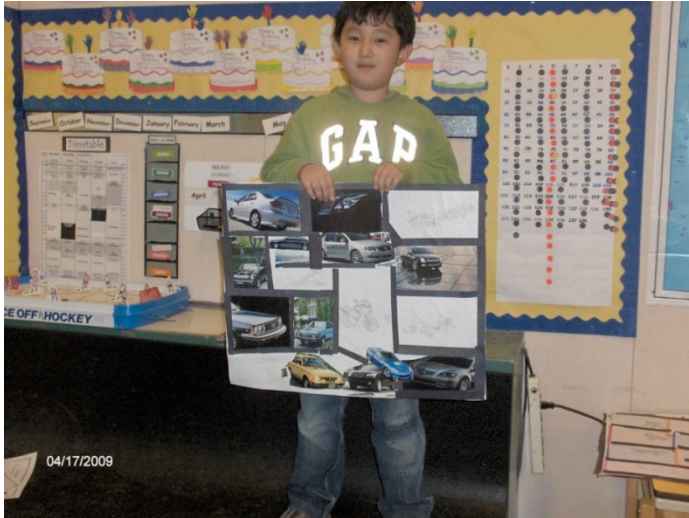
BUGS - WHALES - GIRAFFES



CATS



## TRANSPORTATION



Achievements of March's plan: 2 items.

- ☒ Children are prepared for presenting their research to date
- ☒ Continue training students and using computers where applicable

### **April, 2009**

The librarian and I have been blessed with a very willing and thoughtful student teacher who will be with us for the rest of the school year. Having three sets of brains, hands and eyes makes LiD flow as we can meet the needs of our students. It also helps having the Youngers beginning to read with competence, skill and interest.

The questions the children are gathering have come in at a staggering number. Our little library is under a lot of pressure to find the answers the children are seeking. The librarian is now taking the oldest students in small groups to research answers on internet sites. To use the internet our oldest students have had to have permission from parents and internet training from our librarian.

I am taking small groups of students to use the encyclopedia sets. This is slog labour for most of the children as they have to learn skim reading techniques if they are to get through the mass of information in books. They also are getting bogged down in taking notes. I have not even tried to work on collecting a bibliography from them.

Those students not involved with me or the librarian are working with our student teacher. She is either encouraging, scribing for or listening to students present their ideas.

The students now know the final presentation will be choosing 3 questions from their topic collection and answering them with as much detail and skill as they can.

Achievements of April's plan... 3 items.

- ☒ continue learning how to *access* topic from the general library shelves
- ☒ introduce grade 3s to computer research
- ☒ introducing encyclopedia skills

## **May, 2009**

The students continue to work independently on seeking questions and finding answers. We are finding the questions are exciting and fun to collect. It is searching for the answers where we are getting bogged down. [In retrospect I should have had the big buddy class help us for one or two library periods looking up information in exyclopedia and on line. It would have been a wonderful opportunity to have the older students put into practice the skills they have been learning.]

The students and teachers are functioning on automatic now. There is a rhythm and flow on Friday mornings when we go to the library. If you came into the room you would hear several conversations humming along. Students and teachers discussing a piece of research or showing something they have just found for their topic or something that may help someone else. You would see a few people searching shelves for books, on the floor reading or on a stepstool reaching for the stacks. You would see students engrossed in drawing, writing or glueing work.

I am sitting away from the group... watching and evaluating. What I see makes me smile. I see involved, keen and inspired learners. I realize that I rarely have to discipline students and even more rarely mediate problems between classmates. Over the past few weeks I have realized how much fun I am having as a teacher. This is my favorite time of the week. I rarely have to prepare a plan for the time. Discipline is a snap. People are self motivated and interested in listening to and learning from each other.



## VOLCANOES



Achievements of May's plan: 2 items.

- ☒ continue learning how to *access* topic from the general library shelves
- ☒ Continue training students and using computers where applicable

## June, 2009

### What did the teacher learn?

The final presentations range from 2 to 5 minutes in length if I include the comments and question period. Not a stellar amount of information and yet everything that is presented is from each students' own research. The students shared what they found and what they understand and what they KNOW. Some of the older students were asked to rate their final presentation. In many cases the older students rated their final project work lower than what they rated other students' work. In a discussion with these students where they rated themselves lower, they stated they rated themselves against how much they had left to learn rather than on what they had accomplished. The students were focussing on the future potential of their topics and not on how far they had come. Once they shifted their perspectives the students re-rate their final

presentations. These students experienced knowledge as ongoing, variable, infinite and within their reach.

This knowing is quite different from former styles of primary project studies where fill-in-the-blank answers are the norm. Often the children read their completed sentence but can not answer simple comprehension questions related to what they just read. The information itself is not important. It is the quantity of completed topics that reigns supreme and topic knowledge is soon forgotten once a new project is taken on. Knowledge is held as a certainty and finite.

With LiD I see my students developing knowledge and a sense of pride in their accomplishments combined with a comforting sense of community. No one does learning alone. The children and adults work together to learn, create and understand. As I stated earlier in this journal, I rarely have to discipline my students during our Knowledge Quest time. In fact, as the year has gone on, self discipline and self direction is prevalent.

Engaging students' imagination and interest was a lot easier than I first thought it would be. Having parents well aware of what we were doing, having the oath and tools to do the job was all helpful in setting us up for success. Letting everyone know I was not going to assess their work and I would work for them was freeing for all of us. They knew my job during LiD was to assist them in seeking knowledge. They also learned to share me, take turns and be patient. And in the end we all had a stimulating experience together, learning in depth.

Having the burden of formal assessment lifted from my shoulders inspired me to fully develop my role as a facilitator / guide / teacher. It is not to say I did not assess my children during their Knowledge Quest. Observation, note taking and student-teacher discussions were valuable in getting to know my students' learning styles and in making my decisions of what skills, training and direction the LiD project would take next.

A surprising and most gratifying aspect of LiD for myself, a teacher was experiencing how students were transferring their knowledge quest skills into all areas of their daily work. Oration and thinking developed. Student participation in discussions rose. Not only did they have more to say, the quality and complexity of their comments and questions also increased. Students were more thoughtful and open to alternative ideas, realizing that there may be more than one answer to a question. Curiosity in new material presented in other subject areas also rose. A few students even began to see and express how their Knowledge Quest topic would relate to what we were learning as a class.

In doing the LID project called Knowledge Quest I learned many things about my students, colleagues, curriculum studies, knowledge and myself. LiD was very rewarding. What I experienced revitalized my faith in how powerful an individual's passion is to know. I gained inspiration in knowing how little I truly know and that is just great with me because I will never run out of things to learn, thus I will never... ever... be bored.

Achievements of June's plan... 1 item.

☒ Children present their final research for the year – ~~VIDEO?~~