A simple innovation that can transform schooling

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Imaginative Education Research Group
Faculty of Education
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Criteria of Education

Education should include both **breadth** and **depth** of knowledge.

**By breadth** we mean:
- knowledge of the world around one
- how it got this way
- utilitarian knowledge
- exposure to the arts

**By depth** we mean:
- learn about the nature of knowledge
- distinguish knowledge from opinion
- gain expertise

Currently education provides breadth for all, depth for hardly any.
“If one is master of one thing and understands one thing well, one has, at the same time, insight into and understanding of many things.”

(Vincent Van Gogh)
Quick Overview:

**LiD** is an ongoing learning process that engages a child from their **first** day of school to their **last**

- The first day of school each student is assigned a topic they will learn about throughout their school years

- Over the years students create a portfolio about their topic; they do this in addition to their regular curriculum. The portfolio is ungraded

- Students work in collaboration with teachers, parents, peers, older students, and possibly experts, both during, and more often, after school

- Students have the opportunity to demonstrate their growing knowledge at school presentations

- Each student graduates with true expertise, knowing as much about a topic as almost anyone on Earth
The Case of Sara:

During the first week of school, Sara, and her parents, attend a special ceremony at which she proudly receives a portfolio with the topic she will study throughout her school years.
Sara’s Topic:

Apples.
Over the years, Sara...

- meets regularly with her teacher for suggestions that will help her explore her topic
- explores resources with her parents, her friends, and older students who are studying the same topic
- shares resources with her peers and collaborates on projects
- presents her portfolio to her teachers, classmates, and parents
Sara explores many avenues

Over the years Sara explores many fields to build her portfolio.

- **Biology** – there are 7,200 varieties of apple in the world
- **Geography** – apples originated in Kazakhstan
- **Physics** – legend of Newton, a falling apple, and gravity
- **Poetry, literature, sayings** – “the golden apples of the sun,” “the apple of my eye,” “an apple a day, keeps the doctor away”
- **Health** – apples protected sailors from scurvy
- **Genetics** – some apples are genetically modified to resist disease
- **Ecology** – some pesticides have reduced apples’ ability to reproduce
- **Art** – Magritte and Cezanne both painted green apples

This process allows her to develop both breadth and depth of knowledge.
Sara explores in many ways

She explores apples through many different modes to make the topic her own. She…

• does field work – goes to her local store with her dad to observe different varieties of apples

• visits the library – her librarian helps her search how apples have been used over the years

• conducts experiments – bakes different apples to look at effect of heat on different varieties

• performs web searches – she locates Kazakhstan and prints out a map

• makes graphs and charts

• draws pictures and makes models

• writes stories and poems

This process also allows her to develop both breadth and depth of knowledge.
Over time …

In each new grade as Sara acquires new tools and new ways of knowing the world, her ability to learn, and her expertise about her topic, increase and improve …
Until eventually…

… she becomes an expert on her topic.

Over the years:
Sara has gained sufficient depth of knowledge about her topic to make it her own and become an expert

Through the process:
Sara has also become an expert at learning; she has developed a sense of agency that motivates her to learn, and has acquired the skills necessary to learn about any topic

Ultimately:
Sara now has an enriched understanding of what knowledge is, and an approach that will allow her to be a successful life-long learner
A Word About Topics

Criteria

Topics need to be:
• complex
• varied
• multi-dimensional

Things to consider:
• sufficient breadth, sufficient depth
• multi-dimensional richness: cultural ties as well as emotional and imaginative ties
• not concerned with material that will lead to depression or violence
• not too technical
• not too general nor particular - (animals/Bengal tigers--> cats)
• adequate local materials available for early years
• acceptable to parents/caregivers
Some Possible Topics

<table>
<thead>
<tr>
<th>ANCIENT RUINS</th>
<th>BIRDS</th>
<th>SPICES</th>
<th>WRITING SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEES</td>
<td>PAINTS</td>
<td>WATER</td>
<td>FUNGI</td>
</tr>
<tr>
<td>COOKING</td>
<td>GRASS</td>
<td>MUSIC</td>
<td>SHIPS</td>
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IERG has introduced the Learning in Depth concept over the past few years through presentations, forums, and classroom discussions.

Teachers, school administrators, students, and parents have provided us with many comments and numerous objections and questions.

Here are some of them…
Obj. "Students will get bored."

A. Boredom is a product of ignorance, not knowledge.

When students become engaged with their topic and make it their own, they start to have fun and are motivated to learn more.
Obj. “Students should be given some choice.”

A. Everything is “wonderful” if you know enough about it!

Each topic is chosen so that it will engage a child, a teen, a young adult. A topic a child may find captivating and choose on their own at six should not be their millstone at sixteen.
Obj. “It’s too complicated to organize.”

A. With a limited number of topics, and help from older students, librarians, and parents, it can be done.

There are unquestionably complications in introducing this—but its educational value merits dealing with the difficulties. None of these complications is compellingly difficult.
Objections, Comments, Answers and Responses

Obj. “It is impossible to grade.”

A. It won’t be graded.

Teachers will help students engage with a topic in an inquisitive, imaginative, and enjoyable way, without stress and anxiety.
Objections, Comments, Answers and Responses

**Obj.** “It won’t get teacher buy in.”

**A.** Some teachers say “It’s what I got into teaching for!”

Many teachers have responded with enthusiasm to the opportunity for teaching in a more imaginative and creative way.

Some are more wary of this innovation.
Objections, Comments, Answers and Responses

**Obj.** “It won’t get administrators to buy in.”

**A.** Many administrators say “It’s a natural for teacher and community involvement.”

Many administrators see this as an opportunity to motivate teachers, involve parents and get their support, and build community.

Some are more wary.
The benefits of LiD

For Students:

- Provides opportunity to acquire expert knowledge of a topic
- Teaches learning skills applicable to all knowledge areas
- Engages students’ imaginations and emotions in learning
- Removes the vulnerability of ignorance
- Builds confidence
- Encourages life-long learning
- Opportunity to share knowledge and to learn from a variety of people in a variety of ways
The benefits of LiD

For Teachers:

• Encourages discovery along with the student
• Removes the pressure of grading
• Provides the pleasure of working with enthusiastic learner
• Enriches learning of the regular curriculum

For Schools:

• Provides for exchange and cooperation between students in different grades
• Enriches the culture of the school
• Provides a community focus of interest
What do we do next?

Depends on who “we” are…

• a Teacher
• a Parent
• a Faculty Member
• an Administrator
• the Ministry
• the Emperor of the Educational Galaxy
Further Information

For more information:

To get one of our publications, to sign up for a workshop, or to share your ideas about the LiD approach to education go to www.ierg.net/LiD or contact us at ierg-ed@sfu.ca


"This is a fascinating, provocative, utterly visionary and courageously speculative imagining of an educational future that is simultaneously elite and egalitarian, deeply intellectual yet utterly connected to passion and identity. A most audacious proposal from one of education's most audacious thinkers . . . an inspiring challenge to those who aspire to deep understanding for their students."

Lee S. Shulman, President Emeritus, The Carnegie Foundation for the Advancement of Teaching.