

Building the Portfolio

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Introduction

What will these portfolios look like? Where will students keep them? What will be the teacher's role exactly, and what will happen as students move from teacher to teacher? How different can portfolios be? What are student presentations going to be like, and what is their purpose?

What I would like to do here is try to give a sense of the project as it unfolds in everyday practice. I should add that this is my current image of how it might work, and I am well aware that others might be able to work out much better ways of implementing the LiD program, and, once we see it in practice in various schools, we will likely see revisions and more diverse and ingenious forms than the notions I currently have. (The LiD websites will also have pages in which we can gather "best practices" in implementing the basic idea.)

The starting ceremony

Students will be prepared for the ceremony by having it explained to them that during this event they will discover the topic about which they are going to become an expert: "At the end of this week we will have a very important day. It will be the day you will receive your 'special topic.' This will be something that will be uniquely yours: a topic that will grow, change, and flourish as much as you will throughout the years." This, it should be made clear, is no small matter, and is something that will effect their lives in a significant way. The ceremony itself should involve caregivers and teachers as well as the class of students, and perhaps others as I'll suggest below.

The student should be given some kind of container for the material they will begin to collect, perhaps a simple folder, which will be the beginning space for the portfolio. We need also to have something that the student can display to indicate the topic they have been given. If we use a folder we could include a sticker and a tile, both with the name of the topic written on them, the student's name, and a

colored image of an apple, a beetle, a dust cloud, or whatever. The sticker could be put on the front of the folder and the tile will become a part of a wall of such tiles in some prominent place in the school, where all students' tiles will be mounted. The student will announce, with appropriate help, the name of his or her topic to the assembled group.

After the program has been in operation for a few years, older students studying the same set of topics can present the folders to the Grade 1 students. So Jake from a local high school might give Sara her topic of *apples*, and will be around to discuss it with her after the ceremony, and perhaps show Sara something of the portfolio he has developed so far; Ella from a nearby middle-school can present Cloë with the topic *railways* and later show her some of her portfolio; and Nora from Grade 3 in the same school can present the topic *camels* to Owen. Mingling the novices with older students who have been studying the topic for years, and with teachers, and parents and other caregivers can enrich the ceremony and its aftermath. This borrows an attractive feature from Waldorf schools, where senior students sometimes welcome newcomers with a flower.

Each school or school district might, of course, develop its own distinctive ceremony. I have recently heard about a school principal in Japan, who plans to implement the LiD program in his school, but the opening ceremony is going to involve giving each student the topic on a slip of paper inside a Fortune Cookie. So the student's mind is alerted to whatever the topic is. The name creates a semantic space that the student is invited to begin the search for content to fill it—a mini-version of the Big Bang that sets the cosmos going, accumulating material in the space it generates. That may not get the physics quite right, but I hope the image of creating cognitive expectations and a “space” to begin filling describes adequately one purpose for the ceremony. I am trying to emphasize the way in which we should prepare the students' minds for something out of the ordinary. This is an event they will remember, the moment at which an exploration of some consequence begins for each one of them. It would be desirable to have an occasion after the ceremony, perhaps over milk and cookies, during which the students have a chance to hear and talk about their topics with the adults and other students.

The forms of portfolios

Let us assume that we begin with the giving of a folder as the initial storage medium for the portfolio. After the ceremony each student will take her or his folder home. An identical folder will be provided and this one will remain in the school with those of the other students. It will most conveniently be kept in the student's classroom, if no other dedicated space is available, such as a library. I imagine one of those expandable folders that has a set of dividers and one bigger space

designed to hold the equivalent of a large format book.

The “home” folder can travel with the student, and its contents can be transferred to the school folder at regular intervals. For the first year it is likely that these folders will be sufficient. They will be filled with the basic information students can gather and maybe with the pictures students collect, their drawings and writing. The first contents will likely be equivalents of Sara’s drawings of apples and her scoring system based on taste, along with lists of varieties, as described in the *Brief Guide* in this Resource package. It might include some photographs that Sara, with a parent’s help, has taken of different varieties of apple and apple trees. The emphasis in the early years should be on accumulating knowledge from what the student can experience, as far as possible—from what they can touch and see and hear from others. Again, this needn’t be exclusively the case, and other sources of knowledge can be used. I mention this just to make clear that there is no hurry to amass huge compilations of information in these early years. The folders on such topics as *dust* and on *railways* will no doubt accumulate quite different contents. One can imagine a folder with a sample of household dust in a small plastic pouch stapled to a sheet of heavy paper on which the student, or a parent or teacher, writes a list of the things the dust is made up of. Another page might begin a list of the dust in the air of a typical classroom, discovered from talking with parents and teachers. Another page has a definition of dust, taken from an encyclopedia, and various attempts to indicate the size of dust particles. Another page has some random facts the student has learned from his neighbor, but which may not mean very much yet to the student, such as that in a typical house about 1,000 dust particles settle on each square centimeter (with a drawing of how big that is) every hour of the day. Where is it coming from? The same neighbor tells the student, and writes down for him, that a lot of this is from human skin, and that we shed the whole outer layer of our skin every day or two, which comes off at the rate of about 7,000,000 flakes of skin each minute. Yuk! No wonder there is so much dust around, the student is beginning to understand. And that’s only the skin—there’s much more in dust, he is becoming keen to discover. The numbers will not mean anything very precise initially, of course, but they serve to indicate something about the scale that will become increasingly precise as time goes by.

By Grade 2 many folders will already be bulging, with, in the case of *dust*, further drawings and photographs of dust mites and other miniature creatures found in dust, pages of varied facts, plastic containers with kinds of dust, lists of places where dust storms are common, pictures of dust clouds in space, and on earth from space, a note of how “pixie dust” is used in *Peter Pan* to help people to fly, and on and on. A new folder, one with greater capacity and sections within it, is given to each student when the first becomes full. The further sections will require

a new form of classifying the material already gathered, and help develop relevant cognitive skills.

By the end of Grade 2 or 3, some thought will need to be given to future forms for some portfolios. Many students will find the enlarged folder sufficient for some time, but in some cases models the student has made will be added to the portfolios and some of these will be pushing the limits of physical portfolios. In such cases the class portfolio can contain pictures of large models or samples, and the artifacts can be stored elsewhere—at home if there is space, in some other dedicated place in the school if possible.

We will also want to encourage students to take stock of their portfolios at the beginning of each new school year. In some cases the reorganization of the topic might involve discarding some older material, but in some cases the topic growth may be more linear and cumulative. But a kind of meta-level reflection on the portfolio at least once each year is important.

By Grade 5 or 6, each student will be provided with space on a server to begin building an on-line digital dimension to his or her portfolio. This can help to solve some of the problems caused by excessive material in the physical portfolios; much of that material gathered so far can be scanned or put into some other digitized form and be added to the on-line part of the portfolio. On-line development of the portfolio will need to begin slowly, and maybe helped along by older mentors who have been working on the same topic. We don't want to have twenty or thirty children suddenly displacing their learning about *apples* with a need for intensive work with computers. Initially we may expect the teacher to provide one or two useful on-line sites, and recommend that students download one new item for the portfolio and do something with it before inserting it into the portfolio; they might, for instance, integrate some information about the introduction of *apples* to the Americas with the document in which they have been building a history of apple varieties and their spread around the world. The physical portfolio, though, will still be used for samples and illustrations not easily put online. Indeed, it is possible that some topics will not require computers and digitized on-line storage at all.

Students can begin to search out further material on the Internet if appropriate, gathering further information, and constructing, with teachers' help, categories to classify and reorganize their accumulating store of knowledge. Sam, the student

studying *dust*, for example, can begin to add information and even videos of atmospheric dust storms, dust in space, and so on, discovering whole new forms of dust to explore. For each addition, though, the teacher's/supervisor's task is to ensure that Sam is not simply accumulating "stuff" but is building knowledge and understanding, and he will be expected to show this by the way he integrates new knowledge in meaningful ways with his growing portfolio. One simple task at the end of each year would be to ask the students to compose a list of ten "favorite" things discovered during the year. Each year Sam and Sara and all the others will be asked to revisit the ten items listed for each previous year, and reconsider them, in an attempt to ensure that the contents of the portfolio are constantly being reflected on, reassessed, manipulated, reorganized—thought about.

For the next few years it is likely that the major growth in many portfolios will be through online developments, though experiential exploration in most cases will continue to be significant and should be encouraged. Quite quickly the general basic information—the kind one can find in encyclopedias, for example – will be firmly in place, and sound organizational categories will be established. Now Sam can begin exploring "records," such as the largest accumulations of dust, the most dust free environments, explosive dust, colorful dust, uses of dust particles in space exploration, gold dust, underwater dust, dust in literature, Dust Bowl conditions, dust in songs, and so on. Sam's own interests should increasingly be the driver in these explorations, and teachers should feel it appropriate to encourage quite quirky pathways of inquiry, like underwater dust or dust in space or the health problems associated with dust mites.

The material gathered can be organized within Sam's online portfolio, and some items may be considered especially important and printed off for adding also to the physical portfolio. Sam will be increasingly realizing the wonder of dust, which is everywhere, all over the Earth, and through the stars, and, even in the cleanest conditions thousands of dust grains are in every cubic inch of air around him. One can imagine through these years, when families are attentive to Sam's growing expertise and interest, the student receiving occasional gifts—the uncle returning from Australia with a small sample of gold dust, the grandfather's birthday gift of a picture book about Dust Bowl experiences, the parents' present of a microscope, etc.

At Grade 7 or 8, each student will be encouraged to enter the various on-line forums connected with their topic. So they will make contact with others who have

the same topic through Wiki sites, Facebook-style networks, Websites devoted to aspects of their topic, and whatever other community-of-knowledge formats may have been elaborated on the Internet. It seems likely that these will grow like *mushrooms* (another good topic!) once LiD programs get underway. Students' on-line portfolios can be synched with home computers and perhaps individual students' laptops, such that they can continue to add to their growing portfolios at almost any time. These portfolios can now begin to be linked to those of others, and individual quirky inquiries can be shared widely: those files on the history of dust, dust underwater, interplanetary dust, songs about dust, the spread of dust from volcanoes, can become a part of the accessible data-base students can continue to explore.

It is, however, easy to imagine other possible scenarios, such as – to continue with our friend Sara—and have her make another contact at a party as well as the one imagined in the *Brief Guide*: "Sara met Jon at a friend's party. They talked about their topics and decided that they should do a joint presentation at the end of the year. Jon's topic was *birds*, and they began work on a presentation that would show the many ways in which *apples* and *birds* interacted. Threading through their presentation was the Italian folk tale of the Singing Apple and the Talking Bird. Jon's older cousin, it turned out, also had apples as a topic, and Jon invited Sara to meet him when he next visited. Sara took along an outline of her portfolio and the section on the historical development of apple species, of which she was most proud. Jon's cousin had his laptop with him and showed Sara a world map he had drawn which showed what species of apples were grown where and in what quantities. They discussed whether they might be able to merge the information they had and produce a similar map for every century from ancient Greek times till today." Well, again, an idealized world maybe a bit remote from most students' party activities today. But it is not implausible that a fairly wide implementation of LiD might create interactions among young people that are not prominent today. Through the high school years both the online portfolio and the physical portfolios will continue to grow and change in structure. *Dust* for Sam, like other topics for other students, will provide perspectives that begin to reshape his sense of the world in which he lives. The subject of his inquiries is in size about half way between a sub-atomic particle and the planet he lives on, it is made up from Sam's, and everyone else's, skin, from decayed animal feces, from his clothes, from pollens, from minute life-forms that thrive where we provide them with our organic material to feed on, and on and on. Sam will become increasingly aware as his portfolio develops of the processes of life and of social and historical conditions that are interwoven with his topic. The world he sees will be different from the world you and I see, and the world each student will see will be different again as their topics enlarge their understanding. And their portfolios, most of

which will be comprehensive, huge, and well organized, will support that understanding. Each student will have a space in school and at home where they keep a physical portfolio about their topic. For many students, the bulk of their portfolio will be on a server kept by the school district, and backed up on their own computers. I suspect, in most cases, the end of schooling will not be the end of their additions to their portfolios.

Portfolio supervision

Who is to do the supervision? Should the school try to ensure the same teacher stays with a group of children for their LiD program as long as possible, or should it be the job of the classroom teacher and change each year? Should special LiD supervising teachers be hired? Does it have to be a teacher—could someone less qualified handle the job? How would the supervisor interact with all those others mentioned as helping student, such as librarians, parents, older school students, college students, and others? And what knowledge or skills does a teacher need to have to be able to do the job most effectively?

Let us begin at the beginning. It would seem desirable that teachers or others who will be supervising portfolio development with a group of students should obviously need to understand the aims of the program. The program itself is not complicated, but it is desirable that any prospective supervisors should take at least a two-day workshop that will familiarize them with the aims and also give them guidance in how to engage students in topics and support them as the program goes forward.

To back up the workshop, the supervising teachers should also be given two kinds of written supports, which can be supplemented by further materials made available through LiD websites. The first kind of support will be some basic information about each of the topics they are to supervise, and this information will need to be suitable to the age of the students with whom they will be working. A booklet might also include suggestions for activities the students can become involved in that will engage their minds in exploring their topics. Producing this kind of support will take some time, but I think it will accumulate quickly with the help of teachers and LiD researchers.

The second kind of support that should be made available is suggestions about how to engage the imaginations of students at specific ages with the topics. That

is, the focus here is on students' minds and what most readily will attract them to inquire about their topics energetically.

The first kind of support can be provided in a basic way by whoever is organizing the program in a school or a school district. In the first instance, the LiD websites will provide information on each of the topics it recommends as appropriate, beginning with the set included with this Resource pack, and information on these can be downloaded to provide a basic starting point for the supervising teachers; acknowledging that many teachers will not want or need such prepared material and will prefer to find their own or rely on their own knowledge base and teacherly skills. We provide two rather elaborate support booklets of this kind, on *apples* and *money*, with this Resource pack. Most will likely be rather simpler.

Such information can be augmented by some further research by organizers of the program within school districts. Teachers will, of course, likely find extra material on some of the topics they will supervise. As time goes by their knowledge about most of the topics they supervise will grow and can be added to whatever is available on the LiD websites. Teachers can also contribute comments to the websites about activities that work especially well, so we will develop a resource of "best practices" expertise.

The second kind of support may be rather like that provided in the booklet *Some Operating principles*, which is also provided on this DVD. These principles can no doubt be organized into a form better suited for a handout to be given to supervisors. Again, experience and teachers' own suggestions might enrich this support, and websites will provide a means for supervising teachers' experience to be made available to others. That is, both kinds of support—of the background information that will supply initial avenues for students to explore and of the strategies that can engage students' imaginations in their topics—can quickly be elaborated through Wiki pages on LiD websites.

Initially I assumed that the regular classroom teacher would always be the student's portfolio supervisor, but a number of teachers have argued that it would work better if the student kept with the same supervising teacher for a number of years, as long as the students were in the same school. I can see how it would be easier to organize supervision if the regular classroom teacher handles it, but I am certainly open to the alternative suggested. The reason why I suspect the supervisor can change relatively painlessly in this program is that after a very

short time, the students will know more about their topics than any teacher. The supervisor's role is less a direct teaching role and more a support role, helping with suggestions, guiding questions, recommendations for avenues worth exploring, and so on.

While it may work to hire people other than regular teachers to supervise portfolios, I suspect the skills teachers acquire over their training and years of experience will be important to making this program a success. Parent volunteers, older students, librarians can all help to reduce the time burden on the teacher supervisor, but I think the students' portfolio development needs generally to be guided by teachers' skill and experience. These concerns seem important especially during the first three years of students' work on their topics, but thereafter I imagine most students will become year by year increasingly independent, needing to check in with their supervisors for feedback and occasional suggestions. No doubt this will not be true of all students, and some may forever need a bit of prodding and more active guidance than most. But even in these cases, the Wiki sections of the LiD website should come in useful as a repository of suggestions about how to help the more needy students sustain engagement with their topics.

Presentations and their purposes

The presentation is an opportunity for students to share the results of their work and receive feedback on it from their peers and from others, including parents, teachers, and older and younger students. The presentation is also a moment of pause and public celebration in what will be largely a private activity of developing a portfolio. That is, even while students begin to make contact with others studying the same topic, and discussing with others how they might combine features of their topics, their own portfolio is uniquely theirs and will grow and change under the direction of their interests and inquiries.

Presentations can be scheduled once a year and can take many forms. Individual students may want to make a brief presentation on some feature of their work that they have found most interesting during the previous year, or they may choose to make a joint presentation with one or two or a number of friends with different topics about which a coherent presentation can be structured. Within a short time, I am sure, the routine and conventional presentation, with perhaps an overhead projector, will soon give way to more adventurous formats, in which performance, multi-media, artwork and music, will begin to come into play.

One aim of the presentation is increased student confidence and skill at speaking to an audience. A basic aim of the program is to give students confidence through knowing something, and that confidence will be enlarged if we encourage other dimensions of individual confidence to be developed as they learn.

The celebratory function of presentations is also important. Some mark of achievement helps others to see the growing expertise of the student, and helps the student recognize the progress he or she is making. These presentations could be available throughout the year, and could thus become a new aspect of the school's activity. The degree to which these should be open sessions, available to all who want to come, should be determined by the teachers and the norms of the school, informed somewhat by each student's own wishes. Maybe for the first three or four years, the presentations might best be restricted to the class group, with occasional others as the student wishes. But as the students become older they should be encouraged to address their presentations to wider audiences.

The logistics of presentations should not be ignored, of course. If each student in a school will be making a presentation once a year, that will mean some space and time will be needed on a very frequent basis for this activity. It may be that two or more presentations might have to be made at the same time in different rooms. I think there are many ways this can be dealt with—the school might organize conference-style presentations, restricted to specific days, perhaps once per semester, with multiple parallel presentations available for the audience to choose among at any one time. I can imagine different schools finding varied ways of managing this.

Student differences

What are we to do about differences in students' ability and achievement in compiling a portfolio? Some students will have supportive and sensitive parents helping them and learning along with them, but not interfering inappropriately in what is the students' project. Other students will not have such good fortune; they may have parents or caregivers who have little interest in the students' LiD work or may, on the other hand, have intrusive parents who want to constantly shape the portfolio according to their own preferences, unaware perhaps of how they are taking over their child's task. Some students will have easy access to computers and may have their own laptops from an early age; others may have more difficult access and little support. What are we to do about these inequities?

One of the criteria for identifying suitable topics for the LiD program was that topics should be able, as far as possible, to provide students with equally rich experiences as they explore them. But should we also try to ensure equal outcomes, similarly rich portfolios at the end of the program for each student? Is this a program in which élitism or egalitarianism is to thrive?

My hope is that it will be a program in which great diversity will be allowed to thrive, without comparisons on some artificial and inappropriate criterion of “rightness” for portfolios.

In general, the portfolios are to be free from assessment and are to be constructed by the student according to the student’s interests. Will this not lead to unequal results, such that some portfolios will be massive, complex, and enormously enriching to the students who compose them, while others will look in comparison dull, uninteresting, and not at all complex? I think the problem words there are “in comparison.” Who will be doing the comparing? No doubt the students themselves will be doing so, but my suspicion is that even the duller portfolios will be, in comparison to typical projects students may do in school today, hugely more accomplished. Also, each student will increasingly be tied in with networks of others, sharing ideas, findings, and suggestions, but, always, some more and some less than others.

The uncommitted student, who may lack the kind of energy and engagement of many of their peers, will, even so, be putting together something on a scale and complexity beyond anything they are challenged to do today. The interactions students will have with others working on the same topic, and the easy ability to transfer components of portfolios, especially from Wiki sites, will likely mean that most portfolios will look formidably complex, and it would only be by looking carefully and at length that the richer and more complex portfolios would be evident to an observer.

Well, that’s the weasel response to the question. Will some portfolios be obviously hugely better than others? Of course. What should we do about it? Nothing; absolutely nothing. We should simply help and encourage each student put together the kind of portfolio she or he is drawn to construct.

We have created an educational system in which nearly all formal learning is

forced in some way. Nearly all formal learning is subject to assessment, because we tend to assume that students need to be “motivated” to learn. That is, we have created a system in which the kind of easy, “natural” learning of the streets and fields that John Dewey wanted to see brought into schools is not generally expected to happen. Our system is based on the belief that we cannot give students a choice about whether they should learn, say, algebra or not, because we fear the results, and it is clearly believed that to “motivate” them to learn algebra we need to assess them and allot benefits in school and in life in proportion to how well they manage.

The LiD program is based on the belief that students’ learning when un-assessed and uncoerced will likely produce results quite different from what we consider inevitable in our current schools. These likely different results are a product of removing the program from the commitment of the schools to produce required learning for various social purposes and from the consequent need to assess students to help determine their future social roles and jobs. Some of the schools’ difficulties in achieving easy and widespread learning are tied to its role as a crucial social agency delivering skills suitable for democratic social life and a national economy. By setting itself outside of these commitments, the LiD program has a chance at achieving a kind of learning that is currently rare within our school systems—though far from rare in our experience outside schools’ demands (think again of those hobbies and collections, that local Civil War buff, the surprising expertise built up by an aunt about eighteenth century manners, and so on.) A corollary of this is that the quality of students’ portfolios are to play no part in their selection for particular jobs—the portfolio is not an item to be placed on their résumé – nor is it to be a component to be used in deciding on university placement, and so on. Now I recognize that this is a somewhat idealistic, not to say unrealistic, expectation. After working so hard for so long and accumulating so much knowledge and understanding, can’t one use it for some more utilitarian purpose? No doubt one can’t stop that happening in some degree. I would only warn that every utilitarian use of the portfolio is a diminishment of what it can best do for the student.

Well, that has taken us some way from the issue of what we are to do about the fact that some portfolios will be much better than others. But, of course, it is far from a simple issue. About some features of human differences, we can do nothing. But what can we do about the cruder differences in access to knowledge among students? Some students will be in schools with few computers and restricted access to them, and little easy access to public library computers. I suspect this will increasingly be less of a problem in the future, as access to the

Internet will become less a matter of economic power and more a public right. But it is important to remember that much of the work of building a portfolio is not going to be simply a matter of downloading information. It will be at least as much about finding samples of dust or seeking out and tasting varieties of apples, measuring railway lines and counting railway ties, and exploring topics by means of experience in the world. Also there are grounds to propose that LiD portfolios should use the Internet in only very restricted ways for the first five or six years. And what are we to do about the student who says, after six months or a year or two or ten years that they are fed up with their topic and don't want to continue with their portfolios? Nothing; absolutely nothing. Let them stop. My expectation, especially in the early years, is that after a period of relief the drop-outs will face an environment in which most of their peers are becoming both expert and engaged by their developing portfolios. Drop-outs can be told that they can begin again any time they want, maybe months later or a year or more later. In some cases it may be that it is something about the topic that has turned them off, in which case they can be given a new topic. Some students will drop out and stay out. Nothing is lost from the schools' point of view—they will simply have a student doing much the same as all students do today. I suspect this will be rarer than many people might predict, but only experience will tell. (When administrators or teachers in a school raise this as a potential problem—some predicting massive drop-out rates within the first few years – I say that I will give them \$20 for every student who wants to drop out. But the deal is that they give me \$20 for every student who continues.)

Conclusion

No doubt as LiD programs get underway, they will take on forms I am not able to imagine. There is something odd about trying to describe practical details of a process that no one has yet put into practice. And no doubt the early experiences with the program will answer in a much more clear way many of the questions I have hesitantly tried to describe here. Support for anyone who wants to begin a pilot LiD program for themselves, are available in some degree on this DVD, but also on the LiD websites.

Another obvious feature of these LiD programs that I have not explored, because I cannot, is that different schools' values and mission statements will influence the way LiD is implemented. There are various ways LiD can be structured and practiced, reflecting and coordinating with the unique characteristics of particular schools. While one aim of the LiD program is to achieve a transformation of the experience of schooling for students, the program itself is not supposed to direct or change much of the school's everyday activities. Each school, with its

professional community, is obviously in the best position to determine how the program can fit into its school culture and organization. Nor should we expect that some precise and regular implementation process can be instituted for all schools wanting to try LiD. The program will take on a life of its own as teachers and administrators fit it to their own educational context. What I am trying to do here is lay out what seem to me a basic set of principles that can be adopted and adapted by individual schools, which, in the end, Sinatra-like, will do it their way.