Context: After a couple of years of leading the Constructionist Learning Laboratory project inside The Maine Youth Center, Maine's troubled prisons for teens, state government officials were interested in expanding the educational approach developed by Seymour Papert and his colleagues to reinvent the entire school within the prison. Roberta Niehaus was the school's principal. This document would have been written around 2001. The goals outlined in the proposal were never fully realized.

Learning in Interest Worlds

A Discussion Paper
on
A Structural Concept for a School in a Juvenile Correctional Facility
by
Roberta Niehaus and Seymour Papert

1. Background

This paper has grown out of work at the Maine Youth Center (MYC), the state correctional facility for adjudicated youth.

Niehaus is principal of a school in the MYC which has been held to conformity with the design of a standard Maine public school. In response to a widespread view that this design does not best serve the educational needs of majority of its students she created a "Restructuring Committee" with the mission of developing an alternative design for the school. The "structural concept" at the core of this paper grew out of a plan presented by Niehaus to this committee.

Papert (a member of Niehaus's committee) has directed a team engaged in the creation of a small pilot project (The Constructionist Learning Laboratory) at the MYC which has experimented with the extensive use of digital technologies in creating a learning environment in which disciplinary knowledge and the development of learning skills are integrated in the pursuit of projects selected for their ability to engage the students. The curriculum and pedagogical aspects of the design described here is strongly influenced by members of this team, particularly Sue Finch, John Stetson, David Cavallo and Gary Stager[1].

The authors want to make it very clear that this paper is being circulated as a basis for discussion rather than as a proposal for adoption as such. They believe that

1. Restructuring is needed.
2. Developing an alternative design will require more work than they have so far been able to put into the task.
3. The idea presented here has been worked over sufficiently to constribute to a serious discussion of alternatives.
4. The best outcome of the discussion will be the emergence of new ideas beyond anything that we have been able to imagine.

2. The Concept of an "Interest World."

[1] A general report on this work is available from The Learning Barn (learning@midmaine.com); papers by members of the CLL team will become available during the current school year.

Many adolescents, probably most of these who come into the MYC, could engage far more easily, and deeply, with an area of work such as wood-work, computer repair, commercial graphics or food preparation than with algebra or grammar. One might deduce that therefore they should be offered a "vocational" rather than an "academic" school. This may be true if those were the only possibilities. But what we suggest here is really a third choice, very different from the usual sense of vocational school.

Example 1. The goal of work in the wood-work area will not be to prepare students for a career in carpentry — though any who do become carpenters will, of course benefit from their work there. Rather, the goal is to use the interest evoked by working with wood to support the development of skills, attitudes and ethics that will be of value in all directions of further learning and in all career paths. We want students to leave with a strong and realistic sense that all paths, including the most academic are accessible.

Thus, what we would see happen in the wood-working area will in some ways be less than what would be done in the carpentry department of a vocational school and in some ways much more:

> Less in that we would not try to provide all the carpentry skills tauight in the vocational school.
>
> More, in that we would have goals that are not specifically associated with carpentry such as:
>
> 1. A very strong emphasis on communication skills including writing but also expression in other media such as reporting a project by using digital cameras and computers to compose a compelling video presentation.
> 2. Use of software for design, inventory, bookkeeping, cost estimation etc.
> 3. Instead of trying to make the use of the software as "easy" as possible the emphasis will be on creating understanding and the deepest possible level of computer fluency
> 4. Understanding the science of wood and of structures approached in a way that will lead to the greatest possible appreciation of scientific method.
> 5. Developing a sense of self as a competent learner and a sense of wonder at what one is capable of doing.

Point 5 is of the essence and is illustrated by work done by John Stetson in the CLL on two kinds of woodwork that are not usually included in a beginning vocational course: building high quality musical instruments and building ultralight model airplanes. Building a high-quality guitar from scratch might require 120 hours of concentrated work but leaves a sense of having accomplished beyond what one imagined one could do. Being able to keep the guitar is an incentive to learn to play music and a permanent reminder of what can be done with concentrated work in pursuit of a goal— and cannot be done without it. The very delicate work of building a model plane of spectacular high performance has something of the same effect — here learning to fly the plane to obtain

the best performance connects with powerful ideas in the areas of control theory, physics and mathematics very different from what is usually taught in school but far more valuable in the worlds of work or further study.

Example 2: The food area will differ in similar ways from the usual "culinary arts" vocational course. Educational work will include learning how to prepare meals and experience of participating in the kitchen of the institution. But beyond this it will include reading and writing about food; scientific experiments related to food, nutrition, diet for weight control and athletic performance.

As in wood-working computers would be extensively used for projects such as tracking food consumption and body weight, designing meals and long-term diets, seeking information on the web and, of course writing. Projects could include making and editing video presentations on nutritional issues, a cooking show, eating habits in other countries.

3. Structure and Organization.

Each student is assigned to one interest area and as a general rule works there until released from the center (though presumably there has to be some mechanism for transfer under exceptional circumstances.) Each area has a core staff (depending on the size of the student population) which works as a team in the area.

In addition there is a rotating staff of specialists in language, mathematics and social studies who divide their time between the areas. We assume that the core staff of the area will pay attention to language and mathematics as integral components of the interest-area work; the rotating specialists in these subjects have the task of providing overview, filling gaps, disciplinary standards and giving credits.

4. Assessment and Credit on Leaving.

Students will leave with three kinds of "credit" to carry with them to a receiving school:

1. A personal portfolio that shows what they have done and includes samples of their writing. This does NOT include summative grades by discipline (such as B in ninth grade English.)
2. A certificate of competence as a learner or "learning-readiness".
3. When they are able to do so the staff who know the student may give a "credit" in the form of a statement that this student is at such and such a grade level in such or such a subject. But it is made clear that this doers not mean having "taken" a course in that subject at that grade level.

5. Acess to On-line learning.

The school does not regularly provide such courses as ninth grade math or tenth grade English. However, students who have the competence and the discipline to benefit from such courses will be able to take take them on-line and will have access to subject teachers for limited amounts of help with this work.

6. Emergent Curriculum.

Creating curriculum for the interest areas will require considerable work. However, it must be noted that this does not have to be completed before starting. In fact, it would be far better not to set this goal: the proper goal is to have enough curriculum development to be able to operate and the intention and resources for permanent curriculum development.

Thus, at the start 80% of the work of students in the wood-working area might be traditional carpentry supplemented by traditional literacy and numeracy classes.

Weekly staff meetings of the area discuss new ideas that will allow for greater integration across disciplines.

To facilitate this one or two staff members should, at least in the first two years, be assigned full-time to the task of coordinating the discussion and implementation of these innovations. These staffers could be hired for the job, perhaps as consultants, or they could be members of the teaching staff who might carry out this function in yearly rotation. In either case school budgets would have to take this need into account.

7. Problems and Difficulties

7.1 Developing curriculum. As discussed above, this is primarily a matter of budget amounting to about two full salaries for a year or two and one subsequently.

7.2 Staff development. With goodwill all teachers could find a niche in the new structure for which they could be prepared with an acceptable level of effort. Most of what needs to be known can and should be learned “on the job.”

7.3 Resistance by teachers. A more serious problem than the need for teachers to learn new functions is the likelihood that some would resist the new setup, possibly as breach of contract, and that some have personalities that are incompatible with it. One partial solution lies in the fact that the new structure relatively more traditional way: the rotating subject teachers are in this category and two teachers could be assigned to work with the students who are taking onb-line courses. But it must be admitted that a core of the problem remains.

7.4 Resistance by “receiving” schools. One problem that should be welcomed because its solution will bring great benefits to troubled youth is the likely resistance by the schools to which students go after a period at the MYC. The form of “credit” proposed here will

require some changes in thinking in the schools and this in turn will require effort to "educate" these schools. Although the "certificate of competence in learning" mentioned before would help, there is no formulaic solution to identify this bug. The only answer is hard work to open the eyes of the teacher and of the warning public to what is happening.

The following is another proposal Papert sent to Maine Commissioner of Education Duke Albanese and his deputy, in 1999, prior to the launch of the project.

URGENT URGENT ……

TO DUKE ALBANESE (Commissioner of Education_
FROM SEYMOUR PAPERT

I

A Process for Design of Education at the Northern Juvenile Correction al Facility

The following is intended to advance discussion on the problem of a more fundamental rethinking of the educational aspects of Juvenile Correction.

II
Issues to be addressed

1. What kind of schooling would be appropriate for a juvenile correctional facility?

In the current structure of the MYC educational goals are served by a school (or in some sense two schools, a middle school and a high school) conceived, operated and evaluated on the model of Maine public schools.

Over the past years defects in the educational services provided by the school have been addressed by pressure to bring it more closely in line with schools outside, for example by correcting deviations from the state's conditions for school approval.

A first question to be addressed is whether this policy is correct. I make no secret of the fact that I believe that the model of a "standard school" does not fit the needs of the majority of MYC residents and attempting to force education into that mold deforms the entire process. Moreover, I have found that in informal discussion pretty well everyone who knows the situation and has given it any serious thought holds a similar view. Within the school this situation is expressed by the thinking of a "restructuring committee" created

in the past year by Ms. Niehaus, the principal. Outside the school I have found broad agreement in discussions with Commissioner Albanese, Deputy Commissioner Saar and many others.

The fact that a policy which so many believe to be counter-productive remains in force requires an explanation. In my view the explanation has two parts.

(1) The most important of these is simply that nobody in the circuit has the time, the resources and the authority to develop radically new alternative policies. I make the point by commenting on a proposal that has been formulated by Ms. Niehaus to restructure the learning environment around vocation-like areas of interest such as "carpentry," "graphic arts" "business technology" and the constructionist activities that I have been developing at the MYC. I think that this is an excellent starting point for serious study but taking it really seriously requires (at the very least) more work on the following issues than Ms. Niehaus has the resources to carry out:

1. Defining learning outcomes which will be (a) consistent with the goals of Maine's Learning Results legislation, (b) acceptable by "receiving schools" to which the students might return after release and (c) synergistic with the rehabilitation goals incorporated in the "core program." In my view this goal can only be achieved by a process of consultation involving personnel from a representative sample of Maine schools, rehabilitation and treatment specialists and individuals from out of state who have related experience and expertise.
    2. A promising line of work in this direction would be to examine the feasibility of the adoption by DOE of a learning outcome standard that could be described as " a certificate of learning competence." My experience is that the majority of students at the MYC have such large gaps in knowledge in specific subject areas that it is meaningless to define their goals in terms of gaining "credits" in specific subjects. What they need is a basis of competence in learning, some fundamental ideas that cut across the disciplines and the development of a "learning ethic."
3. Translating the new learning outcomes (whether or not they include the certificate of learning competence) into curriculum and assessment procedures. An initial stab at developing some segments for such a curriculum for language has been made under the direction of Ms. Niehaus during the summer of this year. My

project has developed some in the area of science. But in the absence of a deep re-examination of the learning outcomes these efforts could not be more than an initial cast to serve as a basis for more discussion.

4. Examining deeper possibilities of using modern technologies in the "interest areas."
5. Examination of possibilities of on-line courses for the minority of residents who are "in good academic standing." The only justification for operating a school on the model of a regular high school is that students who could graduate in good standing should be able to do so. But there are other ways this could be achieved.
6. Examining a host of legal issues such as the implications of special education requirements and rights of students to pursue their education.

(2) The already formidable difficulties of developing a policy taking into account all the issues mentioned above are greatly compounded by the difficulty inherent in developing change in an ongoing institution. Transposing the problem to the design of a new ("Northern") facility will clear the air for study of a wide range of proposals (including but not confined to the Niehaus plan mentioned above). This does not mean abandoning the "Southern Facility." On the contrary the most effective strategy for change there might be to implement it elsewhere.

2. An integrated view of the facility as a "Learning Environment."

Posing the question about what kind of school is appropriate assumes that there is a school separate from the rest if the institution. But a deeper, more systemic, analysis of possibilities must ask whether there should be a separate school. Might it not be better to design a "total learning environment" where "learning takes place everywhere and all the time" ?

Clearly this question raises a host of extremely difficult issues. But that is not a reason for ignoring it. What I think should be done is:

7. A fundamental examination of the issues; search worldwide for models that have been tried; draw world-class people into the process of exploring ideas.

8. Designing a new model in which flexibility is a major criterion, something that can grow and evolve. It is *not* reasonable to believe that a committee or task force could come up, especially in a limited time, with an ideal solution to the very complex issues involved in designing a totally integrated situation. BUT IT MUST BE POSSIBLE TO AVOID IMPLEMENTING A PLAN WHOSE EVOLUTION IS IMPEDED BY FACTORS SUCH AS CONTRACTS, "TURF" …….ETC.

3. Developing an integrated approach to "thinking skills."

It is a striking coincidence that both the "core program" on the "treatment side" of the facility and the program that I have been developing on the "education side" place an emphasis on "thinking skills." The integration of these two approaches cries out to be tackled irrespective of what is decided about the bigger question of integration. I have already started a search for compatible people on both sides of the "cognitive" vs "therapeutic" divide in approaches to this issue. At the least it would be interesting to hold a seminar/workshop with participation of practitioners in Maine correctional and educational sectors together with some leading theorists,

4. Developing a new interface between detention and receiving schools.

This is another issue that falls under the bigger ones but merits independent consideration. An aspect which interests me particularly is the development of a "certification of readiness to learn" that would be accepted by receiving schools as an alternative to subject credits which in many (probably in most) cases have little relation to the students real academic fitness to proceed.

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Forms of Activity to Support the Design

1. Gathering information on what exists: look for models, read and abstract publications, identify and consult experts. This requires a research assistant, some travel, and a lot of telecommunication.

2. Meetings of correctional and educational professionals. This requires meeting facilities, support staff, editorial work.

3. Draft curriculum ideas. In initial phases using part-time consultants. Later as staff for the new facility is recruited they would participate increasingly. (I assume here that the staff would be recruited to start work in the spring or at the latest early summer of 2001 but would not have operational duties until September.)

4. Write position papers, reports etc. Part time services of a very good writer(s).

5. Discussion with legislators, opinion makers, school personnel.

IV

Possible Timeline

Sept.

Get started: Last week of September (or if this is delayed other dates will slip by same delay.)

Sept/Oct:

Period of study and consultation

November:
"First Position Paper" on issues and a range of solutions including drafts of curriculum and assessment instruments: Written in first half of November and widely circulated for comment. Replies requested before end of November.

December:
Meetings to discuss contents of paper: First half of December. First round of meetings with "internal" people: DOC, DOE, MYC etc. Followed by a one day conference to which all stake holders in the juvenile correction in Maine are invited.

"Second Position Paper" responsive to feedback from December meetings written before Christmas.

2001:

Preparation for Opening Day:

By the beginning of the year we will have defined the "philosophical basis" for the new facility and have developed prototypes of curriculum. Staff for the facility including the principal can be recruited with a clear understanding of shared perspective and commitment to a plan for development. As they come on board they will work on the elaboration of the design.

Permanent Design:

One of the features of the design should be flexibility: it should avoid re-creating a structure that is inherently hard to change. This also means that the transition from "design phase" to "operational phase" will not be sharply defined by an opening day.

