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Notes on an ISCS Visit

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NOTES ON AN ISCS VISIT

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In late January, 1973, I had the opportunity to work with persons in Tulsa, Oklahoma in the evaluation of their ISCS-Level I program. Some of the local innovations in Tulsa, I believe, are noteworthy enough to be brought to your attention. Included below are extracts from a letter I wrote after my visit to Mr. A. Q. Polk, Supervisor of Science in the Tulsa Public Schools. The notes cover ISCS program evaluation and thoughts relating to my school visits.

ISCS Program Evaluation

The objectives of an ISCS program are not identical to those of any other contemporary program. In fact, with its emphasis on lab activity, individualized self-pacing, and scientific processes, the program is very different from others now available for junior high school use. Therefore, in evaluating the ISCS program, it is not entirely appropriate to compare the cognitive learning of ISCS students with that of students in other contemporary programs. Test instruments will inevitably be biased.

It is appropriate to set up program criteria and objectives for the students in Tulsa and then to evaluate whether or not the ISCS program provides an appropriate means to meet these objectives. The objectives developed by the workshop team on January 24, 25, and 26 provide a starting point for evaluation of the effectiveness of the program, but effort should be made to refine and improve them as time progresses. Representatives of the larger community including students, graduates, parents, and employers should be involved in future development of objectives for the science program as well as faculty members. The objectives and evaluation instrument developed in January were put together in a limited span of time and for that reason, although participants worked diligently, they are somewhat narrow. Too often the test items emphasize factual recall rather than the higher order process skills such as "inferring" and the building of "conceptual models."

One of the major ISCS program goals, with which I heard workshop participants identify at several points, was the development of self-reliant students. Students should develop an ability to plan and use their time for the optimum attainment of objectives they themselves select (such as the choice of excursions). ISCS materials can help to facilitate self-reliance in a good environment, but the instrument developed does not begin to measure this important objective. At the very least, items dealing with the facilitation of self-reliance should be included in the attitude surveys being prepared for students and teachers by Lyle Young.

School Visits in Tulsa

My impressions of the science classes we visited during my stay in Tulsa are very positive. Class activity was clearly superior to that which one may observe in a great many junior high schools in this country. There is little doubt that this is due in large part to the manner in which you have developed the science program in those schools. The ISCS program does provide a point of departure around which to structure a sound science program which can begin to meet the needs of individual students.

The six week-three week time frame in use in these schools is, I think, exemplary. The six week phase allows student access to nationally developed, individualized curriculum materials with a quality which would be almost impossible to develop locally. In the three-week phase, local faculty, schools, and other interested parties have an opportunity to develop and use materials based on locally perceived needs. In concert with the "three teacher team" concept, this model provides administrators much greater flexibility in assigning personnel and in facilitating appropriate curriculum change since not all team members must employ the same teaching style.

The attitudes of the teachers, administrators, and students with whom I met were very positive toward the current science program and its implementation. I was particularly impressed to observe the second level ISCS class at Wilson Junior High School working with chemistry lab activities under the supervision of a substitute teacher. The level of student involvement, concern, and responsibility under these conditions was remarkable.

The use of paraprofessionals is also noteworthy. Administering and evaluating tests and recording data regarding student progress was handled effectively by the teacher aides I observed. The aides worked with the students in a professional manner and in the process, teachers were freed for the more appropriate role of interacting with students.

Although your program is exemplary in a number of ways, in reflecting upon my visits, I do feel the following questions should be raised:

1. Are there enough paraprofessionals working with the teacher teams?

2. Is the locally developed enrichment phase relevant enough to the needs of students and to the local environment?

3. Is the enrichment phase being taught in a manner which is too rigid and too highly structured?

4. Is the level of student/teacher interaction sufficient in all lab-classrooms?

5. Do grading policies properly encourage students to select the appropriate remedial and/or enrichment excursions?

6. How can the program be improved to further meet the needs of individual students?

7. Are there adequate resources for poor readers?

8. Do faculty members in different schools have adequate opportunity to discuss common problems?

SOME REASONS FOR NOT WORKING TOWARD A HUMANISTIC SYSTEM

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We tried that before. Our system won't allow it. We are too small for that. It costs too much. They won't let us. We're too big for that. You can't do that with kids like ours. It may work in your place, but not here. Let's sleep on it. Write it up and we'll put a committee on it. It may work in industry but it'll never work in education. We should wait awhile. It may work later. We have too many people to try it. We don't have enough equipment. We don't have enough room. The kids are not ready for that sort of thing. The kids need more structure. The administration requires us to give grades. It's a required course. The kids will goof off. You can't trust the kids. The other members of our faculty aren't up to it. Parents will be on our backs. You have to start that in the first grade, not here. Let's put it on a trial basis. I haven't got the time. It might work in art, but it'll never work in science. But the kids have to be taught the fundamentals first. The kids might miss something really important. Suppose the students get so specialized that they study only one thing. The students will just dabble and never get into anything in depth. You can't get away with that kind of thing. I've got to act my age. It's not good to get too close to the kids; they won't respect you anymore.

<u>There is only one acceptable excuse for not changing</u>: If you really are comfortable with what you are doing and if your students tell you they are really comfortable, <u>then don't change</u>. Ask your students and see how they feel. If you say you'd like to change but can't for any of the reasons above, <u>you're copping out</u>!

<u>All it takes to offer alternatives is your own real desire to offer them</u>.

You can change if you want to. You must take personal responsibility for whether or not you do.

<u>All it takes for a major change in your program and your life is you</u>!

A grant of $2,825 to the University of Wisconsin-Superior for support of a 1973 summer session Physics Project in Digital Electronics has been announced by Jack W. Sheriff, President of Duluth Scientific, Incorporated, 620 Hughitt Avenue, Superior.

The DSI grant, under the direction of Dr. Gordon O. C. Besch, chairman of the University of Wisconsin-Superior physics department, will be used to implement a "Short Course in