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ABSTRACT

The high achievement of students in the Johnson City School District (JCS D) in New York is attributed to three factors: (1) the mode of instruction from elementary through high school is grounded in a common theoretical base--Bloom's work on Mastery Learning and Glasser's work on Reality Therapy; (2) the teachers participate in staff development that encourages risk-free innovation and in a sense is itself an example of Mastery Learning; and (3) the administrative leadership at the district office level is focused primarily on instructional leadership, committed to aligning all facets of the district's operations in pursuit of a common set of student outcomes. This last factor has led to the development of an Outcomes-Driven Development Model (ODDM) which has made such high academic achievement possible. The ODDM broadens the definitions of student outcomes to include far more than standardized tests, and identifies the major subsystems of the school which must be intentionally aligned in pursuit of high student achievement. This paper provides descriptions of the implementation of each of these elements in the JCS D program. (JD)

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EXCELLENCE IN AN OUTCOME-DRIVEN SCHOOL DISTRICT

A Validation Study of the Schools of  
Johnson City, New York

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Johnson City Central School District has been recognized for the outstanding achievement of its students and for the **Outcomes-Driven Development Model (ODDM)** which made that achievement possible. ODDM, the only elementary and middle school curriculum management model to be validated by the National Diffusion Network, broadens the definition of student outcomes to include far more than standardized tests and identifies the major subsystems of the school which must be aligned in pursuit of those outcomes for the school to be maximally effective. The model will be described in more detail below.

Usually when people think of outstanding schools, one or both of two conditions exist: The student population is composed largely of upper middle class kids from high achieving homes who have a way of making most schools look good because of their ability and motivation and because of high expectations of the school by both students and their families, and/or the school is being judged on the basis of one or two small programs which include a small part of the student body and which are small enough to be staffed by exceptional teachers, frequently with a high degree of emotional involvement in the success of the program.

The Johnson City (JCSD) schools are an important exception to this in that the city is a small, basically blue collar working class suburb of Binghamton, New York, that lacks a significant professional and managerial component and in that the programs which have made them excellent extend to all students, teachers, and buildings.

In my research in the Johnson City schools in the past year, several things have become apparent. First, student achievement is truly extraordinary and statistical analyses of test scores have established that. Second, the staff of educators is exceptional, not because they are brighter or better educated or more talented, but because they really do believe that they can enable most students to achieve at a very high level, because they are constantly improving in relevant ways through an excellent

staff development program, and because they pull together more than most educators through the use of a common instructional process designed to bring that belief to reality. And third, the administrative leadership at the district office level is first and foremost instructional leadership, committed to aligning all facets of the district's operations in pursuit of a common set of student outcomes. It is this last factor which has lead to the development of ODDM.

### . STUDENT ACHIEVEMENT

The district began working towards a mastery model in 1971 with the primary teachers in just one elementary school, and by 1978 the total district was involved in mastery learning at some level. Students then in the eighth grade, who entered school in 1970, would have worked in mastery learning situations in at least some of their classes, and students entering in 1977 (the 1978 column in the table below) would have experienced mastery learning throughout their school careers. The table displays the grade equivalent scores on the California Achievement Test (CAT) for JCSD students in grades one through eight for the years 1978 through 1984. To follow the progress of a particular cohort of students--e.g., those who entered school in 1977--trace the diagonal from the upper left hand corner of the table across and down to the lower right hand corner. Thus one can see that JCSD students on average were just slightly below average at the end of the first grade; as they progressed through the grades, they not only caught up with the national norm, but by the time they finished the eighth grade they were on average over two years above the norm in reading and over three in mathematics.

GRADE	NATIONAL NORM	READING						
		1978	1979	1980	1981	1982	1983	1984
1	1.0	1.6	1.9	1.9	2.1	2.2	2.1	2.2
2	2.0	3.0	3.2	3.1	3.1	3.2	3.4	3.6
3	3.0	4.0	4.1	3.9	4.0	4.1	4.5	4.2
4	4.0	5.3	5.5	5.7	5.7	5.6	5.8	5.8
5	5.0	6.8	6.8	7.0	7.6	7.1	7.0	7.2
6	6.0	7.2	8.0	8.1	8.5	8.3	8.3	8.1
7	7.0	8.7	9.3	9.2	9.7	10.0	10.0	10.0
8	8.0	8.7	9.3	10.0	10.6	11.0	11.1	11.1

  

GRADE	NATIONAL NORM	MATHEMATICS						
		1978	1979	1980	1981	1982	1983	1984
1	1.0	1.7	2.2	2.0	2.1	2.2	2.3	2.4
2	2.0	3.0	3.4	3.3	3.3	3.2	3.4	3.4
3	3.0	4.1	4.5	4.3	4.4	4.3	4.6	4.4
4	4.0	5.0	5.7	5.7	5.5	5.4	5.5	5.9
5	5.0	7.1	7.2	7.5	7.4	7.0	6.9	6.9
6	6.0	7.0	8.0	8.6	8.4	8.1	8.1	8.1
7	7.0	8.5	9.3	9.2	10.0	9.9	9.8	10.0
8	8.0	10.7	11.1	12.5	11.9	12.5	12.5	11.9

<sup>1</sup>The tests were given approximately two months before the end of the school year. Thus the dates heading the columns represent the end of the school year. Therefore the scores for the first grade in the 1978 column are for those students who entered the first grade in 1977.

By following the horizontal rows in the table from left to right, one can get some idea of the improvement the staff made in their efforts to promote student learning at a given grade level. For example the average score for first graders in reading in 1978 was 1.6, slightly below the national norm, but the next year it was very slightly above the norm and by 1981 had moved up to three or four months above grade level and stayed there. The greatest gains come after the third grade, at a point in their educational careers when many students begin to achieve at a somewhat slower rate than before.

One of the district's goals is for at least 75% of its students to be six months or more above grade level on the CAT by the time they finish the eighth grade, a goal that the district has been achieving consistently since 1980 in mathematics and 1982 in reading. Normally one would expect about 42% of the students to score that high in reading and about 41% in mathematics. There are no CAT data prior to 1978, but back in 1971 and 1972, when the district first began to move towards mastery, only about 37% of the students in reading and 42% in mathematics were six months or more above grade level on the Stanford Achievement test. Here again the extraordinary progress of the district in improving the performance of its students is clearly seen.

## THE STAFF

One might expect such outstanding success to come at the expense of having to recruit an elite staff from far and near. Nothing could be further from the truth. Although the staff is outstanding in many ways, in the main it is composed of people who grew up in the area, who went to area colleges and universities, and who by many criteria are typical teachers and administrators. They excel, however, in the extent to which they have been able to follow a common instructional process (see below) in pursuit of the widely held belief that almost all kids can achieve at a very high level and that they as educators are good enough to help them do it.

The staff has a common language, derived from a common theoretical base--primarily Benjamin Bloom's work on mastery learning and William Glasser's work on reality therapy. I found that teachers in one school could explain events in another school, even when they did not know the teachers and students involved, because they shared that theoretical base. Although they do not think of themselves as theoretical, in planning and in problem solving they make frequent reference to Bloom, William Glasser, and others upon whose theoretical work district practice is based. It is not uncommon to hear a classroom practice attributed to its theoretical sources--for example, Glasser's reality therapy and Johnson and Johnson's cooperative learning groups.

This shared knowledge and shared practices came into existence primarily through an exceptional staff development program. Starting with just six teachers in one primary school, each teacher participating in the developing programs of the district was paid to devote at least a week during the summer to exploring what he or she really believed about teaching and learning, what the research literature said on those same topics, and what changes would be required to incorporate that research

into an instructional process in support of those beliefs. Loaded with new information on theory and research, they were given risk-free opportunities to attempt to develop programs consistent with those beliefs and that research. The spirit of this original staff development effort persists in that it is district personnel--usually teachers--who are the leaders. Typically someone will identify an instructional practice which promises to solve an existing problem or to improve achievement in some way. If it seems consistent with the beliefs and practices of the district, then several people will learn all that they can about it, usually by going to a training program at district expense. Then, with better knowledge of the practice, it will be evaluated in terms of how appropriate it is for the district. If it is appropriate, then the person or persons who were trained in the practice--called core people for the practice--will make a presentation to the district's staff, inviting those interested to join them in its implementation. The core people thus become the in-house trainers who have both expertise and a strong sense of ownership.

The teachers and administrators of the district are now developing a career ladder program for teachers to increase the responsibilities and rewards for outstanding teachers without their having to become administrators. As a learner a teacher first must master the facts about some innovation being implemented in the district. Then comes applying the practice in somewhat controlled and predictable situations, as in implementing a unit guide prepared by someone else. Third, the teacher applies the practice in additional areas not previously planned for. And fourth, the teacher designs new courses or new units based on the practice. As a teacher of teachers, first the teacher must know the theory underlying the practice. Next comes modeling the practice for others, and third involves planning, say, of unit guides to help others learn to apply the practice. Finally comes the coaching of other teachers.

For those who wish to learn about the practice, the district provides time to learn and to prepare those materials and plans necessary for its implementation. They are also secure in the knowledge that if the innovation does not work as expected, there will be no sanctions against them for trying it out. If it does work as expected, then over the next few years more and more teachers will learn about and adopt the practice. There will be further workshops to adapt practices to the district and retrain staff. I found no evidence that there was ever an effort to install an innovation on a large scale by decree.

In a sense the staff development program is an example of mastery learning. Teachers are not forced to attempt an innovation if they are not ready for it, and when they do decide to adopt it, they are given lots of support and feedback and as much time as they need to put the practice in place. It is not assumed that all teachers are at the same place in their development or learn best at the same rate or in the same manner. The only caution to those who are not ready to adopt an instructional innovation is this: "You don't have to cooperate, but don't get in the way." The expectation clearly is that sooner or later, all will cooperate.

This shows up very clearly in the teacher evaluation process, which is based on an extensive list of behaviors which, according to the professional literature, have greatest likelihood of promoting student achievement and which are consistent with district beliefs about how teaching and learning relate. The items on the list are the result of the collaboration of a committee of ten teachers and two administrators. On each behavior a teacher is evaluated as not yet exhibiting the behavior, as maintaining a level of proficiency comparable to the previous evaluation, or as developing beyond what had been previously observed. Individual goals are generated by the teacher and the administrator, goals which will constitute part of the basis of future evaluations.

Although all teachers in JCSD are on display when the hundreds of visitors come to the district each year, a second aspect of the staff development program places a number of teachers even more in the public eye as they are encouraged to become spokespersons for the district, serving as consultants to other school districts that wish to learn about and perhaps adopt a mastery model similar to that used at JCSD. All teachers are encouraged to become as expert at the instructional process as possible; those who serve as consultants are those who, in addition to becoming expert, also become adept at explaining the program and at helping others try it out. Although this gives teachers and administrators a real motivation to become expert at what they do and provides them with both status and financial rewards, it costs JCSD nothing: Any school employing the staff member pays not only for the consultant but also for the substitute who replaces the staff member while he or she serves as consultant.

### THE INSTRUCTIONAL PROCESS

Staff members at JCSD are in demand as consultants because of the success of the district's instructional process, an instructional management system which insures that there is a high degree of correspondence between instructional objectives, what is taught, and what is tested and that there is more time available for learning and more instruction for those who need it. The instructional process for a unit of instruction begins with the assessment of whether the students have the prerequisites for the unit. If they do not, then the teacher provides instruction on the prerequisites. Then comes cue setting, a brief explanation of the objectives of the unit and a description of what the students will be able to do and will know when they have mastered the unit. Next comes the "best shot" instruction, that large group instruction which the teacher thinks has the best chance of enabling all the students to achieve mastery. This is followed

by guided practice in which the teacher informally evaluates how well each student is doing in a practice situation. It may be as simple as a teacher's walking about the room, checking each student's work as they work on practice problems, but the emphasis is always upon successful practice. No child should ever be asked to do homework, for example, that he or she does not know how to do.

When the teacher is confident that most, if not all, of the students can demonstrate mastery, a formative test on the unit's objectives is given. Those students who have mastered the unit's objectives then work on enrichment activities, while those who have not receive corrective instruction. Thus those who need more time and more instruction receive it while those who do not are freed to work on other things. After corrective instruction and more guided practices, a summative test on the unit is given before going on to the next unit.

No grades are given on either the formative or summative examinations. Instead a student is adjudged to have achieved mastery or else not to have completed the unit. Frequently one or more students will not complete the unit, but they are responsible for completing the unit at a mastery level after school or at other available time before the end of the course. The student who does not demonstrate mastery on a given unit is not let off the hook just because the class has gone on to the next unit. The teacher will still work with that student as needed on the incompletd unit. Grades are given at the end of each ten weeks. The lowest level of achievement for which the student can get credit for a unit is 80 or 85, depending on the subject and level. If a student scores less than that, he or she gets an incomplete.

Steps are taken to see that students accept maximum responsibility for their own learning. Thus students may not take a second summative test on a unit until they can prove that they have engaged in additional learning activities designed to help them achieve the objectives of the unit. A student who has not done his or her homework

hardly qualifies for any extra consideration; rather it is up to the student to prove that he or she deserves corrective instruction by cooperating in the instructional process. Not only does this reduce demands on teacher time, it also reinforces the district's stated goal that students learn to be self-directed learners.

The instructional process does not prescribe or preclude any particular instructional strategy. Rather it is the teacher's professional responsibility to select from a wide range of instructional practices those that seem most appropriate for a given unit, attempting in each case to employ a variety of teaching techniques to accommodate the learning styles of different students: lecture, discussion and interaction, reflecting on and analyzing experience, integrating reflective analysis into concepts, practicing clearly defined concepts and skills, adding something of oneself to that which is being studied, and so on. Here is where staff development programs in Reading in the Content Areas, Cooperative Learning Groups, and Reality Therapy, for example, are most important: They greatly expand the teacher's repertoire of tools to help students learn.

## INSTRUCTIONAL LEADERSHIP

My first and best insight into how this all came to be came from an unexpected conversation with a group of teachers in a teachers' lounge before I began formal interviews in the district. When I asked to what they attributed the extraordinary achievement of the students, the answer was simple and direct: "Our administrators." In a day and time when teachers and administrators do not frequently say good things about each other and when educational administrators are usually trained to be site managers instead of instructional leaders, I was shocked at such a response. During the next year of interviewing staff members and observing meetings and workshops, I was

repeatedly impressed by the importance of the instructional program in administrative deliberations as seen, for example, in a three hour meeting of the administrative staff of the district in which nothing--not schedules or budgets or unions or legislation--was discussed except how to provide appropriate instruction at the next level of schooling for students who still had incompletes from the previous level of schooling. And I was amused when I observed the embarrassment of an administrator at one level whose decision, based on financial considerations, was challenged by an administrator at a lower level because the decision was not consistent with "what we believe about how kids learn." There is that transformational leadership, particularly by the superintendent and other members of the central office staff, which makes every aspect of the life of the school subject to change if that change will increase the probability of achieving the district's desired outcomes. As a result there is a conscious effort to align all aspects of the school's operation to support the instructional program. To appreciate this one must understand ODDM. (See chart on following page.)

What began as a determination to base school policy and practice on the best research and theory in order to maximize the number of students who achieve at high levels has evolved into a development model designed to promote the intentional alignment of all areas of school policy and practice in support of desired student outcomes. It is not enough to introduce a new instructional process; instead that innovation must be supported by a curriculum and other classroom practices, by school practices and organizational structures, all intentionally aligned towards achieving the same outcomes. And that intentional alignment does not stop with school support systems but extends to the whole administrative system and to the board of education. It is a school board policy that all decisions are to be based on the best research literature available throughout the district. It becomes the responsibility of central administration to see that this intentional alignment of school practices with each other

OUTCOMES - ORIVEN DEVELOPMENTAL MODEL

RESEARCH LITERATURE

MISSION: ALL STUDENTS WILL LEARN WELL WHAT SCHOOLS WANT THEM TO LEARN

PHILOSOPHICAL BASE

PSYCHOLOGICAL BASE

TRANSFORMATIONAL LEADERSHIP

ADMINISTRATIVE SUPPORT SYSTEMS

STAFF DEVELOPMENT MODEL

COMMUNICATIONS NETWORK

PROBLEM SOLVING MODEL

CHANGE FACTORS & PROCESS

CLIMATE IMPROVEMENT MODEL

BOARD OF EDUCATION

BOARD POLICY

BOARD SUPPORT

COMMUNITIES

NETWORKING

SCHOOL SUPPORT SYSTEMS

INSTRUCTIONAL PROCESSES

CURRICULUM ORGANIZATION

INTENTIONAL SCHOOL PRACTICES

INTENTIONAL CLASSROOM PRACTICES

ORGANIZATIONAL STRUCTURES

DESIRED STUDENT EXIT BEHAVIORS

1. SELF-ESTEEM AS LEARNER AND PERSON
2. COGNITIVE LEVELS - LOW TO HIGH LEVELS
3. PROCESS SKILLS - PROBLEM SOLVING - COMMUNICATION  
DECISION MAKING - ACCOUNTABILITY  
GROUP PROCESS
4. SELF-DIRECTED LEARNER
5. CONCERN FOR OTHERS

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Albert January  
Johnson City

and with the research literature extends to staff development, to teacher evaluation, and to efforts to improve climate, to solve problems, and to manage the change and communications processes.

For example, the attendance policy ideally should support the instructional program; certainly it must not work against the instructional process by making it possible for a student to escape responsibility for his or her own learning. And the same is true for the system by which students are advanced from grade to grade. School board policies must be consistent with these efforts. Conscious efforts are made to develop and use models of change and communication which insure that nothing is left to happenstance. Here and elsewhere instructional leadership from the superintendent and consequently from the rest of the administrative staff clearly is central to the district's success in promoting excellence in learning.

### THE TASK AHEAD

Nothing that has been written thus far should lead one to the conclusion that this is a perfect school district. There is room for improvement anywhere you look and there are some problems ahead which have yet to be solved.

The program has developed incrementally over the last dozen or so years, and although this has had the advantage of allowing teachers to adopt new instructional practices, for example, as they were able to do so (as opposed to everyone's trying to adopt something at the same time), it has resulted in the incomplete implementation of the instructional process in many classrooms. And because the instructional process is played out over a period of days and weeks, it is virtually impossible to observe a single teacher at every step in the process. For example, one would have to observe a teacher during the right five or ten minutes of the right day of the right week to know

if cue setting is being done and done properly. Thus the staff has to rely on indicators of the use of the instructional process: Are the unit plans laid out in terms of the instructional process? Do teachers and administrators talk about teaching in terms of the instructional process? When teachers are asked to describe and demonstrate an aspect of the instructional process, can they do it? From my own interviews with the staff, I have concluded that most of the time most of the teachers follow the instructional process, but as one would expect, there are times when a teacher does not check for prerequisites or when enrichment is just busywork or when the tests do not fit the objectives as well as they might. One would expect this in any human endeavor, however, and it should not detract from the fact that student achievement in JCSD is truly extraordinary. Less than perfect teachers and administrators are following an instructional process most of the time and are achieving real excellence. The challenge becomes one of improving their fidelity to their beliefs and to the instructional process as they attempt to find and develop new ways to help kids learn.

A second problem deals with momentum: How do you keep from becoming complacent? There is a tendency for people to assume that standardized test scores can be equated with an education. Clearly such tests usually measure objectives at the lower cognitive levels and do not deal at all with affective matters or with larger social issues. The district has adopted programs, for example, such as Talents Unlimited, in which it is assumed that every kid is talented in some way and can make important contributions to learning if that talent is developed, and Investigations, just now being developed, in which students will be encouraged to work at high cognitive levels on problems which lie outside--above--the normal school curriculum and the content of standardized tests. The temptation is always to rely on the easy indicators of success. To the extent that JCSD resists this temptation and continues to move into important kinds of learning not measured by standardized tests, while maintaining its

basic instructional program, it will continue to excel. The district faces a major problem in that there are no good measures for the really important kinds of learning not measured by traditional standardized tests: the ability to solve significant problems, individual dedication to being a good citizen, willingness to participate in the political process, the ability to communicate effectively in important nonschool situations, and so on.

The momentum problem shows up also in the need to find ways of rewarding teachers so that they do not have to leave the classroom to become administrators in order to have a sense of personal and professional success. The district's use of teachers as consultants, described above, provides both status and financial reward for outstanding teachers, and the present effort by teachers and administrators to define a career ladder for teachers, if successful, should work to encourage teachers to continue to develop as educators.

A third problem lies in the need to find ways to induct new teachers who do not necessarily share the district's belief system and who are not accustomed to or sold on the instructional process. Heretofore most new teachers were hired from the ranks of substitute teachers who had worked in the district for several years, who understood what was going on, and who could easily move into the system. As retirements take place and as new programs develop as a result of external requirements, it will be a challenge to develop a new staff development program designed as a crash course for new teachers who must learn to operate within the system very quickly if the system is going to continue to operate as it presently does. Here again, however, the district is working to develop such a program even before the need is strongly present. That same program should also be useful in helping other school districts learn about and adopt the kind of program which has made JCSD the outstanding district it is.