QUALITY SCHOOLS INTERNATIONAL
Guideline & Ideas for an PBE Structure
in the Elementary School

(16 JUN 89, revised on 29 APR 90, 15 APR 91, & 31 DEC 95)

I.   Use Exit Outcomes to develop Program Outcomes, which ore used to develop Course Outcomes, leading to Unit Outcomes, which finally end in the individual Lesson (or Segment) Outcomes.

II.   Unit Outcomes -

> Divide the courses (mathematics, reading, language arts, science, etc) of each 'class' level (6 year old class, 7 year old class, etc) into units.

> There are ten essential unit outcomes for each course which meets daily for one period of about 45 minutes.

> There are less than ten essential unit outcomes for classes which do not meet daily as described above. For example, if a science class meets three times a week, there are six unit outcomes for the course for the year. Or, for an art class which meets once a week, there are only two unit outcomes for the course. Or, for a class which meets all year daily for about 20 minutes, there are five unit outcomes for the course.

> Each unit outcome consists of 1) a summarizing statement of what the student will demonstrate in the unit as a whole, and Z) a series of lesson outcomes (behavioral objectives).   These lesson outcomes are written in measurable terms. For example, "The Student Will understand addition" is not written in measurable terms. "TSW add two digit numerals with carrying" is written in measurable terms.

> Success in these objectives needs to be carefully defined in terms of mastery, participation, project completion, group learning, or whatever.

> The demonstration of mastery of each unit outcome is defined. In many cases this is a paper and pencil test with at least two alternative forms. In other cases, particularly for younger children, the demonstration of mastery or success takes a different form, such as performance, lab demonstration, oral response, or other observable behavior which can be recorded.

➢   One of the QSI 'boundary conditions' is that each student in the nine year old class and older will be given the written unit outcome just before instruction begins for a particular unit. In this manner the student knows what is to be learned and what he/she has to do to demonstrate mastery. If a student knows where and how he/she is going, he/she is more likely to get

there than otherwise.

III.   Lesson (or Segment) Outcomes (Behavioral Objectives) -

The unit outcomes consist of a dozen or so lesson outcomes or behavioral objectives. Effective teaching in which learning is taking place is a major means of reaching success. However, neither the unit nor the lesson outcomes dictate teaching methods. Teachers, having different styles, are expected to use their creativity and professional expertise in ensuring the success of each student. The lesson outcomes describe what we expect all students to do. These should be written on the basis of the first premise of PBE: "All students can succeed". These unit and lesson outcomes are prepared by individuals and small groups and then reviewed and   revised by an appropriate team before publishing. As stated above some outcomes may be evaluated by paper and pencil tests,   while others may define success as participation in activities in other ways.   These decisions are to be made by teams concerned with the elementary curriculum as the course, unit, and lesson outcomes are developed.

IV.   Expanded Opportunities -

Normally at the end of the class participation in learning for a unit (about 1Z class periods) there has been a demonstration of mastery/non-mastery for each student. If all have shown mastery, it is expected that the whole class will then engage in the next essential unit outcome. If, however, some students demonstrate mastery and some don't, there are several avenues which may be taken:

  a. Perhaps only a little time is needed to re-teach one or two students some essential material.   This can take place either in the class, in a break time (recess or lunch), after school (in assigned safety net time or other), or with another teacher or the resource teacher.   Perhaps a computer can be used by the student to complete the learning. Then a student may be re-tested only in the areas originally not mastered. In some cases an entire alternative version of the test is in order.

  b. If many students did not master the unit, it may be wise to use one or more class periods to work with these students. Hopefully after a few days after re-testing, all will have mastered the unit and the class can continue together in the next unit.

      Those who did master the unit the first time may either move on to the next essential unit outcome (if appropriate) or engage in a 'selective' unit outcome.   A selective unit is designed to require about the same energy and work as an essential unit, but probably accomplished by students requiring less direct teacher instruction. For each ten essential outcomes

there should be two or three selective outcomes available. These will be included in a student's evaluation (on the status report) as are the essential unit outcomes.   Students may begin a selective outcome and when time is not available to continue, have it put on 'hold' for a time, completing it later when there is an opportunity. During the days when the class is in two groups a paraprofessional or other staff member may assist in the instructional process.

    c. It may be unwise in certain cases to continue to pursue an essential outcome. It may be better to put it on hold for a time.

Whereas class sizes in QSI schools are generally small, it nevertheless takes a considerable amount of time and energy and a high level of professionalism for the teacher to take this responsibility of success for each one of his/her students.

V. Evaluations -Success in each unit outcome will be rewarded with an 'A' or 'B' defined as follows:

A - All essential parts of the outcome were mastered at an appropriately high level. The student consistently demonstrated noteworthy achievement of a high quality, particularly in the higher order thinking or performance skills.

B - All essential parts of the outcome were mastered at an appropriately high level in which the student successfully engaged in higher order thinking or performance skills.

There may be cases in which a student is placed in a class for grouping and/or social reasons (or as another way to gain exposure to English), but in which the student is not capable of 'mastery' of the outcomes. In such a case an alternative evaluation may be used which signifies successful participation and success to a level appropriate for the child, but does not indicate mastery of the specified outcome.   This may be important for Intensive English students or those who are so placed for social reasons. This evaluation, 'E', is defined as follows:

E - 'Exposure'. The student made a reasonable effort in the outcome and attained a level of mastery consistent with his/her capabilities.

An 'E' does not count as a unit in totaling units mastered. Some examples of situations for use of 'E':

> An 11 year old student has just transferred to the 11 year old science class from   Intensive   English.   He cannot be expected to attain the same

understanding and mastery of science as other students, yet there is no better class placement for him in which to learn some science and also to improve his English vocabulary.

> A student struggles in an 8 year old cultural studies class but due to lack of vocabulary or perhaps to being on a learning 'plateau' is not able to achieve mastery. The teacher needs to decide whether to give the student an evaluation 'H' (with the intention of eventually returning to attain mastery of the unit) or ~E' (considering that there is no particular gain in returning in the future to this unit).

> A student is placed in a ie year old cultural studies class for social and/or scheduling reasons, but is not able to master the unit outcomes in a reasonable time due to lack of maturity or some learning disability.

> A student enrolls in the school in February and joins a required Arabic course in the 6 year old class. He doesn't know any Arabic, but there is no better alternative during this time.

The evaluation 'E' may not be given in mathematics, reading, or language arts. Also this evaluation is not used in any secondary credit courses.

Careful consideration needs to be given to the school's philosophy and objectives in implementing PBE. In particular, attention needs to be given to sections A-Z-E and A-Z-f of each school 's "objectives":

A-Z-e: To reward students equally for mastering learning tasks regardless of the path taken to mastery, assuming equal diligence. Not to give a higher reward to one who required a greater input of energy nor to one who easily and quickly attained mastery.

A-Z-f: To evaluate students in a way in which a student competes against himself rather than against a fellow student.

Upon implementing PBE, a unit outcome is clearly stated in behavioral terms a student cannot be given a mastery evaluation of 'A' or 'B' unless mastery has indeed been demonstrated (contrasted awarding an evaluation of 'A' or 'B' if the student is successful at his/her level of understanding).

The following will also be used as is the case with the secondary school reports:

P -   The student is 'in progress' in the outcome (normal).

H -   This outcome is 'on hold' for a legitimate reason. (The student has begun the

outcome, but is not currently pursuing it).

D - The student has not made a reasonable effort and is therefore 'deficient' in attaining mastery of the outcome.

W - The student was withdrawn from this outcome.

The 'P', 'H', and 'D' notations are temporary and are usually replaced with 'A', 'B', or 'E' eventually.

It should also be mentioned that QSI encourages life-long learning. One way of encouraging this in the school is to allow a student to request re-testing during a school year for any unit for which an evaluation of 'B' was received. Through continued interest and further study a student may gain insight and learning to be able to demonstrate 'noteworthy achievement' of a higher level and change the evaluation to an 'A'. This sends a message to students that our goal is student learning, not student labeling.

VI.   Credentialling –

A computer is used to manage and print this evaluation information. Elementary unit mastered are totaled, but do not have the same graduation significance as secondary credits. A graph on the elementary reports shows the progress of each student through the mathematics, reading, and language arts curriculum. An age equivalency can be calculated from this graph. Details follow:

>The elementary mathematics curriculum begins with learning the numbers and counting (beginning of 5 year old class) and ends when the student has the necessary mathematical competencies and knowledge to engage successfully in a secondary algebra course.

>The elementary reading and language arts curriculum begins with learning the letters of the alphabet and ends when the student has the necessary reading and language competencies and knowledge to engage successfully in a beginning secondary English literature course and a secondary writing course.

>All three of these programs are designed such that the average first engagement age is about five and one half years and the age at which student exit each program with mastery is from 13 to 15 years. There are variations in both the entry and exit ages, with larger fluctuations in the exit ages.

>The status report indicates the approximate percentage mastered by the student of each program.

>This is shown on the status report with a string of apples. Starting on the left of the string the apples are filled in (solid apples) for each unit outcome mastered. Also the percentages of the elementary curricula (5 yr old through 13 yr old outcomes) which have been mastered are noted, such as:

Mathematics:	44%
Reading:	38%
Language Arts:	41%

>In the example shown 44% indicates that the student has completed 4G essential unit outcomes (out of the total of 90). This is the norm for a student at the end of the school year in the 8 year old class. The normal length of time students engage in this curriculum is 9 years. If required, an age equivalent can be calculated by taking 44% of 9 (which is 4.e) and adding the average age at which students begin the curriculum (5.5 years) resulting in 9.5 years. The 38% indicates 34 essential units completed and the 41% indicates 37 or the 7th essential unit outcome in the 8 year old class.

VII. Graduation -

Since there will be no clear cut dividing line between elementary and secondary students in terms of their course work, there will be no elementary graduation. There will be many cases in which students are pursuing both elementary and secondary outcomes at the same time. Some examples:

> A secondary student who has not yet mastered 13 year old mathematics.

> A secondary student who is assigned to Intensive English classes (has not yet mastered 13 year old English).

> A 12 or 13 year old student enrolled in algebra, English I, Writing I, French I, or other secondary course for secondary credits.