

Individualizing Instruction in Secondary Schools— Urmila Devi Dasi

By the time children are about twelve years old, most of them have developed personal educational interests. It is common for middle and secondary students to have a specialized vocabulary that their teachers don't possess unless they share those same interests. When absorbed in their passion, these adolescents can absorb and apply information and skills at an incredible rate. They will also learn skills that may be secondary to their interest, such as organization, memory aids, typing, and so on.

Besides having individual interests even before they enter secondary school, students also have unique academic, emotional, and social needs that a blanket curriculum and program can't always address. Some have an inherent biological learning problem; others have gaps in their education for a variety of reasons.

The school itself may be structured in such a way that "assembly line, factory" education is impractical, regardless of the needs and interests of students. Whether in addition to or in spite of structure, the administration or teachers may have a personal commitment to fostering strong individual relationships—mentoring and facilitating in addition to teaching.

Once a teacher or administrator decides to individualize secondary instruction, whether for one or all of the above reasons, there are a variety of ways to accomplish the task. A particular teacher may choose one of the ways exclusively or use as many of the methods that fit both needs and resources.

One of the easiest methods is to adapt group teaching practices for small groups or individual students. One can deliver a lecture to one or three students as easily as to thirty. A teacher can discuss the material with as small a group as one, and have questions and answers. The students can be required to come to class with questions for the teacher, as well, in order to spark more interest and discussion. Often it is the case, particularly when dealing with intelligent and motivated students, that less time is needed overall for the lecture/discussion/question format to achieve the same result as in a large class. In other words, an hour discussion with two students may achieve what requires 5 hours with a large group. The small group rarely has discipline and control issues, and the teacher and student can concentrate on what's most important or difficult for the particular students involved. A drawback, however, is that the atmosphere tends to be more casual—students and teacher may sit on the same level rather than the teacher standing at the board while the students sit with notebooks poised, for example—and this informality can encourage tangential topics taking over the class time.

When a large group method is used for one or a few students, a teacher can keep the same textbook assignments, lesson plans, and so forth, perhaps simply finding that classes take less time and therefore students can use some of what would be lecture or discussion time for completing independent work. However, it is also possible to have basically the same format as for a large group, but tailor the program for the needs and/or interests of the student(s) involved. For example, when teaching Journalism to one student who has no

interest in sports, one might skip the normally planned unit on sports reporting, and instead spend extra time on investigative reporting, which this student finds particularly exciting or difficult.

Obviously commercial lesson plans and textbook assignments that demand group work have to be abandoned when there's only one student in the class. However, sometimes student and teacher can work as the group, or some of the individual projects can be pursued in more depth. Sometimes a student can work with adults in the greater community, other teachers in the school, students in another school, relatives, and so forth, on what would normally be a group student effort.

When there is a small group of students who wish or need to learn something different, one can also use cooperative learning methods that are equally effective with a large group. Investigative projects related or integral to the subject are divided between the students of the group, so that each student becomes "expert" in a particular area. They then work together to produce a finished product that necessitates each sharing their knowledge with each other. The teacher acts as a resource person and mentor throughout the process.

Some other standard teaching methods are particularly useful for individuals or small groups. There are many games, both on and off the computer, which impart knowledge and skills in such a way that student interest often surpasses what is generated in large classes. There are also simulations, which may or may not have game-like features. These simulations (for example, designing and running a city) are generally done on the computer, though some educational simulations are low-tech games.

In addition to tailoring large class methods, there are ways of teaching which especially address the circumstances of teaching one or a few secondary students. One such method is for teachers to work out individual learning contracts with students. The student(s) and teacher, and perhaps the parents, meet at the end of the academic year previous to, (ideally) or at the start of, the year in which the student will study the subject, and decide together on both the objectives and the way of meeting them. Fulfilling a learning contract can take many forms. Students can read and do assignments from textbooks, or research independent projects. These projects can be reporting on and compiling the work of others (e.g. a research paper), reporting and drawing their own conclusions from direct observation (e.g. a science project with research paper), or doing something entirely or mostly original (e.g. investigative project in various fields).

Learning contracts can involve interactive computer tutorials—one of the most exciting methods of individualized learning. The contract can also be for completing a finished work that will involved the application of the lower level skills normally taught in an equivalent course. For example, a student or small group can design their own school newspaper, compose their own songs—both lyrics and music, write and produce their own drama, build their own models to demonstrate geometric proofs, and so on.

For such contracts to work, the students involved need to be interested and even excited about the subject. The teacher probably needs to have a schedule where the desired result is checked in small increments. The teacher can act as an instructor, mentor, or resource person. It is often the case that a student fulfilling a contract will work with several teachers or even adults outside of the school staff. Of course, a contract can be as simple as what one high school English teacher did with me one year. I had to turn in a research paper every two weeks on a topic of my choice and show up only to take the classroom tests. I learned how to complete the papers in three days, and got rewarded with extra study hall time in which to work on other assignments. The system greatly motivated me to learn to produce high quality research in the shortest possible time. I doubt that such a result was in that teacher's mind, but I remain grateful to her for it.

Just as there should be natural rewards for completing contracts well and early, there have to be negative consequences for the student whose deadlines come and go without meeting the requirements. Such consequences should ideally be part of the initial contract so as to eliminate misunderstanding. Teachers should also be aware that individual learning contracts are best for those with "intrapersonal intelligence," or those who are expert at motivating themselves. If there's a group working on the same contract, the peer pressure generated will be a great help. It may also be necessary for the teacher to do quite a bit of "hand holding" for the first contract or the first phase of each contract. Some students are great starters but poor finishers, and some great finishers but poor starters. A benefit of the learning contract is that a dedicated teacher will get to know his or her students as people with their strengths and weaknesses and will adjust accordingly until the students mature enough to know how to compensate for their weaknesses. Students who successfully complete contracts generally have a much deeper sense of accomplishment and satisfaction than is gained from regular classroom assignments. Such students have learned how to plan and execute a program, and how to take advantage of an expert's experience and guidance.

Another type of individualized instruction involves not having a small group or individual learning a different subject from what the bulk of students are doing, but having students work at their own pace or in their own way on the same subject. In other words, all twenty or thirty students in the classroom are learning math, grammar, vocabulary, and so on during the same class time, but they are progressing at different speeds or are learning through different modalities, or both.

If the only difference in the classroom is the speed and/or level of students' learning, then there may be a class where everyone is studying math, but some students are in pre-algebra, some in algebra I, some in basic math, and some studying trigonometry. In order to accomplish this feat, the instructional materials have to contain everything or nearly everything the students need. Some student textbooks, for example, have up to half of the important instruction and material in the teacher's edition; a student would have a difficult time learning the subject merely from such a student book. Other textbooks, however, are designed to be primarily self-instructional. The ideal format for such self-instruction is probably a programmed, incremental text. I have seen incremental texts and programmed texts, but never both combined in a comprehensive printed course. Such

material exists to a limited extent in some software, the downside of which is generally a prohibitive cost.

I suggest that the method described above be used primarily for subjects that are not very creative nor worth augmenting with discussion. Math, grammar, spelling, vocabulary, and any drill work in any subject, are excellent candidates for this approach. I further suggest that this method only be used when all students in the room are working on the same subject. It is rather easy for a teacher to adjust his or her mind from basic math to trigonometry; but quite difficult to switch from gerunds to areas of triangles. The mental switch from both subjects and levels takes only a few seconds longer than just switching levels in a subject. However, those few seconds can add up to many minutes of instructional time lost in a class period.

Once self-instructional material is found, there needs to be a system of self or peer correction of daily work. A teacher cannot correct 30 different math lessons a day, either on the board or after school. Sometimes the self-correction is built into the material, as in a programmed course. Other times the teacher can make the answers to daily work available. Students can be required to correct assignments at a separate area with a different color pen than the one used to complete the work. Or they can correct each other's work, with "buddies" only correcting work from other levels. Naturally, when there is self or peer correction, grades cannot be based on the correctness of this work. Grades can be based mainly on tests, with credit added or subtracted depending on whether or not daily work is complete and on time.

In the above situation, the teacher acts as a tutor and troubleshooter. Students who are having difficulty can come up to the teacher's desk, or he or she can go to the student's desk, when there's a specific question. Students who have a question can raise their hand, or call the teacher's name; they are then put on a list and helped in order. If there are too many students needing help, the teacher can ask a more advanced student who has finished their work early to act as a teacher's assistant. The teacher also needs to be aware of students who are doing poorly on tests but never ask for assistance. These students need to get help on a regular basis whether or not they ask for it.

A little more complex than simply having students working at individual speeds and/or levels is having students—all in the same subject in an area that is mostly drill and formula—use different methods, or different speeds/levels and different methods. For example, the most excellent programmed grammar course may simply not work for some students. Or a particular student may need a more visual approach to math than that in the text or software that is the standard for the class. Such individualization of method is done the same as individualization of speed/level, but requires even more flexibility on the teacher's part. The more the teacher is familiar with all the materials and methods used in the classroom, the easier it will be. One or two students learning with an entirely different text or method is quite difficult to manage if that medium is new to the teacher. The program can be done if the need is great and the teacher has a firm commitment to meet that need.

Other ways of individual or small group teaching involve stretching the teacher, so to speak. After all, individualizing may create a logistical problem—how to teach so many subjects to so many students when there’s a limited number of teachers, or no teacher with developed expertise in the student’s area of interest.

In such cases, students can learn wholly or partially through a “surrogate” teacher. There are excellent high school and college (“honors” or “AP” for high school) courses available on video, audiotape, computer programs, and most recently, the Internet. Courses delivered via computer, whether with personal software or on-line, are often (not always) interactive and even sometimes can adjust according to the answers the students give. Software can include an audio and video component. With courses via Internet, there can even be “live teachers” who can give a student personal attention beyond the interactive features of the instructional software. The classroom teacher can supervise the program in the sense of making sure students are spending the time with the course. Many of these courses have methods of assessment that the classroom teacher can use to generate grades.

Whether through adjusting various methods of large group teaching, individualizing within a large classroom, or designing programs specifically for the needs of one or a few students, teachers enter a wonderful world when individualizing secondary instruction. Students are involved with their studies, get help in their areas of weakness, and learn how to learn in a way rarely possible in most group instruction. It can be a most rewarding program for students, parents, teachers, and administrators.