

Strategies to Help Students Who are Failing

* Sherry Fraser (fraser@math.sfsu.edu):

During my visits to IMP classes this fall, and via e-mail, I have been asked about school-wide strategies to help IMP kids who are failing. Some of our IMP schools have large numbers of 9th and 10th graders who are not being successful. I remember a few years ago there were a couple of schools that had an extra "booster class" or "homework class" for students who needed the time during the school day in order to keep up with the work.

Would you please post to this listserv strategies that you or your school have developed that have been successful in helping kids be successful? Thanks.

* Michael Endress (endress@CARIES.DENTAL.MU.EDU) on November 3, 1998:

We have been offering classes in the "off" semester. By that, I mean we are currently offering IMP 2 during semester 2. For many of our students, the immediate repeat of the material they did not get the first time through is enough of a help. Several students who failed the first time through are now getting A's or B's. Even those who really struggled are sticking with it and finding success (for them) by earning passing grades.

* Janice A. Bussey (jbimp@TELIS.ORG) on November 4, 1998:

Many schools run math labs or tutorials during lunch and after school. They are "manned" by math teachers or older math students who are doing community service of some kind. This addresses the fact that so often, students fail IMP because they do not do their homework. I have seen schools successfully REQUIRE at-risk or failing students to put a set number of hours in the math lab so that they can get support, complete their work, and bring their grades up.

* Betsy Adams (sadams@DHVX20.CSUDH.EDU) on November 4, 1998:

At our school, students who received a "D" during their freshmen or sophomore years are enrolled in a required math lab that meets twice a week. The teacher in charge of the "lab" is one of the IMP teachers. That person monitors both homework and POW exploration for those students.

* Karen Radcliff (rhaneypad@home.com) on November 5, 1998:

Fortunately, our school has an ELP (Extended Learning Period) built into the day. ELP is a 35-minute period when students can choose to go to a tutorial, homework room, club meeting, or new class. This is when we offer an IMP 2 honors option once a week. We also have ongoing tutorials for students going on in a classroom with a teacher.

Also, the IMP teachers have volunteered their time after school from 2:15 - 3:00 for tutorials. We all sign up for one or two afternoons during a month. There is a calendar posted in each

classroom, and all the counselors have a copy of the calendar. (I think they give it out more than the teachers do.) This is always the first line for getting help.

Students in CSF (honors club) also offer tutorials for money. This is their fund-raiser. Many of the CSF students have gone through IMP and feel very confident tutoring students in both traditional and IMP math classes.

I hope this helps spark some more ideas on helping our kids!

* Cindy G. Phillips (cfrain@juno.com) on November 3, 1998:

We find that, at our school, there are many kids who fall into the category of students who could do the work, but choose not to do the work. For those students, we create a set of assignments that must be completed over the summer in order for the students to receive credit. Essentially, the students are given time to create a passing portfolio for the year.

* Michael Soguero (TioMikel@AOL.COM) on November 7, 1998:

I am curious about teachers' efforts to discern what, if anything, students have learned as a result of doing assignments. Is there an assumption that the doing is equal to learning? If so, how is this reconciled with a constructivist view of how people learn? I am skeptical that we can look at assignment responses and say that we now know what a child knows or understands. I am afraid that most portfolios are really glorified ledgers, an accounting approach to education where assignments get checked off.

Is it possible for students to learn something mathematically or, more importantly, to come to understand something new without having done the homeworks?

I am curious about all of the above. It has been my personal project for years to get to the heart of this.

* Janice A. Bussey (jbimp@telis.org) on November 11, 1998:

I found the above conversation intriguing.

In my own IMP classroom, I find the BEST way for me to discern what mathematics a child has learned is to TALK to him and to LISTEN to him. During discussions and oral presentations in the class, I can question and listen in order to tell what a student understands mathematically and what he has learned. While most students need the experiences of the homeworks to reach their learning potential, I also have had students who gained a lot of mathematical understanding just by actively participating in the classwork, the class assignments, and the class discussions. These students may choose not to do homework. These may be the kinds of students about whom Cindy is talking.

I have determined the best thing for these kids is to let them take the next level of IMP, because I can tell informally that they have learned enough to continue on. On the other hand, because I also live in a world plagued by objective grades, these students may not have demonstrated

their learning with enough work turned in and may have failed a particular year of IMP. The students often repeat the failed math course in order to get credit and replace the failing grade. I do not really like this method; having repeaters in an IMP class is not always the best thing. I kind of like Cindy's idea.

* Brent McClain (imp-nw.brent@juno.com) on November 12, 1998:

Janice, you expressed yourself very well! I tend to agree with you. I remember a student who failed IMP 2 because of his lack of work. I let him move on to IMP 3 the next year. He was in my class again, and he received an A for the first quarter. I always knew he had learned things and could do much of the math, because he participated very well and gave presentations to the class about ideas he had on many problems. Like you said, I LISTENED to him. The problem with his grade was that he did NO homework and was often gone for end of the unit assessments. I am sure that had I made him repeat IMP 2, he would have dropped math altogether (probably rightfully so; he would have been tremendously bored).

Of course, there are other students who should retake the year. It just depends on the reason for their failure. I try to ask myself of each student, "Can ___ be successful if he/she moves on to the next year?" If I answer myself with something like, "Yes, if he/she does the homework and turns in work," then I will move him/her on. If, however, I think that I am setting him/her up for failure by moving on (because there are significant gaps in understanding and many misconceptions), then I do not move him/her on.

Of course, regardless for the reason for failure, if a student has not passed, there will be gaps in understanding. For me, the question is "Has the student shown me enough for me to think that these gaps can be overcome (especially if homework behavior changes)?"

* Jim Gilmore (jjim.gilmore@DO1.SCCCD.CC.CA.US) on November 12, 1998:

Brent makes a good point, but how can we make exceptions for some and not for the others? On paper, two students could look identical, but intellectually, they could have very different capabilities. I believe there must be a number of students who wonder why they are being held back to repeat the class they failed, while others were chosen to move on to the next level of IMP. It looks like preferential treatment or playing favorites. Would your administration go to the wall with you to support you? Shouldn't the student who chose not to do homework live with the consequences? There ARE consequences for our actions. What do we teach the students who get to move on? I believe that we teach them that it is okay not to do homework if they choose not to.

Apparently, one school decided that since they were not getting any homework back, they would no longer assign any. I hope we hold our students to higher standards.

* Cindy G. Phillips (cfrain@juno.com) on November 12, 1998:

My Fellow IMPsters,

This is the second time I have felt that I have to defend my actions on this listserv!!

I do not feel that a student's written work is solely representative of what he/she knows. In fact, that is the reason our school only gives this "make-up" opportunity to a few students - those who we feel truly understood the work but chose not to do the work.

I feel that there are often students who understand the material and choose not to do homework. I feel this is completely unacceptable. This is not because I have no written proof of their understanding, but because it is a requirement in my class for students to complete homework. Homework is a lead-in to the next day's activity, and when a student makes no attempt at homework, he/she cannot fully participate in class. This then hinders the his/her own learning and the learning of others!

There are also students who understand the material, but choose not to participate in class! This is just as unacceptable, especially if constructivist learning is to take place.

IMP uses various assessment techniques, and if I am to properly assess the level of a student's understanding, I need the student to complete the tasks I give him/her. Classroom interaction is not the only tool.

By the way, the student I spoke of failed IMP 2, but he is now in IMP 3, because I felt he would understand the new material and repeating would be a waste of time for him.

* (wolffe@camelot.beaver.edu):

Some Philadelphia teachers have asked me to check out whether any other districts have done anything special with offering IMP in summer school.

The teachers are concerned with two issues: 1) Nearly all summer school students have already taken (and failed) IMP during the academic year and, consequently, have seen all POW's and activities. 2) The time allotted to summer school courses is much less than during the year.

Please respond with any ideas. If this topic has been previously discussed on the listserv, let me know and I will comb through my archives.

* Diana Obstfeld (diana_obstfeld@CEO.CUDENVER.EDU) on September 23, 1999:

Sometimes, the summer school classroom may be grouped by those students who need to only complete particular units. Many do not have to redo the whole year. We have our students go back through the units and improve on what they did previously. They are sent to summer school with their portfolios, and they can redo any or all of the work, including Problems of the Week. Or, they can work on any "incompletes" they earned on their report cards, and then they can clear them up with the instructor when they get back to school in the fall. Otherwise, those who failed to meet the standards for all units are expected to take the full year course.

Because summer school is shorter than the regular school year, the students are not able to get the full credit for the class. They may only be able to do half of the units. In this case, they

must register for the second half of the course when they get back to school in the fall. Sometimes, they may take IMP 1 and IMP 2 simultaneously for a semester. Other times, they do "independent study" to catch up on concepts they missed the first time around.

We try to work with each student individually and set up a plan that is best for him or her.

* Michael Paul Goldenberg (mikegold@umich.edu) on September 27, 1999:

I just joined this list and am looking for some help, feedback, shared anecdotes, etc. I just started my second year at an alternative high school working with very disgruntled at-risk kids who (mostly) have low regard for mathematics, their own math abilities, and ANY curriculum presented to them. After one semester of trying to teach out of the very old, boring, traditional books for remedial kids that were simply left to me by the previous math teacher, I convinced my principal to let me start using Core I. (Keep in mind that none of these kids plan to take any math past the 4 required semesters, so we likely will go as far as Core II.) As much as they hated what I used before Core, they hate this even more. They do not like it for the usual host of reasons, but, at heart, I think they dislike the unfamiliarity, the group work, and the emphasis on explaining one's thinking. Nonetheless, we are committed to using Core Plus (at least as long as I am here and have administrative support).

Okay, so none of this is surprising. There is no such thing as a perfect curriculum, I am not the world's greatest or most experienced mathematics teacher, and change bothers and frightens most people, not just troubled high school students in math class.

I would like to hear from other teachers who use CPMP with alienated, at-risk kids. Thanks in advance.

* Don Karlgaard (tdkarlgaard@brainerd.k12.mn.us) on September 29, 1999:

I have lived through the task of working with two large groups of students who did not like school and, especially, did not like math. The highest grade that any of them had received in math in the previous 3 years was a D. I was pulling my hair out, but kept my faith that Core Plus would work. It took until November for them to turn the corner. There were still unpleasant moments once in a while after that, but basically the curriculum and the use of technology got the kids engaged.

* Doug Whitesell (dwhitesell@kiwi.dep.anl.gov) on February 7, 2000:

This is our second year using Core Plus. The problem we have is a high failure rate. As a department, we feel we do everything possible to accommodate the course to the ability levels of our students. We weigh homework and in-class investigative work significantly (50%) to try to motivate students to do their homework and to take classwork seriously. The high percentage of students that either will not do the homework or cannot do the homework contributes to the high failures.

My questions are these: Did other districts experience a high failure rate during the first couple years? Did that improve? Are we putting too much emphasis on homework and on the in-class investigations? What criteria do you consider important when assessing students in Core Plus? How do other schools motivate students to do the work? To what extent do they provide support for students?

* Marcia Weller Weinhold (math_cpmlst@wmich.edu):

I was hoping someone else would have time to relate some experiences, but since that has not happened yet, I will try to give you some ideas.

In many schools, because the investigations are hands-on and deal with easy-to-relate-to situations, students usually get interested. Do you think some of the students' reactions may be based on their having to think for themselves? I know my students (who were exceptionally well-motivated) complained that I was not teaching them; they had to figure things out for themselves. Once they got used to the idea that this was the whole point, they got into it and really enjoyed arguing with each other about whose methods were best.

I had the benefit of teaching students from different "home schools" (our school houses a countywide, half-day, pullout program for math and science), so we could sometimes get a little competition motivation. Are there any friendly rivalries that you might use that way (of course, you would not want to get into really dangerous rivalries...)?

Sometimes, I had students who identified themselves as the "algebra" kids and always wanted to write a formula; then, there were the "geometry" kids who wanted to make a diagram to solve the problem; and, others wanted find a calculator algorithm. It became a routine during the *Checkpoints* to see if each group was able to find a way to solve the problem their favorite way.

Does your school have any incentive programs to use with students who show improvement? You should not have to do something special just for math class if these students are having the same problem in all their classes. Maybe a concerted effort by all the staff could help the problem. I think you are correct not to lower standards to improve the pass rate. Still, there must be some way to convince the kids that it is not that hard to pass.

Are these "non-workers" mixed in all the classes, or are they all in the same sections? Sometimes it makes a difference if they can't "feed" off each other. This, of course, would have to be part of a school-wide plan.

Certainly, if the difficulties stem from poor reading, there should be help for students since you are trying to develop (and assess) math thinking, not necessarily reading. Some teachers read all instructions in class; others assign a good reader to every group (if there are enough in the class). Students' writing of their ideas is important, though, which may help develop reading, too. Some schools have noted an increase in reading ability after Core Plus was introduced, but we cannot claim a cause-effect relationship there.

I hope some others will add their ideas about assessment. Personally, I hope to see evidence that a student understands the problem situation, can select an appropriate mathematical model

for the problem, and can apply the model to the situation in such a way as to clearly lay out how a solution was found. The student should then be able to interpret that solution in terms of the problem situation, noting why it makes sense. All of these points are as important as the correctness of the solution, though what "evidence" the student has to exhibit may vary for different problems.

* Mark Stanton on February 28, 2000:

My school is in its first year of IMP. How do other schools program students who fail IMP 1 for the ensuing year? Empirical results would be great, but anecdotal observations are also welcome.

* Diana Obstfeld (diana_obstfeld@CEO.CUDENVER.EDU) on February 28, 2000:

We try to look at each individual kid and determine in which areas he/she is deficient. If the student failed because of attendance problems and/or passive resistance to doing the tasks, we tend to keep him/her back. If we think it could be harmful to the student, and he/she is at high risk for dropping out, we might advise a different core (school within a school).

If we think that the student has the basic tools, but has chosen not to apply his/herself outside of the classroom (i.e. homework), we might consider letting the student try the next course. If he/she still does not perform, we might send the student back to the failed course after the first unit. It is really pretty individual. We are allowed to give incomplete grades to our students in hopes that they make up the work in summer school or with the second year course. (They do this outside the regular class with the help of the teacher during planning or conference time.)

We get pretty creative. We do not have a policy that pertains to all students. I have heard of schools that do not retain any of the students after IMP 1. They let them all go on, but then make the decision after IMP 2 whether or not the student must repeat that year's program. IMP 3 is a BIG jump for them in terms of content.

Some of the kids who moved ahead to IMP 2 despite failing IMP 1 never do make up the "credit" for the first year. They were successful in IMP 2 and had to take IMP 3 to get the two years of credit they need to graduate. In some cases, this is one more year than they had originally intended.

Good luck...it becomes a "professional" call.

* Peter A. Jonnard (PAJJonnard@AOL.COM) on February 28, 2000:

We adopted a policy of waiting until a student fails a full year before sending him/her back a year. In other words, if a student fails two consecutive semesters, he/she would be required to go back to "redo" the entire year. We also consider individual circumstances.

The most difficult situations are those when students fail one semester, pass the next, and then fail the third. There is no place to put those students the next semester. Unfortunately, many of them end up getting programmed into Math A or Math B against our objections; the counseling

department ultimately has made the decision in such circumstances.

In any case, I definitely think kids should move up if they are intellectually capable. Of course, practical concerns, such as their willingness to do POWs and the need to graduate, eventually enter into the equation.

* Byron (skip777@HOTMAIL.COM) on February 29, 2000:

When we had students who failed IMP 1, we gave them a choice of going back to Algebra 1, or going on to IMP 2. Both cases worked for the students. Those who went back to Algebra 1 were better prepared, and those who went on to IMP 2 actually worked harder in the second year. The counselors were the only ones who had trouble with this; they knew that the kids would just die. The kids were fine.