**HELPING STUDENTS TAKE RESPONSIBILITY FOR THEIR OWN LEARNING.**

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 MATH4FOBIX@aol.com         MaryLiz Pierce

I have a philosophy that I discuss with my students. If they are   
willing to do their homework and ask questions, then I will do my best to   
find an explanation that works for them. In my classroom I integrate a lot of   
techniques including cooperative learning, computer mediated instruction,   
problem based learning, writing in the math classroom, student development of   
application problems, and critical thinking. One way I make them responsible   
for their own learning is by giving at least one take home test a semester   
which requires a great deal of thought, though the solutions may be fairly   
simple.  I also have them correct mistakes on tests -- for partial credit.   
However, when all is said and done, I think the way I encourage them the most   
is in my attitude toward them.  I often say that the only students who don't   
pass my class are those who are not willing to do the homework and ask   
questions. I let them know that I am very willing to help but I can't do the   
work for them and I do believe in learning by correcting one's mistakes even   
if it means letting them fail the class. I always tell them that they CAN do   
the work. I tell them it may be difficult but they can do it. The things that   
mean the most to us are the challenges we face and conquer.  Success in math,   
real success, is the best self-esteem builder I know.

I often point out that reading teachers traditionally don't teach students   
to read for details after about second grade. From then on it is inference   
and that is why I work with them on reading for details and why I took   
reading classes in my master's. I actually give test questions that involve   
this.  It's surprising how many students cannot write the two statements "n   
is less than 9" and "n less than 9" in symbols. If they take the attitude   
that this is a skill that was skipped in their learning for a while, they do   
start to do a much better job with it.

Periodically I do have a class that will not work and many of them fail the   
class. I find that these students are mainly among the youngest in the class.   
 Once they have been out and working for a while their attitude changes. My   
school caters to the working adult and has a great many partnerships with   
industry and vocational programs, as well as the college transfer programs   
and in this area I feel blessed. I get a lot of motivated students.  If I   
have a class where the majority of the students have a good attitude, it   
frequently brings up the performance of those who don't wish to work. The   
motivated students naturally provide a great deal of peer pressure -- just by   
their attitude. I wish that others could have the benefit of this type of   
student. They are a pleasure to teach.   
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mkoether@kennesaw.edu        Marina Koether,   
Yes indeed, we have that problem too at Kennesaw State University.  We attribute it to our commuter school issues but if this is occurring at the traditional schools, perhaps it has to do with no real incentive. They do enough to pass and that is all.  Just to open a book to see that the material that I am talking about is in the book or the lab manual to read the instructions of how to write the lab is too much work for them.  Yet, they have time to have a social life and talk for hours in lounges and play practical jokes on their classmates. I don't understand it.   
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Judy.Euller@winona.msus.edu   
The responses posted so far are fascinating, and the enthusiasm of the   
faculty is wonderful.  I'm wondering if anyone has used any techniques   
specific to online courses.  Discussion forums, work groups, and live chat   
seems to be the de rigueur method of interaction.  Has anyone used any   
creative means of fostering responsibility for learning in the online   
environment?   
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Jennifer Powers    jpowers@kennesaw.edu

Hi.  One of my colleagues forwarded some of your stuff to me.  I was just commenting to her this morning how no one expects to be a great musician, a great orator, a great athlete, etc. without lots of practice.  Yet our students don't seem to want to "practice" to be a great student.  They do not expect to spend a lot of time studying to get As and Bs.  If a teacher sets the tradition of requiring a lot of work or study, then students try and avoid those classes.  Even many of our students who want to be medical doctors, vets, nurses, etc. don't want to work for their grades.   
   I'm not sure I have the answer to encouraging and motivating these students.  I do let mine know up front that I intend to give them the same quality education as if they were going to one of the more prestigious universities in our state.  It won't do our university any good in the long run if we give grades away or dilute our curriculum just to make the students happy.  For instance, if employers or graduate schools see that our students have made As, but really don't know & understand what they're doing, then they become less likely to hire our students or accept them into their programs in the future.   
    One of my current students places the blame on her high school education.  She says that she never had to study in high school to get As.  Personally, I was always told that "you may not have to study in high school, but you will have to study in college to get good grades."  I partly blame this mindset of wanting a "free ride" on our culture & society.  Today we expect to have almost everything instantaneously.  We have microwaves, airplanes, computers, etc. that allow us to do many things in much less time than it took in the past.  However, no one has come up with a faster way for us to become a great musician, orator, athlete or student.  That's frustrating to many people.  Don't get me wrong, I'm happy for all the modern conveniences, but children still need to be taught to appreciate having to work for something and having patience and discipline.   
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++   
DManns@UTNet.UToledo.Edu

First you have to stop rewarding those who don't do the work. I think   
that many faculty are so concerned with being popular and only worrying   
about evaluations, that the grades given often do not reflect the true   
nature of the course.   
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++   
 "Deirdre Collins" <dcollins@victor.cc.ca.us>

Your observations are, oh, so true. Read "Beyond the Classroom," which discusses a study of 25,000 high school students and documents how they spend their time outside class.  The average U.S. high school student spends  an average of 4 hours a week studying for all of his/her classes.  Since this is less than what is really needed to succeed in just a math class, it's clear they are not getting the additional practice they need.

The cover story from this month's CCA Advocate discusses an ongoing study of college freshmen which includes a question on study time.  The average college freshmen reports spending about 6 hours  a week studying for all of his/her classes.

At my college, we have begun a "supplemental instruction" program where we pay student tutors to attend class (in order to get to know the students) and then have the tutors run additional help sessions outside class.  The social aspect of being able to work with others does seem to attract students who are not able to make themselves work on their own, and I see definite improvements when my struggling students start attending "SI."

Another benefit of SI is that it enables you to provide the benefits of "group work" for your students, but to provide it outside of actual class time, where it can be extraordinarily time-consuming.

SI was started at the University of Kansas, which runs workshops for anyone interested in starting an SI program on their campus.  And, of course, there are plenty of other student workshop models, such as Uri Treisman's, which are also excellent.   
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 Linda Blatt <BlattL@central.edu>

        Thanks for opening up this discussion.  I teach a Course designed to teach students how to read/think critically.  It is a  200-level course called Modes of Argument in Reading and   
Writing.  As a class, we actually develop a class strategy for reading critically; the students then prepare two oral presentations showing they can use/master our class method.  The course also asks students to write a short critical analysis paper.   
        I teach the course using a Metacognitive approach and even ask the students to read some of the research done about the psychology of reading.   
        Anyone wanting more information can contact me directly.  I'll be glad to share.   
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 "Gordon Timothy" <TimothyG@ricks.edu>

I give my students tools for self-improvement:   
 A critical thinking form for summarizing materials   
 A form for 'expanding' by providing personal applications and examples   
 A form for working with a group to teach and help one another improve   
 Forms for peer assessment   
 Forms for self assessment   
 Product Standards for making work reach for high quality   
 Personal Standards for improving one's own performance   
 Process lists for identifying areas for improvement   
Students are asked to help each other and encourage each other, to set goals as to ways to improve and go beyond requirements, so they can feel the independence and agency that goes with that.   
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Charles Grefer <cgrefer@SUNYORANGE.EDU>

I'm not sure if you wanted our responses to be addressed to the list or a web site.  Since I think the whole list (I may have an attack of narcissism), here it goes.

I state in my syllabus that extra credit will be offered periodically.  This is factor is accounted for in the factoring of my grading system from the start.  The primary source, and most effective, is telling the students that I may give them an opportunity for three extra credit points at the beginning of classes in the form of a quiz.  I tell them that it will not be every class, but will be many.  I then structure it in a classical conditioning format where by the third class they think "I've   
got to read every chapter & do the homework".  I then use a form of successive approximations / phase into a much less frequent and unpredictable schedule of extra credit.  By the third class, often sooner, about 90% or more of the student are in the classroom much earlier than the class begins intensely studying the chapter we are to cover.  Based on this behavior and the resulting test grades I find strong evidence of the students studying outside of class.  The quiz format is to ask them to tear off a half sheet of paper and I will thumb through the chapter and ask whatever I feel is good, making as sure as possible, to not follow a pattern.  An additional factor that is very well liked is my testing format.  Depending on the class & test, I allow 5 - 10 questions to be "skipped" or "omitted" by the student.  I do not use scantron answer sheets so that I may know how each individual is progressing, offering assistance to those having difficulty.  Offering the option of omitting a question also tells me where the week points are in their dedication/learning or my teaching.

I approach the situation much differently than most educators I had in college.  In the first class, I tell them that if the class were to end today, "you would all have an "A" and anything you fail to do will only detract from that "A", so simply maintain that "A".  This creates a remarkably different atmosphere!  I also enter the situation with the assumption that students do not fail to learn, but educators fail to teach, in most cases.  Of course there are always exceptions, but I feel it is my   
duty to inspire them to learn.  This often become a mix of being an entertainer and a professor.  Some may think that this is not the way to go, but I think we can all remember back to our days in college and those professors that entertained us (in one way or another) to the point where the learning was fun and we became hungry for more!  To paraphrase Carl Jung, "use what ever seems to work".

I was recently introduced to another method.  A colleague actually holds two students out of class responsible for giving the whole class a review of what was covered last class (or week) and another to give preview of what will be covered this class (or week).  I plan on implementing this next semester.   
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Kathy LSPE <kathylspe@HOTMAIL.COM>

I encourage students to take responsibility for their own learning by   
establishing learning tasks that are learner-centered and that are   
authentic. In other words, I set up the learning environment so that   
students develop an intrinsic need to learn the targeted new knowledge and   
skills. Then, I serve basically as a resource to help them acquire the   
information they will need in order to successfully construct their own   
understanding. Of course, I work with college students so this is no real   
"great feat". However, many of my students seem to do the same things with   
their own elementary and secondary students on a fairly regular basis. I   
admire them a great deal, because I think that it is easier to "pull this   
style of teaching off" if you are dealing with students who come to you with   
some motivation of their own ... not always the case with public school   
students in general. Ay any rate, the bottom line, so to speak, seems to be   
that if students of any age have a "need to know", they will do what it   
takes to learn.   
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Robert Blomeyer <Robert.Blomeyer@ncrel.org>,

Kathy:   
Right on!  As we shift from "teaching" to "creating and maintaining   
effective learning environments," everything else falls into place!

That's why technology is such a strong catalyst.  When we work on   
integrating technology, we learn to construct or use interactive   
environments that support learning.  There appears to be a sort-of   
continuim with "constructing" on one end and "using" on the other. Both   
ends have pros and cons... and most of us are somewhere in the middle.

(Ted... you're really getting out there toward the left of CONSTRUCTING!)

My "hypothesis" is that over time, we gravitate more toward "constructing"   
and our work becomes increasingly grounded in our own communities' "context   
of situation." The more contextualized our learning environments become, the   
more powerful they are for "engaging" our learners. (And sometimes our   
colleagues.)

I've been reluctant to say this publicly.... Maybe I'm getting braver in my   
"olde age"... but technology is just a "Trojan Horse" for much more   
fundamental changes in pedagogy and ideology.  As McCluen once said, the   
medium is the massage!

I'm a blatant pragmatist. Whatever it takes to get the job done is OK by me!   
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Kathy LSPE <kathylspe@HOTMAIL.COM>

I am sorry. I know this discussion thread got "put away" a couple of days   
ago, but I just now got back to my listserv email. And, I could not pass   
this one up!!

First, I appreciate that the response I am using to respond to is "tongue in   
cheek" even if it, unfortunately, is sometimes true.

However, there are more humane ways to motivate even adolescents. It just   
takes a little work! Since I assume that the original question was not   
"tongue in cheek", I thought I might weigh in on this subject.

This is actually really closely related to my response to Ted's "blue plate   
special" because, I do firmly believe that the only "motivators" that truly   
have long lasting impact on student retention of knowledge and skills are   
intrinsic motivators. In other words, unless the learner has developed a   
"need to know", whatever is learned will not successfully be retained in   
long term memory in a way that renders it useful, easily accessible,   
transferrable information over the long haul. Of course, that need to know   
can be generated during the learning process instead of prior to it, but   
only if the learning event itself is stimulating or motivating enough to   
capture and hold an appropriate level of learner attention (How many "bells   
and whistles" can you pack in?). It is much easier to activate the   
instrinsic motivators on the front end.

Of course, this is a very gross over simplification of a really really   
complex process -- learning that is!! But, I think the bottom line is that   
it is the job of the "teacher" (I prefer faciliator of learning) to generate   
instrinsic motivators. Simply relying on extrinsic motivators such as   
rewards, threats, etc. is never going lead to the kind of deep learning that   
we all hope to cause in our students.

So, the trick is to find out what causes intrinsic motivation in the   
targeted group of students. If you combine theories forwarded by Erikson,   
Piaget, and Kohlberg (You will have to forgive me ... I studied with John   
Santrock for a while!), you will find that middle school students are often   
"driven" by their attempts to reconcile the following developmental tasks:

1. They are trying to figure out who they are and how they will "fit" into   
the adult world which they are working toward entering.

2. They are seeking to understand their world by considering the abstract ..   
but, they still see things pretty much as BLACK or WHITE, and they are   
pretty idealistic.

3. Most of them still believe that caring, trust, and loyalty are important   
factors when making moral judgements. And, many of them are struggling with   
understanding social order, justice, and duty. So, they are not very "jaded"   
or cynical, yet.

In other words, this is the ideal age to motivate mostlearners by offering   
them opportunities to collaborate or cooperate with peers while working   
through essential knowledge and skills in the context of solving social or   
moral dilemmas (as long as there is an eventual right or wrong answer). This   
is particularly effective if you can make learning events authentic. And,   
because learners at this age are beginning to work on abstract, logical   
reasoning, this is also the perfect age to intentionally integrate   
curriculum so that connections are overt. (Of course, I actually believe   
that integrating curriculum is important at any age. Unfortunately, I   
believe it is more important in the middle and high school years than at any   
other time ... you know when most of our students move into subject specific   
classes and few teachers make an effort to do cross curricular planning --   
because it adds so much to their already over-burdened work loads.)

This is also a time of very strong feelings of loyalty, so, it is one of   
those times when a student might "love" history and "hate" math (or visa   
versa). So teach percentages from the perspective of tracking how   
financial/economic structures impacted struggles for land ownership during   
the middle ages. Your math "lovers" will suddenly have an intrinisic   
motivation to pay attention to "hated" history, and your history "lovers"   
will suddenly find intrinsic motivation to understand math concepts so that   
they can make sense out of historic social systems. Relate the lesson to   
what is likely to happen in our near future (look at energy wealth and   
ownership of oil supplies), teach students to work together in teams, and   
let them design an ideal society in which war will not be needed to resolve   
control/ownership issues -- add uses of technology like a spreadsheet to   
measure the relationships between financial wealth and acts of aggression   
and an electronic presentation that shows and justifies their "perfect   
world" -- and you will have a set of intrinsically motivated middle school   
students.   
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 John Mason <j.h.mason@OPEN.AC.UK>

Kathy and All:   
Whilst sympathetic to what you (Kathy) said (below), I wonder if this   
perspective accounts for my experiences when young which was being   
forced to memorise poetry, being required to 'study' shakespeare, and   
Latin, and most especially, one rainy afternoon when we could not   
play soccer, being forced to memorise the Greek alphabet (motivation   
was threat).  In all instances I have greatly valued in later life   
what I did not enjoy and was not intrinsically motivated to do when   
young.  I say 'was not intrinsically motivated' ... there must have   
been a strong element of wanting to be liked, wanting to succeed,   
wanting to do what i was asked to do.

I am not advocating repeating this treatment to kids today, but   
curious how to integrate it into sensitive theories about teaching   
and learning.   
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 Kathy LSPE <kathylspe@HOTMAIL.COM>

John   
I suspect that among those "intrinsic motivators" that you mentioned,   
"wanting to please" and "wanting to stay out of trouble" were also in there.   
No doubt, there are still many many children and adolescents who are   
motivated in that way. However, I also suspect that you do not remember   
those things you mentioned as readily as you might would if you had really   
had "a burning need to know" them at the time. In other words, if they had   
some real meaning in your world other than, "If I learn them, my teacher   
will be happy, and I will not be in trouble."

Is there any reason, given your experience, why you could not have learned   
those same things, but through activation of deeper, more personally   
meaningful motivators? (such as: if I know my poetry, I will do well in the   
Trivial Pursuit tournament my class is having next month; or I am completing   
a project that has parts -- like in a treasure hunt or a web quest -- and if   
I know the Greek alphabet by rote, I will find my clues to get my assignment   
completed faster and with greater success; or even, if I am directed to seek   
out certain things as I read Shakespeare, and if I find those things by   
reading first, I will understand it better when my class takes that field   
trip to actually see the play live, and I will be more successful in my   
participation of a class discussion after the play.)

I do not think that finding ways to activate intrinsic motivation   
necessarily means abandoning the teaching of classic knowledge. I just think   
it means finding a way to introduce it other than using threats. I suspect   
that for at least some time in your life, you resented the Greek alphabet on   
some level, because, based on your description, memorizing it was a   
punishment (you did not get to play soccer) simply because it rained, not   
even because you did anything wrong. You may value knowing it now, but what   
did it take to get over the feelings you must have had when you learned you   
had to spend your time memorizing something that must have seemed   
meaningless to you rather than playing? Would you have gotten over it   
sooner, and come to your appreciation earlier if you had experienced the   
same task as an act of "play" instead of punishment? If it is true that   
"play is the employment of childhood" and children learn by "playing" (I am   
pretty sure that is Piagetian theory), I find it hard to justify insisting   
that children learn to avoid (or in this case to receive) punishment.   
I am glad for you that you stored up classical knowledge that enriches your   
life now. I am just sorry that you were "forced" instead of having the   
opportunity to seek it for yourself so that it would have enriched your life   
then, as well.   
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"José Florêncio Rodrigues Jr." <jfloren@APIS.COM.BR>

I teach at a masters program in Education.  Just past semester I taught a course on Educational   
Evaluation that was named by the head of the department as a "seminar."  So, I decided to put to   
work the group strategy whose characteristics matched what I'd learned from the literature about   
seminars.

First, it took me a heck of a time to work out the program because I had to indicate ahead of time the bibliography for each of the 15 sessions.  So, here comes the first element, namely, planning and informing ahead of time.

During the sessions I enforced what seminars require from participants: that is, at least 70% of the 32 students were expected to contribute with ideas and suggestions issuing from the literature read.  I kept log of the contributions and kept the chatter boxes under control and encouraging the introverts to participate.  This is the second ingredient: enforcing accountability.

Thanks, and it was nice to learn from the others on the group, too.   
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 "Enrique Bores" <ebores@campus.tol.itesm.mx>

Because I believe that best learning occurs socially I incorporate several   
team learning activities into my courses (e-Business, Organization Theory)   
at the Tecnologico de Monterrey at Toluca. Students form teams of three or   
four people for teamwork during the whole term. Class meets twice a week   
during 90 minutes: one is used to study the theoretical frameworks, the   
other to discuss cases.

1. Regarding studying the theory, I use Michaelsen's(1994) approach   
considering the following steps: a) students read in advance, b) students   
answer a multiple choice quiz at the beginning of the class, c) teams solve   
the quiz together, d) after grading the test, students challenge by writing   
any response of the exam and e) teams are given an assignment for applying   
the theoretical concepts during the remaining time of the class.

2. For the case discussion teams met before class to write a short memo   
about the case and send it by mail one day before class. Going against   
tradition in the case method, discussion of the case is not directed by the   
professor but by a team. Each of the seven or eight team that form the class   
lead one case discussion during the term. During the case discussion   
students are seated close to their team in order to consult each other   
before participating. The professor talks as low as possible and uses most   
of his time observing student's ant team's behavior to provide feedback and   
assess participation. The whole group gives feedback to the leading team   
after the case discussion is over.

3. Monthly exams have two parts: a short one in which students work   
individually and a large one in which is solved by the teams.

4. A term paper is developed by teams during the semester.

This is a short description of the last version of the course. I keep   
changing and I guess I will change many things after reviewing your home   
page. I hope this ideas will trigger another ideas among our colleagues.   
Your collaborative amigo,   
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 Eric Hibbison <ehibbison@jsr.cc.va.us>

    The phenomenon intrigues me, too, though I am beginning to think the   
question is sort of the wrong question.  A faction of people have always   
mistaken education for training, and working students have always wished   
more of college learning could be focused on class time.  I suspect,   
however, there's something in Piaget's stages or Perry's levels of moral   
development.  Since we are drawing more heavily from the bottom half of   
high school classes (and probably fewer students are dropping out), we   
are simply seeing more students who don't know how to be in college,   
more of the students whom the systemic problems of the American   
educational factories have failed.   
    As a nation, we could actually AFFORD Cambridge-style tutoring for   
every student; we just don't want to spend our trillions that way and   
want a factory-style system and productivity standards to work on crack   
kids, broken kids of all kinds, and kids whose parents both have to work   
to make an Ozzie and Harriet house without the Ozzie and Harriet   
involvement in their kids' school lives.   
    Getting our students to "accept responsibility for their learning"   
is just another bandaid because actually overhauling the educational   
system would take too much politicking and organizing. The "acceptance"   
scam is something we can each run in our own classrooms--which makes it   
a systemic problem, too.   
    In short, it can't be that simple.   
    Nevertheless, part of the answer IS in training students how to do   
our courses, how to study in and out of class, how to read critically,   
and how to take our tests and write our assignments--training   
guidelines, with different levels of sample answers.   
    For a sample of such a "Learning Week" at the beginning of a course,   
see the example provided by my colleague Barbara Glenn.   
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I would like to initiate a discussion around the subject of HELPING STUDENTS TAKE RESPONSIBILITY FOR THEIR OWN LEARNING. What do you do to create an active learning environment where students can become more involved in their education? This might involve group learning, cooperative techniques, interactive lectures, in class and out of class projects etc. Please site specific examples, results you have had and what you might do differently in the future for a particular exercize. I will start the discussion with an experiment I tried recently in two developmental math classes I teach at Cape Cod Community College.

By way of background I have two Intermediate Algebra classes. One at night with mostly adults and one during the day with mostly younger students. We have finished a review of elementary algebra where we have worked in pairs and groups of four for the past three weeks. The students are now relatively used to working together and have rearranged themselves to find people they are compatable with.

I started the section on factoring polynomials by announcing that this would be their chapter. They would be responsible for teaching themselves and the class this material with me serving as their consultant to assist in arbitrating disputes and helping them clarify any difficult concepts or procedures. To help the process along I suggested that each table of students (4-6 at a hexagonal table) be responsible for teaching one section of the chapter to the class. They "agreed" to try this approach.

We spent two days working on the material in class. A few groups did some work out of class in the math lab where they work as a study groups normally. There was a great deal of concern about their being required to "teach" the material. I assured them that they would not be graded on their performance, that this was as much an experiment for me as them and they relaxed a little. They worked on strategy for their presentations, what order of problems to discuss and who would do what. I asked for volunteers to start and two students offered to go first to end their ordeal quickly so they wouldn't have to sit in class a get more nervous. I congratulated them on their strategy. They worked together putting problems up and discussing them. There seemed to be comfort in their doing this together versus having to go to the board alone. Interestingly they worked on the side board not the board in the front of the class. The rest of the class was inspired by their approach and at one point an entire table went up together to work at the board. This required a little management on my part so everyone could see what was going on and have a chance to ask questions.

The students basically worked through their procedures for factoring without a lot of theoretical discussion. This was acceptable to me since the factoring topic is somewhat mechanical in nature. I stepped in to highlight important aspects being discussed and to emphasize particular areas of potential difficulty or mistakes. I did that as much to get involved in the process myself so that I would not be perceived as not doing anything to help them along. (This is a problem with group learning. The teacher is sometimes perceived as not being involved when they actually are motre involved helping individual groups).

In the end everyone made some kind of presentation. Some shorter than others as you might expect, some very detailed. We may have discovered a few budding teachers in the group. The students felt much better about the exercize after we completed it. Next i gave them a group test. I assigned 5 problems at a time and the group was responsible for getting the solutions. Each member had to write one problem on an answer sheet I provided. This was to prevent one person from doing all the work. I offered them a half a point for each correct answer to be tallied on the chapter test. In two days we worked through 40 problems in class. They worked extremely hard and cooperatively. It is amazing what students will do for half a point. I'm not sure I would have been able to cover that many problems in class if I did them all myself. Finally before they exam I asked each student to make up a test covering all the material with their accompanying solutions. This helped them focus on the nature of test making and what they might expect. Again there was a lot of variation here but overall a good effort by almost all of the students.

I then gave an individual exam to promote accountability and the results were excellent. Out of a class of 30 only 3 did not pass. These were students who were not partivcipating very actively in the process dispite my frequent interventions and exhortations. That is a subject for another discussion. There were 4 grades between 75-80 and the rest were above 90. The lower grades were also predictable based upon my observation of the students level of enthusiasm for this approach and perhaps algebra in general.

The biggest benefit for me is that I get to see students performing in every class and can assess their ability and level of effort before they take the exam. The students had a good time as evidenced by comments they made through an informal evaluation I did after we were through. And finally their individual performance demonstrated that they had mastered the material.

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 "Elizabeth A. Osta" <eaosta@naz.edu>

I love your topic. I teach a course at the Graduate level in special ed and start out by having students design their own course requirements. I've worked out some kinks and initially there's great fear and trepidation but eventually they experience exhilaration and freedom. They end up doing more than I would ever have designed and they're doing projects they are interested in..instead of busy work...one caution I have found is not to desert them by putting them on their own without enough info to start with. They need the safety net of support. So much of education is not designed this way...this is new and these folks are often non-traditional coming back after raising families, etc. It's been exciting. Keep your great experiment going. The more the better..   
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From: Lonna H Smith <lsmith@isc.sjsu.edu>

I try to do a lot of things to make students responsible for their own learning, but I only have time to share two!

First, I TELL my students they are responsible for their own learning. This comes as a big surprise to them, and no doubt. For, as I explain, from K-12th grade, their teachers were unfairly given the responsibility to get them to learn. If they did poorly, the principal might ask, "Why aren't you ensuring that this student is learning? What will you do so he/she will learn?"Now that they are in college, that question won't be asked. If a student fails a course, why it's automatically the student's fault! Therefore, they must be in charge of their own learning. A bad teacher? Drop the class if you can or get outside help. I also have a rule in my class that encourages them to be responsible. The rule: If I say anything that you don't understand, it's my fault because my job is to teach, and that includes explaining directions, concepts, etc. so that every student will understand. However, I won't know that you don't understand unless you tell me. So you must be responsible for your own learning by letting me know I didn't do my job! (I actually had a student who, if she was confused, would wag her finger at me saying, "Didn't do your job." I LOVED it!!) I make it easy for them, because instead of saying, "Do you understand?" I ask, "Did I explain this well enough?" This way the blame's on me... where it truly belongs.

Second: When we discuss a novel in my developmental reading/writing courses, I have the students come prepared with 3 questions they would like answered. Then, in small groups, they ask their questions. Any questions not answered by the group are taken up by the whole class.

Groups also share questions that evoked lively discussion. I don't make up the discussion questions, they do. At first it was tough giving up that control, but the questions have always been good, and the students like being in charge.

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From: Chet <cpryor@DGSYS.COM>

Subject: Friday Assignment (From Chet Pryor's Developmental Composition Class at Montgomery College)

WHAT THE STUDENTS ARE TOLD: You are a group of writers that have beencalled together to listen to ideas for a new TV show. After hearing the spin, you will be competing with each other to produce a storyboard and a narrative description for a new TV show. The best creative package getsthe contract.

Translation

A group of students will be given an assignment to write a narrative essay in story form based on a subject suggested by the   
professor. The essay must be accompanied by a narrative outline sheet specifying the premise for the story, the plot idea developed into at least four stages of action, and a conclusion. This will than be turned into a narrative essay defining time, characters, conflicts, resolutions, reactions to resolutions, and conclusions.

THE CREATIVE PLATFORM: a poem, a picture, a news story, etc.

PRACTICAL APPLICATION: Just for the sake of this demonstration, students receive a black and white copy of the the painting \_The American Gothic\_ by Grant Woods. They are instructed to turn the characters in the picture, the scenario, even the time in history the painting represents into a story showing how the characters happened to be in this picture in exactly this position. First conceive a premise on which the story could be hung; then turn the premise into a storyboard on which the characters advance from the beginning of the premise to its conclusion. Then provide details of characterization, setting, and detailed action to flesh the premise out to a resolution and conclusion. Last turn the detailed story-board into a historical tale told either omnisciently (by someoneoutside the story) or narratively (by someone inside the story).

Here's an example:

\_The American Gothic\_ (P.S. If you are not familiar with this painting, this really will sound ultra stupid).   
Premise: Farmer Brown decided that he would not allow the highway department to run the new connector road across his land using nothing but his pitchfork and his guile.

Step One: Farmer Brown and Mrs. Brown met the highway department at the front of their farm, he with a pitchfork and she with a glassy stare. They couldn't believe that the highway department would seize their land with no warning.

Step Two: They decided to use 'passive-aggressive' power to get these people off their land even if only temporarily.

Step Three: After assisting the highway department and being sweet, cooperative people for at the first twenty-four hours,   
they decide to provide coffee and pie for the men. Mrs. Brown bakes lots of her famous prune and rhubarb pies and Farmer Brown helps her serve the men pie with lots of hot coffee.

Step Four: For the next six hours, every bush and shrub is visited continuously by all of the highway crew workers.   
Productive work stops. Finally the men just pack their equipment and leave.

Conclusion: Farmer and Mrs Brown regained control of their land and lives, at least temporarily, by using their guile and   
at least a little bit of passive aggression.   
------------------------------------------------------------------   
Note: Further illustration and detail are to be provided (even pictures or cartoons if student is so inclined) to flesh out the   
storyboard with details defining character, setting, and time.   
-----------------------------------------------------------------   
Next, convert and develop the above into an essay/story in which your premise becomes part of your introduction, each STEP becomes a paragraph in your story with a transitional sentence to ties each paragraph together, and the conclusion becomes the concluding paragraph of you paper.

NOTE: I teach two classes of developmental composition twice a week (4:15 to 6:30PM and 6:45 to 9:00PM). My adults go to work as early as five-thirty AM, and most arrive at our campus' outer-ring location having fought Washington's near-gridlock suburban traffic and without having taken an evening meal. It takes quite a song-and-dance to keep everyone interested. I am presently grading the results of this assignment for Fall semester. The shortest, least developed narrative I have is seven pages. Clearly this exaggerated assignment is effective with this particular population, at least in achieving writing fluency. +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++   
From: Paula Volpiansky <pvolpian@STUDENTS.WISC.EDU>

I also work with adults in a college setting in a teacher preparation program, but have also worked with K-12 age students. I'll share a few examples from my college setting.

1. As an alternative to lecture, instructor led presenation, I sometimes begin the class by asking students to consider the topic for the evening and individually write down a questions they would really like answered re the topic- last week it was inclusion of students with mild disabilities through collaboration between special and regular educators. I then ask students to share their questions and write them on the board, grouping questions that fall into the same category. We then go through questions, and elicit answers and solutions (often the questions are related to challenges with students the class participants are working with on the job or in practicums). We pass the chalk around and take turns writing key concepts/ideas for the questions addressed. I try to step back and occassionally participate on a relatively equal level to the students. I find that if I do not talk, the students begin talking and problem-solving with each other, rather than me. Last week a few students got together at the end of class to arrange a way to share resources, articles, etc. that others said they had related to the various questions discussed. What fun!

2. I teach a seminar for graduate students who are currently teachers. The topics vary from semester to semester. Instead of assigning a paper or giving exams, students are to create a portfolio based on goals they identify. The only requirement is that the goals relate to improving skills or tackling a challenge in their classrooms/schools. Goals can be directed at particular students, curriculum and instruction, and/or professional development (as long as there is some explanation of how knowledge gained might be applied to their work). At various points during the semester, they work together in small groups and help each other clearly define their goals, brainstorm ways of accomplishing them, determine what to include in the portfolio, and helping each other over hurdles during implementation. At least once during the semester, I meet individually with students for aportfolio conference. We have a conversation (I provide some guidelines) about their goals and what they have selected to include in their portfolios and why. I've been told that this assignment is very challenging but worthwhile. Some say it is difficult to get away from trying to plan a project based on what they think the instructor wants, and instead focus only on their needs. I've been told a number of time that this was the first time they ever really designed their own learning outcomes for a college class.   
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From: IN%"nickerss@newschool.edu" "Stephanie Nickerson"

What a terrific story! Your experience suggests that the teachers of quantitative methods who say one can't use student centered methods to teach such subjects simply are copping out. At the very least, they need some guidance in order to think more creatively about how people learn. The social support the class generated seems to me to be key when people are uncomfortable material.

When I use small groups, I usually assign members to groups. (I post the groups on flip chart paper.) I have hypotheses about each of the student's learning needs and abilities, and I try to put people with complementary skills and needs. Sometimes I will try to challenge very quick students by placing them with other very quick students. Sometimes I put students who are good teachers with others who need patience in their peers in order to "get it." I change the groups each class, usually, so that everyone works with everyone at least at some point.

I teach students in courses that lend themselves to experiential methods, management and organization behavior, training and development, human resources management.   
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From: "Foster, Mary Beth" <mfoster@sla.purdue.edu>

I teach Study Skills for Introductory Psychology. I have found a couple of things encourage students to take responsibility for their own learning:

1) In conferences and in whole class discussions, instead of telling students what they can do about a problem, I ASK them what they can do about it. They almost always have better ideas than those I would have pushed on them, and since THEY suggested them, they are more likely to "own" them and maybe follow through on them. During in-class "troubleshooting" sessions (e.g. "What problems do you have with notetaking?") I let the students make suggestions for solutions to each others' problems.

2) I have them do readings on various study skills topics from a coursepack. On a random basis, I give reading quizzes. They are instructed to write down the 2 or 3 best ideas they found in the readings; I do not tell them the topic of the readings, so they have to have done them to know what to write down. I tell them at the beginning of the semester that the easy way to ace all of those quizzes is simply to mark the good ideas as they read (or even make notes of the good ideas). Then before class they can review what they marked. This not only "sneaks" them into txbk marking notetaking, but it also puts the responsibility for finding good ideas and remembering them squarely in their court.   
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From: "Alan S. Altman" <altmanr@alpha.acast.nova.edu>   
sibility

You might try getting the students to weigh a house. Got the idea from the peer assisted learning listserver in Dundee Scotland. Have the students weigh an entire house, with all of the ramifications attended to it; sq.footage for foundations and the specific material, costs for same, plumbing,electrical,fixtures, lighting, labor, loan interest, blueprint costs(how many copies), I MEAN EVERYTHING !! Your looking at algebra, finite math(averaging),geometric formulas for area etc. Since I teach in the social sciences, that's the best I can do. Good luck   
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From: "Landry, Anne F." <LANDRY@SMTPGATE.SUNYDUTCHESS.EDU>

Getting students to accept responsibility for their own learning is indeed difficult, particularly in my lower level math classes. one approach i have taken that seems to set the right tone from day one is as folllows: the initial homework assignment is always a writing assignment (GASP -- writing in math, ooooh noooo). part one is the standard math/personal biography. in part two I list for them over a dozen very specific items that I have identified as my responsibilities to them (serious preparation for class, timely return of graded work, fair and impartial assessment, respectful treatment in class, thoughtful and relevant homework assignments, etc., etc.). I ask for their reactions to the list and then I ask that they prepare a similar list of their responsiblities to me, to themselves, to the class as a whole. the responses never cease to amaze me. with very few exceptions (remember, this is in lower level classes) the students are astonished that a teacher would even consider having responsbilities to the class. they report feeling very personally attached to the class now that they know i am taking them seriously. it also makes it harder for them to cut class casually or to start acting out in class or to fail to work on homework when they have committed themselves in writing to positive behavior. we usually need to reaffirm our commitment at a couple of times throughout each semester, but, as i said earlier, a good tone is set very early. This doesn't work as well in higher level classes or in my evening classes -- the only time i used this in an evening calcIII class i was told i had offended them by assuming that they weren't already in control of their educational destinies. upon consideration, i decided they were right and i have refrained from asking subsequent evening sections to complete the exercise. Your group work sounds really great. i use a similar technique to structure review session and have found it to be hugely successful. one of my pet peeves is students who wander in on review days and ask for review sheets with answers or sample tests -- lazy, lazy, lazy. i tell them that review is their job, i already know the stuff. i help them organize their thinking and help them decide how to prioritize the material, but i make them dig out their own "good problems" and representative questions. i have also experimented with having students (in groups of three or four) prepare sample test questions. i then have them exchange questions with other groups. they discover very quickly how difficult it is to construct a relevant, sensible, and doable test question -- they are very critical ofeach other's questions and they begin to think about what the components of a reasonable test are. again, this seems to work better in lower level courses and in the liberal arts math class.   
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From: "John Ufer. User" <OnSiteEdu1@AOL.COM>

I allow for 10% extra credit for outside classwork and it takes a lot of it to get the full 10%- increase of one grade. students are given comprehensive weekly 10 question quizs and most need to do extra credit to make up missed points, but it is their choice. This allows students the contol of what their grade is, not completely by the lottery of tests and my choice of test questions. I have used this method for a number of years and it works great based on final exam scores.It is enjoyable to watch the reaction of student when you enpower them to increase their grade by learning more if they chose to. Students sometimes don't quite get it but by mid term they all seem to start doing some extra credit. I think that motivation is key to student learning and the more methods of motivation we can use the more students learn.   
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 Bierema@aol.com     Laura L. Bierema

I applaud your collaborative strategies. Here are a few musings and ideas based on similar initiatives at Washtenaw Community College in Ann Arbor.

Your design of having students stand in front of the class to teach might make a few people nervous about making a presentation, thus distracting them from learning. One alternative approach I've tried is a jigsaw exercise. Here are the steps: 1) Prepare an information sheet of terms and content that the students are responsible for learning. (For instance the 3 different types of business ownership: sole proprietorship, partnerships, corporations). 2) Students in teams of 3 count off by threes (1-2-3). Team 1 gets the information sheet on sole proprietorship, team 2 on partnerships, team 3 on corporations. 3) Teams (1-2-or 3) are responsible for helping each member understand the information and devise a way to teach their original team members about the concepts. 4) Students return to their orignial teams. Each person teaches her/his component of the lesson. 5) There are many options for class at-large follow-up such as questions, dioalogue, team quiz, a game of Jeopardy about the topic, etc. Contact Idahlynn Karre for her booklet \_Busy, Noisy, and Powerfully Effective: Cooperative Learning Tools in the College Classroom\_ This booklet has several collaborative exercises that work. Her address is: Department of Speech Communication Univeristy of Northern Colorado Greenley, Co 80639   
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: nisal@unlinfo.unl.edu (terri laswell)

In our adult ed department we frequently make use of a critical or problem-posing pedagogy as a means to help learners assume more responsibility for their learning, as well as to help shape learning situations that will honor their own experiences and encourage critical perspectives. I had considered that perhaps this worked best in courses where the content was non-technical, but you provided a  good example of group work within a highly technical context. That  was helpful to see.

What I have observed--both in myself and in other learners--is a  reluctance at times for learners to embrace such an approach. My sense, and what I glean from reading, is that many of us have been so culturized-socialized-institutionalized to believe that learning is a  largely passive activity (the fill-the-empty-head model) that it is  difficult and often extremely uncomfortable to assume a more active role. t's as though we have somehow lost the ability to make meaning within a structured environment; the instructor-as-expert perspective is far simpler than the work and affect often involved in constructing knowledge for ourselves, and trusting in our own experiences.

I observed a class last week, in which the instructor was developing a rubric with the class to identify criteria for some papers due over  the next several weeks. This is a learner-centered process for identifying characteristics of adequate, excellent, and outstanding work (or whatever other categories of "quality" one would wish to indicate). In part, this activity is done to help learners assume more ownership or responsibility for their work, including the evaluation of their work. Now, I would guess that every student in that room had a sense of what constituted quality work, but few were willing to voice that sense. Having some prior experience with this, the instructor worked patiently with them (it would have been far easier for her to simply have listed her own criteria), and ultimately a rubric was created that satisfied the class. Out-of-class conversation indicated students were struggling with trying to "second guess" what it was the instructor wanted them to say, rather than searching their own experience with what they knew to be quality work.   
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From: "Robert Lewis" <LEWIS@academic.stu.StThomasU.ca>

In responding to Ted Panitz's question, it seems to me that efforts to help students take responsibility for their own learning   
are thwarted somewhat by traditional evaluation systems. Ted's example demonstrates this in his efforts to allay the student's   
fears about evaluation of their teaching and his use of group tests.

I've been using contract evaluation systems for years (25 or more), and I've recently adopted portfolio systems. Both provide   
high quality evaluation while involving students. Both make formative evaluation "count" more and allow students to have more   
control over the methods of measurement. Both systems seem to students to be more responsive to effort, and permit teachers to divert students away from surface processing toward deeper processing of the content. Of the two I prefer contract, because it allows me a better "lever" to induce students to try things they might not otherwise attempt. I'll send my contract plan as an  example to anyone thinking about that system. I'd be interested in seeing those from others on the list who are actively using contracts or portfolios.

Part of my contract arrangement is a stipulation that for the higher marks students must undertake a project designed to aid   
the learning of others in the class. The project is unmarked, but is subject to the reinforcements of others in the course, which   
tends to keep quality high. The suggestions I make for this project include:

1) A test construction group which develops multiple choice items. After editing by me, a practice test is made for all to use. I also offer a "rationale sheet" which discusses why the keyed answer is right.

2) A "Devil's Advocates" group which attempts to develop knotty questions to be raised in class. Questions may be asked of   
the professor or the class.

3) Video production groups, charged with developing skits which  illuminate the class material. A very popular option, the resulting videos often explain things much better than I could.

4) Poster production groups (or by individual), which clarify content.

5) A "planning group", which advises me of needed reteaching areas, and suggests activities to complement the course.   
Another part of my contract arrangement is the "quantity requirement", which demands that all students write to me each   
week. They may select from among several options, ranging from "reaction reports" which have no specified content to "text   
exercises" which require them discuss their success and reaction to problems posed in the text. All messages now come to me by email, and I read and respond to all. This provides a protected, confidential channel for interaction between us. The advantages for aiding involvement are obvious.

Naturally, all of this requires reasonably sized classes. I can keep up with this load with classes of sixty fairly easily. Contract and portfolio systems do create more work for the professor, but the payoff in student involvement and responsibilitymakes it worth the effort.   
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From: "Joan McMahon, University Teaching Initiative"< E7H5JOA@TOE.TOWSON.EDU>

I too have had success with "peer teachers." At both the graduate and undergraduate level. At the graduate level, I use a book by Richard McCullough (ASTD) on Planning Your Professional Devp in HRD. Here the students (indiv or gp) go through a series of excises and then plan their own development plan. We then negotiate it. Indiv with similar needs present what they are learning to their peers. At the undergrad level, my hardest class is the first course in their professioanl core. It is here that they confront several issues. The teacher is not the fount of all learning; they have experience from othercourses they can draw on and use; and they have to be responsible for their own learning. Using electronic conferencing, students must present information they have learned about a topic (what was the best source of information on needs assessment?) Through CMC, they can share a wealth of information.

In both cases, my job is learning manager (foreign to most of them and TERRIBLY uncomfortable at first, to say nothing of resentful and hostile). At the end of the semester, the reflections from both groups deals with empowerment, self-esteem, and new skills in life-long learning   
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From: Bruce Wagner <BWAGNER@VM.TEMPLE.EDU>

That so many even discuss this key issue in learning must say something very positive about developments in higher education. My response to students who seem to be all too passive about their education has been to ask them directly what they want to achieve in our course. I do it through an open ended questionnaire which I ask them to complete three times during the term, and which we all refer to as we reach hard places during the course. I found that

students were taking my course because they "were told to." (It is a requirement.) As I begin to ask them to figure what they want (aside from what I want from them) I find that their growth, their involvement, their collaborative efforts all become better focused and much more active. What has pleased me most is that they say (both in the 3rd questionnaire and in person) that they appreciate the dynamic of what has happened.   
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From: "jacqueline ann mintz" <jmintz@uclink.berkeley.edu>

I have recently completed a semester of a shared teaching experience with a group of undergraduates studying the drama in a Comparative Literature course. I will be giving a presentation on the nitty-gritty, including a videotape of the students teaching and all the self-and mutual evaluation materials they wrote at the ISETA (International Society for Exploring Teaching Alternatives)conference next week. In brief, my approach differed, not only by discipline from Ted's, but in that I integrated into the syllabus and in teaching from the beginning, preparation for the requirement, agreed upon by all those who chose to take the course: that they would work in small groups to choose and then teach a play. Based on what they had experienced as modeled by me, and through various teaching and learning strategies, as well as their own interests and particular strengths, they chose the plays, sorted out what would be done in class, how and by whom, according to what their goals were for the other students to learn and take away from their teaching. They had a full month after the arrival of their texts to prepare. Assessment of the whole course, including midsemester evaluations, and of each of the steps in their projects followed. The students helped write these forms and evaluated themselves and each other. My evaluation was one among the whole group in each appropriate category. The play presentations led to a individual final papers in which the chosen play figured prominently, though not necessarily exclusively. I graded those papers. Evaluations for the projects were integrated into the final evaluation for the course. All but one student said that the project was educationally valuable, enjoyable and would recommend doing it again. The single dissenter said s/he was indifferent. Students did a very good job and, in sharing orally what they learned, said they experienced the frustrations of time and coverage, choices to be made, etc. that we, as long-time teachers struggle with always. I felt very gratified to learn that we had a new level of understanding we might not otherwise have reached about teaching and learning. The course all together received the highest evaluations I have gotten to date. This was a freshmam/sophomore seminar course of 14 students.   
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From: Merili Geller <Mer512@AOL.COM>

It is alot easier to include children in this kind of learning if it has started at a young age. I teach kindergarten and have even had this kind of organization with pre-kindergarten children. When they walk into the room they must turn over a card with their name and picture on it. they are therefore responsible for taking the attendance. They have centers that they go "work'" in and a chart to keep track of where they have been. They have folders to place their work into.All of this is the responsibility as is cleaning and maintaining the classroom. Parents are amazed at children who won't do a thing at home and how organized and helpful they are in class. It is very important to maske the children responsible for themselves as much as possible. It helps build feelings of self worth. When I have tried to get this cooperation from children who were older, 5th or 6th grade, they were totally overwhelmed because they had never been treated this way before.   
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From: HA03@swt.edu

I received your message- obviously. I am teaching an intro computer class and I tried something a bit different. I arranged 5 tables and had a piece of equipment on each table. I then made groups of 5 and had them sit at the tables. The people in the group were expected to interact- the first would turn to the person on the left, introduce themselves, and ask that person a question about the piece of equipment sitting on the table. The group could discuss the answer, the person who was on the left repeated the scenario- introduced themself, asked the question to the person on the left. This continued until all people in the groups had participated. Then I moved the groups to the next table down the line. I really liked the results.

The students became aquainted with one another, the information was shared, and common questions were defined and answered. I would think you could do the same using manipulatives. I also teach a basic math class and have just received some manipulatives that I had on order. I plan on using this strategy for my math class. How about giving it a go?   
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From: "Nancy C. Zare" <zare@cambridge.village.com>

For an undergraduate class this term, I have asked students to determine their own term assignment. Due this Sunday (class meets 4 week-ends per term), they are preparing a "contract" stating what their learning objective/s is/are and how they plan to fulfill it/them. I gave several ideas in the syllabus including journal, report, presentation, art work, etc. We talked extensively last class about what it means for them as adults to take responsibility for their own learning. I have provided assigned readings and suggested topics for each session. However, I start the class by making a joint agenda of items/topics to discuss. We often assign timelines to them and priorities. I find this works very well with adult learners.   
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From: DanH150093@aol.com

> What sorts of things do you do to get the students actively involved in the process of learning math?

I call these "group quizzes". Place at least as many problems as you have coop groups on the chalkboards. These problems generally reflect the previous night's homework.

Tell the class, "In twenty minutes, one of you is going to do one of these problems for your group's grade. You don't know which problem you'll do or who from your group will do it."

Don't you think that'll put a little peer pressure on everyone to master theproblems? You bet it does. And if you play it right the kids don't feel much anxiety about doing it. And if you really want to see the fur fly, do it in relays giving each kid about 1/2 minute at the board, before being replaced by a fellow group member.

It's amusing as hell to watch. Kids love it. Especially when you call "free-for-all" and the kids at the desks can yell the answer to their colleague at the board. It makes you happy to be a teacher.   
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From: Carlton Severance <cqs8081@is.nyu.edu>

I've been letting my students use their portfolios on many (but  not all) exams. Result: Some very nice portfolios, well-organized and  stuffed full of useful information, easy to access, etc. Students with  "science anxiety" are able to mellow out and function, and allstudents  have the satisfying feeling that they have gotten away with something. What they've gotten away with is organizing information so that it's useful to them, a far more real-world situation than the hardcore closed book test environment in which many of them have languished til now. I teach chemistry (and other sciences) at a small private  secondary school in New York.   
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From: pat schutz <pschutz@MESA5.MESA.COLORADO.EDU>

In my experience, there are few situations that can validate my effort and time as a teacher, like the positive results of a group learning situation. I read your account of just such a situation in your developmental classes, with great interest and empathy. You obviously have a good grip on what it takes to organize, maintain, and measure a productive group learning activity.

It's the MEASUREMENT of information assimilation part of group learning strategies that always seems be most challenging for me. Sometimes I devise a customized method, such as you did in your classes, and other times I revert to the individualized grading methods in order to be as fair as possible to each student. Other times, I insist from the beginning of the course that certain activities (term papers, homework assignments etc.) will be "group/team activities" and as such, will be graded based upon the aggregate performance of the team as a unit. "Strive for synergy, or settle for mediocrity with your least active member", is one of my battle cries. In the final analysis, every student's course grade is based mostly upon individual tests and individual assessments of his/her performance.

You asked for other ideas to promote participation:

I have recently begun to vary my normal method by which I create teams in the classroom. From time to time, the teams that I create at the beginning of the semester will exhibit some negative behaviors as the course progresses. Groupthink, ostracization of members, suboptimization of group capabilities are a few of the more easily recognizable behaviors that show up on occasion.

In order to maximize the potential for each group to succeed, the RAM was born. Introducing a RAM into each group each time there is a team activitiy, causes the groups to become just a little less cohesive and just a bit more intellectually energetic. The RAM, or Random Alternative Member position is filled by a student who will join a team which is different from his/her own, and will only be a member of the new team for one class period.

Once the teams have been well established and have had enough interaction to become cohesive, the RAM concept is introduced. The RAM has specific duties that s/he must perform in the new team. For the RAM to make a significant contribution to the new team, s/he must attempt to act as a Devil's Advocate for unorthodox/creative solutions, an outside expert, and a champion of diverse thinking.

The result is usually a reduction in the negative behaviors caused by severe cohesiveness, and among other things, a heightened awareness of the potential rewards for the encouragement of diverse thought.   
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From: Suzy M Hill <SuzyMHill@AOL.COM>

In Geography classes I use an "Extra Credit" carrot of up-to 20 points added on to any test grade. These are earned by attending 'International Functions' (we have a lot of them here) and talking or eating from the various nations involved. A brief report of 25+ words describing what they have learned. Amount of credit depends upon where they go, how involved they get. Usually 2-5 points per activity.

In graduate classes I often let the students write the test questions. After I havesorted them out I pass out a copy of all the questions and use them for essay test questions. They sometimes come up with a different insight than I have to a particular topic. I might add they come up with harder questions than I do!   
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From: C.Thomson@unsw.edu.au (Chihiro Kinoshita Thomson)

I've written an article a while ago on this topic:   
"Learner-Centered Tasks in the Foreign Language Classroom" FOREIGN LANGUAGE ANNALS pp523-531, Vol 25 No 6, 1992. The article esentially deals with a series of classroom tasks where the learners becomes the planners of the learning tasks and providers of the learning input, under the theoretical framework of self-directed learning.   
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From: siowck@slgan.pc.my (Gan Siowck Lee)

> Could you explain what the one-stray-three-stray method is?

The One Stray, Three Stay technique is devised by Kagan. I usually use variations of it depending on circumstances. One   
variation which I use often is One Stay, Three Stray.

Here is an example:   
Aim: To help student teachers learn how to 'teach' collaborative skills. (Some reading materials are provided for reference)

1) Each group of four chooses one skill and makes a plan of how they would teach that skill.

2) Then, one member of the group stays and holds up a sign to display the skill the group has discussed and which he is going to share.

3) The other three members stray - they leave their groups and individually sits down at a table with a sign that displays the   
skill he/she is interested in.

4) Each Stayer explains the group's plan to the Strayers who come to the table.The Strayers ask questions and make suggestions.

5) The Strayers return to their original groups and tell other members what they have learned/observed.

6) A new Stayer is chosen , and the process is repeated. Everyone gets a chance to be the Stayer.

I find that this works well. My students learn to take responsibilty for their own learning and they actually enjoy this   
teaching-learning activity! :)   
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++   
From: "Foster, Mary Beth" <mfoster@SLA.PURDUE.EDU>

This is in response to "TPANITZ"'s message about getting students to take responsibility for their own learning. These are ideas I've used; I'd like to hear others....Getting students to take responsibility for their own learning is the biggest challenge and the biggest joy I face. Here are a couple of techniques I use:

1. During class "troubleshooting" discussions and during individual conferences, I turn questions back on them. During class, I often begin with something like, "What problems are you having with notetaking?" and then, when a student mentions a problem, I ask the class, "OK, what can she do about that?" Oftentimes, they class comes up with more varied and interesting responses than I could have, and since the students are making the suggestions, I suspect they might be more likely to actually try the ideas In conference, I do the same thing -- only there, I can work with the student to expand his repertoir of possible actions. After we have come up with a verbal list of possible solutions, I run through it again to highlight that there are LOTS of possible solutions, and that the choice is his about which to try.

2. That leads to a second method I use: the "menu" approach. Whenever we are talking about a problem area/skill (e.g. time management, notetaking, txbk usage...), I make sure that there are a VARIETY of suggested activities to strengthen the skill. I may have them practice a particular solution in class or for homework, but through their readings and class discussion they should pick up that if one thing doesn't work, there is something else to try. The working assumption is that everyone is different, and what works for you may not work for me. So the TECHNIQUE is not bad, the FIT is.

3. A third way I encourage personal responsibility is through reading quizzes. I told the students at the beginning of class that there would be occasional quizzes, and that they would work this way: They would come into class, I would say "take out a piece of paper and write down the two (or three) best ideas you found in the readings for today, and how you might use those ideas." But I also tell them at the beginning of the semester how to ace these quizzes. While they read, I tell them, mark the ideas they like. Maybe even write them on a piece of paper. That will help them remember them, in case there is a quiz. (Of course, it will also increase the chance that they will remember the idea and TRY it. And it gets them doing textbook marking and notetaking before we even talk about those techniques!)

4. A fourth way I encourage responsibility is by keeping my evaluation out of the picture as much as possible. In my experience, the more I graded students to try to motivate them, the less motivated they became. So I try to trust them, and trust my assignments and activities. I cannot be SURE that the students are learning what I want them to learn. But if I design good activities, I can be reasonably certain that they've learned something. Instead of looking for a particular product (e.g. Cornell notes done just so, or a time schedule filled in a particular way), I look at what they produce and try to see what they've learned and how they are thinking, and what we might still need to work on. I let them guide me.

Ultimately, we cannot change a student's locus of control. But we can use techniques and language which gives them FREEDOM TO CHOOSE behaviors, and opportunities to EVALUATE the success of those behaviors THEMSELVES.   
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From: YH25482@swt.edu

I have come across a good article on students taking responsibility by Charles S.Bacon (The Clearing House, vol.64 p.395-398). The article differentiates holding students responsible and making students responsible. When student is being held responsible, the teacher will have to maintain the whatever influence or power to make him/her responsible. One the other hand, for someone

who is able to be responsible, there is no need to provide support for that individual to fulfill his responsiblities. The former is more extirinsic and the latter, intrinsic. It would be more beneficial for teachers to promote environments that encourages students to be more responsible than to hold students responsible for learning activities. Just another viewpoint of this discussion from Bacon (1991).   
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From: Wendy Crebbin <WCREBBIN@fs3.ballarat.edu.au>

I agree that the learn-to-teach approach is a very effective way of  encourageing student responsibility. It also requires students to  approach their learning in a deeper, more metacognitive way (unlike some other approaches) and provides the students with a PURPOSE FOR LEARNING.

Another approach which I use with my Graduate Diploma of Education students is a process where, within the first weeks of their course my students are placed in learning environments where they each, individually and with a partner, have to teach groups of young learners. These experiences are followed up, in groups of about 15, with extended discussions in which the content is entirely based upon their description (oral or video) of their interactions with the learners and THEIR QUESTIONS arising out of those experiences.

In this way the course is set up so that it is my students own question, issues, problems and concerns which become the content of learning. Although it is the students' own NEED TO KNOW which drives the pace and direction of the course I have found over the years that I need have no concerns that the issues which I might have included in a pre-set course will not be covered. Or that they will not be covered in depth. What it does mean is that as the teacher I need to have a  sufficiently global view of the program that I can provide students  with access to the sorts of information they need, when they need it, and, at the same time, maintain a process of continually drawing the threads together to ensure continuety and direction.I have also found that this process is greatly enhanced through students maintaining their own journals about their questions, plus their own self evaluation profiles. (more information avialable on these if required)   
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From: Randolph Hollingsworth <RHOLL00@UKCC.UKY.EDU>

In a 100-level early European survey history course, students must simply KNOW certain historical terms for their essay exam. I have traditionally tested their knowledge base with short answer Identification (who-where- when-what-historical signicance) as 30-40% of the exam. This year I used collaborative learning techniques in class (including 20% of their grade for producing 3 terms per chapter with answers that I would comment on and put in the class notebook on reserve in the library so the whole class could see each group's work). For their exam, the group would answer the short ID terms, then break up to write individual essay. The trick that I found made the groups accountable -- and the students thought this was fair, too -- was that the essay must include appropriate group-chosen terms (I listed them all, per chapter, under the essay question part of the exam). I deducted points from the individual essay that did not include a class-chosen ID which would have enhanced the answer. In other words, everybody had to know the terms -- they couldn't just farm out individual terms and remain blithely ignorant of what their team member was doing. It was fun for me to watch them studying for the exam and critically analyze their peers' own answers and argue about why I graded some answers tougher than others. It livened up a usually dreary list of "stuff" from their perspective, and from my perspective I had higher quality essays -- and a cut-and-dry way to grade their use of historical terms!   
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From: JBORNSTEIN@aol.com

Without getting too deep into the strand here, I offer some thoughts on student responsibility. Cooperative Learning itself has not been the key, although I use it extensively. More successful has been a goal setting technique built around one-on-one conferences. Once I have had a chance to assess students initially (in my setting, after about 6 weeks), I present them with samples of competent end-of-year work. A week later, we hold a conference (with parents, as this is an elementary school), during which we go through the following agenda. First, my assessment. Second, the student self-assesses and/or validates my assessment. Third, with the end-of-year competencies in mind, we set long range goals. Finally, we set mid-range goals for the next ten weeks.

Weekly conferences (1/2 hour) in at least one curriculum area help to develop short range goals. We meet again ten weeks later. At that time, students present work from a portfolio. Their samples (chosen in negotiation with me) should represent either excellence, improvement, or both. Again, we set mid-range goals (ten weeks). One more conference is held in ten weeks. Summative evaluations at the end of the year include assessments by me and the students.

This process seems to encourage great responsibility and motivation on the part of otherwise disenfranchised students. Furthermore, the constant assessment talk develops a metacognitive vocabulary and awareness among the students that is crucial.   
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From: Phyllis Oliveto <poliveto@OUTLAND.DTCC.EDU>

In Technical Writing, my students are required to participatein a collaborative writing effort in which they prepare a written (and oral) Problem-solving Proposal. They usually consider problems in the community or workplace; some focus on campus problems. Since this project is a formal report, it usually follows the following organizational plan:

Title page, Table of Contents, Abstract, Introduction, Background,

Statement of Need, Plan of Action, Budget, Funding, Schedule, Evaluation

Conclusions/Recommendations and Appendix(es)

This project ususally requires students to design questionnaires and conduct interviews or any other empirical research that may be needed. I found that groups of 3-4 persons work best; every group member has something valuable to offer. I have been very impressed with the way students work when their grades are dependent upon each other! There is a peer evaluation that is worth 25 pts. towards a possible grade of 200 pts. If you would like any more info- topics used, problems, specific project breakdown,   
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From: Kaci Morrison <KM28852@SWT.EDU>

I would like to respond to the question about adults taking responsibility their own learning. I tried something in my math classes the last couple of semesters that I think seemed to work. When I got to class, I started by telling them I had a question and anybody who wanted to answer it could volunteer. I did not tell them the question though. For the volunteer, I gave them a question relating to the previous class lesson. If they got the question right, I gave them 3 points added on to their homework grades. If they missed it, another person could volunteer, and that person would receive 2 points if they got it right. (They had already heard the question by then.) These extra points were reason enough for my students to for get involved.   
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From: "John Ufer. User" <OnSiteEdu1@AOL.COM>

I would be interested in finding out what people use as methods of effective and interesting teaching strategy and why it worked. I enjoy trying out new ways to engage the students I teach.

I have been using overhead transparency problems that students do in groups or as homework and then use their examples and solutions for class discussions. I preview the example quickly and only place the good examples on the overhead.It has been very effective but I do lose a great number of overhead pens in the process A second method I use with blank overheads is to get three student to a group and have the group design an electronic circuit to fit an application, each member has a job within the group- the presenter, the secretary, and the researcher. They have data books on electronics parts and must design the circuit in 20 minutes. The class votes on the best design. Sometimes art wins over effective circuit design- student love it.. Has anyone else used overheads within groups or for problem solving problems ?   
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From: "BARBARA J. BASS, ENGLISH DEPT." <E7E4BAS@TOE.TOWSON.EDU>   
Subject: Re: 2.5 hour-long Class Sessions

I've been taking graduate courses in the evening, and some of the techniques employed there might help you, along with some of the great suggestions that have been coming over the list. One thing that really works is FOOD! In the class I'm taking now, we rotate the food responsibiliity. People have gotten pretty creative with what they bring in, and a bit silly (like danish when we were reading Hamlet!). There is always a break, as someone has already suggested, and during that time we socialize and eat whatever's been brought in. Another technique this professor uses that I have employed in my own classes is letter writing. We begin each class by reading a letter written to someone specific, not Dear class...responding to something in the reading, or something we may have read or seen on tv that is relevant. It really helps in getting the discussion started. If you have a large group, you'll have to divide the letter-writers up...maybe 6 or 7 at the most per period. This professor also uses a class historian who does a sort of deconstruction of the previous class and reads it to the group. Finally, I'd like to add one of my own techniques that should work pretty well in a big block of time, although I have only used it in 50 min blocks. I have the class divide in groups, each group discussing a different reading. They have to find the most important sentence in the piece and come up with a question they have about it. Then we put that info on the board and use it to start the class discussion. It's a good way to review the material before you get started, too. If it's a long piece rather than short articles, you could divide it up, with each group discussing a different section.   
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From: chayeol@baarnie.tafe.sa.edu.au (Chaye Oliver)

You may like to have a look at Dr Bernice McCarthy's 4Mat system of learning styles and instructional design. I have been using it with adult learners and find it great. The student feedback is extremely positive too. through using the LTM (Learning Type Measure). 4Mat also describes a system of designing lessons to meet all the learning styles in your class or group and has a comprehensive training program to assist you in doing so. This is the part which I believe makes 4Mat outstanding. Most other learning style instruments give you a profile of your learners, but no real insight into how to plan your curriculum, lessons and activities to meet the needs of all your learners. Using the 4Mat model to plan your lessons will encourage the qualities you have mentioned above - group learning and cooperative techniques. Dr McCarthy has established a company called Excel and you may like to contact it to find out more about the 4Mat System. There are also many books and 2 computer programs which have been published by Excel. Excel Incorporated 23385 Old Barrington Road Barrington Illinois 60010 Phone 708 382 7272 Fax 708 382 4510 bernice@excelcorp.com   
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++   
From: Kaci Morrison <KM28852@SWT.EDU>

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