Breaking Success Barriers—Zero-based Thinking and You

Zero-based, improvement thinking, widely practiced in business circles, can be a powerful strategy for improving your teaching and your students’ learning. What is zero-based thinking?

It means before you begin a new term, you seriously reevaluate your current practices, methods, course content, learning activities, instructional design, teaching and learning assumptions, etc. For example, it may mean dropping sections of a course that has experienced content inflation over the years and now has become impossible to learn in the time allotted with traditional methods.

This strategy requires that you justify everything you do including: your instructional design, the assignments you give, the learning activities you plan, the number and type of tests you include, and the specific ways you intend to continuously evaluate the results of your teaching.

Ultimately, using zero-based, improvement thinking may mean deleting or altering some cherished outcomes that have seemed so necessary in the past but today are inconsequential.

Zero-based thinking works because it produces clarity and simplification, and simplification allows you to focus your energy on the correct targets to reach the goals you set.

For best results, use the five Critical Success Factors of good teaching to guide your evaluation. These crucial areas are: leadership, classroom or on-line management, instructional design, communication and evaluation.

To teach for success this term, begin now to root out the time-wasters, the trivial, the repetitive, the inflated content, the nice-to-know. Then allow only the most essential, fundamental, important and crucial content, learning activities and assignments to remain. When complete, you can safely add back some extras without threatening your most important learning outcomes.
Do You Have a Plan—to Know They Know?

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Your skill at providing quality assessment can greatly affect your student’s learning (as well as student’s surveys of your teaching abilities.) In addition, a quality assessment plan featuring a balanced and authentic assessment ensures the strengths of one tool and minimizes the weaknesses of another.

Prior to choosing an assessment strategy, it’s important to establish learning standards that clearly delineate what is to be learned and performed.

Traditional Testing

One of the three main methods of assessment is traditional testing. It includes classroom assessments such as teacher-made tests and assignments. Unfortunately, many teacher-made tests are poorly constructed as they often emphasize verbal-linguistic skills and lower-order thinking.

In her book, How To Assess Authentic Learning, Kay Burke gives suggestions to improve the quality of traditional tests. These guidelines include: create the test before teaching the unit, ensure that the test correlates to course objectives, arrange questions from simple to complex, vary the question type (multiple choice, fill-in, matching, etc.), include visuals and give sufficient time for all students to finish.

Burke also recommends using questions that cover different levels of thinking. Gathering information questions use verbs such as match, describe, and name. Processing information questions use verbs like compare, classify, analyze and explain. To stimulate higher-order thinking, include application questions that require the student to evaluate, judge, predict and estimate. A good traditional test will cover all three levels of intellect.

Portfolios

The portfolio is a powerful tool for learning and assessment, and it’s a collection of evidence that reflects a student’s knowledge and skills in a specific subject. It focuses on process and product.

There are many types of portfolios as well as purposes for their use. The portfolio process involves three steps:
- Collecting the evidence of learning.
- Selecting artifacts for inclusion in the portfolio.
- Reflection.

Portfolios are evaluated using scoring systems, which contain multiple evaluative criteria and pre-specified quality standards. They emphasize self-assessment, reflection, goal setting and application. This strategy also prepares your students to create a professional portfolio for use in their career.

Performance tasks

The last main type of assessment is the performance task. This method involves using practical applications to problems found in the real world. A multitude of options are available to you depending on the subject matter.

You may ask students to provide solutions to a current community problem, demonstrate verbal or psychomotor skills relevant to the subject matter or create a product that is useful in that particular field. These tasks encourage higher-order thinking and train your students in real-life skills.

Like portfolios, evaluate performance tasks with scoring rules. Have your students assist in the development of these procedures. Performance tasks are a critical component of the assessment plan because they focus on applying knowledge to the real world.

Balanced and authentic

Your ultimate goal in using this type of assessment plan is to gain an accurate picture of student learning and achievement.

You can then use this knowledge to make informed decisions regarding evaluation and to improve your teaching and the learning process.

Using a variety of strategies and incorporating a balanced and authentic assessment will be most effective.
During and after the test is too late for me to evaluate learning. My course is fast-paced and jam-packed with information that compounds over time in the class.

No time to go back

Aren’t all courses like this? Mine is no different I am sure. If the students have missed major concepts or misinterpreted information, I have no time to go back. Without a just-in-time response system, I wouldn’t even be aware of the need to go back until after the fact. Then it’s too late.

I teach physical assessment in an Associate Degree of Nursing Program. The lecture series in the course covers concepts of assessment, data analysis, and application to nursing practice. These advanced skills are difficult to grasp at best. Students are assigned to preview video tapes that demonstrate the assessment skills.

Skill demonstration and follow up

To enhance understanding, I loaded a purchased Assessment CD-ROM onto my laptop. Our classrooms are cabled to allow me to run the program on a pull-down screen.

After presenting the concepts, I flip open the CD to the human body system that we just discussed. A short two-to-three minute demonstration is listened to and viewed. Students are then taken through several multiple choice questions covering the content.

Card system

At the beginning of my course, each student is given a packet of colored index cards. The colored cards are marked as follows:

- Blue “A”.
- Pink “B”.
- Yellow “C”.
- White “D”.

Upon viewing a multiple-choice test item, my students individually select and show their response by holding up the appropriate colored card.

At-risk quickly identified

Now, I can quickly scan the colors to assess learning. This is a great way to evaluate understanding of content before formal testing. As a result, I can immediately review confusing concepts as needed.

It’s also interesting to note peer pressure and changing of selections. Identifying those at-risk students can be invaluable.

These are times when my class may be split over the desired response. I use this as an opportunity for debate. My students share their thinking on why they selected the answer they did and attempt to convince others in the class of the correctness of their response.

Ultimately, a correct response is decided upon and the answer is revealed with a mouse click. Students receive immediate feedback as to their answer being correct or incorrect.

Incorrect responses include an explanation as to the correct response.

At the end of the series of questions a percent correct is calculated and flashed on the screen. Again, this gives students immediate feedback. Students know where they need to focus further study and review.

Furthermore, I know where I may need to evaluate my presentation of key concepts to enhance learning for the future.

Short time; big gains

The entire process takes approximately 10-15 minutes depending on the number of questions and discussion needed. This time is well spent. Students have positive comments regarding the use of this technique.

In fact, they have suggested that formal testing be done this way! Something to think about.

You are encouraged to try this technique and see the learning that takes place. It could be used for test review sessions or to check complex content.

If you don’t have CD-ROM-based test items, you can generate your own computer-projected test questions using PowerPoint. This card technique also gives students positive reinforcement for correctly learned information and a higher degree of self-esteem coming into a formal evaluation.
How can you help your students to periodically synthesize their progress—to look beyond their grades to the learning those grades represent, especially in a course without traditional tests or a strictly defined body of content?

It’s really not difficult; try setting time aside for a Mid-term Objective Check Day. This is a technique that I have found to be highly successful. This time is aimed at making sure my writers come to recognize what they have already mastered and at testing how well their learning has met my course objectives.

Here’s how

First, I separate my class into groups of four, trying to mix ability levels. I request that each group then discuss and evaluate the syllabus, their notes and graded papers. The purpose is to have each student compile a list of his or her newly acquired skills.

I do not participate in any of the discussions, remaining seated in the back of the class. After about 15 minutes, I quietly go to the board and begin to list my course objectives, such as “—to provide you with a mental plan to guide you in future writing assignments.”

Then reseated in the back of the room, I ask how many students listed specific learning which matches each of my objectives.

Initially, the students may not recognize that the items on their list, such as “I can write a thesis” or “I have learned to organize,” match the more generally stated learning objectives, so providing this opportunity for such associating not only reinforces learning but increases understanding.

Furthermore, the informal groups and the teacher’s seating position within the class establish an environment in which students feel free to ask questions or to express opinions. How interesting and broad this discussion gets may surprise you, ranging from the colors used for error correction to American values.

Outcomes

But the greatest advantage of an Objective Check Day is that all begin the second part of the semester more confident. The students have gained greater security by realizing the individual strengths they have mastered and have benefited from hearing what others have learned.

In addition, I feel confident that I have established a clearer communication with my students. After this day’s interchange, they seem to perceive me more as an integral part of their learning process.

Publisher’s Favorite Special Award

QuickTip Winner—Evaluation

This time is aimed at making sure my writers come to recognize what they have already mastered.

Uh! Oh! Right Notes; Wrong Class

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Have you ever prepared activities for one course only to walk into that class with notes on a different class altogether? After being a freeway flyer and teaching as an adjunct faculty at several community colleges during the same semester, I’ve developed a simple method to avoid appearing absent-minded—color-coded course materials. It’s a simple organization method, but it works.

As soon as I learn my course assignments for the semester, I assign each course a color, and buy or prepare materials only in the color selected for each course. For example, this past semester I taught Composition II at two different—color-coded green and the other color-coded red.

All the materials for each course—binders, folders, index cards, labels, even photocopied handouts—were shades of green for one course and shades of red for the other.

Since developing this method several semesters ago, I haven’t walked into a class with the wrong notes (or even worse, the wrong graded assignments) again.
Most students have limited time; they work, have families and school attendance is a sacrifice. I know that for them to succeed they must learn to study smarter not harder. Therefore, I pass on some sage advice to my students on the first day of class.

How can your students study smarter? Suggest that they follow these simple but effective rules, and then add your own.

Attend class
When you attend class, you know what material the instructor places emphasis on, and you learn what will be assessed in-depth in the next exam. In addition, you will get special handouts, benefit from in-class exercises and have an opportunity to ask questions.

Review notes
Review your notes every night and ask questions the next time the class meets if you do not understand something.

Consistent time and location
Have a set study time and study location. This does not have to be an office; just a location in your home. Be sure that your friends and family members know and respect your study time and privacy. Also, have your supplies ready so as not to waste time looking for a pencil, pen, paper, dictionary, etc.
Remove distracters from your study location, such as posters that cause you to daydream. Do not situate yourself in front of a window because this also causes you to daydream. Also, know your peak-energy time. This is the time when you are most alert and when you can get the most done.

Manage time
Have a set agenda to guide your study activities. Start in-depth papers and lengthy assignments weeks before they are due.

Study your most difficult subject first because if you run out of time, at least you will have completed work in your weakest subject area. Familiar subjects take less time and energy to master.

Highlight
Do not over highlight. Emphasize what you do not know so that you can review that information for an exam.

Additional practice when needed
If your instructor assigns the odd numbered questions for homework, also work the even numbered questions because the even numbered questions may also appear on exams.

Question, question, question
Always ask questions. If you are shy or afraid, write the questions on a note and give it to the instructor before or even after class. If your instructor is willing, turn in long assignments and/or papers before they are due and ask your instructor to suggest improvements. This, however, cannot be done at the last minute.

Refer to the syllabus often
Review your course syllabus and course outline so that you can keep up with assignments and exams. Prepare ahead of time for as much as possible.

Goals
Set realistic grade goals for yourself. Most students will not get all A’s. Do not beat yourself up if you don’t get an “A” in every class. Remember that you are in school to learn, so weigh your course grade against how much you learned and not necessarily on your final grade.
I teach a computer class and each semester I have the same problem. There’s a small segment of the class that’s new to computers and know almost nothing, and there’s a large segment that is advanced.

How do I separate the two groups so that one doesn’t feel neglected? Normally I ask the advanced students to be patient while I repeat some things that they already know, but I don’t think this is working.

I would like to make an observation. There are always those students who THINK they are experienced but have great gaps in their know-how. For example, many people who think they are saving on disk are actually saving on the hard drive.

There are so many of them in our lab that the attendants must regularly delete those files. I think that a simple test of basic know-how would be useful to separate the users with some experience from the truly competent users who don’t need help.

Sometimes I have paired inexperienced with experienced users so that they are side-by-side in the lab.

—Barbara Love, English, Prairie State College, Chicago Heights, IL

I don’t know what to do in class after this has occurred. You could change the prerequisites to include a course in, or proof of, basic computer literacy and perhaps avoid the problem.

—Chuck Knight, Engineering, St. Charles Community College, St. Peters, MO

I’m not a computer teacher, but this is still a problem in many nontechnology classes.

Is there any way you can have a study group once a week for students who feel behind and have the option of attending?

—Anonymous

In this situation you have a good opportunity to employ some peer teaching and group learning activities where the experienced computer gurus would be paired or grouped with one or more novices.

The gurus would be responsible for coaching the novices on basic computer skills. In addition, your institution may have a computer lab and tutors who work in these labs who could provide some extra out-of-class instruction for those who need more instruction than is feasible in class.

—Jack Shawder, Coeditor of Teaching For Success. South Lake Tahoe, CA; jack@teachingforsucess.com

I have two thoughts both based on teaching writers with varying backgrounds. A long term fix depending on the size of the computer program is to designate sections for beginners versus intermediate users.

Students can self sort with amazing accuracy if given the information to do so.

My advice for this faculty member would be to pair students for the first few weeks into teams comprised of one advanced student and one computer novice.

This would help the novice get off the ground without admitting what they don’t know to more than one person.

The advanced student would increase their own knowledge and skills by being placed into a teaching situation.

This solution would not require as much class time. The instructor should spend some time explaining the roles of the team members and the purpose of the teams, but the rest of the time can be devoted to the academic content.

—Anonymous

When I have low-tech students, I try to pair them with students who know all the ropes and which buttons to push. In many cases, students learn better from each other than they do from me.

—Stuart Tichenor, Oklahoma State University-Okmulgee, Okmulgee, OK
My students can’t identify credible information on the Internet” is a common cry among college teachers. “My students think WebMD is an academic site and use it in their research papers,” a nursing professor lamented to me recently. I understand these frustrations all too well.

But I also understand how difficult it must be for students who are trying to weed through the overwhelming amount of information out on the Internet, especially when they are not experts and are frequently short on time.

One small way to solve the problem is to point students to credible, authoritative web sites before they begin to research. This can save students an untold amount of time and will introduce them to characteristics of a credible/authoritative site.

In any class where students must research health-related topics or issues, MEDLINEplus is absolutely one of those sites to direct students to before they begin researching.

A service of the National Library of Medicine, MEDLINEplus is a comprehensive, authoritative and up-to-date collection of medical/health information. One feature I especially like is that it takes into consideration the different knowledge levels of its users. What I mean is that it includes articles written for health professionals as well as articles written for the everyday person.

How is it Organized?

There are eight sections highlighted on the front page. These sections include “Health Topics,” “Drug Information,” “Dictionaries,” “Directories,” “Other Resources,” “Current Health News,” “Featured Site,” and “Clinical Trials.”

What are the best sections for students?

Health Topics

“Health Topics” provides information about hundreds of different medical topics in easy-to-understand language and provides two main ways to find those topics: alphabetically or by subject groupings. I was really impressed by the scope of information provided.

For example, when I typed in “kidney stones,” I found articles, graphics, interactive tutorials, links to kidney organizations, and links to kidney statistics. This is a wonderful starting place for a student to learn basic and advanced information about the health topic she is researching.

Especially educational is the interactive tutorial. I learned so much in a little amount of time in this section.

PubMed Database

Once students have a background understanding of their topic, they can move on to more difficult, “academic” articles written about health professionals in the “PubMed” database (this is especially important if the student is majoring in a health field). Students can access the “PubMed” database under the “Other Resources” section of MEDLINEplus.

According to the web site, the “PubMed” database “provides access to over 11 million MEDLINE citations back to the mid-1960s and additional life science journals.” In many cases, students can access the full text of articles. In others, they are at least given abstracts and citations of the articles.

Although more difficult than the “Health Topics” section, “PubMed” includes many help features, including a tutorial for how to use the database.

Dictionaries

Another section that should prove to be very helpful for students is the medical dictionary section. If a student comes across unfamiliar medical terms, all he has to do is access this section to find out the definitions.

This may not sound like a big deal at first, but considering that a regular dictionary contains a minimal amount of medical terms, it’s not hard to imagine how frustrated students would be trying to look up difficult medical terms in a regular dictionary (which they would try to do).

In fact, it’s probably a good idea for teachers to point out the benefit of this section to students.

Current Health News

The “Current Health News” section is an additional valuable resource on this site. It contains links to health-related news articles from several different reputable news services/organizations from the past thirty days.

Including this section makes the site truly comprehensive because students can access information from important studies that have not yet been indexed in a database. This gives students access to the most up-to-date medical information.

Bottom line

In my opinion, MEDLINEplus is THE gateway for reliable health information on the Internet. Save yourself and your students valuable time; direct them to this site first!
How Do You Keep Evening Students Awake and Motivated? For Two or Three Hours? Here is One Idea to Add a Jolt of Energy to your class.

Each semester, there are some students who become frustrated because they believe very sincerely that their earned grades on papers or tests do not correlate with the effort they feel they expended in preparing for these assessments. You may find it difficult to respond to these disappointed students. To be most effective, listen to their complaints and try to offer suggestions, tutoring, retesting when appropriate, and other helpful advice.

In addition, the following is a preventive strategy that is employed at the beginning of the semester before any assessments are assigned. On the blackboard write the equation: PERFORMANCE = MOTIVATION + ABILITY + PREPARATION + OTHER FACTORS (beyond the student’s control to some degree).

Ask the students questions about each variable. Let the students discuss the questions among themselves and challenge them to brainstorm solutions.

Performance
Can you recall a time when you felt you were really ready for a test but when you began answering questions you could not remember information? Why?
Have you ever prepared for a speech or a test and knew you were ready but when you arrived in the classroom your mind blocked and you could not perform well?
Have you ever prepared for a sports competition but then in the game performed as though you had not trained?

Motivation
Is your motivation to study sustained throughout the semester or do you find yourself cramming to complete a paper or study for a test?
Are you goal-oriented in your studying? Do you always know what the goal is?
Do you find that what the teacher expected from an assignment is not what you had spent all your time working on?
Are you enthusiastic and energetic when studying or completing an assignment or do you find yourself going through the motions and trying to get by with the minimum?

Ability
Do you set realistic grade goals for each class and assignment? If you have never received higher than a “C” grade in a particular subject, is it realistic to aim for an “A”? What would be a more realistic goal for you? (Perhaps a “C+” or “B-” and progress from there.)
Do you ever ask the teacher for feedback after an assignment or test?
Do you compare your grades to other students’ who have different abilities, different work schedules and different responsibilities that take up more or less of their time?
Why should you only compare your present performance to your own past performance?

Preparation
Do you practice taking multiple choice tests, for example, before the actual test?
If you only score a “B-” for example on a practice test, is there any reason to think that you should do better in a real classroom situation? How many times do you edit and rewrite papers at home? Do you think you will write your best paper in only one draft?

Other Variables
There are a number of factors that a student has little or minimal control over. Some include the difficulty level of a test, the time limits for an in-class test and the personality of the teacher. Students can be encouraged to concentrate on the variables they can control and not worry as much about those factors they cannot control.

Guiding student discussion, early in the semester, about the variables involved in the PERFORMANCE EQUATION can help them clarify and establish realistic goals. It will greatly minimize your students’ frustrations later on.