LDC *Lately...*

Learning Development Center

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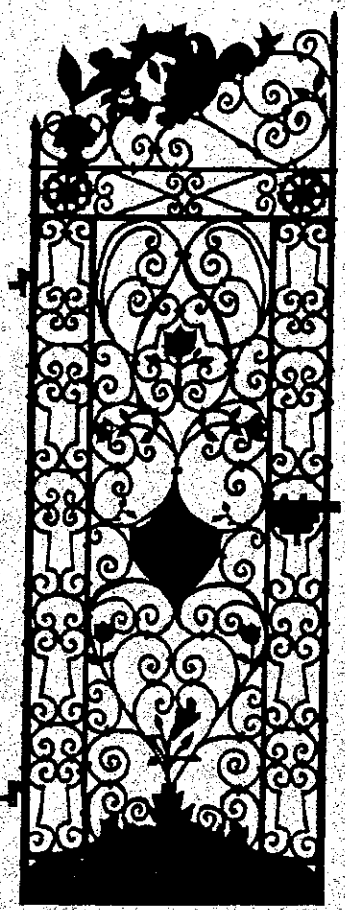
Motivation



MOTIVATION

"I do much better in classes where I'm motivated."

– student, overheard on the Quarter Mile

"My students are so passive – they're just not motivated!"

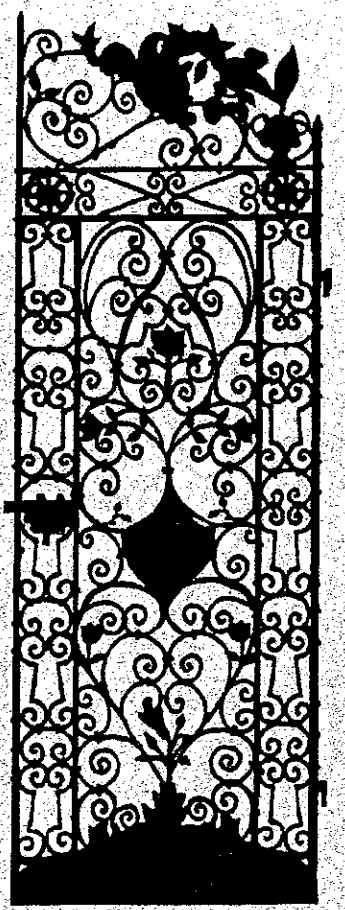
– professor, overheard in Java Wally's

"I can do the work, and I'm not lazy – I've just lost my motivation!"

– student, on phone to parents

"You can lead a horse to water, but you can't make him drink. However, you CAN make him thirsty!"

– old proverb, updated



If one of the most rewarding aspects of teaching is seeing students flourish in your classroom, then one of the most challenging aspects of teaching is trying to reach the students who appear to be unmotivated. Alas, motivation – that elusive, pivotal, unstable desire to learn, grow, and achieve – can't be taught. Yet, true learning inherently requires the learner's motivation, whether it be positive (reaching a goal one has set for oneself) or negative (avoiding the negative consequences of not reaching the goal).

In this edition of *LDC Lately...*, we explore factors that contribute to motivation, and we look at how motivation functions in the life of an RIT student. Drawing on the principles of current motivational theory, we have compiled a list of practical strategies for you to use with your students. Finally, we suggest further reading in a review of a new book that updates Bloom's Taxonomy by incorporating motivation into the model of learning.

As you experiment with ways to invigorate your students, be prepared for a commensurate impact on your own attitude. Nothing is more motivating to a professor than interested and involved students!

Understanding Motivation

by Jane A. Munt

Theories of motivation have several common elements, most notably that motivation is multidimensional. Motivation, as described by Biggs (1999), is a result of two major factors: the value the learner places on the learning and the expectation the learner has about the possibility for success. Marzano (2001) adds a third element, the student's experiences around learning. Here we present four major theories which connect students' assumptions about themselves and their experiences to their motivation (Swartz, n.d.).

Expectancy theory – *"This task is possible for me to accomplish, and it has value."*
Expectancy theory supports the definition of motivation offered by Biggs (1999) and Marzano (2001), in that it is a function of both competence and relevance. This view is supported by the research conducted by Marzano for *Designing a New Taxonomy of Educational Objectives*. According to Marzano, the first endeavor of every learner should be to examine the Self-System. The self-system contains several elements that are interrelated and lead to motivation for completion of a task. The primary elements are the learner's beliefs and goals around the task. If a student believes that he is capable of completing the task, he is more likely to be motivated to do so (Schunk, 1991). In addition, if a student believes that the task is important to complete, there will be increased motivation to engage in the work necessary to do so. Ray, Garavalia, and Murdock (2003) state that "task value refers to students' beliefs about the importance, interest, and utility of the task or course content." Research on task value (Pintrich & Garcia, 1991, 1994) indicates that the higher the level of value a task is given, the more likely students are to engage in high-level thinking and complex learning strategies appropriate for completing the task.

Self-concept theory – *"I have experienced success, and I expect to succeed again."*
Self-concept theory supports the expectancy theory; however, it is expanded to include the degree to which a student's self-concept has been crystallized (Rosenburg & Kaplan, 1982). In other words, the experiences of a student as a learner may affect his motivation. If students have had relatively few positive learning experiences, it may affect their view of themselves as learners. On the other hand, if the student has had only a small number of "bad experiences" as a learner, it is likely that his views will be more optimistic. Self-concept theory also takes into account the stability of that self-concept across disciplines and contents. Students may have strong motivation to succeed in one content or discipline and very little motivation in another. The developmental history of the students is an additional factor. Crystallized self-concepts around learning may be more difficult to change than those that are more variant across disciplines and contents or that have been infused with at least a few positive learning experiences.

Attribution theory – *"My effort matters."*
Attribution theory assumes that the student's motivation is a function of conscious perceptions about outcomes. A student may perceive that success is related to several factors: ability, luck or effort expenditure (Schunk, 1991, 2000). A good number of students attribute success to ability. Unfortunately, this can result in poor motivation for additional effort (e.g., "I'm good in math, so I don't need to do the homework."). In addition, ability is generally viewed as stable by most students; thus, they feel that ability levels are stable across contents, despite the varying demands within a discipline (e.g., "I've always been a good writer, so I don't need to spend a lot of time

on this technical report."). Generally, students who possess high ability in a particular skill area may expend less effort in all work related to that skill. Additionally, many students attribute success to luck (e.g.,"I happened to study the right material," or "I got the easy teacher."). These students tend to have a pessimistic view of the amount of control they have over learning outcomes.

Students who attribute success to effort expenditure generally are motivated to work hard in order to succeed. According to Ray, Garavalia, and Murdock (2003), students who attribute success to their effort have established learning goals and placed a high value on the tasks. Establishing learning goals affects their learning behaviors, and valuing the learning increases the intensity and persistence of those behaviors.

Self-efficacy – *"I have the ability and drive to succeed."*
Self-efficacy theory purports that students' beliefs about their capabilities in relationship to the academic demands placed on them have significant impact on motivation to complete the task (Bandura, 1986, 1993, 1997). Students who possess a strong sense of self-efficacy believe that they have the ability to meet those demands. In most cases, it is a combination of natural ability, hard work, and persistence. In addition to these factors, the students' perceptions about their ability to reflect upon and monitor their progress in meeting the demands of a task come into play. Students who have strong metacognitive skills often have the most highly developed sense of efficacy.

Can we really motivate our students? Probably not, but we can help students motivate themselves. Try some of the suggestions on pages four and five.

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29 Practical Approaches to Fostering

climate

- **Be passionate about your content area.** A professor's passion, in addition to competency, will naturally trigger a high level of interest.
- **Assume that each student in your class wants to learn,** even the ones who look half asleep.
- **Create a quick introductory activity** (in class or on-line) to find out what your students are bringing to this class. Ask them about their previous experiences, expectations, and goals.
- **Welcome late-comers.** Students who register late or miss the first class are "outside" the group. Bring them into the class community without over-focusing on their late entry.

strategies

- **Boost students' self-belief** by helping them recognize and use their strengths.
- **Encourage students to expand their views of success.** The top student in the class is not the only person who can have a successful learning experience. *
- **Model for students how you approach learning.** Demonstrate strategies and approaches that have allowed you to succeed with the course material.
- **Note progress and barriers, and discuss them in a problem-solving context** by offering assistance in forming study groups and finding tutors.
- **Capitalize on "teachable moments."** Often they occur outside the classroom.
- **Model metacognition.** When working through a practice problem on the board, verbalize a typical learner's inner dialogue as he struggles and perseveres through a roadblock.
- **State the purpose for everything you ask your students to do.** Don't assume they know why they're doing it.
- **Use metacognitive activities** such as self-evaluations and realistic grade projections that help students think about their learning process.
- **Create ways your students can rehearse, practice, and obtain feedback on the material before their performance is graded.** New learning requires a great deal of energy.
- **Be prepared for different rates of learning.** Use group activities to capitalize on faster learners teaching slower ones.
- **Show students how to sort through complex material** by distinguishing between the overall concepts and the supporting details.

Motivation in the Classroom by Belinda Bryce

assessment

- **Recognize achievement in skill development, personal progress, and new understanding.***
- **Assist the learning process by providing regular feedback for improvement.** Frequent quizzes give students helpful information about their progress.
- **Make homework count.** Increase the value and incentive for practice and practical application by grading homework. Collect it randomly to manage your workload.
- **Help students prepare for exams** by providing sample questions, an outline of what will be covered, or the format in which they will be tested.
- **Commit to a system of feedback that can be delivered as early as week 3 of the quarter.** Be prepared for early alerts and requests for midquarter progress inquiries.
- **Guide students to learn from their mistakes.** Return graded exams and assignments promptly. Review their errors. Suggest additional resources to strengthen weak areas.
- **Consider dropping the lowest exam when calculating final grades.** The final grade should reflect learning and growth, not simply a numerical record of graded performance.
- **Reexamine how you test learning.** Overly complex exams are demotivating to students.
- **Provide multiple success experiences.** Reward students throughout the process instead of simply evaluating the final product. Scaffold instruction so that tasks get increasingly difficult, and chunk tasks into manageable pieces. *

resources

- **Focus students' attention on factors within their control,** such as effort, strategies, and accessing resources.*
- **Post your office hours on your office door.** Be there during the designated time. Ask students with scheduling conflicts to make an appointment.
- **Facilitate each student's development of a personal arsenal or tool-box of strategies.**
- **Never discourage a student who is genuinely trying.** Instead, come up with an alternative, but equally challenging, assignment to help build confidence. Become a flexible resource.
- **Keep a list of helpful resources** (on-campus, texts and articles, internet sites) and refer students to them when external support is appropriate.

* Martin, A.J. (2003). *Motivating students to learn.* Presented at the Annual Association for Guidance and Counseling Conference, Sydney Australia.

Book Review

Latty Goodwin

Designing a New Taxonomy of Educational Objectives. R.J. Marzano. Thousand Oaks, CA: Corwin Press, 2001.

When Bloom's Taxonomy burst on the horizon in 1956, it was the educator's answer to evaluation problems. As a *framework*, this taxonomy described six general categories of information processing that covered the complex range of the learning process. Educators found this a useful tool for ordering cognitive tasks into a hierarchy. From this hierarchy of tasks, instructional objectives could be written and achievement could be measured. Over the years, Bloom's Taxonomy has continued to be a resource for educators at all levels and in all disciplines of study. (Please see *LDC Lately...*, Fall 2000, for a more thorough discussion of this hierarchy.)

Just as the actor asks the director, "What's my motivation in this scene?", the student needs to find his or her motivation for the learning of content material. Recognizing that cognition, the effective processing of information, is not enough to accomplish true learning of information, Robert Marzano (2001) took on the task of bringing Bloom's Taxonomy into the 21st century. His text, *Designing a New Taxonomy of Educational Objectives*, retains the cognitive processing aspects of Bloom, but adds two critical pieces to the "new" taxonomy: self-system and metacognition. For our purposes, the focus will be on the self-system piece because it contains that important driver: motivation.

Marzano focuses a great deal of attention on the self-system, which he describes as "a... network of interrelated beliefs and goals...used to make judgments about the advisability of engaging in a new task" (p. 10). The self-system determines the amount of motivation and energy brought to any task. In order to evaluate the level of engagement in learning one is willing to make, three questions must be asked and answered:

1. Is this information important to me?
2. Do I have the ability to succeed in learning this information?
3. Do I have a positive or negative emotional response to this information?

Answering these three questions with positive responses leads to high motivation to learn or increase competence.

> **Case A:** *Jason is taking Calculus II for the second time in order to improve upon the "D" he earned last quarter. They are currently studying work problems. Because he is an engineering student, he responds "yes" to question #1. Work problems are important to him in this major because he will probably have to use these concepts in related courses and in his eventual career. Jason is also likely to respond "yes" to question #2. Even though he did not succeed last quarter in Calculus II, he did learn about resources, such as the LDC Math Lab and study groups. With this additional support, Jason believes he will be able to succeed. Jason is ambivalent in his answer to question #3. Jason's struggle with Calculus II has left him a bit bitter about this course, but he is optimistic that he can get past that.*

So, two "yes"s and a "maybe" make Jason fairly well motivated to take the next steps toward learning the material, namely metacognitive and cognitive processing of the content.

Let's now imagine a different scenario:

> **Case B:** *Jason is in this course for the second time because he needs to increase his GPA in order to be accepted as an internal transfer to photojournalism. However, he has acquired no new learning strategies or resources. His responses would probably be negative to all three questions, which indicates low motivation and a slim likelihood that he will engage in the learning behaviors that are necessary in order to master Calculus II.*

This example illustrates that negative responses to these questions indicate a low motivation for learning this particular information and little prospect for success.

Without appropriate levels of motivation, learning is diminished and becomes little more than a "brain dump" on tests, isolated bits and pieces of learning that will be forgotten as soon as the grades are posted. With this knowledge, it behooves educators to overtly address the issue of motivation with their students in each of their courses. (See suggestions in the centerfold of this issue.) Therefore, consider this new way of looking at a taxonomy of educational objectives as a tool that enhances what we value from Bloom's Taxonomy by including the importance of always attending to the motivation that's not only behind the learning, but that must *precede* it. And, if you're so motivated, Marzano welcomes your revisions and adaptations of this revised way of looking at learning.

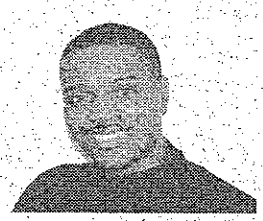
What's Motivation Got To Do With It? An RIT Story!

We were curious about the role motivation has played in the life of one of our successful former College Restoration Program students. Andrew Martinez, a software engineering student with SAT scores well over 1200, started out strong his first year at RIT. However things began to crumble his second year, resulting in low grades in calculus and physics, two probations, and finally suspension. He lost motivation and felt terrible about himself. We interviewed Andrew recently to learn how he got himself back on track. He told us about four motivating factors that moved him in the right direction.

- Andrew remembers his former boss, who yearned to be head manager of the store and talked about going back to school, but couldn't sustain the effort. Andrew's determination to avoid ending up with a dead end job motivated him to go to college and stick it out, no matter what happened.
- Andrew admires Bill Gates because of his computer expertise, his business savvy, and his vision that revolutionized the PC. Bill Gates was a role model for Andrew.
- Andrew likes the competitive atmosphere at RIT. It makes him work harder to be one step ahead of his peers. He wants to demonstrate that he "knows his stuff." "What's the point if you're just at the same level as everyone else?" he says.
- Andrew has dreaded mathematics since his high school math teacher laughed at him and his team members in front of the entire class. This humiliating experience cast a shadow that followed Andrew and contributed to his failures in calculus at RIT. The remedy? Through intensive skill instruction and moral support in CRP, along with his own determination to succeed, Andrew earned an A in the course.

Andrew's motivators were internal, external, positive, and negative, and they have served him well. We are happy to report that Andrew is once again a successful (and highly motivated) student in Software Engineering.

LDC Profile...



Joe Williams is the newest addition to the LDC. "Joe Bones," as he is known around campus, is easily recognizable by his tall stature, his BIG smile and his friendly personality. His new position is as a counselor in the Higher Education Opportunity Program, where he works directly with more than 50 HEOP students. He joins HEOP after being an Instructor in the First Year Enrichment program for a year and a half. Joe has a profound passion for RIT and its students – and he is a graduate of the RIT Criminal Justice Program! While a student here, Joe was a member of both the basketball and track teams. After graduating from RIT, Joe spent ten years as a policy analyst with the New York State Legislature. Joe is excited to be a new member on two different committees here at RIT, The Commission for Promoting Pluralism and our own LDC Advisory Board Committee. He lives in Rochester with his wife Laverne and his five year old son Jordan. Aside from eating, Joe states that his favorite hobby is playing with his new home theatre!

LDC's Vision Statement

The Learning Development Center will be leaders in maximizing students' potential for academic success, and will be partners in creating a campus environment conducive to the intellectual and personal growth of all RIT students.