How to Motivate Students:
A Primer for Learner-Centered Teachers

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Abstract: Learner-centered pedagogy defines successful teaching in terms of student learning—and a necessary condition of learning is the motivation to learn. The purpose of this paper is to provide learner-centered teachers with the basic information they need in order to be able to successfully motivate their students. In particular, I focus on three beliefs that are important to students' motivation to learn: (1) beliefs about the subjective value of the learning goals; (2) beliefs about their ability to achieve these goals; (3) beliefs about how well their learning environment supports their learning. I provide concrete suggestions about how we can strengthen these beliefs to increase student motivation. One important implication of the relevant research is that the traditional motivator—the desire for good grades—can be relatively ineffective and, in fact, counterproductive.

Introduction

The literature on motivation is vast, potentially confusing, and partially contradictory.[1] This paper is an attempt to make sense of that literature for practitioners of learner-centered pedagogy, so they can use it to design and teach courses in which the students are motivated to learn. This paper is, by its nature, introductory, but I hope it is helpful to give learner-centered pedagogues an evidence-based foundation for their thinking about how to motivate their students to learn.

Before discussing motivation, however, it may be useful to articulate how I conceive of learner-centered pedagogy, since the term has a wide variety of meanings. At its simplest, learner-centered pedagogy can be described as teaching that is oriented to what the students will learn, rather than what the teacher will teach. That is, the fundamental issue that must be addressed by the class meeting, course, or educational program is "How will the students be different after this experience? What new knowledge, skills, or attitudes will they develop?" Once that is established, every subsequent teaching choice is tested by the question, "Given their context, what will optimize my students' ability to learn?"[2]

At a slightly higher level of complexity, the mark of a learner-centered course (and for the rest of this paper I will concentrate on learner-centered pedagogy in a course, rather than a class meeting or educational program) is that it reflects the principles of backward design.[3] First, one must identify what is to be learned. Second, one must decide what evidence will count as showing the students have indeed achieved the learning goals identified in the first step. And only then can the third step be taken, where one plans the activities that will lead to learning and the production of evidence of learning. Behind this characterization of learner-centered pedagogy lies a particular worldview of the nature of learning. Learner-centered pedagogy tends to emphasize the active role of students in learning. Knowledge is conceived of as "constructed," by which is meant that students can only gain knowledge by integrating it with what they already know. The teacher's role is to design learning environments in which students will be engaged in learning.[4]

By contrast, traditional (instructor-centered) pedagogy focuses on the transmission of knowledge from teacher to student. Pedagogy is the art of taking what is in the teacher's head and transferring it to the minds of the students. Successful teaching focuses on the teacher's clear communication of as much knowledge as required, and successful learning occurs when the students internalize this knowledge.

Teachers who use the traditional model in their pedagogy rely, I think, on two main sources of motivation. First, they try to be as clear and interesting as possible when they lecture or lead class discussion, in order that students will be interested in the knowledge they are to internalize. Second, they use grades to motivate the students to actually internalize the knowledge.

At first glance, it seems that the same motivational structure would work for learner-centered pedagogy as well. Of course, in the learner-centered classroom, one would need to make sure that grading was aligned with the learning goals; that is, that a student's grade reflect her achievement of the learning goals. But if we ensure that grades measure student learning, then wouldn't students' motivation for good grades also suffice to motivate students to learn?

As it turns out, it's not so simple. One aim of this paper is to carefully analyze under what circumstances grades are an effective motivator, and what other more effective motivators are available to us. As we shall see, for a number of reasons, grades are often a poor motivator of student learning.

What Is Motivation?

In this paper I assume that student learning is a function of both the student's *ability* to learn and her *desire* to learn. Thus, being motivated (i.e., having the desire to learn) is a necessary condition of learning. (Since learner-centered pedagogy has produced a lot of good literature on giving students what they need in order to

learn—i.e., developing their ability to learn—I will not say anything more about this other necessary condition.)

Student motivation is particularly important in learner-centered pedagogy, because the active, engaged learning envisioned in learner-centered pedagogy is hard work; indeed, Terry Doyle expresses the fundamental rule of learning as "Whoever does the work does the learning."[5] This is one of the reasons for the well documented student resistance to learner-centered pedagogy; it takes more effort and engagement on the part of the students than traditional instructor-centered pedagogy (except for the night before the exam), and students have only limited time and effort to give.

The neuroscience of learning explains why learning is hard work; learning requires the establishment of new neural pathways in the brain, and that takes energy and effort. (The brain has two percent of the body's weight but consumes twenty percent of the body's energy.[6]) Thus, however strategically we design our classes to facilitate learning, if the students do not put any energy or effort into learning, then learning will not occur. It is not enough for us to design learning experiences where students are *able* to learn; we must also design learning experiences where they are *motivated* to learn.

Hence, in this paper, when I talk about "motivation," I mean more than just the desire to learn. There is also a volitional component; motivation is a measure of a student's willingness to work to achieve a learning goal.[7] Students who are highly motivated are willing to work hard to achieve a learning goal. Students who are not highly motivated are not willing to work hard to achieve a learning goal.

Besides the conative and volitional components, motivation also has a cognitive component; students' willingness to work to achieve a learning goal is based upon certain beliefs they have. In particular, motivation is dependent on students' beliefs about:

1. The subjective value of the goal.[8] Is the goal perceived as worth attaining? As we might expect, in general, the higher subjective value a student gives to the goal, the higher the student's motivation to achieve that goal.

2. Their 'expectancies'—i.e., the expectation of successful attainment of the goal. An expectancy is positive if the student believes they will achieve the goal and negative if the student believes they will not achieve the goal. In general, the belief that maximizes positive expectancy is: "With work I can achieve the goal."

3. Their learning environment—in particular, the degree to which the environment is supportive of achieving the goal. In general, a person tends to be more highly motivated in an environment that is perceived as promoting the other two beliefs—that is, an environment that supports a high subjective value for the learning goal and the student's positive

expectancy about achieving the learning goal. Environments believed to be unsupportive make a student doubt the value of the goal or their ability to achieve it, and thus undermine their motivation.

To summarize: Highly motivated students believe that [1] the course learning goals are worth achieving; [2] with effort they can achieve the course learning goals; and [3] their classroom and school environments support their achievement of the course learning goals.

Note that these cognitive components of motivation imply that grades will not in themselves be sufficient to motivate students to learn. Grades can only affect the subjective value of the learning goal; if a student values a good grade, and if good grades require the student to achieve the learning goals, then the student will place a high subjective value on the course learning goals. But grades will not encourage students to believe that with effort they can achieve the course learning goals, nor will they foster belief that the environment is supportive of their learning. Thus, even if grades did motivate students to learn, we would still need other strategies to supplement the motivational power of grades—strategies that encourage students to have the other necessary beliefs that lead to effective motivation.

Indeed, in certain circumstances, grades can actually make students less sure that with effort they can succeed and that the environment supports their learning. In some courses grading policies motivate students with the fear of a bad grade. Think of, for example, a course where on the first day of class the instructor makes a little speech like this to the students, "This is a very difficult course. You will have to work very hard in this course, and, even then, a third of you will not pass. So be prepared." In these courses, students are being told that even with effort their chances of success are slim, and that the environment will not encourage their success.[9]

Building Positive Expectancies

As Ambrose and her colleagues argue, students' expectation of success in achieving a learning goal is influenced by many factors, such as their prior experience in similar learning situations.[10] Curiously, however, it is not so much their *actual* prior experience of success or failure that is significant in determining their expectancies; what seems to matter more is the *reason* they give for their success or failure. If a student believes they succeeded because of their innate talents or abilities ("internal causes") or their persistence and effort ("controllable causes"), they are more likely to have a higher positive expectancy in their current learning context. On the other hand, if they attribute their previous success to external causes (such as easy assignments or lenient grading) or to uncontrollable causes (such as luck), then they are more likely to have a negative expectancy about success in their current learning context.

The reasons students give for failure also affect expectancy. In this case, however, failures that are attributed to internal causes (such as natural ability) lead to negative expectancy. For example, students who attribute their poor grades in a math class to their "just not being good at math" will not expect to be successful in another math class. Conversely, if students attribute their failure to controllable causes (such as lack of effort), then they will tend to have a higher positive expectancy in a similar learning context, because they believe success is possible if they only try harder.[11]

Thus, to maximize positive expectancy in our class, we need to encourage students to believe that their success or failure in the class is due to controllable causes—that, if they prepare adequately, acquire all the relevant information, and make sufficient effort, they will succeed in the class.

How might we encourage this belief? Here are some strategies that have proven effective:[12]

1. *Inculcate a growth mindset instead of a fixed mindset.* As Carol Dweck has documented,[13] many American students tend to think of their intelligence and talents as natural abilities that are fixed; one is born with a certain degree of intelligence, and then stuck with that for the rest of his or her life. But intelligence, like many other talents, is actually quite malleable; it can change over one's lifetime depending on a variety of factors. (Dweck calls this view of intelligence [and other abilities] a "growth mindset.") Everything we do and say in class should reflect the growth mindset. For example, we praise students not for how smart they are, but for how hard they have worked. We tell students, "You might not do well on this paper at first, but the more you revise it, the better it will be." We give them low-stakes assessments where failure is not penalized, but used as a starting point to determine in what areas they need to focus their effort.

2. *Align course learning goals, assessments, and instructional activities— and communicate that alignment to the students.* As I indicated at the beginning of this paper, for me the heart of learner-centered pedagogy is in effective course design, where the learning goals, assessments, and instructional activities are aligned. In courses like these, students have clear evidence that their success is within their control. They know what they need to learn. They know how their learning will be measured. And, most importantly, they know that they will be given what they need in order to learn what they need to learn.

3. *Have clear standards for success that are communicated to the students.* Students should understand what it means to achieve a learning goal. Rubrics are probably the most important device in a teacher's arsenal to carry out this strategy.[14]

4. *Practice the Goldilocks principle.* Coursework should be at the appropriate level of challenge for the students, where with effort they can achieve the learning goals. In other words, the course should be not too hard and not too easy, but just right. This strategy requires a thorough knowledge of one's students. Diagnostic assessments might be very helpful here.

5. *Provide early opportunities for success.* Since, as we know, expectancies are influenced by previous performance, it is important for students to develop positive experiences where their efforts led to success. Thus, for example, students might be given early, shorter assignments that provide them with the confidence and skills necessary for larger course projects.

6. *Give students plenty of good formative feedback.* Feedback (and assessment) is divided into two kinds: summative and formative. Feedback that is summative is designed to measure success in achieving the learning goal at the end of an instructional unit. A grade on a chapter test is summative (for the student), as is a course evaluation (for a teacher). Formative feedback is designed to provide information that allows a student or teacher to improve their practice. Comments on a rough draft of a paper are formative for the student; minute papers (where students write one or two sentences summarizing the main points of that day's class) are formative for the teacher. To be most effective, formative feedback must be timely (so that it can be used to improve practice) and constructive (so that it provides guidance for how to improve one's performance). Students who get good formative feedback have an important tool to increase positive expectancy, because they have learned what to do in order to achieve success. Success, in other words, will depend on the controllable factor of their making use of the feedback.

Building a Supportive Learning Environment

Learner-centered pedagogy is, well, learner centered. Thus, almost by definition, instructors who practice learner-centered pedagogy value their learners—i.e., the students. The two main challenges for learner-centered instructors are to communicate this fact and to take particular care that students from often marginalized groups are valued in the classroom.

To communicate to students that they are valued, we can adopt the following strategies:[15]

1. *Reduce student anonymity.* We should learn student names (and provide opportunities for students to learn one another's name). We can make efforts to connect with students outside of class.

2. *Develop a climate of respect by establishing ground rules for civil interaction among students.*

3. *Model and teach active listening.* In active listening, before responding to someone else, one must first paraphrase what they said and get their agreement that the paraphrase is accurate. One must, in short, demonstrate that one has really listened.

Ensuring students from marginalized groups feel valued in a class is mostly a matter of developing an appropriately inclusive classroom climate. The classroom climate is a complex function of a number of interacting factors; among them are "faculty-student interaction, the tone instructors set, instances of stereotyping or tokenism, the course demographics (for example, the relative size of racial or other social groups enrolled in the course), student-student interaction, and the range of perspectives represented in the course content and materials."[16] Clearly, producing a supportive classroom environment is a complicated job. However, there are a number of strategies we can use as instructors:[17]

1. Do not ask students to represent an entire social group.

2. Model inclusive language, behavior, and attitudes.

3. Use multiple and diverse examples that speak to students across different cultures, from different socioeconomic groups, and of different ages.

4. Think about whether your course content systematically excludes certain perspectives (for example, assuming a traditional family structure in an ethics unit on familial obligations).

Increasing the Subjective Value of the Learning Goals[18]

Psychologists distinguish carefully between extrinsic and intrinsic motivation. Extrinsic motivation "involves engaging in an activity for reasons external to the task,"[19] while intrinsic motivation "refers to a desire to engage in an activity for no obvious reward except task engagement itself."[20] Thus, teaching for the paycheck is an example of extrinsic motivation because the reward (the paycheck) is external to the task of teaching, while doing a crossword puzzle because one loves the intellectual challenge is an example of intrinsic motivation because engaging in the task of solving a crossword puzzle in itself provides the reward of intellectual challenge.

What is significant about this distinction is that in extrinsically motivated activities, gaining the reward after engaging in the activity is highly contingent, while in intrinsically motivated activities there is a very close connection between the activity and the reward. For example, one receives a paycheck as a reward for

teaching only in the highly contingent circumstances that one is employed to teach. If one is not employed as a teacher, then the activity of teaching will not result in a paycheck. By contrast, a person who does the crossword puzzle because they love the intellectual challenge will (almost) always reap the reward of being intellectually challenged when doing a crossword puzzle.

(We should note that grades are extrinsic motivators. A student who achieves a learning goal of being able to write a critical essay on Hume's view of causality will only get the reward of a high grade if they are enrolled in a course in which this is an assignment. This is a highly contingent connection between the activity of writing the essay and the reward of receiving a good grade.)

The distinction between extrinsic and intrinsic motivation is important because a learning goal has high subjective value only so long as it leads to the reward. If the motivation is extrinsic (such as the desire for a good grade or to impress the teacher), then when the highly contingent connection between the learning goal and the reward is broken—as it must be when the course ends—the student no longer has any motivation to achieve the goal.

As learner-centered pedagogues who define success in terms of student mastery of the learning goals, it is probably especially important to us that our students retain and apply their newly acquired philosophical skills after the course has ended. Unfortunately, extrinsic motivators are insufficiently powerful to motivate learning that extends past the end of the course, and are thus inadequate for learner-centered pedagogy.

Furthermore, there is some evidence that extrinsic motivation actually extinguishes intrinsic motivation. The classic study showing this counterintuitive claim was conducted in 1973 by Lepper, Greene, and Nisbett[21] (discussed in Pink[22]), but it is a very robust finding, confirmed by three decades of research and over 100 experiments.[23] It is so robust, in fact, that it has a name: the Tom Sawyer effect. Tom Sawyer, you might recall in Mark Twain's 1876 novel of the same name, was punished for his bad behavior by being forced to whitewash a fence. But Tom was able to convince his friends to whitewash the fence for him—indeed, to pay him for the privilege—by presenting it as an intrinsically rewarding activity. In short, by changing the extrinsic motivation to intrinsic motivation (by shifting from external to internal rewards), *work* became *play*. (Strictly speaking, Lepper's study supports the *reverse* Tom Sawyer effect, because, by adding extrinsic motivation, *play* became *work*. But the fundamental lesson is the same; sustained engagement in an activity can best be maintained if intrinsically motivated.)

Consequently, if we wish to encourage our students to place a higher subjective value on learning goals, we would do well to find ways to make mastery of the learning goals intrinsically motivating. Pink (following Deci and Ryan[24]) identifies three effective intrinsic motivators. The first of these is *autonomy*, which involves "behaving with a full sense of volition and choice" rather than "the experience of

pressure and demand toward specific outcomes that comes from forces perceived to be external to the self."[25] Autonomous motivation, in other words, means that people are more motivated to achieve goals that they have chosen themselves rather than goals that are imposed upon them by, for example, their supervisor.

Thus, in the classroom, we will foster autonomous motivation to the extent that our course structures allow students control over teaching decisions. As Doyle points out, many—perhaps most—of the decisions about policies that will affect student performance in the class are made by the teacher with no input from the students. They rarely have control, for example in any of the following decisions: course textbook, number of exams, when in the course exams will be given, attendance policy, late-work policy, late-for-class policy, course learning outcomes, office hours, due dates for major papers, teaching methods/approaches, how groups are formed, topic of writing or research projects, grading scale, discussion guidelines for large- or small-group discussions, rubrics for evaluation of self or peers' work.[26]

Of course, power must be shared in proportion to students' ability to handle it. For example, students probably do not have the experience to choose the best textbook for the class or all of the suitable learning goals. But perhaps they have enough experience to choose from a limited range of texts offered by the teacher. And perhaps they can set a personal learning goal for the course in addition to the ones established by the teacher.

Maryellen Weimer identifies several areas where students could potentially gain more autonomy over teaching decisions:[27]

1. Activities and assignment decisions:
   a. Students might decide which assignments they will complete from a set of potential assignments, allowing them to select the ways they wish to demonstrate mastery of material.
   b. Students might decide the due dates for a major individual or group project. They might be asked to identify the intermediate steps necessary to successfully complete the assignment, select deadlines for the intermediate steps, and identify steps for which they want formative feedback from the instructor.

2. Course policy decisions:
   a. Students might develop policies within constraints that justify the policy. For example, if a teacher believes that student participation is an important component for accomplishing particular learning goals, then the students might design an appropriate participation policy. This will take time and effort. (Weimer used a process that involved collaborative group work [in two stages], teacher feedback, student revision, a summary draft of the policy, whole-class review of the draft, and finally a class vote. It took the better part of a week for the students to develop the policy.)

3. Course content decisions: This is the most difficult area for us to encourage student autonomy because this is where the greatest gap in expertise lies; we faculty are hired for our hard-earned content knowledge. Thus, we will need to move carefully in this area.
   a. Students might determine the content of a review session by identifying the content that they believe they have the poorest understanding of.
   b. Students might generate some of the questions for a test.
   c. Students might identify the areas of a text or argument that they are having the most trouble with so that the instructor can focus a class meeting on those areas.
   d. Students might select one or more topics or philosophers (from a list provided by the instructor) for the course. If our learning goals are primarily skills and attitudes (as I believe they often are in learner-centered philosophy courses), rather than specific content, then we can focus on developing the relevant skills and attitudes, whatever the content. Thus, in an introductory philosophy class, we might offer the students five standard topics (for example, free will, personal identity, the existence of God, the mind-body problem, and the nature of knowledge) and let them discuss which topics are of most interest, and then vote on the top three.

The second important intrinsic motivator is *mastery*. That is, people are highly motivated to do difficult things if they are good at them. The motivation for mastery is best captured by the concept of "flow" developed by Mihaly Csikszentmihalyi.[28] "Flow" is Csikszentmihalyi's term for the highly satisfying experience people have when they are absorbed and deeply engaged in an activity. If you have ever been so absorbed in a task that you lost track of time and your awareness of yourself disappeared, you have experienced flow.

In order to generate flow, an experience must have three characteristics:[29]

1. The agent has a clear idea of the goal[s] they are pursuing.

2. Feedback about their success in achieving the goal is immediate and clear.

3. Most importantly, there is a match between the agent's ability and the difficulty of the task. The task is challenging enough so that it can only be accomplished with effort. In other words, flow has its own Goldilocks principle: the challenge must be just right—neither too hard nor too easy. Challenges that outstrip the agent's abilities produce frustration and anxiety; challenges that are too easy produce boredom.

Each of these conditions generates its own strategies for motivating students by mastery:

1. The learning goals of the course and of each task should be clear to all students.

2. Activities must generate immediate and useful feedback.

3. Tasks should be novel and engaging, so that the students are stretched in their ability. Tasks that require lower levels of thinking—such as rote memorization—are unlikely to be sufficiently challenging to generate flow. Tasks that require students to teach something to their peers can be a real incentive to mastery.

The third effective intrinsic motivator is *purpose*. People are intrinsically motivated to engage in activities that are meaningful—that give them purpose. Students will be more highly motivated to achieve the learning goals if they can connect those goals with what they already value. Thus, we might employ the following strategies to make these connections:

1. *We can point out a connection between the course goals and students' current interests.* For example, we might spark interest in critical thinking by showing how it can be used to resist manipulation by advertisers. (Nobody wants to be taken advantage of!)

2. *We can assign authentic real-world tasks, such as service-learning in an ethics course.* It is motivating for students to see that abstract concepts have real-world applicability.

3. *We can make connections between the course goals and the students' academic lives*, by, for example, showing taking the course we are teaching will prepare them to do well in another course where they also want to do well.

4. *We can also show how our course will help with professional success.* For instance, we might motivate good philosophical writing by emphasizing the importance of writing well in most careers.

Summary

Effectively motivating students is a necessary component of success in learner-centered pedagogy. Grades are a relatively ineffective (and sometimes counterproductive) motivator for student learning. Instead, the learner-centered classroom will focus on providing a supportive learning environment for students, fostering positive expectations for success in the course, and using intrinsic motivation to give high subjective value to the learning goals.

Notes

1. See, for example, Schunk, Meece, and Pintrich, *Motivation in Education*. Note that this volume is 667 pages long!

2. Doyle, *Helping Students*, 4.

3. Wiggins and McTighe, *Understanding by Design*, 13–34.

4. http://www.assessment.uconn.edu/docs/TeacherCenteredVsLearnerCenteredParadigms.pdf.

5. Doyle, *Helping Students*, 25.

6. Nahmias, "Why We Have Free Will," 79.

7. Because of my focus on motivating students, I am using a narrower definition than is common. For example, Schunk defines *motivation* as "the process of instigating and sustaining goal-directed behavior." See Schunk, *Learning Theories*, 346.

8. Ambrose et al., *How Learning Works*, 69–82.

9. Its potential undermining of two important beliefs is one reason why fear is a poor motivator for student learning. We should note in passing that there is at least one more reason to avoid using fear to motivate students. Stressful emotions, such as fear and anger, interfere with the brain's ability to route information to the prefrontal cortex (which controls learning). Making your students frightened or upset is an effective way to make it more difficult for them to learn. For a powerful discussion of the negative effects of stressful emotions on learning and thinking (which ended in an innocent man being shot to death by police), see Gladwell, *Blink*, 189–244.

10. Ambrose et al., *How Learning Works*, 77–78.

11. Ibid., 78.

12. Ibid., 85–88.

13. Dweck, *Mindset*.

14. For guidance on using rubrics, see Walvoord and Anderson, *Effective Grading*, 39–60. See also Stevens and Levi, *Introduction to Rubrics*.

15. Ambrose et al., *How Learning Works*, 182–86.

16. Ibid., 170.

17. Ibid., 182–86.

18. The research supporting the intrinsic motivation of autonomy, mastery, and purpose is discussed at length and accessibly in Pink, *Drive*. Pink is very heavily influenced by the self-determination theory of Deci and Ryan (http://www.selfdeterminationtheory.org/). One need not accept Deci and Ryan's elaborate theoretical framework to accept the principles of motivation I articulate.

19. Schunk, *Learning Theories*, 389.

20. Ibid., 386.

21. Lepper, Greene, and Nisbett, "Undermining Children's Intrinsic Interest with Extrinsic Reward."

22. Pink, *Drive*, 35–37.

23. Ibid., 37. For a summary of his experiments supporting the same conclusion, see Deci with Flaste, *Why We Do What We Do*. However, in *Learning Theories* (391), Schunk

suggests that external rewards like grades can be markers of improved performance, and thus positively influence students' motivation to learn in limited circumstances.

24. Deci and Ryan, "Facilitating Optimal Motivation."

25. Ibid., 14. Cited in Pink, *Drive*, 88.

26. Doyle, *Helping Students*, 8.

27. Weimer, *Learner-Centered Teaching*, 32–40.

28. Csikszentmihalyi, *Flow*.

29. Pink, *Drive*, 112–13. See also Csikszentmihalyi, *Flow*, 71–93.

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