

Intrinsic Motivation The Key to Fully Engaged Music Students

by Dina Alexander

A recent study of student motivation for music learning revealed alarming concerns for music educators (McPherson & O'Neill, 2010). The international study was an examination of student interest in music, in and outside of school. Twenty-four thousand one hundred and forty three students in grades 6 - 12 from Brazil, China, Finland, Hong Kong, Israel, Korea, Mexico, and USA were surveyed for the study. Students were asked to rank-order interest in six subjects (art, mother tongue, physical education, mathematics, science, and music) when experienced in school, and again when experienced outside of school. In the USA, where findings corresponded similarly to international results, students in grades 6 – 9 ranked interest in school music last, and interest in music outside of school second only to physical education. Students in grades 10 – 12 again ranked interest in school music last, but ranked interest in music outside of school first. The researchers suggested that school music programs were not meeting needs of students. They suggested that to interest students to participate in school music programs music teachers provide students with more creative and intrinsically motivating activities—the kinds of activities that attract them to participate in music outside of school.

Throughout my music-teaching career I have been characterized as a motivating teacher. My beginning instrumental students demonstrated unusually high music achievement and were enthusiastic learners. Neither bribes or threats of punishment were required to inspire home practice, and few students discontinued instruction. I had ideas about what inspired motivation—challenge coupled with support, and teaching

students to create and comprehend music at depths normally reserved for advanced students—but I desired deeper understanding. In my quest for knowledge, I read numerous books and articles, conducted a major research study, and worked closely with both Richard Grunow and Christopher Azzara, Professors of Music Education at the Eastman School of Music, and Edward Deci and Richard Ryan, Professors of Psychology at the University of Rochester and authors of self-determination theory (SDT). In this article, I will (a) summarize important and relevant developments in motivation research, (b) describe my research, and (c) offer suggestions for supporting students' motivation for music learning.

Research in Motivation

It is important to understand the distinction between intrinsic and extrinsic motivation— two primary types of motivation. Intrinsic motivation is the instinctive human drive to seek out challenges, new knowledge, and deeper understanding.

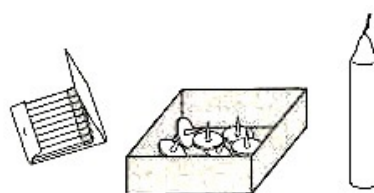
It is self-inspired motivation. Students who are intrinsically motivated might say: "I love practicing," "Playing my instrument makes me happy," or "I love learning something new in my lessons." Conversely, Extrinsic motivation is motivation that results from influences outside one's self. Students who are extrinsically motivated might say, "I'm playing an instrument because my parents want me to do it," "I'll get punished if I don't practice," or "My teacher gives me a sticker when I have a good lesson."

The traditional view of motivation is behaviorism. Behaviorism, associated with psychologist B.F. Skinner (1965), is based on the principle of reinforcement. Behaviorists believe that human actions are not autonomous (based on free will), but are instead conditioned through positive or negative reinforcements. Behaviorism is often described as "Do this, and you'll get that" motivation. Since the mid-twentieth century, social scientists have revealed new and fascinating perspectives on human motivation and challenged beha-

aviorism as the dominant view of motivation. This research revealed that people are not as predictable or easily manipulated as previously thought.

The candle problem (Duncker, 1945), a test of cognitive skill, requires participants to affix a lit candle to a wall in a way that wax cannot drip on the table below it. To solve the problem, participants are seated in a small cubicle and given a candle, a box of thumbtacks, and a book of matches.

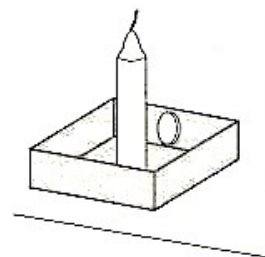
Figure 1. The Candle Problem



The candle problem was used in an experimental study that examined length of time required to solve the problem. Glucksberg (1962) offered \$5 to half of the study participants if they solved the problem faster than 75% of participants, and \$20 if they solved it fastest overall. Remaining participants were not offered any incentives, but were asked to solve the problem as quickly as possible.

Figure 2.

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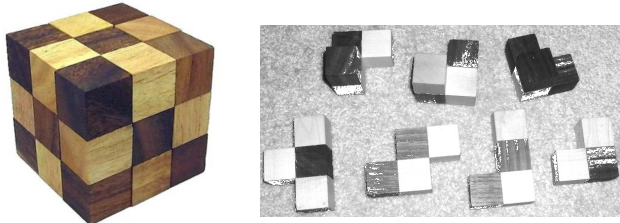
Candle Pro-
tion

Results of the study indicated that participants offered incentives required, on average, three minutes and thirty seconds longer to solve the problem than participants not offered incentives. Results of this study, then considered anomalous by most, inspired graduate student Edward Deci to conduct his own study of motivation.

In Deci's (1971) experimental study of motivation participants were asked to solve Soma puzzles.

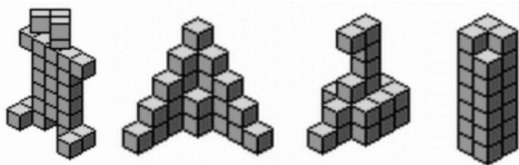
Developed by Piet Hein in 1933, a Soma cube is a 3x3x3 cube that can be disassembled into seven unique shapes.

Figure 3. Soma Cube



Soma puzzles are images of predetermined configurations of the Soma cube.

Figure 4. Examples of Soma Puzzle Designs



Deci ins to solve as many puzzles as possible, but offered money to half of them for each design assembled correctly. When allotted time expired, asked participants to wait in the room for ten minutes while data was recorded and a questionnaire was retrieved. Instead, Deci observed participants through a two-way mirror to watch their behavior during their “free time,” after they had finished the activity. Participants could choose to relax, read from an assortment of magazines, or continue to work on puzzles. Overwhelmingly, participants who had been offered money for solving puzzles ceased to work on them, and participants who had not been paid continued to solve puzzles. The monetary reward had resulted in diminished motivation for puzzle solving. This landmark research led to hundreds of related studies in human motivation.

Since 1971, researchers have examined motivation for work, play, health, education, and much more⁷.

⁷⁷ See Deci & Ryan, Guntert, Ng, and Przybylski for supporting research.

⁸⁸ See Deci, Koestner & Ryan, DeCharms, Kohn, and Ryan & Deci.

Results of these studies indicated that, overall, rewards (or punishments) fail to inspire motivation for tasks that require even minimal cognitive skill. However, rewards do not diminish intrinsic motivation for tasks that are simple, mechanical, or uninteresting.

With ample and persuasive research that supports the view that rewards do not inspire interest and motivation, why do incentives remain an integral part of teaching and learning? It is simple—human behaviors can be manipulated by promises of incentives. Therefore, rewards or punishments can result in temporary compliance. In addition, application of incentives is easy because it requires little time or thought. Rationale against using rewards to regulate student behavior is abundant and compelling⁸.

Rewards or other incentives are employed when students are not progressing as expected or desired. Incentives are offered in an attempt to control and manipulate outcomes. Students offered incentives in exchange for compliance experience unintended side effects. Students who are “bribed” for their actions feel judged and controlled. Therefore, they experience decreased feelings of autonomy—power to freely choose actions. Further, rewards (a) create an imbalance of power and harm relationships; (b) result in competition; (c) when offered in group settings, can result in unhealthy peer pressure; (d) leave those who do not receive them feeling punished and demoralized; and (e) do not serve to reveal underlying issues responsible for perceived deficits.

The promise of rewards also negatively influences willingness to take risks.

When driven by rewards, focus shifts from learning to earning. Striving for rewards results in narrowed learning objectives and limited learning. In reward scenarios, learners (a) avoid challenges, (b) are less likely to explore possibilities, (c) are less flexible, innovative, and

creative, and (d) remember less of what is learned. Rewards undermine genuine interest, diminish intrinsic motivation, extinguish enthusiasm, and the effects are long lasting⁹. In, "Punished By Rewards," Kohn asked, "Do rewards motivate people? Absolutely. They motivate them to get rewards." In short, rewards punish.

Why is the application of rewards in education so damaging? Because, when incentives are offered for learning, the implication is that learning is something performed only to receive rewards or avoid punishment, not because learning is intrinsically interesting, meaningful, and valuable.

The self-determination theory (SDT) of motivation, developed in 1985 by Deci and Ryan, asserts that actions performed of our own free will, and toward meaningful goals, result in optimum engagement and creativity. The theory assumes that, like infants, people are by nature, active, self-motivated, curious, interested, vital, and eager to succeed. According to Deci & Ryan, intrinsic motivation (a) develops from within, (b) is fueled by interest, (c) is key to long-term engagement in activities, and (d) promotes personal well-being.

Intrinsic motivation is fueled by three basic human needs:

Autonomy (to act of our own accord),

Competence or Mastery (to develop skills), and

Relatedness or Purpose (to connect to others or to a greater good).

Autonomy is characterized by choice, enjoyment, interest, effort, risk-taking, and fun. Competence is defined as the need for high-level skills, and in-depth knowledge and understanding. Relatedness is the need to feel cared for and connected to others, and having purpose in life.

Much of what music educators can learn about intrinsic motivation is derived from research in general

educational practices. Students who experience need satisfaction (competency, autonomy, and relatedness) are vital and interested learners. In contrast, students whose needs are not satisfied feel disaffected and uninterested in learning. While both extrinsic (controlled) and intrinsic (autonomous) types of motivation can lead to learning, the quality of learning varies. For example, students who are intrinsically motivated exhibit deeper, more contextual learning. Students, who are extrinsically motivated—to pass a test, for example—tend to memorize facts and may not understand the larger context. Intrinsic motivation (autonomy) is associated with in-depth learning, and extrinsic motivation (control) is associated with more superficial learning¹⁰.

The Alexander Study

"Intrinsic Motivation in Collegiate Secondary Music Instrument Class," (Alexander, 2015) is an examination of self-determination (autonomy, competence, and relatedness) in a 14 week, secondary instrument course (trumpet) for music education students (non-trumpet majors). In the study, two primary questions were examined: (1) would trumpet class instruction that included intrinsic musical behaviors (i.e., singing, moving, learning by ear, improvising, and composing) support students' needs for autonomy, competence, and relatedness? and (2) would participants experience greater enjoyment, persistence, and achievement than experienced in previously completed secondary instrument courses? Results of the study provide insights into types of content and methods of teaching that support students' intrinsic motivation for music learning.

Curriculum for Trumpet Class included Jump Right In: The Instrumental Method (an aural approach to learning to play an music instrument), Developing Musicianship Through Improvisation (an aural approach

⁹⁹ See Csikszentmihalyi, and Omaggio

¹⁰ See Deci, Vallerand, Pelletier, & Ryan, and Deci, Koestner & Ryan.

to learning to improvise), and original materials¹¹. Trumpet Class content emphasized skill development: (a) trumpet performance, (b) executive skills (embouchure, articulations, hand position, posture, etc.), (c) singing, chanting, and moving, (d) improvisation, (e) composition, (f) music reading, (g) techniques for teaching, and (h) trumpet care and maintenance.

Results of the study suggested that participants' needs for autonomy, competence, and relatedness were met. All participants' expressed feelings of autonomy when they described their experiences in Trumpet Class as interesting, exciting, inspirational, satisfying, and fun. They willingly exerted considerable effort and were willing to take risks. Participants' demonstrated competence through learning by ear and with notation an extensive repertoire of tunes (57 selections) performed in, and transposed to, five major and five minor keys. Music reading assignments required students to (a) audiate and sing melody, bass line, and harmony parts, (b) perform melody, bass line, and harmony parts on trumpet, (c) improvise a new melody, and (d) transpose to a new key, tonality, or meter. In addition, participants' (a) taught executive skills, rote songs, and tutored one another, (b) identified and diagnosed common trumpet playing issues, (c) learned proper trumpet care and maintenance and emergency trumpet repair, and (d) learned to compose and arrange for trumpet. Upon completion of the course, all participants' expressed confidence in their ability to (a) perform, (b) play by ear and with notation, (c) transpose, (d) improvise, (e) compose, and (f) teach trumpet. Participants demonstrated satisfaction of the need for relatedness by (a) willingly practicing and playing trumpet with one another outside of class, (b) interacting in class through humor, and (c) expressing appreciation of the class environment, content, and instruction.

Results suggested that an aurally-based approach to teaching a music instrument could lead to

students with increased musicianship who are confident in their ability to perform, teach, improvise, and compose. In addition, meeting students' needs for autonomy, competence, and relatedness could lead to students who are willing to exert considerable effort, take risks, and enjoy learning.

Suggestions for Teachers

How can music teachers support students' intrinsic motivation for learning? To answer this question, we must look at how to better meet our students' needs for autonomy, competence, and relatedness.

For students to experience autonomy, they must feel in control of their actions. Choice and shared decision-making foster feelings of autonomy. For example, offer students input on which repertoire they will learn. Provide experiences of personal, creative expression through improvisation and composition. Seek to understand and acknowledge your students' perspectives on music learning. Minimize or eliminate rewards, punishments, and controlling language. Controlling language is characterized by phrases that include words like, "you should," and "I want," for example. When grading students, emphasize skill development, effort, persistence, and improvement. Reduce or eliminate competition and tests. Instead, ask students to self-evaluate and then use the assessment to help students improve skills. Students need to feel safe to make mistakes and sometimes fail. Create a classroom environment in which your students feel safe to take musical risks. Replace praise with informational feedback. Praise is another form of reward and is, therefore, controlling. On the other hand, providing informational feedback presents students with guidelines and suggestions for improvement. Below are examples of praise versus informational feedback.

¹¹ See Alexander, Azzara & Grunow, and Grunow, Azzara & Gordon

Table 1
Praise versus Informational Feedback

Praise	Informational Feedback
That etude sounded great!	You performed all rhythms and pitches correctly and your tone was pure and full.
Nice effort, but would you please play it again?	I'm not sure you're audiating this melody accurately. Can you sing it for me?
With a little more practice, you could have nailed it.	Tell me what you thought of your performance? Why do think that occurred?
Good work today!	The etudes you played today were well prepared and performed musically and in tune.

Informational feedback does not have to be unemotional. Students value excitement and enthusiasm demonstrated in support of their learning.

Intrinsic motivation is enhanced through competence. To support students' needs for competence, implement a comprehensive curriculum that includes intrinsic musical behaviors (e.g., singing, moving, learning by ear, improvising, and composing). Teach a large repertoire of tunes (melody, bass, and harmony lines) by ear, in many tonalities, meters, and styles. Teach content in manageable components. Students may feel overwhelmed when presented with a new task all at once. Help them experience success by breaking learning into parts that can be managed more easily. Maintain high expectations and be willing to provide support students need to achieve success. Learning is enhanced through teaching. Offer students opportunities to teach one another. Provide positive, non-controlling feedback. Finally, seek to discover your students' optimum level of challenge. Students experience intrinsic motivation when they believe that they can meet a challenge that will inspire growth. For students to experien-

ce optimum challenge, they must not perceive the task to be too easy—which results in boredom—or too difficult—which results in frustration and lack of persistence.

Students need to feel a sense of relatedness or purpose. Relatedness can occur when students' sense that their teacher knows and cares about them, is kind, seeks to understand their unique challenges, and is willing to help when needed. The unique connectedness experienced by musicians performing in small ensembles may support a musical form of relatedness. Students who work toward goals they consider meaningful experience feelings of purpose. Those goals may be individualistic (improving technique), or group goals (preparing for a concert).

Music educators around the world are challenged to maintain music programs and retain students. To address this challenge, music teachers must strive to better meet students' needs and interests. Research indicates that intrinsically motivated students enjoy learning and are eager to develop skills through practice. Music teachers who strive to meet students' needs for autonomy, competence, and relatedness are more likely to have classrooms and studios filled with intrinsically motivated musicians who are eager to grow and learn.

BIBLIOGRAFIA

- Alexander, D. L. (2015). *Intrinsic motivation in a collegiate secondary music instrument class*. University of Rochester: Eastman School of Music
- Azzara, C. D., & Grunow, R. F. (2006). *Developing musicianship through improvisation*. Chicago: GIA Publications.
- Azzara, C. D., & Grunow, R. F. (2010a). *Developing Musicianship through Improvisation, Book Two/CD*. Chicago: GIA Publications.
- Azzara, C. D. & Grunow, R. F. (2010b). *Developing Musicianship through Improvisation, Book Three/CD*. Chicago: GIA Publications.
- Csikszentmihalyi, M. (1990). Literacy and intrinsic motivation. *Daedalus*, 119(2), 115-140.
- DeCharms, R. (1968). *Personal causation: The internal affective determinants of behavior*. New York, NY: Academic.
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18(1), 105-115.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, 26(3 & 4), 325-346.
- Deci, E. L., Koestner, R., & Ryan, R. M. (2001). Extrinsic rewards and intrinsic motivation in education: Reconsidered once again. *Review of Educational Research*, 71(1), 1-27.
- Deci, E. L., & Ryan, R. M. (1985a). *Self-Determination*. Hoboken, NJ: John Wiley & Sons, Incorporated.
- Deci, E. L., & Ryan, R. M. (1985b). The general causality orientations scale: Self-determination in personality. *Journal of research in personality*, 19(2), 109-134.
- Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology*, 49(1), 14-23.
- Duncker, K. (1945) *On Problem Solving*, *Psychological Monographs*, 58, American Psychological Association OCLC: 968793.
- Grolnick, W. S., & Ryan, R. M. (1987). Autonomy in children's learning: An experimental and individual difference investigation. *Journal of Personality and Social Psychology*, 52, 890-898.
- Grunow, R. F., Gordon, E. E., & Azzara, C. D. (1999, 2001, 2002). *Jump right in: The instrumental series: teacher's guide*. Chicago: GIA Publications, Inc.
- Guntert, S. (2015). The impact of work design, autonomy support, and strategy on employee outcomes: A differentiated perspective on self-determination at work. *Motivation and Emotion*, 39, 99-103.
- Kohn, A. (1999). *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise, and other bribes*. Houghton Mifflin Harcourt.
- McPherson, G. E., & Hendricks, K. S. (2010). Students' motivation to study music: The United States of America. *Research Studies in Music Education*, 32(2), 201-213.
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7(2), 133-144.
- Ng, J. Y. Y., Ntoumanis, N., Thøgersen-Ntoumani, C., Deci, E. L., Ryan, R. M., Duda, J. L., & Williams, G. C. (2012). Self-determination theory applied to health contexts: A meta-analysis. *Perspectives on Psychological Science*, 7, 325-340.
- Omaggio, A. (1978). *Successful language learners: What do we know about them?* ERIC / CLL News Bulletin, May, 2-3.
- Pink, D. H. (2009). *Drive: The surprising truth about what motivates us*. New York, NY: Riverhead Books.
- Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology*, 95(4), 667-679.
- Pintrich, P., & Schunk, D. (1996). *Motivation in education: Theory, research, and applications*. Englewood Cliffs, NJ: Prentice-Hall.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Ryan, R. M., & Deci, E. L. (2013). Toward a social psychology of assimilation: Self-determination theory in cognitive development and education. In B. W. Sokol, F. M. E. Grouzet, U. Muller (Eds.), *Self-regulation and autonomy: Social and developmental dimensions of human conduct* (pp. 191-207). Cambridge, England: Cambridge University Press.
- Ryan, R. M., Mims, V., & Koestner, R. (1983). Relation of reward contingency and interpersonal context to intrinsic motivation: A review and test using cognitive evaluation theory. *Journal of Personality and Social Psychology*, 45(4), 736-747.